Philo-Greenwood Road over Navarro River Bridge (10C-0032) Rehabilitation and Widening Project

Initial Study/Mitigated Negative Declaration
Public Draft

March 2, 2023

Prepared for:
Mendocino County
Department of Transportation
340 Lake Mendocino Drive
Ukiah, CA 95482
(707) 463-4363

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STN #2272010200

Project Information

1. Project Title: Philo-Greenwood Road over Navarro River Bridge (10C-0032) Rehabilitation and Widening Project

2. Lead Agency Name and Address:

Mendocino County
Department of Transportation
340 Lake Mendocino Drive
Ukiah, CA 95482
(707) 463-4363

3. Contact Person:

Alicia Meier, Acting Deputy Director–Engineering
Mendocino County Department of Transportation
(707) 463-4363

4. Project Location: Philo-Greenwood Road at Navarro River, located in the unincorporated area of Mendocino County, 3.7 miles northwest of the community of Philo, California. Approximately 0.4 mile west of State Route 128 intersection at Philo-Greenwood Road.

5. Project Sponsor's Name: Mendocino County

6. General Plan Designation: Anderson Valley Community Planning Area

7. Zoning: Agricultural District (AG 40), Rangeland District (RL160)

8. Description of Project:

Mendocino County Department of Transportation (County) is proposing to rehabilitate and widen the Bridge No. 10C-0032 on Philo-Greenwood Road over the Navarro River. The County has nominated this bridge for rehabilitation under the federal-aid Highway Bridge Program administered by the Federal Highway Administration through the California Department of Transportation (Caltrans) Division of Local Assistance. In 2010, Caltrans determined that the bridge was structurally deficient and functionally obsolete due to a variety of factors, including a narrow deck (i.e., one-lane bridge) and rotting timbers. The rehabilitated bridge would meet current design standards of Mendocino County, American Association of State Highway and Transportation Officials, and Caltrans.

The project would widen and rehabilitate/retrofit the existing arch span and replace the timber approach spans with a new concrete approach structure. The existing structure consists of 15 spans for a total length of approximately 350 feet including abutments. Twelve of these approach spans composed of timber and are on the northern end of the existing bridge. The remaining three are concrete, characterized by open spandrel arch construction. The existing 19-foot-wide deck over the arch spans is bare concrete while the timber approach spans subfloor is covered with an asphalt concrete overlay. The 12 timber approach spans would be replaced with a three-span concrete approach structure. The bridge

deck and arch span would be widened to meet the capacity requirements of the roadway facility and rehabilitated/retrofitted to meet current design code load requirements.

9. Surrounding Land Uses and Setting:

Land uses in the project area consist of the existing Philo-Greenwood Road corridor and adjacent rural private and State-owned properties. The Navarro River bisects the project area in a southeast to northwest direction. A private timber company owns most of the undeveloped properties on the west side of the river, with the exception of some State-owned property upstream of the bridge that extends to both the east and west sides of the river—a portion of Hendy Woods State Park. Private land uses on the east side of the river include dispersed residential, orchard, pasture, and cultivated agriculture (i.e., vineyard). These uses are buffered from the road and the river to varying degrees by stands of mature riparian forest. The Hendy Woods State Park entrance intersection is located approximately 300 feet southwest of the existing bridge.

10. Other Public Agencies Whose Approval May Be Required (e.g., permits, financing approval, or participation agreement):

- National Marine Fisheries Service
- U.S. Army Corps of Engineers
- California Department of Fish & Wildlife (Region 1)
- California State Regional Water Quality Control Board (North Coast Region)
- California Department of Transportation
- California State Parks

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Acronyms and Abbreviations

AASHTO	American Association of State Highway and Transportation Officials
ADT	average daily traffic
amsl	above mean sea level
AQMD	Air Quality Management District
BMPs	best management practices
CALFIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
County	Mendocino County Department of Transportation
cSEL	cumulative sound exposure levels
dB	decibels
DPS	distinct population segment
EPA	U.S. Environmental Protection Agency
ESU	evolutionarily significant unit
GHG	greenhouse gas
HBP	Highway Bridge Program
HEPA	high efficiency particulate air
IS	Initial Study
IS/MND	Initial Study/ Mitigated Negative Declaration
MMRP	Mitigation Monitoring and Reporting Program
MND	Mitigated Negative Declaration
NAHC	Native American Heritage Commission
NMFS	National Marine Fisheries Service
OHWM	ordinary high water mark
PM_{10}	particulate matter 10 microns in diameter or less
PRC	Public Resources Code
project	Philo-Greenwood Road over Navarro River Bridge (10C-0032) Rehabilitation and Widening Project
ROW	right-of-way
RSP	rock slope protection
SWPPP	Storm Water Pollution Prevention Plan
TTLC	Total Threshold Limit Concentration
USFS	United States Forest Service

1 Introduction

1.1 Introduction and Regulatory Guidance

This document is an Initial Study (IS) that summarizes the technical studies prepared for the proposed Philo-Greenwood Road over Navarro River Bridge (10C-0032) Rehabilitation and Widening Project (project). It includes an evaluation of potential environmental impacts that could result from project implementation and provides justification for a Mitigated Negative Declaration (MND) for the project. This document was prepared in accordance with the current California Environmental Quality Act (CEQA), Public Resources Code (PRC) Section 21000 et seq., and the state CEQA Guidelines (14 California Code of Regulations 1500 et seq.) that require all state and local government agencies to consider the environmental consequences of projects over which they have discretionary authority before acting on those projects. Mitigation measures are proposed to avoid or minimize any significant impacts that are identified.

1.2 Lead Agency

The lead agency is the public agency with primary responsibility for carrying out or approving a project. The CEQA Lead Agency is the Mendocino County Department of Transportation (County), and the project is receiving funding from the Federal Highway Administration through the Highway Bridge Program (HBP) administered by the California Department of Transportation (Caltrans) Local Assistance Program.

1.3 Supporting Technical Studies

The technical studies listed below are available for review at the following location:

Mendocino County Department of Transportation
340 Lake Mendocino Drive
Ukiah, CA 95482
(707) 463-4363

The following technical studies were conducted for the project and are available to the public upon request (with the exception of the Historic Property Survey Report):

- Historic Property Survey Report (This report is confidential and available to qualified reviewers only.)
- Biological Assessment/Essential Fish Habitat Assessment
- Farmland Impact Assessment
- Location Hydraulic Study Report
- Bridge Design Hydraulic Study Report
- Initial Site Assessment
- Natural Environment Study, including
    - National Marine Fisheries Service (NMFS) Biological Opinion

    - Bat Acoustic Survey Results Memorandum and Visual Habitat Assessment Memorandum
    - Delineation of Waters of the United States
    - Tree Survey Report
- Technical Memorandum: Northern Spotted Owl and Marbled Murrelet Habitat Assessment of Evaluation of Auditory and Visual Disturbance
- Construction Noise Memorandum
- Section 4(f) De Minimis Finding

1.4 Document Organization

The IS/MND consists of the following chapters:

- **Chapter 1.0 – Introduction** describes the purpose and content of this document.
- **Chapter 2.0 – Project Description** provides a comprehensive description of the project, a tentative schedule, required permit approvals, and project alternatives.
- **Chapter 3.0 – Environmental Impacts and Mitigation Measures** describes the environmental impacts of the project using the CEQA Environmental Checklist. Where appropriate, mitigation measures are provided that would reduce potentially significant impacts to a less-than-significant level.
- **Chapter 4.0 – Determination** provides the environmental determination for the project.
- **Chapter 5.0 – Summary of Mitigation Commitments** provides a comprehensive list of all mitigation measures proposed for the project.
- **Chapter 6.0 – Report Preparation** identifies the individuals responsible for preparation of this document.
- **Chapter 7.0 – References** provides a list of references used to prepare this document.

2 Project Description

2.1 Location

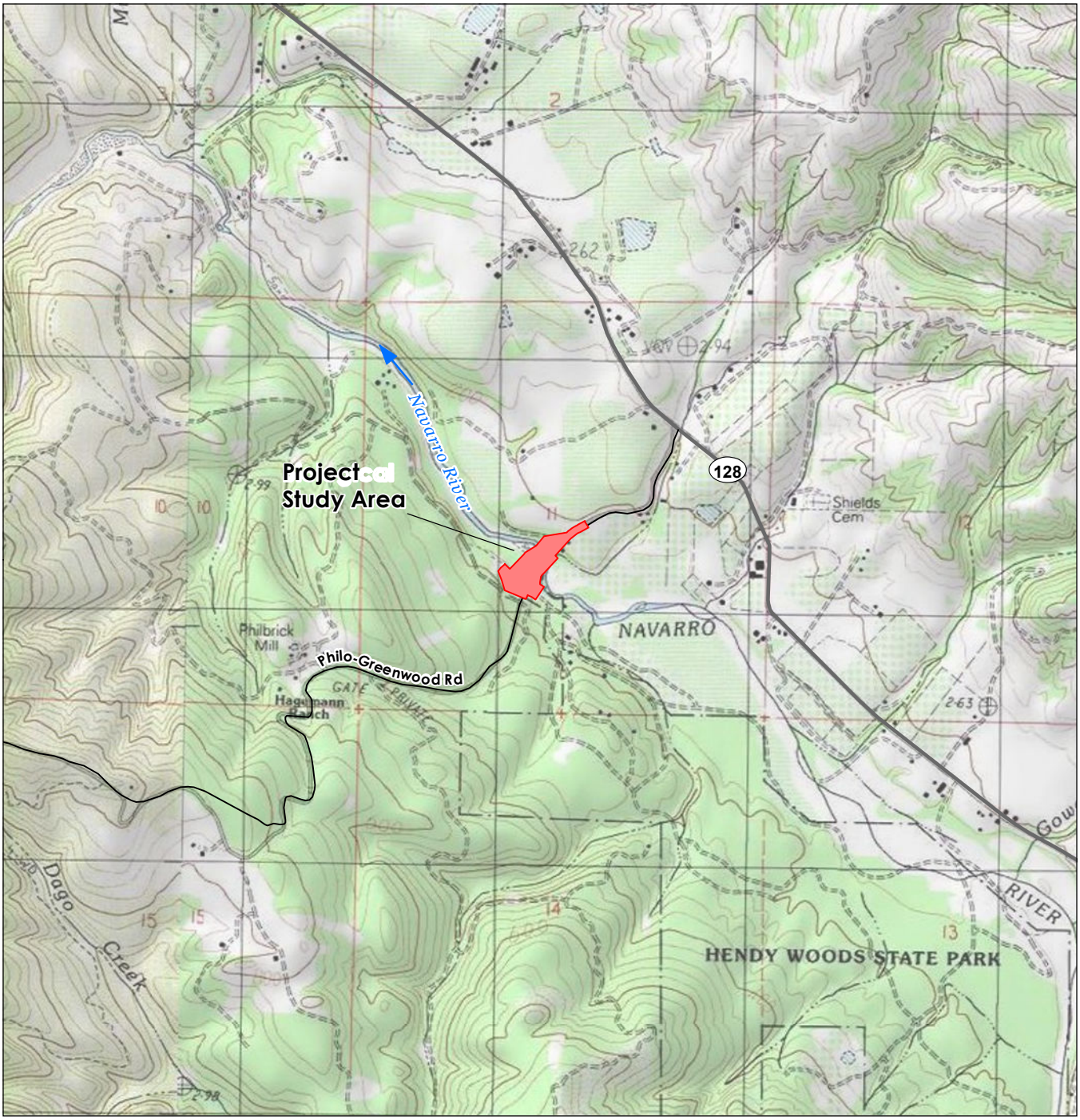
Philo-Greenwood Road at the Navarro River Bridge (No. 10C-0032) is located approximately 2.7 air miles northwest of the unincorporated community of Philo, Mendocino County, California and about 0.5 mile southwest of State Route 128. The city of Ukiah is about 15 air miles to the west. The bridge crosses the Navarro River, a direct tributary to the Pacific Ocean approximately 23 air miles south of the community of Mendocino. The project study area includes the entrance to Hendy Woods State Park and State of California Lands on the upstream (south) side of the bridge. The Hendy Woods State Park entrance intersection is located approximately 300 feet southwest of the existing bridge, and the entrance to the Philo Apple Farm is approximately 70 feet east of the existing bridge. The approximately 9.24-acre project site is found on the *Philo, California* 7.5-minute U.S. Geological Survey topographic quadrangle, Township 14 North, Range 15 West, Section 11, Mount Diablo Base & Meridian. The location of the project is shown in Figure 1.

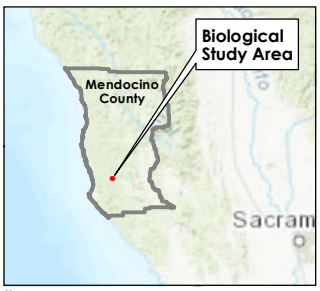
The County maintains and existing 40-foot right-of-way (ROW) along Philo-Greenwood Road but would need to acquire both temporary and permanent ROW to allow for project implementation. Permanent ROW would affect parcels on the north side of the road and bridge, while temporary construction easements would affect parcels on both sides of the alignment to allow for bridge and approach roadway construction, equipment access, and a contractor staging area. The project site extends along a section of river channel downstream from the bridge to conservatively account for any potential transient turbidity and sedimentation in the low gradient and low water velocity flatwater habitats during the early portion of the seasonal work window. The project site includes Mendocino County ROW through portions of the following Assessor Parcel Numbers: 026-530-10, 026-530-03, 026-360-01, 026-530-04, 026-360-55, 026-530-05, and 026-530-09.

2.2 Existing Conditions

Philo-Greenwood Road is a narrow, two-lane Rural Minor Collector with a 40 mile-per-hour design speed (due to rolling terrain). The stretch of Philo-Greenwood Road through the project area is nearly level but becomes steep and windy just southwest of the bridge. The current average daily trips (ADT) at the project site is 400 vehicles per day and the future forecasted ADT is 419 vehicles per day in 2029 (Stantec 2023). Although the road consists of two lanes, the existing bridge is only one lane.

The existing bridge is 350 feet long and is composed of 15 spans—three open spandrel concrete spans and 12 timber approach spans. The timber spans are located on the northern end of the bridge. The existing bridge deck over the arch spans is constructed of bare concrete deck, while the approach structure's timber deck is covered with an asphalt concrete-wearing surface. Total deck width over the length of the bridge is 19 feet. The approach spans are supported on timber-bent caps seated on timber columns founded on reinforced concrete strip footings.





Project Study Area (9.24 acres)

0 600 1,200 2,400 Feet

1:24,000

(At original document size of 8.5x11)

N

USGS 7.5-minute Quad: Philo CA (1997)

Stantec

Project Location
T14N, R15W, S11
Mendocino County CA

Prepared by TM on 2020-08-04
TR by CF on 2020-08-07

Client/Project
Quincy Engineering, Inc.
Philo-Greenwood Road over Navarro River Bridge Rehabilitation and Widening Project

Figure No.
1

Title
Project Location

Notes
1. Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
2. Background: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Many of the timber elements of the bridge structure exhibit significant rotting and some approach spans have noticeable sags. Repairs have been previously made in an attempt to prevent further wood splitting and additional stringers have been added to existing wooden stringers. Large cracks occur in the trestle bent footings and concrete used in the arch supports is of poor and deteriorating quality. Large portions of concrete can be removed by hand.

2.3 Project Purpose and Need

The County is proposing to rehabilitate and widen the Bridge No. 10C-0032 on Philo-Greenwood Road over the Navarro River. The County has nominated this bridge for rehabilitation under the federal-aid HBP administered by the Federal Highway Administration through the Caltrans Local Assistance Program. In 2010, Caltrans determined that the bridge was structurally deficient and functionally obsolete due to a variety of factors, including a narrow deck (i.e., one-lane bridge) and rotting timbers. The rehabilitated bridge would meet current design standards of Mendocino County, American Association of State Highway and Transportation Officials (AASHTO), and Caltrans.

2.4 Proposed Project

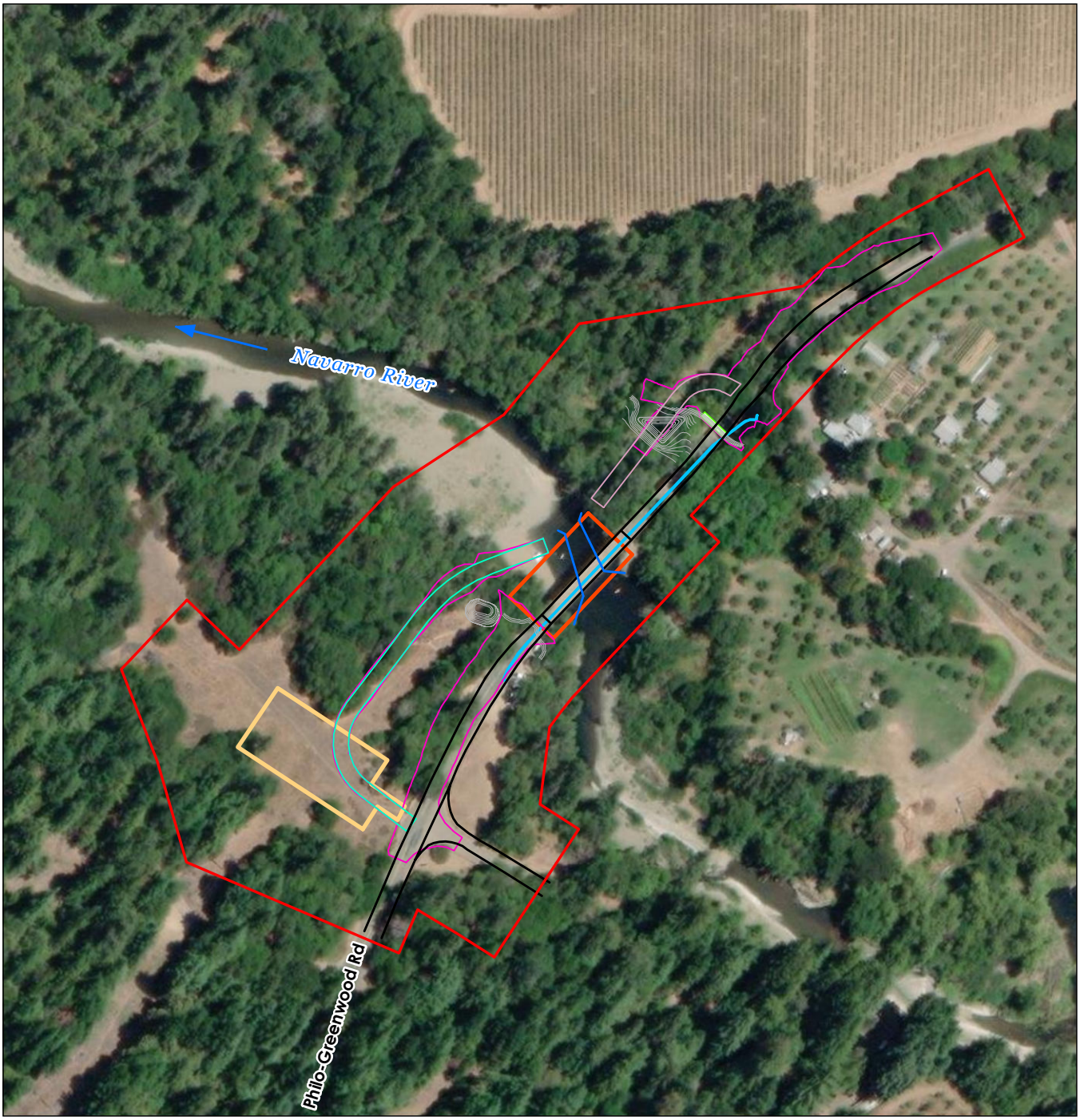
2.4.1 Proposed Project Features

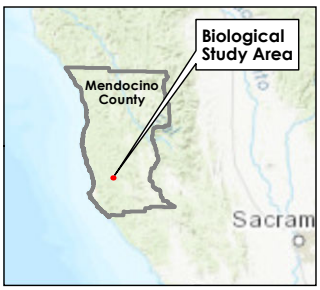
The project layout is shown in Figure 2.

REHABILITATION AND BRIDGE WIDENING

The existing one-lane bridge carries only one lane of traffic and is classified as “functionally obsolete,” with a 2010 Caltrans sufficiency rating of 46.9. The project would consist of rehabilitating and widening the existing open spandrel arch structure using a sister arch constructed downstream of the existing bridge. Project construction would require an additional 5 feet of bridge width to accommodate a raised sidewalk in the final bridge configuration (two 11-foot lanes, two 5-foot shoulders, and a 5-foot sidewalk). This would require a slight shift of the roadway alignment to the northwest of the existing bridge centerline to facilitate bridge widening. A new concrete deck would be constructed across the entire widened structure to allow for improvements in the roadway vertical profile, including conforms to the approach roadway. The timber approach spans would be fully replaced by a new post-tensioned cast-in-place concrete bridge approach structure. A single lane of traffic and pedestrian access would remain open throughout construction through staging and traffic handling. The rehabilitated bridge and approaches would be shifted slightly downstream of the existing bridge centerline to facilitate the bridge widening.

Construction of the superstructure for both the new arch and the new approach bridge would require a temporary system (i.e., falsework) made of timber and steel beams and posts to support concrete formwork and wet concrete until it hardens to become the permanent bridge structure. Long spans of concrete formwork over the river would require a temporary construction trestle beneath the existing bridge. The temporary trestle may be supported on precast elements, timber mats, or clean gravel confined within metal forms/elements. All temporary construction systems and fill materials within the floodplain would be removed upon completion of bridge construction at the end of each construction season.





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1. Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
2. Background: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Project Study Area (9.24)

Project Components

- Pavement Edges
- Proposed Drainage Basin/Contour Grading
- River Diversion
- Construction Access Alternative 1
- Construction Access Alternative 2
- Cut and FIll
- Existing Concrete Arch Bridge to be Widened and Retrofitted (or Replaced)
- Rock Slope Protection
- Staging
- Temporary Trestle

0 50 100 200 Feet
1:2,400
(At original document size of 8.5x11)

N

Stantec

Project Location
T14N, R15W, S11
Mendocino County CA

Prepared by TM on 2022-06-21
TR by CF on 2022-06-21

Client/Project
Quincy Engineering, Inc.
Philo-Greenwood Road over Navarro River Bridge Rehabilitation and Widening Project

Figure No.
2

Title
Project Design

Staggered removal of the exiting timber approach structure and portions of existing concrete arch would occur over the course of two construction seasons to allow for the maintenance of one lane of through traffic as new bridge elements are constructed. Reinforcement and shoring of portions of the existing bridge would also be required to stabilize them for traffic during construction of the adjacent new bridge elements. All project design elements for bridge rehabilitation and widening are depicted on Figure 2.

STORMWATER FACILITIES

Storm water treatment is anticipated at the northwest and southwest areas of bridge approaches and would be installed in Phase 2 (Season 2 described in Section 2.6). Water from the bridge deck and roadway would be piped to detention basins located within the project limits. Stormwater drainage basins are depicted on Figure 2.

RIGHT-OF-WAY

The County currently holds 40 feet of existing ROW on Philo-Greenwood Road that includes the existing roadway and bridge alignment. Additional permanent ROW would likely be required within the project area, extending onto the parcels located on the north side of Philo-Greenwood Road, on both sides of the river. These parcels would also be included in the temporary construction easements that would be needed to accommodate construction activities (Table 1). A shorter bridge barrier protection system than what currently exists may be needed on the southeast corner of the bridge approach in order to reduce impacts on an existing driveway.

Table 1. Right-of-Way Needs

Parcel	Owner	Right-of-Way Needs
026-530-10	Mendocino Redwood Company LLC	Permanent right-of-way and temporary construction easement
026-530-03	Corby Robert & Camille	Permanent right-of-way and temporary construction easement
026-360-01	Corby, Robert & Camille	Permanent right-of-way and temporary construction easement
026-530-04	Bates, Timothy Joel & Karen Marie Ttees	Temporary construction easement
026-360-55	Bates, Timothy Joel & Karen Marie Ttees	Temporary construction easement
026-530-05	State of California	Temporary construction easement
026-530-09	Mendocino Redwood Company LLC	Temporary construction easement

ROCK SLOPE PROTECTIONS

Rock slope protection (RSP) would be used for stabilizing the drainage swale under the north approach structure as depicted on Figure 2.

2.4.2 Other Construction Activities

TEMPORARY DETOUR

During construction, the existing bridge would be single lane and traffic controls (e.g., temporary stop signs or signal controls) would be used to pass traffic through the project area during construction.

UTILITIES

There are several utilities in the project area. Overhead electric and communication lines run parallel to the bridge on the north side of Philo-Greenwood Road. These lines may need to be temporarily relocated or de-energized during the construction of the rehabilitated bridge; to be determined as the design of the project is finalized.

2.5 Project Design Criteria

2.5.1 Contractor Staging Areas/Construction Access Routes

Contractor staging would be located on the west side of Philo-Greenwood Road in the large grass field, south of the bridge. In-stream construction activities would be limited based only on the need to remove the existing bridge supports/piers and construction of any new piers. A clear water diversion would be instituted as necessary.

The project would not involve permanent modification or alteration of the Navarro River; however, a temporary trestle and temporary access road (from staging area to temporary trestle), would be constructed downstream of the bridge to allow construction equipment to gain access into the riverbed.

During construction, the existing bridge would remain a single lane and traffic controls (e.g., temporary stop signs or signal controls) would be used to pass traffic through the project area during construction.

2.5.2 Design Standards

The bridge would be designed in accordance with current AASHTO requirements, the hydraulic design criteria established by Caltrans, and Caltrans bridge design specifications and seismic design criteria.

2.5.3 Equipment

The types of construction equipment and vehicles to be used during construction activities would be determined by the construction contractor. Equipment typically used for this type of project includes pickup trucks, dump trucks, graders, backhoes, excavators, bulldozers, front-end loaders, jack hammers, generators, welders, circular saws, concrete vibrators, compactors, water trucks, truck-mounted drills, concrete delivery trucks, asphalt concrete paving machines, rollers, a crane, and service vehicles. The number of construction workers needed for the project would also be determined by the contractor.

2.6 Tentative Schedule

The project is expected to be constructed in two stages. Stage 1 bridge rehabilitation and widening would include the first half of the bridge and is expected to occur between May 1, 2025, and October 31, 2025. Stage 2 would consist of the second half construction and is expected to occur between May 1, 2026, and October 31, 2026.

For the project, the anticipated construction sequence is as follows:

STAGE 1 CONSTRUCTION (Season 1)

- Relocate utilities off/away from bridge
- Clear and grub project area
- Reduce existing bridge to a single lane and implement detour with temporary stop or signal control providing traffic control
- Install sheet pile and tieback wall
- Excavate abutments and roadway approach to footing depth
- Install water diversion systems and dewater for temporary trestle
- Install work trestle
- Construct the superstructure and falsework
- Removal of the exiting timber approach structure
- Install cast-in-steel-shell abutment and pier pilings
- Install reinforcement, concrete bridge deck, and bridge railing (may occur in Stage 2)
- Remove work trestle (may occur in Stage 2)
- Construct roadway approaches to finish grade level
- Winter shutdown

STAGE 2 CONSTRUCTION (Season 2)

- Relocate utilities (on bridge if appropriate)
- Construct second half of bridge similar to Stage 1
- Remove stream diversion/protection system
- Install storm water basins
- Construct final portion of roadway approaches, railings, striping, signing
- Open all lanes to traffic

2.7 Required Permits and Approvals

The following permit are anticipated to be required to implement the project:

- U.S. Army Corps of Engineers Section 404 Nationwide Permit 14 (Linear Transportation Projects)
- North Coast Regional Water Quality Control Board Section 401 Water Quality Certification
- California Department of Fish and Wildlife Section 1600 Lake or Streambed Alteration Agreement
- California Endangered Species Act Consistency Determination (Fish and Game Code Section 2080.1)
- National Marine Fisheries Service Section 7 Endangered Species Act Consultation

- Caltrans National Environmental Policy Act Determination (Categorical Exclusion [pursuant to 23 CFR 221.117(c)])
- Mendocino County CEQA Notice of Determination to adopt the IS/MND

2.8 Project Alternatives

2.8.1 No Build Alternative

In addition to the project, Mendocino County also considered a “No Project” alternative in its evaluation pursuant to CEQA. Under the No Project alternative, Mendocino County would not proceed with the rehabilitation and widening of the existing Philo-Greenwood Road Bridge. However, Caltrans has identified the existing bridge structure as structurally deficient. Implementation of the No Project alternative could result in future public safety issues and long-term issues associated with the structural integrity of the bridge.

2.8.2 Alternative 1A

Alternative 1A (preferred alternative) would slightly shift the roadway to the northwest of the existing bridge centerline to facilitate a bridge widening. This alignment would allow a lane of traffic and pedestrian access to remain open during two stage bridge construction. The existing arch span would be widened to meet the capacity requirements of the roadway facility and rehabilitated/retrofitted to meet current design load requirements. The arch structure would be widened with a sister arch constructed downstream of the existing bridge. A new concrete deck would be constructed across the entire widened structure to allow for improvements in the roadway. The timber approach spans would be fully replaced by a new post-tensioned cast-in-place three-span concrete approach structure.

2.8.3 Alternative 1B

Alternative 1B is similar to alternative 1A but would replace the timber approach trestle with a 4-span concrete structure.

2.8.4 Alternative 2

Alternative 2 would replace the existing bridge with a two-span cast-in-place post-tensioned box girder bridge on a 1,100-foot radius horizontal curve on a downstream roadway alignment. This alternative would consist of a more significant shift in roadway alignment to the northwest to allow the existing bridge to remain open to traffic while a completely new replacement structure is constructed. This alternative would require more ROW and have a larger footprint area than Alternative 1. Alternative 2 would have substantial permanent environmental impacts on riparian habitat due to the clearing for the new alignment and would require additional ROW acquisition. It is anticipated that this alternative would generate public controversy and would exceed the cost of alternatives 1A or 1B.

3 Environmental Setting, Impacts, and Mitigation Measures

This chapter incorporates the Environmental Checklist contained in Appendix G of the CEQA Guidelines, including the CEQA Mandatory Findings of Significance. Each resource section provides a brief description of the setting, a determination of impact potential, and a discussion of the impacts. Where appropriate, mitigation measures are provided to reduce potential impacts to a less-than-significant level. A discussion of cumulative impacts is included at the end of this chapter.

Addressed in this section are the following 20 environmental categories and mandatory findings of significance:

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

Each of these issue areas was fully evaluated and one of the following four impact determinations was made:

- **No Impact:** No impact to the environment would occur as a result of implementing the project.
- **Less-Than-Significant Impact:** Implementation of the project would not result in a substantial and adverse change to the environment, and no mitigation is required.
- **Less Than Significant with Mitigation Incorporated:** A “significant” impact that can be reduced to a less-than-significant level with the incorporation of project-specific mitigation measures.
- **Potentially Significant Impact:** Implementation of the project could result in an impact that has a “substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project” (CEQA Guidelines Section 15382).

3.1 Environmental Setting

3.1.1 Regional Setting

The project area lies in the unincorporated area of Mendocino County, approximately 2.7 air miles northwest of the town of Philo and approximately 15 air miles west of the city of Ukiah, California. The bridge crosses over the Navarro River, which flows northwest another 23 air miles to the Pacific Ocean just south of the community of Mendocino. Mendocino County is bound by the California coast to the west, Humboldt County to the north, Lake County to the east, and Sonoma County to the south.

3.1.2 Local Setting

The project area is located on Philo-Greenwood Road, a rural road west of the community of Philo that connects Anderson Valley with the Mendocino coast. On the northwest side of the Navarro River, there are rural residential parcels; and on the southeast side, there are private timber lands, the Philo Apple Farm, and Hendy Woods State Park. The Navarro River and the large gravel bar below the bridge is a popular recreation site for local residents.

3.1.3 Climate

Historical data used to describe the climate are collected at Philo, Mendocino County, California. Precipitation in the project region primarily falls as rain, and the average annual rainfall is approximately 37 inches. Air temperatures range from an average January high of 57ºF to an average July high of 93ºF. The year-round average high temperature is approximately 74ºF (Western Regional Climate Center 2020).

3.1.4 Existing Land Uses

Land uses in the project area consist of the existing Philo-Greenwood Road corridor and adjacent rural private and State-owned properties. The Navarro River bisects the project area in a southeast to northwest direction. A private timber company owns most of the undeveloped properties on the west side of the river, with the exception of some State-owned property upstream of the bridge that extends to both the east and west sides of the river—a portion of Hendy Woods State Park. Private land uses on the east side of the river include dispersed residential, orchard, pasture, and cultivated agriculture (i.e., vineyard). These uses are buffered from the road and the river to varying degrees by stands of mature riparian forest. The Hendy Woods State Park entrance intersection is located approximately 300 feet southwest of the existing bridge.

3.1.5 Topography

The Anderson Valley is generally described as nearly level, yet the immediate project topography is characterized by the wide and deep channel of the Navarro River, flanked by terraces and steep hillslopes. The existing bridge deck is approximately 170 feet above mean sea level (amsl). The low-flow channel of the Navarro River and grassy terrace south of the bridge are approximately 135 feet amsl and 178 feet amsl, respectively.

3.1.6 Hydrological Setting

Hydrology in the project area is provided primarily by Navarro River. The Navarro River begins at the confluence of Rancheria Creek and Anderson Creek, approximately 4 miles upstream (southeast) of the project site, and just south of the town of Philo. The river continues to flow northwest before draining into the Pacific Ocean.

3.1.7 Soils

According to the Custom Soil Resource Report for Mendocino County, Western Part. California (Natural Resources Conservation Service 2020), five soil map units occur in the project area. These soil units are described in Table 1.

Table 2. Soil Map Units in the Project Area

Map Unit Name Taxonomy	Map Unit Reference Code	Drainage Class	Depth to Restrictive Layer	Hydric Soils
Gschwend-Frenchman complex, 0 to 9 percent slopes	153	Well-drained	More than 80 inches	No
Ornbaun-Zeni complex, 30 to 50 percent slopes	188	Well-drained	20 to 60 inches to paralithic bedrock	No
Pinole loam, 2 to 9 percent slopes	193	Well-drained	More than 80 inches	No
Pinole loam, 9 to 50 percent slopes	194	Well-drained	More than 80 inches	No
Riverwash	197	Excessively drained	More than 80 inches	No

3.1.8 Geology

The project area is in the Coast Ranges geomorphic province of California. This geomorphic province is characterized by a series of discontinuous northwest-trending mountain ranges that extend from the Klamath Mountains on the north coast of California to the Transverse Ranges to the south. Crest elevations generally range from about 1,000 to 7,500 feet. The Coast Ranges are composed of thick Mesozoic and Cenozoic sedimentary strata that have a complex structure due to intense folding and faulting. (Crawford 2021)

3.1.9 Vegetation Community Types

Vegetation communities are based on descriptions provided in *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer 1988) and the results of a field survey conducted for the project. Six vegetation communities or other habitats occur in the project area: annual grassland, barren/ruderal, montane hardwood-conifer, montane riparian, riverine, and urban. (Stantec 2023) (Figure 3).

ANNUAL GRASSLAND

Annual grassland vegetation occurs primarily on the gently sloping terrace in the southwest portion of the project area. It is characterized as a dense herbaceous layer and is dominated by introduced annual and perennial grass species, including Italian ryegrass (*Festuca perennis*), wild oats (*Avena fatua*), ripgut brome (*Bromus diandrus*), soft brome (*Bromus hordeaceus*), rattail sixweeks grass (*Festuca myuros*), and hare barley (*Hordeum murinum*). Common forbs include broadleaf filaree (*Erodium botrys*), rough cat's ear (*Hypochaeris radicata*), cut-leaved geranium (*Geranium dissectum*), sheep sorrel (*Rumex acetosella*), and blue-eyed grass (*Sisyrinchium bellum*).

BARREN/RUDERAL

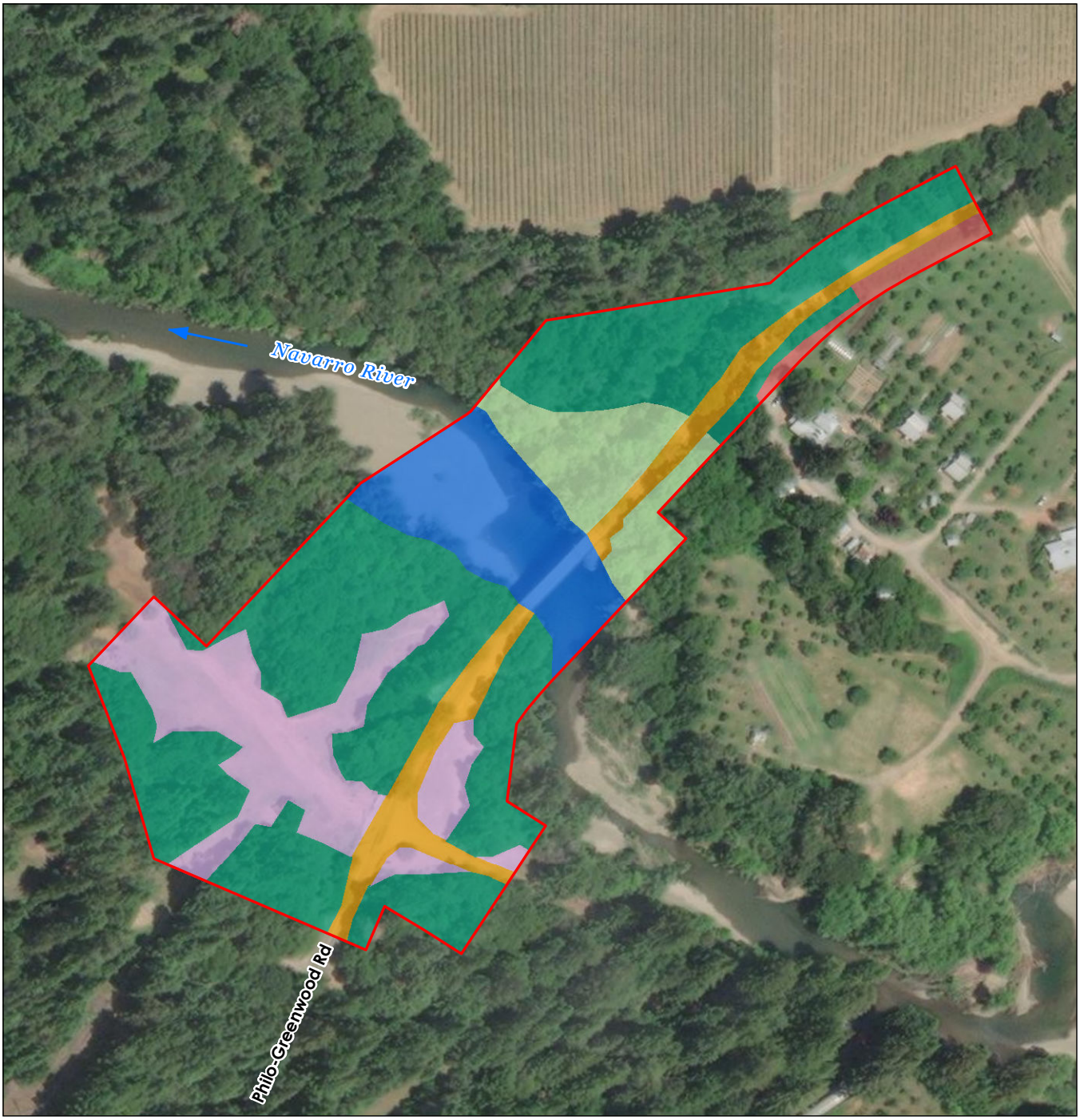
The barren/ruderal community is largely devoid of vegetation and includes the paved roads, road shoulders, a graveled parking area, and gravel driveways. Sparse opportunistic weedy species are present within the unpaved portions of the barren habitat, including ripgut brome and rattail sixweeks grass.

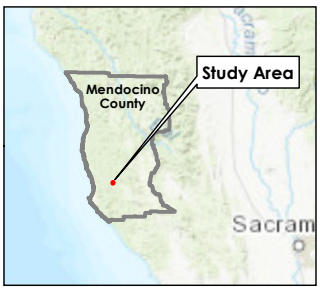
MONTANE HARDWOOD-CONIFER

Montane hardwood-conifer vegetation occurs on the terraces and steep banks above the Navarro River. Interior live oak (*Quercus wislizeni*) dominates the tree canopy in the project area. Other common trees include Pacific madrone (*Arbutus menziesii*), black oak (*Quercus kelloggii*), Oregon oak (*Quercus garryana*), tanoak (*Notholithocarpus densiflorus*), and Douglas-fir (*Pseudotsuga menziesii*). Common shrubs include California buckeye (*Aesculus californica*), manzanita (*Arctostaphylos manzanita*), blue blossom (*Ceanothus thyrsiflorus*), poison oak (*Toxicodendron diversilobum*), and California bay (*Umbellularia californica*).

MONTANE RIPARIAN

Montane riparian vegetation occurs on the floodplain terrace along the northeast bank of the Navarro River and in isolated patches within the ordinary high water mark (OHWM) channel of the Navarro River. Montane riparian habitat is generally characterized as a dense, multi-layered canopy with a dense understory. Dominant trees on the floodplain terrace include Oregon ash (*Fraxinus latifolia*), California bay, and white alder (*Alnus rhombifolia*). Common shrubs and herbs in the dense understory include California rose (*Rosa californica*), Himalayan blackberry (*Rubus armeniacus*), California blackberry (*Rubus ursinus*), snowberry (*Symphoricarpos albus*), poison oak, wild grape (*Vitis californica*) and horsemint (*Stachys* sp.). Arroyo willow (*Salix lasiolepis*) is the dominant tree species that occurs in the patches of montane riparian within the OHWM channel.





Notes
1. Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
2. Background: ESRI World Imagery Web Mapping Service, Vivid, Maxar, 5/13/2019

Study Area (9.24 acres)

Habitats

- Annual Grassland (1.608 acres)
- Barren/Ruderal (0.862 acre)
- Montane Hardwood-Conifer (4.614 acres)
- Montane Riparian (0.812 acre)
- Riverine (1.153 acres)
- Urban (0.196 acre)

0 50 100 200 Feet
1:2,400
(At original document size of 8.5x11)

N

Stantec

Project Location
T14N, R15W, S11
Mendocino County CA

Prepared by TM on 2020-08-04
TR by CF on 2020-08-07

Client/Project
Quincy Engineering, Inc.
Philo-Greenwood Road over Navarro River Bridge Rehabilitation and Widening Project

Figure No.
3

Title
Habitat Types

This delineation of waters of the United States is subject to verification by the U.S. Army Corps of Engineers (Corps). Stantec advises all parties that the delineation is preliminary until the Corps provides a written verification.

RIVERINE

Riverine community is present as the flowing channel of the Navarro River and gravel bars within the OHWM. The substrate is gravel, rock, and sand; and there are large rock outcrops along the steep channel banks throughout the project area. This habitat is largely devoid of vegetation but does include a few scattered clumps of torrent sedge (*Carex nudata*) and willow saplings within the project area. The Navarro River is habitat for several species of fish, amphibians, and reptiles, including Navarro roach (*Lavinia symmetricus navarroensis*), coho salmon (*Oncorhynchus kisutch*), steelhead (*Oncorhynchus mykiss irideus*), western toad (*Anaxyrus boreas*), Pacific chorus frog (*Pseudacris regilla*), and common garter snake (*Thamnophis sirtalis*).

URBAN

Parts of the parcels on the west side of the river show signs of previous development. Although there are no buildings or houses remaining in this part of the project area, it is bisected by a utility corridor and continues to support a diverse mix of trees, ornamental shrubs and herbaceous species including both ornamental and vegetable gardens, and interspersions of bare ground that are indicative of the past presence of human created elements.

3.2 Environmental Impacts and Mitigation Measures

3.2.1 Aesthetics

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	—	—	**Yes**	—
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	—	—	**Yes**	—
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	—	—	**Yes**	—
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	—	—	**Yes**	—

DISCUSSION OF IMPACTS

a) **Less-Than-Significant Impact.** The Mendocino County General Plan does not designate any scenic vistas in the vicinity of the project site (Mendocino County 2009). The project proposes to rehabilitate and widen the existing arch bridge over Navarro River. The project would preserve an architectural arch that is popular with residents and visitors. In addition, implementation of the project would not result in comparably different views from the existing condition.

b) **Less-Than-Significant Impact.** Removal of montane riparian vegetation would be limited and localized to allow for the slight downstream alignment proposed for the new bridge. The existing arch footing on the eastern bridge abutment would be widened on a rock outcropping. There are no historic structures or buildings; Philo-Greenwood Road is not designated as scenic. State Route 128 in Mendocino County is listed as “eligible” for designation as a scenic highway; however, this highway is not located within the area of the project site (Caltrans 2021).

c) **Less-Than-Significant Impact.** The project is not located in an urbanized area. However, the reach of Navarro River in and immediately adjacent to the project area is a popular informal public river access known as Philo Beach. Local residents and visitors to Hendy Woods State Park commonly visit the site during the prime summer recreation season. Currently, there are no formal public facilities (e.g., restrooms, enhanced parking, designated trails, etc.), but plans to develop public facilities are underway, led by the Anderson Valley Land Trust. Although the aesthetics and visual landscape centered on the existing bridge and the river, and experienced by recreational user, would be affected by project construction, rehabilitation of the existing structure would retain the current aesthetic to the extent practicable. Construction activities could have short-term effects on the visual character and quality of the project area. Exposed and disturbed areas of the creek bank and construction area would be restored, and new vegetation would be replanted. The proposed project would have a less-than-significant impact on the quality of public views in the project area.

d) **Less-Than-Significant Impact.** Construction would temporarily increase the potential for glare emanating from the project area due to the presence of construction equipment and removal of vegetation. There would be some potential for additional glare to occur resulting from the permanent removal of vegetation to create the new bridge approaches; however, this would be a localized, seasonal occurrence. The project would not introduce any new light sources or materials prone to glare. Although the new safety rail would be metal, it would be made of non-glare material. Because the bridge would generally follow the existing alignment, headlights of vehicles traveling through the area would result in no new impacts and would be buffered by surrounding vegetation, topography, and the absence of any sensitive receptors (e.g., residences) in line with the road.

MITIGATION MEASURES

No project-specific mitigation is required under this subject.

3.2.2 Agricultural 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 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 and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?	—	—	**Yes**	—
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	—	—	**Yes**	—
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))?	—	—	—	**Yes**
d) Result in loss of forest land or conversion of forest land to non-forest use?	—	—	—	**Yes**
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use, or conversion of forest land to non-forest use?	—	—	**Yes**	—

DISCUSSION OF IMPACTS

a) **Less-Than-Significant Impact.** Proposed contractor staging and construction access roads would temporarily impact designated Grazing Land on the northwest side of bridge and to a lesser degree near the northeast corner of the bridge and Philo-Greenwood Road corridor (North State Resources 2016). Approximately 1.58 acre of designated Grazing Land would be temporarily impacted during project construction. Because of the presence and movement of construction equipment, these areas would be temporarily unavailable to the landowner. However, this temporary loss of Grazing Land would not have a significant impact on this land use because of the relatively small area of effect and the remaining availability of similar lands in the project vicinity. The project design would include restoration of these temporarily impacted areas to pre-construction conditions to the extent practicable.

b) **Less-Than-Significant Impact.** Approximately 0.12 acre of Williamson Act lands (non-prime agriculture) would be permanently converted to a nonagricultural use as a result of project implementation and 0.86 acre would be temporarily impacted by contractor staging and construction access (North State

Resources 2016). Land adjacent to the project area would not be impacted and would remain under the existing Williamson Act contract. A Farmland Conversion Impact Rating for Corridor Type Projects (NRCS-CPA-106) has been prepared for the project (North State Resources 2016). A preliminary land evaluation and corridor assessment criteria score of 54 (Total Site Assessment Points) indicates that the project would have minimal impact on Important Farmland.

c) **No Impact.** The project would not cause rezoning of forestland, timberland, or timberland zoned for timber production. The project area is not zoned for timber production or as forest land (County of Mendocino 2023). Neither construction nor operation of the project would conflict with zoning regulations for forest land, result in the loss of forest land, or result in the conversion of forest land to non-forest use.

d) **No Impact.** There is no designated forestland or timberland in the Project area. The Project would not result in loss of forest land or conversion of forest land to non-forest use.

e) **Less-Than-Significant Impact.** The project would temporarily impact 1.58 acre of Grazing Land and permanently impact 0.18 acre of Grazing Land and Unique Farmland. However, the Farmland Impact Assessment prepared by North State Resources, Inc., (2016) identified that the project would have minimal impact on farmland. Project implementation is not anticipated to result in the conversion of any additional surrounding farmlands to a nonagricultural use outside of the 0.18 acre that would be converted to roadway.

MITIGATION MEASURES

No project-specific mitigation is required under this subject.

3.2.3 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.

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

DISCUSSION OF IMPACTS

a) **Less-Than-Significant Impact.** Air pollution control would conform to Caltrans Standard Specifications, which state that the contractor will comply with all applicable air pollution control rules, regulations, ordinances, and statutes.

b) **Less Than Significant with Mitigation Incorporated.** Mendocino County is currently a state non-attainment area for particulate matter (PM_{10}) (California Air Resources Board 2020). Construction activities associated with the project would result in a relatively minor net increase in PM_{10}. While the amount of PM_{10} generated by the project would be minor, it would nevertheless be considered a significant impact because of the Mendocino County Air Quality Management District's (AQMD) current non-attainment status for particulate matter. In addition to adhering to Caltrans Standard Specifications and Mendocino County AQMD's Particulate Matter Attainment Plan (Mendocino County Air Quality Management District 2005) for air quality, implementation of Mitigation Measure (MM) #1—Air Quality/Dust Control would reduce this impact to a less-than-significant level.

c) **No Impact.** There are no identified sensitive receptors (e.g., residences) within the project area. Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations and there would be no impact.

d) **Less-Than-Significant Impact.** Construction activities would involve the use of gasoline- or diesel-powered equipment that emit exhaust fumes. These activities would take place intermittently throughout the workday, and the associated odors would be expected to dissipate within the immediate vicinity of the work area. The infrequency of the emissions, rapid dissipation of the exhaust into the air, and short-term nature of the construction activities would result in less-than-significant odor impacts. Operational impacts on air quality would be consistent with existing conditions.

MITIGATION MEASURES

Mitigation Measure #1 – Air Quality/Dust Control

The following measures will be implemented to avoid or minimize the potential for adverse impacts on air quality:

MM1 In the construction bid documents, the County will include provisions that the contractor will implement a dust control program to limit fugitive dust emissions. The dust control program will include but not be limited to the following elements, as appropriate:

- Water inactive construction sites and exposed stockpiles at least twice daily (including non-workdays) or until soils are stable. Water will not be withdrawn or diverted from streams with anadromous fish or from non-fish bearing streams that help to maintain aquatic habitat.
- Pursuant to California Vehicle Code, Section 23114(c)(4), all trucks hauling soil and other loose material to and from the construction site will be covered or will maintain at least 6 inches of freeboard (i.e., minimum vertical distance between the top of the load and the trailer).

- Any topsoil removed during construction will be stored on-site in piles no higher than 4 feet to preserve the seed bank and allow development of microorganisms prior to replacing the soil in the construction area. The topsoil piles will be clearly marked and flagged. Topsoil piles that will not immediately be used in the construction area will be revegetated with a non-persistent erosion and sediment control mixture.
- Soil piles for backfill will be marked and flagged separately from native topsoil stockpiles. These soil piles will also be surrounded by silt fencing, straw wattles, or other sediment barriers or covered unless they are to be used immediately.
- All stockpiles, dirt and gravel roads, and exposed or disturbed soil surfaces will be watered by hand or with watering equipment, as necessary to reduce airborne dust.

Timing/Implementation: During construction
Enforcement: County
Monitoring: County and/or its contractor

3.2.4 Biological Resources

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	—	**Yes**	—	—
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	—	**Yes**	—	—
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?	—	**Yes**	—	—
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?	—	**Yes**	—	—
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	—	—	—	**Yes**

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

DISCUSSION OF IMPACTS

a) **Less than Significant with Mitigation Incorporated.** A Biological Assessment/Essential Fish Habitat Assessment was prepared for the project by Stantec in 2021. A delineation of waters of the United States and delineation of wetlands and streams under the California Coastal Act were prepared by Stantec in 2020. Collectively, these studies were used to assess the project impacts on special-status biological resources known to occur in the project area and the results are outlined in the project's Natural Environment Study (Stantec 2023).

Special-Status Plants

A botanical survey conducted on April 23, June 18, and June 20, 2012, and July 13, 2020, concluded that no special-status plant species occur in the project area. Based on habitat assessment, the project area provides potential habitat for five special-status plant species, but these species were not observed during the botanical surveys and are not likely to occur. Thus, implementation of the project would not adversely affect special-status plant species and impacts would be less than significant.

Special-Status Animals

The following special-status fish and wildlife species could use the habitats in the project area or immediate vicinity.

Fish

- Central California Coast evolutionarily significant unit (ESU) coho salmon (*Oncorhynchus kisutch*) – Federally listed as Endangered; State-listed as Endangered
- Northern California distinct population segment (DPS) steelhead (*Oncorhynchus mykiss irideus*) – Federally listed as Threatened
- California Coastal ESU Chinook Salmon (*Oncorhynchus tshawytscha*) – Federally listed as Threatened
- Navarro roach (*Lavinia symmetricus navarroensis*) - State Species of Special Concern

Amphibians and Reptiles

- Foothill yellow-legged frog (*Rana boylii*) – State Species of Special Concern
- Northern red-legged frog (*Rana aurora*) – State Species of Special Concern
- Red-bellied newt (*Taricha rivularis*) – State Species of Special Concern

Birds

- Bald eagle (*Haliaeetus leucocephalus*) - State Endangered; State Fully Protected
- Northern goshawk (*Accipiter gentilis*) – State Species of Special Concern
- Vaux's swift (*Chaetura vauxi*) – State Species of Special Concern
- Olive-sided flycatcher (*Contopus cooperi*) – State Species of Special Concern
- Purple Martin (*Progne subis*) – State Species of Special Concern
- Long-eared owl (*Asio otus*) – State Species of Special Concern
- White-tailed kite (*Elanus leucurus*) – State Fully Protected Species,
- Yellow warbler (*Dendroica petechia*) – State Species of Special Concern

Mammals

- Sonoma tree vole (*Arborimus pomo*) – State Species of Special Concern
- Western red bat (*Lasiurus blossevillii*) – State Species of Special Concern
- Northern California/Southern Oregon DPS fisher (*Pekania pennanti*) – State Species of Special Concern
- Pallid bat (*Antrozous pallidus*) – State Species of Special Concern
- Ring-tailed cat (*Bassariscus astutus*) – – State Fully Protected Species
- None of these species were incidentally observed in the project area during the biological field surveys.

Fish. The Biological Assessment/Essential Fish Habitat Assessment report (Stantec 2021) determined that the project may affect and is likely to adversely affect the Central California Coast ESU coho salmon, Northern California DPS steelhead, and California Coastal ESU Chinook salmon due to increased turbidity and suspended sediment during diversion installations and potential stormwater runoff; hazardous materials exposure from accidental spill of lubricants and fuels; impaired fish passage conditions due to the installation of temporary diversions and bridge demolition acoustic disturbance; fish handling for relocation to prevent entrapment and injury during installation of stream diversions; and change in streamside vegetation providing stream shading. *Mitigation Measure #2 –Special-Status Fish Species*, *Mitigation Measure #3 – Fish Rescue and Exclusion, Mitigation Measure #4 – Hydroacoustic Monitoring*, *Mitigation Measure #5 – Gravel Containment, Turbidity Control, and Monitoring*, *Mitigation Measure #6 – Erosion and Sedimentation Control*, *Mitigation Measure #7 – Prevention of Accidental Spills*, *Mitigation Measure #8 – Replacement of Lost Riparian Habitat*, and *Mitigation Measure #9 – Prevention of Spread of Invasive Species* (described in Sections 3.2.2 through 3.2.9, respectively) will be implemented to reduce potential impacts on special-status fish species to a less-than-significant level. Project operation would be consistent with existing conditions and would have no impact on special-status fish species.

Amphibians and Reptiles. The streams and associated riparian habitat in and near the project area provide potential habitat for foothill yellow-legged frog, northern red-legged frog, and red-bellied newt. The project could adversely affect these special-status amphibian species if individuals are present in the project area during construction. Potential direct effects include harassment, injury, and morality of individuals due to equipment and vehicle traffic. Indirect effects could occur if construction activities result in degradation of aquatic habitat and water quality due to erosion and sedimentation, accidental fuel leaks, and spills. *Mitigation Measure #6 – Erosion and Sedimentation Control* (described in Section

3.2.6)*, Mitigation Measure #7 – Prevention of Accidental Spills* (described in Section 3.2.7)*, Mitigation Measure #8 – Replacement of Lost Riparian Habitat* (described in Section 3.2.8), *Mitigation Measure #10 – General Measures for Protection of Special-Status Wildlife Species* (described in Section 3.2.10), and *Mitigation Measure #11 –Special-Status Amphibian Species* (described in Section 3.2.11) will be implemented to reduce impacts to a less-than-significant level. Project operation would be consistent with existing conditions and would have no impact on these species.

Special-Status Birds and Migratory Birds and Raptors. The project area and vicinity provide potential nesting and foraging habitat for various bird species, including special-status birds and other migratory birds and raptors. Special-status bird species that could use these habitats include bald eagle, northern goshawk, Vaux's swift, olive-sided flycatcher, purple martin, long-eared owl, white-tailed kite, and yellow warbler. Other protected birds including migratory birds and raptor species may also occur and could nest in the project area and vicinity.

Construction activities (e.g., vegetation removal and equipment noise) would occur during the avian breeding season (generally February through August, depending on the species) and could disturb nesting birds in or adjacent to the project area. Construction-related disturbance could result in the incidental loss of fertile eggs or nestlings or nest abandonment, which could affect local and regional populations of affected birds, resulting in a significant impact. Foraging birds and individuals present in or adjacent to the project area outside of the avian breeding season would not be adversely impacted by construction activities due to their mobility and availability of habitat outside of the project area. *Mitigation Measure #12 –Special-Status Birds and Migratory Birds and Raptor Species* (described in Section 3.2.12) will be implemented to reduce potential impacts on special-status birds and migratory birds and raptors to a less-than-significant level. Project operation would be consistent with existing conditions and would have no impact on these species.

Sonoma Tree Vole, Northern California/Southern Oregon DPS Fisher*.* The project area contains habitat for both Sonoma tree vole and Northern California/Southern Oregon DPS fisher within the mixed hardwood-conifer forest. The Sonoma tree vole typically constructs nests from Douglas-fir needles either on a whorl of limbs against the trunk or at the outer limits of the branches. Northern California/Southern Oregon DPS fisher will den in cavities, brush piles, hollow logs, under upturned trees, snags. Although no snags or hollow logs were observed during the 2020 biological field survey, conditions may change before construction begins. Temporary noise disturbance generated by construction could indirectly affect these species as well. Therefore, *Mitigation Measure #13 – Sonoma Tree Vole, Ring-Tailed Cat, and Northern California/Southern Oregon Distinct Population Segment Fisher* (described in Section 3.2.13) and *Mitigation Measure #8 – Replacement of Lost Riparian Habitat* (Section 3.2.8) will be implemented to reduce potential impacts to a less-than-significant level. Project operation would be consistent with existing conditions and would have no impact on these species.

Ring-Tailed Cat. Ring-tailed cat occurs in riparian habitats and in brush stands of most forest and shrub habitats. Brush present in the riparian habitat provide potential denning sites for ring-tailed cat. Several woodrat nests were observed throughout the project area during the 2020 biological field survey, which also may provide denning habitat for ringtail. Direct impacts on ring-tailed cat could occur from tree removal and vegetation removal if it takes place during the natal and maternal denning period (May 1 through June 30). Therefore, *Mitigation Measure #13 – Sonoma Tree Vole, Ring-Tailed Cat, and Northern California/Southern Oregon Distinct Population Segment Fisher* (described in Section 3.2.13) will be

implemented to reduce the potential impacts to a less-than-significant level. Project operation would be consistent with existing conditions and would have no impact on this species.

Pallid Bat and Western Red Bat*.* The bridge over Navarro River does contain cavities suitable for day roosting bats or maternal colonies. Additionally, individual bats may use sections of the bridge as night roosts and the annual grassland, riverine, and riparian habitat in or near the project area could provide potential foraging habitat. Bats may roost individually or in small groups in tree cavities or in riparian vegetation or on the bridge at night. Due to the ability of individual bats to move away from disturbance, direct impacts on bats are not expected when the bats are not in a maternity colony. If construction occurs on the bridge at night when bats may use it as a night roost, indirect effects may occur. Therefore, *Mitigation Measure #14 – Pallid Bat and Western Red Bat* (described in Section 3.2.14) will be implemented to reduce potential impacts on bats to a less-than-significant level. Project operation would be consistent with existing conditions and would have no impact on bat species.

b) **Less than Significant with Mitigation Incorporated.** Riparian habitat is considered a sensitive natural community by the U.S. Army Corps of Engineers, California Department of Fish and Wildlife (CDFW), and the County, and is present in the project area. The project is estimated to result in temporary impacts on approximately 0.01 acre of montane riparian habitat and permanent impacts on approximately 0.22 acre of montane riparian habitat (Stantec 2023). Temporary impacts would result from temporary construction access and would potentially involve tree removal. Temporary impacts on riparian habitat will be restored at a 3:1 ratio as outlined in *Mitigation Measure #8 – Replacement of Lost Riparian Habitat* (described in Section 3.2.8). Impacts would be less than significant with mitigation incorporated.

c) **Less than Significant with Mitigation Incorporated.** Stantec conducted a delineation of potential waters of the United States in the project area on June 18, 2012, October 11, 2013, and July 13, 2020, and a delineation of wetlands and streams under the California Coastal Act was completed by Stantec in September 2020 (Stantec 2020). The project is estimated to result in temporary impacts on 0.370 acre (292 linear feet) of perennial stream, 0.001 acre (38 linear feet) of intermittent stream, 0.002 (23 linear feet) of ephemeral stream, 0.033 acre of seasonal wetland, and 0.008 acre of riparian wetland. In addition to *Mitigation Measure #6 – Erosion and Sedimentation Control*, *Mitigation Measure #7 – Prevention of Accidental Spills*, *Mitigation Measure #8 – Replacement of Lost Riparian Habitat*, and *Mitigation Measure #9 – Prevention of Spread of Invasive Species* (described in Sections 3.2.6 through 3.2.9, respectively); *Mitigation Measure #15 – Wetlands and Other Waters of the U.S./Waters of the State* (described in Section 3.2.15) will be implemented to reduce potential impacts on wetlands and other waters of the United States/waters of the state to a less-than-significant level.

d) **Less than Significant with Mitigation Incorporated.** Installation of temporary stream diversion/protection structures for project construction could potentially impede fish passage due to channel restriction and obstruction. However, the temporary diversions would be constructed in a manner to maintain the natural, wetted, base-flow, channel cross-sectional area to minimize hydraulic changes and allow unimpeded fish movement. Additionally, any channel and floodplain areas temporarily affected by installation of stream diversion/protection measures and construction excavations would be returned to their pre-construction condition. *Mitigation Measure #2 – Special-Status Fish Species* (described in Section 3.2.2) will restrict in-stream work to the period between June 15 and October 15 to protect the most vulnerable life stages of special-status fish species occurring within the project area. This seasonal work window would avoid the salmonid spawning season as it correlates to a period of the year when

juvenile salmonid abundance is at its lowest. This work window also avoids the late fall-winter migration period for adult salmon that may migrate through the project area to upstream spawning grounds, and the peak spring to early summer smolt out-migration. Additionally, *Mitigation Measure #2 – Special-Status Fish Species* (described in Section 3.2.2) will provide for the free movement of fish through the project area if they were to occur; and *Mitigation Measure #3 – Fish Rescue and Exclusion* (described in Section 3.2.3) will minimize the potential for entrapment of fish within the project area. Therefore, the project would not adversely affect the movement of fish species or impede the use of nursery sites and impacts would be less than significant with mitigation incorporated.

e) **No Impact.** The project will comply with the goals and objectives described in the County's General Plan, including measures for water quality and biological resources protection. The project would not conflict with any local biological resource policies or ordinances.

f) **No Impact.** Currently, there are no adopted Habitat Conservation Plans, Natural Community Conservation Plans, or other approved habitat conservation plans that cover the project area. The project would have no impact on local, regional, or state conservation plans.

MITIGATION MEASURES

Mitigation Measure #2 – Special-Status Fish Species

The following measures will be implemented to avoid or minimize the potential for significant impacts on special-status fish species:

MM2-1 The County will adhere to a limited operating period during the low-flow season between June 15 and October 15 for all in-stream construction work and any dewatering of the stream channel. Prior to October 15, the temporary water exclusion/cofferdam structures and temporary gravel fills will be removed from the active channel and floodplain.

MM2-2 The County will sequence dewatering and fish relocation activities to minimize effects, including installing fish exclusion (e.g., block nets if conditions allow); incrementally dewatering the stream to minimize stranding; seining/ other capture and removal according to guidelines set by NMFS (NMFS 2001) and CDFW (Flosi et al. 2010).

MM2-3 Captured fish will be kept in cool, shaded, aerated water, protected from overcrowding or other stressors, and separated by age classes to minimize predation and quickly relocated to another stream reach specified by NMFS or CDFW biologists.

MM2-4 The County will implement erosion and sediment control measures, including a stormwater pollution prevention plan, consistent with provisions of Caltrans Standard Specifications Section 20-2 and 20-3.

MM2-5 The County will use clean gravels of a size suitable for spawning salmon to create all vehicle access paths and work pads within the original high water mark of the stream channel with minimal channel disturbance. Gravel fills will be designed and installed to maintain sufficient width of natural channel through so as not to adversely change the flow characteristics (i.e., velocity, depth, width) of the water as it flows through the project area.

MM2-6 The water exclusion/cofferdam structures and temporary trestle crossing will be designed according to guidelines outlined in NMFS (2001) using the channel design methods to the extent practicable. The present design of work pad installation includes a 20-foot wide clear, open channel between the retained fill on opposite banks to accommodate the typical range of summer river flows and not adversely affect hydraulic conditions for fish passage. It should be noted that the structures will only be in place during the summer in-water work period when little or no movement of adults or juveniles is expected but would still be installed to facilitate the free movement of fish if they were to occur in the project area.

MM2-7 The County will remove any crushed rock used to surface in-channel access paths and work pads but leave the clean spawning-sized gravels in the channel graded to conform to the natural streambed contours at the end of in-channel construction.

MM2-8 All fuel storage and refueling sites, concrete washouts, and any other hazardous materials will be stored on the top of the bank at least 50 feet from surface water and secured with containment structures (e.g., berms).

MM2-9 The County will minimize disturbance of riparian vegetation and replant any riparian areas that must be cleared or otherwise disturbed according to the project's Mitigation and Monitoring Plan.

MM2-10 All construction equipment, pumps with NMFS and CDFW approved intake screens, hand tools, and personnel protective equipment that is to be used in the stream channel will be subjected to inspection and appropriate treatments to prevent the spread of invasive plant and aquatic invertebrate species.

MM2-11 In accordance with Term and Condition 2.9.4.1 of the NMFS May 5, 2022, Biological Opinion (Consultation No. WCRO-2021-02768):

- County will retain a qualified biologist with expertise in the areas of anadromous salmonid biology, including handling, collecting, and relocating salmonids; salmonid/habitat relationships; and biological monitoring of salmonids. All fisheries biologists working on this project will be qualified to conduct fish collections in a manner which minimizes all potential risks to ESA-listed salmonids.

- The fisheries biologist will monitor the construction site during placement and removal of cofferdams, and sediment catchment basins so that any adverse effects on salmonids are minimized. The biologist will be on-site during all dewatering events in anadromous fish streams so that all ESA-listed salmonids are captured, handled, and relocated safely. During fish relocation activities the fisheries biologist will contact NMFS North Coast Branch staff at 707-575-6050, if mortality of federally listed salmonids exceeds 3 percent of the total for each species collected, at which time NMFS will stipulate measures to reduce the take of salmonids.

- If ESA-listed fish are handled, it will be with extreme care, and they will be kept in water to the maximum extent possible during rescue activities. All captured fish will be kept in cool, shaded, aerated water protected from excessive noise, jostling, or overcrowding

any time they are not in the stream and fish will not be removed from this water except when released. To avoid predation the biologist will have at least two containers and segregate young-of-year salmonids from larger age classes and other potential aquatic predators. Captured salmonids will be relocated as soon as possible to a suitable in-stream location (preapproved by NMFS) where suitable habitat conditions are present to allow for survival of transported fish and fish already present.

- Non-native fish that are captured during fish relocation activities will not be relocated to anadromous streams, or areas where they could access anadromous habitat.

MM2-12 In accordance with Term and Condition 2.9.4.2 of the NMFS May 5, 2022, Biological Opinion (Consultation No. WCRO-2021-02768):

- County will allow any NMFS employee(s), or any other person(s) designated by NMFS to accompany field personnel to visit the project site during activities described in the Biological Opinion.
- Upon project completion, County will revegetate access roads and repair bank areas to pre-project slope and form. Between construction seasons, access roads will be made inaccessible to vehicles in order to prevent access to the river channel.
- Construction equipment used within the river channel will be checked each day prior to work within the river channel (top of bank to top of bank) and, if necessary, action will be taken to prevent fluid leaks. If leaks occur during work in the channel, County or their contractors will contain the spill and remove the affected soils.
- Once construction is completed, all project-introduced material will be removed, leaving the river as it was before construction. Excess materials will be disposed of at an appropriate upland disposal site. Minor grading to return the channel to pre-project form can be performed if necessary.

MM2-13 In accordance with Term and Condition 2.9.4.3 of the NMFS May 5, 2022, Biological Opinion (Consultation No. WCRO-2021-02768):

- County will implement measures to minimize road generated runoff to Navarro River by diverting road surface flow to vegetated areas between the road and the stream channel.
- Measures will be implemented to reduce runoff from the bridge deck to the Navarro River.
- Any structures such as relief ditches, grading to direct flow, other diversion structures will receive regular long-term maintenance, with a focus on early fall to reduce runoff from the first rains that cause flush of materials accumulated from the summer months.

MM2-14 In accordance with Term and Condition 2.9.4.4 of the NMFS May 5, 2022, Biological Opinion (Consultation No. WCRO-2021-02768):

- **Project Construction and Fish Relocation Report** – Caltrans must provide a written report to NMFS by January 15 of the year following each construction season. The report must be submitted to NMFS' North Central Coast Office, Attention: North Coast Branch Chief, 777 Sonoma Avenue, Room 325, Santa Rosa, California, 85404-6528. The report must contain, at minimum, the following information:

    - **Construction-related activities** – The report(s) must include the dates construction began and was completed; a discussion of any unanticipated effects or unanticipated levels of effects on salmonids, including a description of any and all measures taken to minimize those unanticipated effects had any effect on ESA-listed fish; the number of salmonids killed or injured during the project action; and photographs taken before, during, and after the activity from photo reference points.

    - **Fish relocation** – The report(s) must include a description of the location from which fish were removed and the release site(s) including photographs; the date and time of the relocation effort; a description of the equipment and methods used to collect, hold, and transport salmonids; if an electrofisher was used for fish collection, a copy of the logbook must be included; the number of fish relocated by species; the number of fish injured or killed by species and a brief narrative of the circumstances surrounding ESA-listed fish injuries or mortalities; and a description of any problems which may have arisen during the relocation activities and a statement as to whether or not the activities had any unforeseen effects.

- **Post-Construction Vegetation Monitoring and Reporting** – Reports documenting post-project conditions of vegetation installed at the site will be prepared and submitted annually for the first five years following project completion. Reports will document vegetation health and survivorship and percent cover, natural recruitment of native vegetation (if any), and any maintenance or replanting needs. Photographs must be included. If poor establishment is documented, the report must include recommendations to address the source of the performance problems. Annual reports will be sent to the address above in MM2-13a.

Timing/Implementation:	Prior to, during construction, and after construction
Enforcement:	County
Monitoring:	County and contractor

Mitigation Measure #3 – Fish Rescue and Exclusion

The following measures will be implemented to avoid or minimize the potential for significant impacts on special-status fish species:

MM3-1 Prior to any construction activities occurring within the wetted river channel (e.g., for constructing temporary detour crossing, gravel work pads, and coffer dams surrounding pile installation and demolition sites), fish will be removed from work areas. Fish exclusion and removal may require installation of block nets, turbidity curtains, and/or coffer dam enclosures and subsequent fish salvage of the enclosed areas prior to any dewatering and/or in-water work.

MM3-2 Physically captured and/or handled fish will be collected and released in nearby suitable habitat with comparable habitat and water quality conditions. While the likelihood of special-status fish species to be present in the project area during the in-channel work window is small, all translocation/removal of listed and non-listed fishes will be conducted by qualified fisheries biologists to minimize potential adverse effects on any fish present. Fish and herpetofauna will be captured using seines, dip nets, and by hand. Animals will be handled with extreme care and holding times will be minimized. Large buckets (5-gallon) with fitted covers and aerated water will be used to hold and transport capture fish to release sites. Fish will be segregated by size in separate buckets, as necessary, to prevent predation of small fish by larger fish. Fish will not be subjected to excessive jostling and noise, will not be overcrowded in buckets, and water temperature will be monitored and prevented from increasing more than 4 degrees Fahrenheit (ºF) (i.e., 2 degrees Celsius). Records of species, life stages, numbers and disposition of all fish captured will be kept and reported to regulatory agencies.

MM3-3 The Dewatering and Fish Salvage Plan (Appendix C of the Biological Assessment/Essential Fish Habitat Assessment report [Stantec 2021]) will be implemented as appropriate.

Timing/Implementation:	Prior to and during construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #4 – Hydroacoustic Monitoring

The following measures will be implemented to avoid or minimize the potential for significant impacts on special-status fish species:

MM4-1 Construction activities within the channel will be restricted to the summer season when the potential for occurrence of listed fish is minimal. Hydroacoustic monitoring during any use of a hoe-ram during bridge removal or abutment construction would be conducted to provide compliance with the terms and conditions resulting from Section 7 ESA consultation with NMFS and provide an opportunity to adopt alternative construction methods to avoid or minimize project impacts, where practicable. To minimize adverse effects of underwater noise on listed fishes, hydroacoustic levels will be monitored to manage and maintain operations during exceedances of adverse sound threshold limits for aquatic life.

NMFS and Caltrans have agreed on acoustic thresholds for peak pressure 206 decibels (dB) and cumulative sound exposure levels of 187dB cumulative sound exposure level (cSEL) for fish 2 grams and larger for physiological adverse responses in fish (Caltrans 2015). Encroachment on to these levels would serve to notify the contractor, in real-time, to suspend or modify underwater noise producing activities to minimize exceedances of adverse underwater noise thresholds.

Timing/Implementation:	During construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #5 – Gravel Containment, Turbidity Control, and Monitoring

The project requires placement of gravel fill into portions of the wetted river channel for working pads and trestles installation. Placement of fill into the wetted channel can cause turbidity and possibly entrap, harm or kill fish. This measure describes approaches for preventing/controlling turbidity at levels that would not be harmful to fish. Mitigation Measure 3 (Fish Rescue and Exclusion) describes methods for removing fish from the areas where gravel pads/road approaches will be constructed in the river channel.

The following measures will be implemented to avoid or minimize the potential for significant impacts on special-status fish species:

MM5-1 Sheet piles will be vibrated into the wetted channel to shore gravel fill for the work pads/approaches. Prior to vibrating in sheet piles and placing any gravels into the wetted channel, each such area would be isolated and cleared of fish. Isolating the areas for sheet pile installation and gravel placement can be done using numerous methods including silt fencing, water bladders, concrete blocks with plastic sheeting and/or Super-sacks filled with cleaned gravels. Silt fencing and water bladders can be installed by hand, while concrete blocks or Super-sacks will need to be placed by heavy equipment. The contractor, with approval from the County, NMFS, and CDFW, will choose the containment method that works best for them and conforms to permit requirements; however, no heavy equipment will enter the wetted channel until the area is isolated and cleared of fish.

The general procedure for installing the isolation barrier is to install most of the barrier while keeping a small section open for fish egress/removal. After fish are removed from the isolated area, the isolation barrier will be closed off. Additional turbidity control measures, if needed, will be installed to reduce/prevent turbidity from escaping the containment area (e.g., adding plastic sheeting to concrete blocks, adding a turbidity curtain). Gravels to be used for work pads and/or detour approaches will be pushed out into the isolated portions of river channel, using clean washed gravel, to displace the water until the sheet piles can be placed inside of the containment area. If water within the isolation barrier is deeper than one foot, water will be pumped out to a settling basin created on the floodplain, where sediment will settle out and water can percolate through the gravel bar back to the river channel, as gravel is placed in order to keep turbid water from being displaced through/under the barrier. This operation will be continuously monitored by a biological monitor as needed.

Timing/Implementation:	During construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #6 – Erosion and Sedimentation Control

MM6-1 Erosion and sediment control measures will be implemented during construction of the project. These measures will conform to the provisions in Section 21 of the Caltrans Standard Specifications (2018) and any special provisions included in the contract for the project. Such provisions include the preparation of a Storm Water Pollution Prevention Plan (SWPPP), which will describe and illustrate the types and locations of best management practices

(BMPs) in the project site to be implemented based on local conditions and would require regular inspections and a Rain Event Action Plan.

Erosion and sediment control measures to be included in the SWPPP or to be implemented by the County will include the following:

- To the extent practicable, activities that increase the erosion potential will be restricted to the relatively dry summer and early fall period to minimize the potential for rainfall to transport sediment to surface water features. If these activities must take place during the late fall, winter, or spring, temporary erosion and sediment control structures will be in place and operational at the end of each construction day and will be maintained until permanent erosion and sediment control structures are in place.
- Areas where vegetation needs to be removed will be identified in advance of ground disturbance and limited to only those areas that have been approved by the Mendocino County Department of Transportation. Exclusionary fencing will be installed around areas that are not to be disturbed
- Within 10 days of completion of construction in areas where subsequent ground disturbance will not occur for 10 calendar days or more, weed-free mulch will be applied to disturbed areas to reduce the potential for short-term erosion. Prior to a rain event or when there is a greater than 50 percent possibility of rain within the next 24 hours, as forecasted by the National Weather Service, weed-free mulch will be applied to all exposed areas upon completion of the day's activities. Soils will not be left exposed during the rainy season.
- Suitable BMPs, such as silt fences, straw wattles, or catch basins, will be placed below all construction activities to intercept sediment before it reaches the waterway. These structures will be installed prior to any clearing or grading activities. Sediment accumulation at the base of BMPs will be removed before BMP removal to avoid sediment mobilization. Erosion and sediment control measures that employ monofilament netting will be prohibited within the work area.
- If spoil sites are used, they will be placed where they do not drain directly into a surface water feature, if possible. If a spoil site would drain into a surface water feature, catch basins will be constructed to intercept sediment before it reaches the feature. After construction, spoil sites will be graded and vegetated to reduce the potential for erosion.
- Erosion and sediment control measures will be in place prior to the onset of the rainy season and will be monitored and maintained in good working condition until disturbed areas have been revegetated.
- Any new or previously excavated gravel material placed in the channel will meet Caltrans' cleanness test indicating the relative proportions of clay-sized material clinging to coarse aggregate and screenings (California Test No. 227) with a value of 85 or higher (excluding such materials as soil in the RSP to allow for riparian planting.

- Water removed from the coffer dammed area for east arch foundation removal and abutment footings will be pumped to a temporary sediment retention basin outside of the active channel on the floodplain to allow sediment of settle out and water to percolate through the alluvial floodplain to return to the river channel.

Timing/Implementation:	Prior to and during construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #7 – Prevention of Accidental Spills

MM7-1 Construction specifications will include the following measures to minimize the potential for adverse effects resulting from accidental spills of pollutants (e.g., fuel, oil, grease):

- A site-specific Spill Prevention Plan will be implemented if potentially hazardous materials are used or stored at the construction site. The plan will include the proper handling and storage of all potentially hazardous materials, as well as the proper procedures for cleaning up and reporting any spills. If necessary, containment berms will be constructed to prevent spilled materials from reaching surface water features.
- Equipment and hazardous materials will be stored a minimum of 50 feet away from surface water features.
- Vehicles and equipment used during construction will receive proper and timely maintenance to reduce the potential for mechanical breakdowns leading to a spill of potentially hazardous materials. Maintenance and fueling will be conducted in an area at least 50 feet away from surface water features or within an adequate fueling containment area.
- Equipment operating within the ordinary high water mark will use non-toxic vegetable oil for operating hydraulic equipment instead of traditional hydraulic fluids.
- Place plastic sheeting or tarps under asphaltic concrete paving equipment while not in use, to catch and/or contain drips and leaks.
- Minimize sand and gravel from new asphalt getting into storm drains, streets, and creeks by sweeping. Old or spilled asphalt must be recycled or disposed as approved by the Resident Engineer.
- Asphaltic concrete grindings, pieces, or chunks used in embankments or shoulder backing must not be allowed to enter any storm drain or watercourses. Install silt fence until structure is stabilized or permanent controls are in place.
- Collect and remove all broken asphalt and recycle when practical; otherwise, dispose in accordance with Standard Specification 7-1.13.

- During chip seal application and sweeping operations, petroleum or petroleum covered aggregate must not be allowed to enter any storm drain or water courses. Use silt fence, straw wattles, or other perimeter control measure until installation is complete.
- Use only non-toxic substances to coat asphalt transport truck dump beds and asphalt spreading equipment.
- Drainage inlet structures and manholes will be covered with filter fabric during application of seal coat, tack coat, slurry seal, and/or fog seal.
- Seal coat, tack coat, slurry seal, or fog seal will not be applied if rainfall is predicted to occur during the application or curing period.

Timing/Implementation:	Prior to and during construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #8 – Replacement of Lost Riparian Habitat

The following measures will be implemented to reduce potential impacts on riparian habitat in the project area:

MM8-1 The width of the construction disturbance zone within the riparian habitat will be minimized through careful pre-construction planning.

MM8-2 Exclusionary fencing will be installed along the boundaries of all riparian areas to be avoided to minimize impacts on riparian vegetation outside of the construction area.

MM8-3 Riparian habitat areas temporarily disturbed will be replanted using riparian species that have been recorded along Navarro River near the project area, including white alder (*Alnus rhombifolia*), red alder (*Alnus rubra*), willow (*Salix* spp.), and Oregon ash (*Fraxinus latifolia*).

MM8-4 On-site creation/restoration will occur in areas disturbed during project construction and the amount of habitat created/restored will be at a 3:1 ratio of new plantings for each large woody plant removed that is greater or equal to 6 inches in diameter at breast height. These replanting ratios will help promote successful re-establishment of riparian habitat.

MM8-5 Plant spacing intervals will be determined as appropriate based on-site conditions following construction.

MM8-6 Non-native tree species removed during project construction will be replaced with native riparian species.

MM8-7 Revegetation monitoring will be implemented in compliance with regulatory permit conditions and be initiated immediately following completion of the planting; and will be described within a Riparian Wetland Mitigation and Monitoring Plan to be reviewed and approved by the U.S. Army Corps of Engineers, North Coast Regional Water Quality Control Board, and CDFW. It is anticipated that this plan will provide for a five year monitoring and contingency program to

provide for successful restoration of riparian vegetation. The monitoring surveys will consist of a general site walkthrough evaluating the survival and health of riparian plantings, signs of drought stress, weed or herbivory problems, and the presence of trash or other debris. In the revegetation area, 85 percent or greater survival of planted species (including container stock and hardwood cuttings) will be considered a success when measured at the end of a five year monitoring period. However, greater than 50 percent mortality of planted species will be considered acceptable if "volunteer" native species provide complete vegetation coverage in the mitigation area. If monitoring results indicate that revegetation efforts are not meeting established success criteria, corrective measures will be implemented.

Timing/Implementation:	Prior to, during, and after construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #9 – Prevention of Spread of Invasive Species

The following measures will be implemented to prevent the spread of invasive species:

MM9-1 All equipment used for off-road construction activities will be weed-free prior to entering the project area.

MM9-2 Any mulches or fill used will be weed-free.

MM9-3 Any seed mixes or other vegetative cover used for revegetation of disturbed sites will consist of locally adapted native plant species to the extent practicable.

MM9-4 Any gravels or materials used for the temporary stream diversions will be new, from a local source, or properly disinfected or cleaned prior to installation.

MM9-5 Any equipment (including boots/waders) and construction equipment will be properly disinfected or cleaned according to guidance provided by the State of California Aquatic Invasive Species Management Plan (California Department of Fish and Game 2008) prior to in-stream work to prevent the spread of aquatic invasive species.

Timing/Implementation:	Prior to and during construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #10 – General Measures for Protection of Special-Status Wildlife Species

The following measures will be implemented to avoid or minimize the potential for adverse effects on special-status wildlife species:

MM10-1 Prior to initiation of construction activities, workers will participate in environmental awareness training provided by a qualified biologist. The training will instruct workers about the following: 1) how to identify special-status species, their various life forms, and their habitat components; 2) the potential for these species to be discovered and affected during

construction activities; 3) how to identify sensitive habitats (e.g., nests); and 4) what to do if special-status species are encountered during construction activities.

MM10-2 Construction access and equipment will be located on existing roads or previously disturbed parking areas.

MM10-3 Vehicle speeds within off-road portions of the work area will not exceed 15 miles per hour to avoid collisions with wildlife.

MM10-4 Disturbance of soil, vegetation, naturally occurring debris piles (including fallen trees, woodrat nests, or dead tree snags), rocky outcrops, and existing burrows or crevices will be avoided or minimized to the extent practicable.

MM10-5 To the extent practicable, all holes or trenches will be covered at the end of each workday to prevent wildlife from becoming trapped. All holes and trenches will be inspected before each workday to facilitate the release of any trapped wildlife. A qualified biologist will be consulted if work crews are unable to safely assist in the release of trapped wildlife.

MM10-6 To minimize attractants to wildlife, trash will be stored in containers that can be closed and latched or locked to prevent access by wildlife. All loose trash will be cleaned up daily.

Timing/Implementation:	Prior to and during construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #11 – Special-Status Amphibian Species

The following measures will be implemented to avoid or minimize the potential for adverse impacts on special-status amphibians and reptiles.

MM11-1 A qualified biologist will conduct pre-construction surveys for red-bellied newt, northern red-legged frog, and foothill yellow-legged frogs within the project area. If these species are detected during the pre-construction surveys or at any time during construction, CDFW will be consulted for guidance on further avoidance measures to avoid impacts on the species.

MM11-2 Prior to moving equipment or materials each day, a qualified biologist will inspect underneath and around equipment and other project materials when located within 200 feet of aquatic habitat for red-bellied newt, northern red-legged frog, and foothill yellow-legged frog. If these species are detected, they will be allowed to move out of the construction area under their own volition, or a qualified biologist will relocate them to the nearest suitable habitat that is at least 100 feet outside of the construction impact area.

Timing/Implementation:	Prior to and during construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #12 – Special-Status Birds and Migratory Birds and Raptors

The following measures will be implemented to avoid or minimize the potential for adverse impacts on nesting special-status birds and migratory birds and raptors:

MM12-1 To the extent practicable, vegetation removal should be scheduled to avoid the nesting season (February 1 to August 31) for raptors and other special-status birds. Removal of vegetation outside of the nesting season is intended to minimize the potential for delays in vegetation removal due to active nests.

MM12-2 If construction activities during the nesting season (February 1 to August 31) cannot be avoided, pre-construction surveys for nesting raptors within 500 feet and for other migratory birds within 250 feet of the project area (where accessible) will be conducted by a qualified biologist within 14 days prior to the initiation of construction activities. These surveys may occur on the same day as the pre-construction surveys for other species. Areas to be surveyed will be limited to those areas subject to increased disturbance as a result of construction activities. Areas where existing traffic, human activity, etc., is greater than or equal to construction-related disturbance need not be surveyed. If any active special-status bird, migratory bird, or raptor nests are identified, appropriate conservation measures (as determined by a qualified biologist) will 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 in the vicinity of the active nest site until the young have fledged.

Timing/Implementation:	Prior to and during construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #13 – Sonoma Tree Vole, Ring-Tailed Cat, and Northern California/Southern Oregon Distinct Population Segment Fisher

The following measures will be implemented to avoid or minimize the potential for adverse impacts on Sonoma tree vole, ring-tailed cat, and Northern California/Southern Oregon DPS fisher:

MM13-1 If construction (including the removal of large trees) occurs during the reproductive season (February 1 through September 30), a qualified biologist will conduct a pre-construction survey of suitable nesting habitat for Sonoma tree vole, ring-tailed cat, and Northern California/Southern Oregon fisher within the project area. The pre-construction survey will be performed no more than 14 days prior to the implementation of construction activities (including staging and equipment access). If a lapse in construction activities for 14 days or longer occurs between those dates, another pre-construction survey will be performed. If any active nests are present, removal of trees or other vegetation or structures containing active nests will not occur until it is determined that the young are not dependent on the nest.

Timing/Implementation:	Prior to and during construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #14 – Pallid Bat, Western Red Bat, and Other Bat Species

The following measures will be implemented to avoid or minimize the potential for adverse impacts on pallid bat, western red bat, and other bat species:

MM14-1 To the extent practicable, removal of large trees and removal of the existing timber approach span will occur before maternity colonies form (i.e., prior to March 1) or after young are volant (i.e., after August 15).

MM14-2 Humane bat exclusion devices may be placed over potential bat habitat on the timber approach span of the existing bridge between March 1–April 15 or between September 1–October 15 during the year prior to construction to prevent bats from forming maternity colonies while allowing bats in the bridge to exit safely. Blockage materials should be installed wherever unoccupied crevices or portions of crevices that are 3/8 inch or wider occur between sistered stringers between bents, and where stringers rest atop bent caps. Active roost locations will require fitting with one-way exits to permit bats to emerge from roost crevices but prevent re-entry. If netting is used, it is to be made of thick plastic with no exposed, overlapping joints and the mesh size will not exceed 1/4 inch. Once bats have been excluded, the exclusion devices will be monitored by a qualified bat biologist on a regular basis to confirm they are in good condition and that bats do not recolonize the bridge.

MM14-3 If construction (including the removal of large trees) occurs during the non-volant season (March 1 through August 15), a qualified biologist will conduct a pre-construction survey of the project area for maternity colonies. Surveys will involve visual emergence surveys, acoustic monitoring, and daytime inspection of potential roost habitat within the bridge as conditions allow. The pre-construction survey will be performed no more than 14 days prior to the implementation of construction activities (including staging and equipment access). If a lapse in construction activities for 14 days or longer occurs between those dates, another pre-construction survey will be performed. If any maternity colony is present, bridge construction or tree removal will not occur until it is determined that the young are volant.

MM14-4 In order to replace existing bat roosting habitat that will be removed, during bridge rehabilitation, forgo the bottom closure pour between parallel box girders, and install lightweight concrete panels of sufficient height, width, length, and thickness of the inner walls of the bridge bay in the closure pour along the length of the structure.

MM14-5 Guidance for humane bat exclusion and replacement of bat roosting habitat contained in the *Bat Habitat Assessment and Replacement Habitat Recommendations* memorandum (Appendix C of the *Natural Environment Study* [Stantec 2023]) will be implemented to the extent practicable.

Timing/Implementation:	Prior to and during construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #15 – Wetlands and Other Waters of the U.S./Waters of the State

The following measures will be implemented to avoid or minimize the potential for adverse impacts on wetlands and other waters of the U.S./waters of the state to a less-than-significant level:

MM15-1 Prior to any discharge of dredged or fill material into waters of the U.S./waters of the state, the required permits and authorizations will be obtained from the U.S. Army Corps of Engineers and the Regional Water Quality Control Board. All terms and conditions of the required permits/authorizations will be implemented.

MM15-2 Prior to any activities that would obstruct the flow of, or alter the bed, channel, or bank of any stream or river, a Notification of Streambed Alteration will be submitted to the California Department of Fish and Wildlife (CDFW). If required, a Streambed Alteration Agreement will be obtained from CDFW, and all conditions of the agreement will be implemented.

MM15-3 All wetlands and other waters of the U.S./waters of the state that are temporarily affected by project construction will be restored as close as practicable to their original contour and conditions within 10 days of the completion of construction activities.

MM15-4 Riparian vegetation removal within riparian wetlands will be minimized to the greatest extent practicable. Where practicable, vegetation will be cut with hand tools at ground level to enable regrowth from roots when construction is complete.

Timing/Implementation:	Prior to, during, and after construction
Enforcement:	County
Monitoring:	County and its contractor

3.2.5 Cultural Resources

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	—	—	—	**Yes**
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	—	—	—	**Yes**
c) Disturb any human remains, including those interred outside of formal cemeteries?	—	—	—	**Yes**

DISCUSSION OF IMPACTS

a) **No Impact.** The Historic Property Survey Report for the Philo-Greenwood Road over Navarro River Bridge (10C-0032) Rehabilitation Project, Mendocino County, California (Caltrans 2022) states that no archaeological resources or historic properties were identified in the project area that meet the

significance criteria of the National Register of Historic Places or CEQA Guidelines Section 15064.5. The existing bridge (10C-0032) is listed as a Category 5 bridge by Caltrans and as such does not meet the criteria for listing on the National Register of Historic Places. The project would have no impact on historical resources.

In the event of inadvertent discovery of a historical resource, *Mitigation Measure #16 – Cultural Resources* (described in Section 3.2.16) was incorporated into the project and will be used as needed to reduce any potential impacts on archaeological and historic resources to a less-than-significant level.

b) **No Impact.** The project would have no impact on archaeological resources (Caltrans 2022). In accordance with Public Resources Code sections 5024.1, 5097.94, 21074, and 21080.3, commonly known as Assembly Bill 52, Alta Archaeological Consulting (2022), sent notification letters and a map via mail and email to the Native American tribes who may have knowledge of cultural resources in the area of potential effect on September 1, 2016, and again on November 18, 2021. On September 1, 2016, Alta Archaeological Consulting requested that NAHC review its Sacred Lands database for culturally significant properties.

An Extended Phase I study was conducted and found no occurrences of cultural resources in the project area. The study confirmed that the project's area of potential effect did not contain buried archaeological resources (Alta Archaeological Consulting 2022). Project construction and operation is not anticipated to impact on tribal cultural resources.

In the event of inadvertent discovery of a historical resource, *Mitigation Measure #16 – Cultural Resources* (described in Section 3.2.16) was incorporated into the project and will be used as needed to reduce any potential impacts on archaeological and historic resources to a less-than-significant level.

c) **No Impact.** Human remains were not identified during the archaeological study; however, the potential for encountering human remains during project construction can never be entirely ruled out. State law prescribes protective measures that must be taken if any subsurface human remains are discovered.

Note that *Mitigation Measure #16 – Cultural Resources* (described in Section 3.2.16) will be used in the event of an inadvertent discovery of human remains.

MITIGATION MEASURES

Mitigation Measure #16 – Cultural Resources

The following measure will be implemented to minimize or avoid project-related impacts on cultural resources:

MM16-1 **Inadvertent Discovery of Cultural Resources.** If cultural resources, such as chipped or ground stone, historic debris, building foundations, or bone are discovered during ground disturbance activities, work will be stopped within 20 meters (66 feet) of the discovery, per the requirements of CEQA (Title 14 California Code of Regulations [CCR] 15064.5 (f)) and Section 106 (36 CFR 800.13). Work near the archaeological finds will not resume until a

professional archaeologist who meets the Secretary of the Interior's Standards and Guidelines has evaluated the materials and offered recommendations for further action.

MM16-2 **Inadvertent Discovery of Human Remains.** If human remains are discovered during project construction, work will stop at the discovery location, within 20 meters (66 feet), and any nearby area reasonably suspected to overlie adjacent to human remains (Health and Safety Code, Section 7050.5). The Mendocino County coroner will be contacted to determine whether the cause of death must be investigated. If the coroner determines that the remains are of Native American origin, it is necessary to comply with state laws relating to the disposition of Native American burials, which fall within the jurisdiction of the NAHC (PRC, Section 5097). The coroner will contact the NAHC. The descendants or most likely descendants of the deceased will be contacted, and work will not resume until they have made a recommendation to the landowner or the person responsible for the excavation work for means of treatment and disposition, with appropriate dignity, of the human remains and any associated grave goods, as provided in PRC, Section 5097.98. Work may resume if NAHC is unable to identify a descendant or the descendant failed to make a recommendation.

Timing/Implementation:	During construction
Enforcement:	County
Monitoring:	County and its contractor

3.2.6 Energy

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	—	—	—	**Yes**
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency	—	—	—	**Yes**

DISCUSSION OF IMPACTS

a) **No Impact.** It would be necessary to use gasoline and diesel-powered equipment during project construction. This would not be considered wasteful, inefficient, or unnecessary consumption of energy resources and would only occur for short periods of time throughout the construction period. Project operation would be consistent with existing conditions.

b) **No Impact.** The project would not conflict with or obstruct state or local plans for renewable energy or energy efficiency.

MITIGATION MEASURES

No project-specific mitigation is required under this subject.

3.2.7 Geology and Soils

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	—	—	—	**Yes**
ii) Strong seismic ground shaking?	—	—	—	**Yes**
iii) Seismic-related ground failure, including liquefaction?	—	—	—	**Yes**
iv) Landslides?	—	—	—	**Yes**
b) Result in substantial soil erosion or the loss of topsoil?	—	**Yes**	—	—
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?	—	—	**Yes**	—
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?	—	—	—	**Yes**
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	—	—	—	**Yes**
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	—	—	—	**Yes**

DISCUSSION OF IMPACTS

a) **No Impact.** No faults pass through the project area, and the site is not within an Alquist-Priolo fault zone for fault-rupture hazard (DOC 2022a). Earthquake-related ground shaking may occur during the life

of design structures on-site. However, the risk of seismic activity occurring would not change from current conditions with the implementation of the project, and the project would not expose people or structures to seismic ground shaking or seismic-related ground failure. Due to the relatively flat to gently sloping topography, the potential for landslides to occur within the project area is low, with a possible exception of local bank instability. The project design includes stabilization methods such as RSP to provide soil stability. Additionally, the project would be built in accordance with Caltrans' *Seismic Design Criteria and Bridge Design Specifications*, which would enable the new structure to withstand seismic events. Implementation of the project would not increase the likelihood of landslides or expose people to substantial adverse effects from landslides.

b) **Less than Significant with Mitigation Incorporated.** Construction of the new bridge would result in soil disturbance in portions of the project area. Project designs and geotechnical considerations would reduce soil erosion. Overall, soil loss would be minimal with implementation of standard construction practices for dust control and stormwater pollution prevention. Erosion and sediment control measures described in *Mitigation Measure #6—Erosion and Sedimentation Control* (described in Section 3.2.6) will be used during construction to minimize the potential for erosion. Implementation of the project's SWPPP would also reduce soil loss. Project operation would be consistent with existing conditions. The potential for soil erosion and loss of topsoil as a result of project implementation would be less than significant with mitigation incorporated.

c) **Less-Than-Significant Impact.** The project area soils are made up of Gschwend-Frenchman, Ornbaun-Zeni, Pinole loam, and Riverwash which have a 0 to 50 percent slope, are well-drained to excessively drained, and 20 to 80 inches to restrictive features (Stantec 2020) The bridge would be designed and constructed in accordance with current AASHTO requirements, the hydraulic design criteria established by Caltrans, and Caltrans bridge design specifications and seismic design criteria. The bridge design requirements would avoid adverse effects from unstable or expansive soils.

d) **No Impact.** Soils in the project construction area have no potential for expansion (Natural Resources Conservation Service 2020).

e) **No Impact.** The project does not involve septic or wastewater systems.

f) **No Impact.** There are no unique paleontological or geologic features in the project area.

MITIGATION MEASURES

Mitigation Measure #6—Erosion and Sedimentation Control will be implemented to reduce project-related impacts to a less-than-significant level.

3.2.8 Greenhouse Gas Emissions

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	—	**Yes**	—	—
b) Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	—	—	**Yes**	—

DISCUSSION OF IMPACTS

a) **Less than Significant with Mitigation Incorporated.** Greenhouse gas (GHG) emissions from the project would be generated off-site from the production of project materials and generated on-site from construction-related equipment emissions. While the project would have an incremental contribution in the context of the county and region, construction-related GHG emissions would be short term and minor. *Mitigation Measure #17—Greenhouse Gas Emissions* was incorporated into the project design to avoid or minimize construction-related GHG emissions. Project operation would be consistent with existing conditions.

b) **Less-Than-Significant Impact.** The State of California has adopted several regulations related to GHG emissions reduction. These include efforts to reduce tailpipe emissions and diesel exhaust produced by fuel-combustion engines. Project construction and operation would adhere to statewide efforts aimed at minimizing GHG emissions (as previously described), and therefore, would not conflict with any applicable plans, policies, or regulations adopted for reducing the emission of GHGs. The project would have a less-than-significant impact.

MITIGATION MEASURES

Mitigation Measure #17 – Greenhouse Gas Emissions

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

MM17-1 Air Quality

- The project will comply with Caltrans Standard Specifications Section 14-8 regarding air quality.
- In accordance with Caltrans Standard Specifications, the contractor will comply with all of the Air District rules, ordinances, and regulations regarding air quality restrictions.
- The project will comply with Title 13 CCR 2485 which restricts construction vehicles idling to no longer than five consecutive minutes.

Timing/Implementation:	During construction
Enforcement:	County
Monitoring:	County and its contractor

3.2.9 Hazards and Hazardous Materials

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	—	**Yes**	—	—
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?	—	**Yes**	—	—
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	—	—	—	**Yes**
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?	—	—	—	**Yes**
e) For a project located within an airport land use compatibility plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	—	—	—	**Yes**
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	—	—	—	**Yes**
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	—	**Yes**	—	—

DISCUSSION OF IMPACTS

a) **Less than Significant with Mitigation Incorporated.** Construction could pose a potential hazard to the public and the environment through the use of diesel- or gasoline-powered construction equipment (e.g., trucks, excavators) and lubricants such as oil and hydraulic fluids. The potential for such hazards would be minimal since equipment would be routinely maintained and inspected to avoid leaks. BMPs described in *Mitigation Measure #7—Prevention of Accidental Spills of Pollutants* (described in Section 3.2.7) would further reduce the potential impacts associated with the accidental spills of pollutants (e.g.,

fuel, oil, grease) during construction and operation. Project operation would be consistent with existing conditions.

Analyses of potential sources of hazardous materials—asbestos containing construction materials, aerially deposited lead in soils, lead and chromium in road striping paint, and lead-based painted bridge surfaces—were conducted during preparation of the project's Initial Site Assessment (Crawford and Associates 2021). Asbestos containing construction materials were not identified on the bridge. Lead concentrations in soil adjacent to the bridge, and in the bridge paint are below the hazardous waste threshold. Lead was reported at a concentration above the Total Threshold Limit Concentration (TTLC) in one of the paint striping samples. Accordingly, *Mitigation Measure #18 – Lead-Based Paint* (described in Section 3.2.17) will be used to minimize the potential for public and construction personnel exposure to potentially hazardous paint waste generated by removing paint. Chromium concentrations in the paint striping samples were below the hazardous waste threshold. The potential for naturally occurring asbestos in the project area is low.

Mendocino County noted that all wood used for bridge construction was chemically preserved pressure-treated wood, and chemically treated wood was observed on the bridge. Accordingly, *Mitigation Measure #19 – Treated Wood Waste* (described in Section 3.2.18) will be used to minimize the potential for public and construction personnel exposure to potentially hazardous wood waste generated by dismantling the existing bridge and road signage.

b) **Less than Significant with Mitigation Incorporated.** As described in issue (a) above, *Mitigation Measure #7—Prevention of Accidental Spills of Pollutants* (described in Section 3.2.7) and *Mitigation Measure #18 – Lead-Based Paint* (described in Section 3.2.17) will be used to minimize the potential for public and the environment from accidental exposure to potentially hazardous materials associated with project construction and bridge demolition. Implementation of these mitigation measures will reduce potential hazardous materials exposure to a less-than-significant level.

c) **No Impact.** There are no schools within 0.25 mile of the project area. The nearest school—Anderson Valley High School—in Booneville is approximately 8 miles to the southeast. The project would have no impact on existing or known proposed schools in the project vicinity.

d) **No Impact.** Review of the California Department of Toxic Substances Control EnviroStor database (California Department of Toxic Substances Control 2021) and the State Water Resources Control Board GeoTracker database (State Water Resources Control Board 2022) found no record of any known contaminated sites, regulated landfill sites, underground tank sites, or hazardous waste generators in the project vicinity. The project area is not included on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. No potential hazardous materials or waste sites are listed in the project vicinity.

e) **No Impact.** No airports are located near the project area. The project would have no impact on public or private airports or present a safety hazard for people working or residing in the project area.

f) **No Impact.** The construction of the project would not completely close the bridge. Construction would maintain a single lane traffic control on the existing bridge. The project would not impair implementation of nor physically interfere with an adopted emergency response plan or emergency

evacuation plan because vehicular access would be maintained through detours or traffic control throughout construction. Project operation would be consistent with existing conditions.

g) **Less than Significant with Mitigation Incorporated.** The project area is mapped as being in a state responsibility area with "moderate" wildfire hazard potential by California Department of Forestry and Fire Protection (CALFIRE) and is designated "non-burnable" by the United States Forest Service (USFS) (CALFIRE 2007; USFS 2020). The use of construction equipment in and around vegetated areas increases the potential for wildfire ignition. *Mitigation Measure #20—Wildfire Potential* (described in Section 3.2.19) would reduce the risk of wildfire associated with project construction. The potential for accidental wildfire ignition during construction would be less than significant with mitigation incorporated. Project operation would be consistent with existing conditions and would not increase the potential for wildfire ignition.

MITIGATION MEASURES

Mitigation Measure #18–Lead-Based Paint

The following measure will be implemented to reduce potential impacts from lead-based paint to a less-than-significant level:

MM18-1 The County will include provisions in the construction bid documents to provide for the proper removal and disposal of lead-based paint coated surfaces found on the existing bridge. The following measures will be implemented to reduce construction-related environmental impacts that could result from lead-based paint removal:

- LBP will be abated before planned construction/demolition by a licensed contractor in accordance with 17 CCR 3500.
- LBP must be transported under a Uniform Hazardous Waste Manifest (Title 22 CCR, Section 6626.23). It must be disposed of either at a Class I landfill or at other landfills that have specific permits to accept these wastes.
- Demolition and construction work will be subject to the applicable work practices for LBP and lead hazards including:
  - California Construction Order 1532.1(a)
  - Lead-in-Construction Standard
  - Title 17, CCR (CCR), Division 1, Chapter 8
  - Work Practices for Lead-Based Paint and Lead Hazards

Timing/Implementation:	During construction
Enforcement:	County
Monitoring:	County and/or its contractor

Mitigation Measure #19 – Treated Wood Waste

The following measure will be implemented to reduce potential impacts from treated wood waste to a less-than-significant level:

MM19-1 The County will include provisions in the construction bid documents to provide for the proper removal and disposal of treated wood waste material found on the existing bridge. The following measure will be implemented to reduce construction-related environmental impacts that could result from treated wood waste removal:

- The contractor will remove treated wood waste following the alternative management standards specific under Caltrans Special Standard Provision 14-11.14 for treated wood waste, as well as California Code of Regulations Title 22, Division 4.5, Chapter 34, Sections 67386.1 through 67386.12 for labeling, accumulation, off-site shipment tracking, notification, treatment, and disposal. All personnel that may come into contact with treated wood waste will receive, at a minimum, training on safe handling, sorting and segregating, storage, labeling (including date), and proper disposal methods.

Timing/Implementation:	During construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #20 – Wildfire Prevention

The following measure will be implemented to reduce potential impacts from wildfire to a less-than-significant level:

MM20-1 The County will include provisions in the construction bid documents to require measures to minimize project-related potential for wildfire ignition.

MM20-2 Per the requirements of PRC Section 4442, the County will include a note on all construction plans that internal combustion engines will be equipped with an operational spark arrester, or the engine must be equipped for the prevention of fire.

Timing/Implementation:	During construction
Enforcement:	County
Monitoring:	County and its contractor

3.2.10 Hydrology and Water Quality

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	—	**Yes**	—	—
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	—	—	—	**Yes**

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	—	—	—	—
i) result in substantial erosion or siltation on- or off-site;	—	**Yes**	—	—
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	—	—	**Yes**	—
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	—	**Yes**	—	—
iv) impede or redirect flood flows?	—	—	—	**Yes**
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	—	—	**Yes**	—
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	—	—	—	**Yes**

DISCUSSION OF IMPACTS

a) **Less than Significant with Mitigation Incorporated.** The project would involve ground disturbance and other activities that could discharge pollutants in storm water runoff. Project construction would not alter the existing topography or existing drainage patterns in a way that would result in increased erosion, surface runoff, flooding on- or off-site, or otherwise degrade water quality. Construction and operation of the project would involve the minor use of hazardous materials (i.e., petroleum-based fuels and lubricants) for fueling and maintenance of equipment away from any waterways. Implementation of *Mitigation Measure #6—Erosion and Sediment Controls* (described in Section 3.2.6) and *Mitigation Measure #7—Prevention of Accidental Spills of Pollutants* (described in Section 3.2.7) that require the preparation of an SWPPP would reduce potential impacts on water quality to a less-than-significant level. Project operation impacts would be consistent with existing conditions and less than significant.

b) **No Impact.** The project would not require the use of any groundwater and would not substantially decrease groundwater supplies. The project would not interfere substantially with groundwater recharge and therefore would be no impact.

c i) **Less than Significant with Mitigation Incorporated.** The project would not result in substantial erosion or siltation on- or off-site with the use of *Mitigation Measure #6 – Erosion and Sediment Control* (described in Section 3.2.6) to minimize impacts from project-related erosion.

There would be a less-than-significant impact with mitigation incorporated.

c ii) **Less-than-Significant Impact.** The project would not substantially alter the existing drainage patterns or substantially increase the amount of surface runoff. The project would not substantially alter drainage patterns and would not impede or redirect flood flows. Changes in the rate or amount of surface runoff resulting from the project would increase the potential for flooding on- or off-site and therefore would be less than significant.

c iii) **Less than Significant with Mitigation Incorporated.** Stormwater treatment is anticipated at the northeast and northwest areas of the project site. Water from the bridge deck and roadway will be piped to detention basins located within the Navarro River floodplain but outside of the normal flow areas. During construction of the project, *Mitigation Measure #7 – Prevention of Accidental Spills* (described in Section 3.2.7) will be implemented to prevent polluted runoff from project construction from entering the waterways surrounding the project area.

There would be a less-than-significant impact with mitigation incorporated.

c iv) **Less-than-Significant Impact.** The project would not result in alterations of the course of the streams located throughout the project area and would not substantially increase the rate or amount of surface runoff in a manner that could result in flooding. Project construction would not impede or redirect flood flows; therefore, there would be no impact.

d) **Less-Than-Significant Impact.** The project area is in a flood hazard area. The hydraulic design criteria established in the Caltrans Local Procedures Manual has been incorporated into the project design so that the new structure would be capable of conveying the base or 100-year flood. The new bridge would meet the freeboard requirements of passing both the 50-year storm event with at least 2 ft of freeboard and the 100-year storm event (Wreco 2015).

e) **No Impact.** Construction and operation of the project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

MITIGATION MEASURES

Mitigation Measure #6—Erosion and Sediment Controls and Mitigation Measure #7—Prevention of Accidental Spills of Pollutants will be implemented to avoid or reduce project-related impacts to a less-than-significant level.

3.2.11 Land Use and Planning

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Physically divide an established community?	—	—	—	**Yes**
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?	—	—	**Yes**	—

DISCUSSION OF IMPACTS

a) **No Impact.** The project would not divide an established community. Construction would be temporary, and Philo-Greenwood Road would remain open with traffic control.

b) **Less-than-Significant Impact.** Due to the slight realignment of the bridge rehabilitation, some permanent ROW acquisition would be required. However, this would not result in an impact due to conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Concurrent to the Philo-Greenwood Road bridge rehabilitation project, a project has been proposed to enhance public access and facilities associated with Philo Beach, a popular informal public river access that includes the reach of Navarro River in and immediately adjacent to the project area. Anderson Valley Land Trust, in coordination with Hendy Woods State Park, Mendocino Redwood Company, and others is in the initial planning stages to add developed facilities (e.g., restrooms, enhanced parking, designated trails, etc.) largely in the footprint of the bridge rehabilitation project area. The County's bridge plans are considered by the land trust to be key in its planned project's development and timing (P. Miller pers. comm. 2023). While the County will not be modifying its existing scope for the bridge rehabilitation project, it intends to work with the Philo Beach enhancement proponents to identify project features that may benefit public recreation.

The project's effects on proposed land uses and planning are anticipated to be beneficial and less than significant.

MITIGATION MEASURES

No project-specific mitigation is required under this subject.

3.2.12 Mineral Resources

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

DISCUSSION OF IMPACTS

a) **No Impact.** The project area has not been mapped by the California Department of Conservation Mineral Land Classification as containing marketable aggregate (DOC 2022b). No mineral extraction activities occur within the project area. Project implementation would not result in the loss of availability of a valuable mineral resource.

b) **No Impact.** The project area has not been mapped by the California Department of Conservation Mineral Land Classification as containing marketable aggregate (DOC 2022b). Project construction would have no impact on mineral resources.

MITIGATION MEASURES

No project-specific mitigation is required under this subject.

3.2.13 Noise

Would the project result in:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	—	—	**Yes**	—
b) Generation of excessive groundborne vibration or groundborne noise levels?	—	—	**Yes**	—

Would the project result in:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	—	—	—	**Yes**

DISCUSSION OF IMPACTS

a) **Less-Than-Significant Impact.** The noise environment in the project vicinity is primarily defined by traffic noise emanating from Philo-Greenwood Road. Although project construction activities would result in short-term periods of elevated ambient noise levels in the immediate project vicinity, provided construction activities are limited to daytime hours, no significant construction noise impacts are identified for this project.

b) **Less-Than-Significant Impact.** During excavation and construction activities for the project, groundborne vibration would be produced by the heavy-duty construction equipment such as jackhammers, backhoes, and loaded trucks. All groundborne vibration and noise levels associated with the construction of the project would be temporary and would not result in the generation of excessive vibration or noise levels. Project impacts related to groundborne vibration would be less than significant.

c) **No Impact.** The project is not located near an airport or private airstrip.

MITIGATION MEASURES

No project-specific mitigation is required under this subject.

3.2.14 Population and Housing

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	—	—	—	**Yes**
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	—	—	—	**Yes**

DISCUSSION OF IMPACTS

a) **No Impact.** This project is intended to rehabilitate an existing bridge structure. The project would not induce growth and there would be no impact.

b) **No Impact.** There are no residential units in the project area and the project would rehabilitate an existing bridge on Philo-Greenwood Road to an updated structure. The project would not displace any people or housing and there would be no impact.

MITIGATION MEASURES

No project-specific mitigation is required under this subject.

3.2.15 Public Services

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

DISCUSSION OF IMPACT

a) **Less-than-Significant Impact.** The project would not cause substantial adverse physical impacts on government facilities or negatively affect fire and police protection, schools, parks, or public facilities. The project would rehabilitate an existing bridge on Philo-Greenwood Road by widening the structure and project operation would not result in changes to existing conditions. The project would have no impact on any public recreational facilities in the project area and vicinity. Although traffic control would occur during construction, impacts on emergency vehicle access would not be expected.

Concurrent to the Philo-Greenwood Road bridge rehabilitation project, a project has been proposed to enhance public access and facilities associated with Philo Beach, a popular informal public river access

that includes the reach of Navarro River in and immediately adjacent to the project area. Anderson Valley Land Trust, in coordination with Hendy Woods State Park, Mendocino Redwood Company, and others is in the initial planning stages to add developed facilities (e.g., restrooms, enhanced parking, designated trails, etc.) largely in the footprint of the bridge rehabilitation project area. The County's bridge plans are considered by the land trust to be key in its planned project's development and timing (P. Miller pers. comm. 2023). While the County will not be modifying its existing scope for the bridge rehabilitation project, it intends to work with the Philo Beach enhancement proponents to identify project features that may benefit public recreation.

No significant adverse impacts on service ratios, response times, or service objectives for public services are anticipated. The project's effects on proposed public facilities are anticipated to be beneficial and less than significant.

MITIGATION MEASURES

No project-specific mitigation is required under this subject.

3.2.16 Recreation

Would the project:	Potentially Significant 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?	—	—	**Yes**	**—**
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?	—	—	—	**Yes**

DISCUSSION OF IMPACTS

a) **Less-than-Significant Impact.** The project includes widening the shoulders of the roadway approaches and the bridge to improve pedestrian and bicyclist safety. The effect would be a benefit for recreationists using Philo-Greenwood Road. The project would have no adverse effect on existing recreational facilities.

Although the project itself would not generate additional demands on parks and recreational facilities, the Philo Beach project—a public river access enhancement project—has been proposed concurrently, using much of the same project area, including staging areas that would be transitioned to public parking and walking trails that would be created leading to beaches adjacent to the bridge. The County's bridge plans are considered by the project's lead proponent, Anderson Valley Land Trust, to be key in its planned project's development and timing (P. Miller pers. comm. 2023). While the County will not be modifying its

existing scope for the bridge rehabilitation project, it intends to work with the Philo Beach enhancement proponents to identify the bridge rehabilitation project features that may benefit public recreation.

The project's effects on public recreation are anticipated to be beneficial and less than significant.

b) **No Impact.** The project area does not include recreational facilities and would not involve the construction or expansion of recreational facilities.

MITIGATION MEASURES

No project-specific mitigation is required under this subject.

3.2.17 Transportation/Traffic

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

DISCUSSION OF IMPACTS

a) **No Impact.** The project is not anticipated to increase either the number of vehicle trips, volume-to-capacity ratio, or congestion at intersections in the project area or vicinity. The project does not conflict with any alternative transportation plan or policy. The project is consistent with the transportation goals and policies of the Mendocino County General Plan.

b) **No Impact.** The primary purpose of the project is to rehabilitate an existing bridge structure. A detour would not be necessary since one-way controlled traffic would be maintained on the bridge during construction. The project would not conflict with Section 15064.3, subdivision (b).

c) **No Impact.** The project would not result in the creation of sharp curves, dangerous intersections, or incompatible uses.

d) **Less-Than-Significant Impact.** The bridge rehabilitation would be constructed in the footprint of the existing bridge; thus, construction would be staged to allow for one lane to remain open to through traffic during project implementation. Traffic control measures such as stop signs, flagging, and stoplights

would be used during construction. Although temporary, short-duration disruptions to normal traffic operation could occur during project construction. Philo-Greenwood Road would remain open to traffic during construction and no significant impact on emergency vehicle access is anticipated.

MITIGATION MEASURES

No project-specific mitigation is required under this subject.

3.2.18 Tribal Cultural Resources

Would the project: cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less-than-Significant Impact**	**No Impact**
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 section 5020.1(k), or	—	—	—	**Yes**
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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	—	—	—	**Yes**

DISCUSSION OF IMPACTS

a) **No Impact.** There are no tribal cultural resources listed or eligible for listing on the California Register of Historical Resources or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).

b) **No Impact.** In accordance with Public Resources Code sections 5024.1, 5097.94, 21074, and 21080.3, commonly known as Assembly Bill 52, Alta Archaeological Consulting (2022). sent notification letters and a map via mail and email to the Native American tribes who may have knowledge of cultural resources in the area of potential effect on September 1, 2016, and again on November 18, 2021. On September 1, 2016, Alta Archaeological Consulting requested that NAHC review its Sacred Lands database for culturally significant properties. The following tribes were contacted based on a list of tribes provided by the Native American Heritage Commission (NAHC):

- Sherwood Valley Rancheria of Pomo
- Manchester Band of Pomo/Indians of the Manchester Rancheria
- Hopland Band of Pomo Indians

Follow up phone calls were conducted on November 19, 2021. The Tribal Historic Preservation Officer for the Hopland Band of Pomo Indians participated in a tour of the project area and reviewed the project plans with Caltrans and the project archaeologists. Although the tribal representative expressed interest in the project, he did not express any specific cultural concerns.

An Extended Phase I study was conducted and found no occurrences of cultural resources in the project area. The study confirmed that the project's area of potential effect did not contain buried archaeological resources (Alta Archaeological Consulting 2022). Project construction and operation is not anticipated to impact on tribal cultural resources.

Note that *Mitigation Measure #16 – Cultural Resources* (described in Section 3.2.16) will be used in the event of an inadvertent discovery of human remains.

MITIGATION MEASURES

Mitigation Measure #16—Cultural Resources will be used to avoid or reduce project-related impacts to a less-than-significant level.

3.2.19 Utilities and Service Systems

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	—	—	—	**Yes**
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	—	—	—	**Yes**
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?	—	—	—	**Yes**
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?	—	—	**Yes**	—
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	—	—	**Yes**	—

DISCUSSION OF IMPACTS

a) **No Impact**. The project consists of rehabilitation of an existing bridge structure with a wider structure. The project does not involve any actions that would require or result in new or expanded water, wastewater, stormwater, or other utility facilities.

b) **No Impact.** No new or expanded water entitlements would be required for the project.

c) **No Impact.** The project does not in involve any actions that would generate wastewater.

d) **Less-Than-Significant Impact.** Construction activities associated with the project would generate solid waste in the form of demolished materials, metal pilings, and other debris. Solid waste generated at the project site would be disposed of at a suitable facility such as the County transfer station facilities. Project operation would not generate solid waste. The contractor would be responsible for removing solid waste produced from construction from the site. Project impacts on transfer station facilities would be less than significant.

e) **Less-Than-Significant Impact.** Any solid waste generated by the construction of the project would be disposed of at an approved transfer station facility in compliance with local, state, and federal regulations pertaining to solid waste disposal.

MITIGATION MEASURES

No project-specific mitigation is required under this subject.

3.2.20 Wildfire

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	—	—	—	**Yes**
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?	—	**Yes**	—	—
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	—	**Yes**	—	—
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?	—	—	—	**Yes**

DISCUSSION OF IMPACTS

a) **No Impact.** Roads within the project area may have lane closures; however, through traffic would be allowed as only partial lane closures are planned. The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Project operation would be consistent with existing conditions.

b) **Less Than Significant with Mitigation Incorporated**. Based on current mapping, the lands in the project area are mapped as having "moderate" fire hazard potential by CALFIRE and the project site is designated as "non-burnable" by USFS (CALFIRE 2007, USFS 2020). The project activities would not exacerbate fire risks or result in ongoing impacts to the environment. Implementation of *Mitigation Measure #20—Wildfire Prevention* (described in Section 3.2.19) would further reduce the potential for wildfire. The project's fire risk would be less than significant with mitigation.

c) **Less Than Significant with Mitigation Incorporated**. The project activities would not exacerbate fire risks or result in ongoing impacts to the environment. Implementation of *Mitigation Measure #20—Wildfire Prevention* (described in Section 3.2.19) would further reduce the potential for wildfire. Project operation would be consistent with existing conditions and would not result in an increase in fire risk from existing conditions.

Project construction may require relocation of existing utilities but would not require the installation of new associated infrastructure. The project's fire risk would be less than significant with mitigation.

d) **No Impact.** The project would provide sufficient gradient for drainage of roadway surfaces, and as such, the project would not expose people or structures to significant risks as a result in drainage changes, runoff, or slope instability.

MITIGATION MEASURES

Mitigation Measure #20—Wildfire Prevention will be implemented to reduce potential impacts to a less-than-significant level.

3.2.21 Mandatory Findings of Significance

(To be filled out by Lead Agency if required)	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Does the project have the potential to 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, 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?	—	**Yes**	—	—

(To be filled out by Lead Agency if required)	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	—	—	**Yes**	—
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	—	**Yes**	—	—

DISCUSSION OF IMPACTS

a) **Less Than Significant with Mitigation Incorporated.** As discussed in the preceding sections, the project has a potential to impact biological resources. Although no special-status plant species would be affected by the project, special-status fish, wildlife, and migratory birds and raptors could be impacted by construction. Mitigation measures described in the Biological Resources section will be used to avoid or minimize potential impacts on special-status species. No cultural resources are anticipated to be impacted by project construction; however, measures are included in this project to mitigate for the inadvertent discovery of cultural resources or human remains. The project would have no impact or a less-than-significant impact on environmental resources with mitigation measures incorporated.

b) **Less-Than-Significant Impact.** The project consists of rehabilitating an existing bridge structure with a wider structure. Impacts associated with the project would be primarily limited to the construction phase, with no significant operational impacts on the environment. All impacts resulting from project implementation can be fully mitigated at the project level. As a result, cumulative impacts would be less than significant.

c) **Less than Significant with Mitigation Incorporated.** As discussed in the preceding sections, the construction of the project may have potential impacts on humans related to temporary impacts on air quality, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, and temporary noise increases during construction. However, all impacts are less than significant or can be mitigated to a less-than-significant level with implementation of mitigation measures. Project operation would not cause direct or indirect adverse effects on human beings as project operation conditions would be similar to current existing conditions. The project would not involve any actions that would have a substantial direct or indirect impact on the human environment that cannot be mitigated to a less-than-significant level.

4 Determination

Based on this initial evaluation:

	I find that the proposed project COULD NOT have a significant effect on the environment and a NEGATIVE DECLARATION will be prepared.
X	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
	I find that the proposed project MAY have a "Potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature _____ Date 2/23/23

Howard Dashiell,
Director of Transportation
Mendocino County

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5 Mitigation Monitoring and Reporting Program

This chapter describes the Mitigation Monitoring and Reporting Program (MMRP) for the Philo-Greenwood Road at Navarro Bridge Rehabilitation Project (project). The purpose of this MMRP is to memorialize the mitigation responsibilities of the County in implementing the project. The mitigation measures listed herein are required by law or regulation and will be adopted by the County as part of the overall project approval. Mitigation is defined by CEQA Guidelines Section 15370 as a measure that

- *avoids the impact altogether by not taking a certain action or parts of an action;*
- *minimizes impacts by limiting the degree or magnitude of the action and its implementation;*
- *rectifies the impact by repairing, rehabilitating, or restoring the impacted environment;*
- *reduces or eliminates the impact over time by preservation and maintenance operations during the life of the project; or*
- *compensates for the impacts by replacing or providing substitute resources or environments.*

Mitigation measures provided in this MMRP have been identified in Chapter 3, Environmental Setting, Impacts, and Mitigation Measures of the Initial Study/Mitigated Negative Declaration (IS/MND) and are considered feasible and effective in mitigating project-related environmental impacts.

This MMRP includes discussions of the following: legal requirements, the intent of the MMRP; the development and approval process for the MMRP; the authorities and responsibilities associated with implementation of the MMRP; a method of resolution of noncompliance complaints; and a summary of monitoring requirements.

5.1 Legal Requirements

The legal basis for the development and implementation of the MMRP lies within CEQA (including the California Public Resources Code [PRC]). PRC Sections 21002 and 21002.1 state the following:

> *Public agencies are not to approve projects as proposed if there are feasible alternatives or feasible mitigation measures available that would substantially lessen the significant environmental effects of such projects.*
>
> *Each public agency shall mitigate or avoid the significant effects on the environment of projects that it carries out or approves whenever it is feasible to do so.*

Section 21081.6 of the California Public Resources Code further requires the following:

> *The public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation.*
>
> *The monitoring program must be adopted when a public agency makes its findings under CEQA so that the program can be made a condition of project approval in order to mitigate significant*

effects on the environment. The program must be designed to ensure compliance with mitigation measures during project implementation to mitigate or avoid significant environmental effects.

5.2 Intent of the Mitigation Monitoring and Reporting Program

The MMRP is intended to satisfy the requirements of CEQA as they relate to the project. It will be used by the County, participating agencies, project contractors, and mitigation monitoring personnel during implementation of the project. The primary objective of the MMRP is to help ensure the effective implementation and enforcement of adopted mitigation measures and permit conditions. The MMRP will provide for monitoring of construction activities as needed, on-site identification and resolution of environmental problems, and proper reporting to Lead Agency staff.

5.3 Development and Approval Process

The timing elements for implementing mitigation measures and the definition of the approval process are provided in detail throughout this MMRP to assist the County by providing the most usable monitoring document possible.

5.4 Authorities and Responsibilities

Mendocino County, functioning as the CEQA Lead Agency, will have the primary responsibility for overseeing the implementation of the MMRP and will be responsible for the following activities:

- coordination of monitoring activities
- reviewing and approving status reports
- maintenance of records concerning the status of all approved mitigation measures

As the implementing agency, the County is responsible for implementing the mitigation measures by incorporating them into the project specifications (contract documents) and enforcing the conditions of the contract in the field during construction. Some pre- and post-construction activities may be implemented directly by the County.

5.5 Resolution of Noncompliance Complaints

Any person or agency may file a complaint that alleges noncompliance with the mitigation measure(s) adopted as part of the approval process for the project. The complaint would be directed to Mendocino County in written form describing the purported violation in detail. The County would investigate and determine the validity of the complaint. If noncompliance with a mitigation measure is verified, the County would take the necessary action(s) to remedy the violation.

5.6 Summary of Monitoring Requirements

Following this discussion are the mitigation measures and associated monitoring requirements for the project. Mitigation measures include standard BMPs that will be used during construction and are organized by environmental issue area (e.g., Air Quality, Biological Resources).

- Mitigation Measures: describes the schedules of activities, prohibitions of practices, maintenance procedures, and structural or managerial practices, which will be used either singly or in combination to prevent or reduce the release of pollutants, or otherwise minimize the potential for adverse effects on environmental resources. Mitigation measure(s) were identified for each potentially significant impact discussed in the IS/MND. The same mitigation numbering system used in the IS/MND is carried forward in this MMRP.
- Timing/Implementation: Indicates at what point in time or project phase the mitigation measure will need to be implemented.
- Enforcement: Indicates which agency or entity is responsible for enforcement of the mitigation measure(s).
- Monitoring: Indicates which agency or entity is responsible for implementing and monitoring each mitigation measure.
- Verification: Provides a space to be signed and dated by the individual responsible for verifying compliance with each mitigation measure.

5.7 Mitigation Measures

This MMRP includes the following mitigation measures to be implemented during construction of the project:

Mitigation Measure #1 – Air Quality/Dust Control

The following measures will be implemented to avoid or minimize the potential for adverse impacts on air quality:

MM1 In the construction bid documents, the County will include provisions that the contractor will implement a dust control program to limit fugitive dust emissions. The dust control program will include but not be limited to the following elements, as appropriate:

- Water inactive construction sites and exposed stockpiles at least twice daily (including non-workdays) or until soils are stable. Water will not be withdrawn or diverted from streams with anadromous fish or from non-fish bearing streams that help to maintain aquatic habitat.
- Pursuant to California Vehicle Code, Section 23114(c)(4), all trucks hauling soil and other loose material to and from the construction site will be covered or will maintain at least 6 inches of freeboard (i.e., minimum vertical distance between the top of the load and the trailer).
- Any topsoil removed during construction will be stored on-site in piles no higher than 4 feet to preserve the seed bank and allow development of microorganisms prior to replacing the soil in the construction area. The topsoil piles will be clearly marked and

flagged. Topsoil piles that will not immediately be used in the construction area will be revegetated with a non-persistent erosion and sediment control mixture.

- Soil piles for backfill will be marked and flagged separately from native topsoil stockpiles. These soil piles will also be surrounded by silt fencing, straw wattles, or other sediment barriers or covered unless they are to be used immediately.
- All stockpiles, dirt and gravel roads, and exposed or disturbed soil surfaces will be watered by hand or with watering equipment, as necessary to reduce airborne dust.

Timing/Implementation:	During construction
Enforcement:	County
Monitoring:	County and/or its contractor

Mitigation Measure #2 – Special-Status Fish Species

The following measures will be implemented to avoid or minimize the potential for significant impacts on special-status fish species:

MM2-1 The County will adhere to a limited operating period during the low-flow season between June 15 and October 15 for all in-stream construction work and any dewatering of the stream channel. Prior to October 15, the temporary water exclusion/cofferdam structures and temporary gravel fills will be removed from the active channel and floodplain.

MM2-2 The County will sequence dewatering and fish relocation activities to minimize effects, including installing fish exclusion (e.g., block nets if conditions allow); incrementally dewatering the stream to minimize stranding; seining/ other capture and removal according to guidelines set by NMFS (NMFS 2001) and CDFW (Flosi et al. 2010).

MM2-3 Captured fish will be kept in cool, shaded, aerated water, protected from overcrowding or other stressors, and separated by age classes to minimize predation and quickly relocated to another stream reach specified by NMFS or CDFW biologists.

MM2-4 The County will implement erosion and sediment control measures, including a stormwater pollution prevention plan, consistent with provisions of Caltrans Standard Specifications Section 20-2 and 20-3.

MM2-5 The County will use clean gravels of a size suitable for spawning salmon to create all vehicle access paths and work pads within the original high water mark of the stream channel with minimal channel disturbance. Gravel fills will be designed and installed to maintain sufficient width of natural channel through so as not to adversely change the flow characteristics (i.e., velocity, depth, width) of the water as it flows through the project area.

MM2-6 The water exclusion/cofferdam structures and temporary trestle crossing will be designed according to guidelines outlined in NMFS (2001) using the channel design methods to the extent practicable. The present design of work pad installation includes a 20-foot wide clear, open channel between the retained fill on opposite banks to accommodate the typical range of summer river flows and not adversely affect hydraulic conditions for fish passage. It should

be noted that the structures will only be in place during the summer in-water work period when little or no movement of adults or juveniles is expected but would still be installed to facilitate the free movement of fish if they were to occur in the project area.

MM2-7 The County will remove any crushed rock used to surface in-channel access paths and work pads but leave the clean spawning-sized gravels in the channel graded to conform to the natural streambed contours at the end of in-channel construction.

MM2-8 All fuel storage and refueling sites, concrete washouts, and any other hazardous materials will be stored on the top of the bank at least 50 feet from surface water and secured with containment structures (e.g., berms).

MM2-9 The County will minimize disturbance of riparian vegetation and replant any riparian areas that must be cleared or otherwise disturbed according to the project's Mitigation and Monitoring Plan.

MM2-10 All construction equipment, pumps with NMFS and CDFW approved intake screens, hand tools, and personnel protective equipment that is to be used in the stream channel will be subjected to inspection and appropriate treatments to prevent the spread of invasive plant and aquatic invertebrate species.

MM2-11 In accordance with Term and Condition 2.9.4.1 of the NMFS May 5, 2022, Biological Opinion (Consultation No. WCRO-2021-02768):

- County will retain a qualified biologist with expertise in the areas of anadromous salmonid biology, including handling, collecting, and relocating salmonids; salmonid/habitat relationships; and biological monitoring of salmonids. All fisheries biologists working on this project will be qualified to conduct fish collections in a manner which minimizes all potential risks to ESA-listed salmonids.

- The fisheries biologist will monitor the construction site during placement and removal of cofferdams, and sediment catchment basins so that any adverse effects on salmonids are minimized. The biologist will be on-site during all dewatering events in anadromous fish streams so that all ESA-listed salmonids are captured, handled, and relocated safely. During fish relocation activities the fisheries biologist will contact NMFS North Coast Branch staff at 707-575-6050, if mortality of federally listed salmonids exceeds 3 percent of the total for each species collected, at which time NMFS will stipulate measures to reduce the take of salmonids.

- If ESA-listed fish are handled, it will be with extreme care, and they will be kept in water to the maximum extent possible during rescue activities. All captured fish will be kept in cool, shaded, aerated water protected from excessive noise, jostling, or overcrowding any time they are not in the stream and fish will not be removed from this water except when released. To avoid predation the biologist will have at least two containers and segregate young-of-year salmonids from larger age classes and other potential aquatic predators. Captured salmonids will be relocated as soon as possible to a suitable in-

stream location (preapproved by NMFS) where suitable habitat conditions are present to allow for survival of transported fish and fish already present.

- Non-native fish that are captured during fish relocation activities will not be relocated to anadromous streams, or areas where they could access anadromous habitat.

MM2-12 In accordance with Term and Condition 2.9.4.2 of the NMFS May 5, 2022, Biological Opinion (Consultation No. WCRO-2021-02768):

- County will allow any NMFS employee(s), or any other person(s) designated by NMFS to accompany field personnel to visit the project site during activities described in the Biological Opinion.
- Upon project completion, County will revegetate access roads and repair bank areas to pre-project slope and form. Between construction seasons, access roads will be made inaccessible to vehicles in order to prevent access to the river channel.
- Construction equipment used within the river channel will be checked each day prior to work within the river channel (top of bank to top of bank) and, if necessary, action will be taken to prevent fluid leaks. If leaks occur during work in the channel, County or their contractors will contain the spill and remove the affected soils.
- Once construction is completed, all project-introduced material will be removed, leaving the river as it was before construction. Excess materials will be disposed of at an appropriate upland disposal site. Minor grading to return the channel to pre-project form can be performed if necessary.

MM2-13 In accordance with Term and Condition 2.9.4.3 of the NMFS May 5, 2022, Biological Opinion (Consultation No. WCRO-2021-02768):

- County will implement measures to minimize road generated runoff to Navarro River by diverting road surface flow to vegetated areas between the road and the stream channel.
- Measures will be implemented to reduce runoff from the bridge deck to the Navarro River.
- Any structures such as relief ditches, grading to direct flow, other diversion structures will receive regular long-term maintenance, with a focus on early fall to reduce runoff from the first rains that cause flush of materials accumulated from the summer months.

MM2-14 In accordance with Term and Condition 2.9.4.4 of the NMFS May 5, 2022, Biological Opinion (Consultation No. WCRO-2021-02768):

- **Project Construction and Fish Relocation Report** – Caltrans must provide a written report to NMFS by January 15 of the year following each construction season. The report must be submitted to NMFS' North Central Coast Office, Attention: North Coast Branch Chief, 777 Sonoma Avenue, Room 325, Santa Rosa, California, 85404-6528. The report must contain, at minimum, the following information:

- **Construction-related activities** – The report(s) must include the dates construction began and was completed; a discussion of any unanticipated effects or unanticipated levels of effects on salmonids, including a description of any and all measures taken to minimize those unanticipated effects had any effect on ESA-listed fish; the number of salmonids killed or injured during the project action; and photographs taken before, during, and after the activity from photo reference points.

- **Fish relocation** – The report(s) must include a description of the location from which fish were removed and the release site(s) including photographs; the date and time of the relocation effort; a description of the equipment and methods used to collect, hold, and transport salmonids; if an electrofisher was used for fish collection, a copy of the logbook must be included; the number of fish relocated by species; the number of fish injured or killed by species and a brief narrative of the circumstances surrounding ESA-listed fish injuries or mortalities; and a description of any problems which may have arisen during the relocation activities and a statement as to whether or not the activities had any unforeseen effects.

- **Post-Construction Vegetation Monitoring and Reporting** – Reports documenting post-project conditions of vegetation installed at the site will be prepared and submitted annually for the first five years following project completion. Reports will document vegetation health and survivorship and percent cover, natural recruitment of native vegetation (if any), and any maintenance or replanting needs. Photographs must be included. If poor establishment is documented, the report must include recommendations to address the source of the performance problems. Annual reports will be sent to the address above in MM2-13a.

Timing/Implementation:	Prior to, during construction, and after construction
Enforcement:	County
Monitoring:	County and contractor

Mitigation Measure #3 – Fish Rescue and Exclusion

The following measures will be implemented to avoid or minimize the potential for significant impacts on special-status fish species:

MM3-1 Prior to any construction activities occurring within the wetted river channel (e.g., for constructing temporary detour crossing, gravel work pads, and coffer dams surrounding pile installation and demolition sites), fish will be removed from work areas. Fish exclusion and removal may require installation of block nets, turbidity curtains, and/or coffer dam enclosures and subsequent fish salvage of the enclosed areas prior to any dewatering and/or in-water work.

MM3-2 Physically captured and/or handled fish will be collected and released in nearby suitable habitat with comparable habitat and water quality conditions. While the likelihood of special-status fish species to be present in the project area during the in-channel work window is small, all translocation/removal of listed and non-listed fishes will be conducted by qualified

fisheries biologists to minimize potential adverse effects on any fish present. Fish and herpetofauna will be captured using seines, dip nets, and by hand. Animals will be handled with extreme care and holding times will be minimized. Large buckets (5-gallon) with fitted covers and aerated water will be used to hold and transport capture fish to release sites. Fish will be segregated by size in separate buckets, as necessary, to prevent predation of small fish by larger fish. Fish will not be subjected to excessive jostling and noise, will not be overcrowded in buckets, and water temperature will be monitored and prevented from increasing more than 4 degrees Fahrenheit (ºF) (i.e., 2 degrees Celsius). Records of species, life stages, numbers and disposition of all fish captured will be kept and reported to regulatory agencies.

MM3-3 The Dewatering and Fish Salvage Plan (Appendix C of the Biological Assessment/Essential Fish Habitat Assessment report [Stantec 2021]) will be implemented as appropriate.

Timing/Implementation:	Prior to and during construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #4 – Hydroacoustic Monitoring

The following measures will be implemented to avoid or minimize the potential for significant impacts on special-status fish species:

MM4-1 Construction activities within the channel will be restricted to the summer season when the potential for occurrence of listed fish is minimal. Hydroacoustic monitoring during any use of a hoe-ram during bridge removal or abutment construction would be conducted to provide compliance with the terms and conditions resulting from Section 7 ESA consultation with NMFS and provide an opportunity to adopt alternative construction methods to avoid or minimize project impacts, where practicable. To minimize adverse effects of underwater noise on listed fishes, hydroacoustic levels will be monitored to manage and maintain operations during exceedances of adverse sound threshold limits for aquatic life.

NMFS and Caltrans have agreed on acoustic thresholds for peak pressure 206 decibels (dB) and cumulative sound exposure levels of 187dB cumulative sound exposure level (cSEL) for fish 2 grams and larger for physiological adverse responses in fish (Caltrans 2015). Encroachment on to these levels would serve to notify the contractor, in real-time, to suspend or modify underwater noise producing activities to minimize exceedances of adverse underwater noise thresholds.

Timing/Implementation:	During construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #5 – Gravel Containment, Turbidity Control, and Monitoring

The project requires placement of gravel fill into portions of the wetted river channel for working pads and trestles installation. Placement of fill into the wetted channel can cause turbidity and possibly entrap,

harm or kill fish. This measure describes approaches for preventing/controlling turbidity at levels that would not be harmful to fish. Mitigation Measure 3 (Fish Rescue and Exclusion) describes methods for removing fish from the areas where gravel pads/road approaches will be constructed in the river channel.

The following measures will be implemented to avoid or minimize the potential for significant impacts on special-status fish species:

MM5-1 Sheet piles will be vibrated into the wetted channel to shore gravel fill for the work pads/approaches. Prior to vibrating in sheet piles and placing any gravels into the wetted channel, each such area would be isolated and cleared of fish. Isolating the areas for sheet pile installation and gravel placement can be done using numerous methods including silt fencing, water bladders, concrete blocks with plastic sheeting and/or Super-sacks filled with cleaned gravels. Silt fencing and water bladders can be installed by hand, while concrete blocks or Super-sacks will need to be placed by heavy equipment. The contractor, with approval from the County, NMFS, and CDFW, will choose the containment method that works best for them and conforms to permit requirements; however, no heavy equipment will enter the wetted channel until the area is isolated and cleared of fish.

The general procedure for installing the isolation barrier is to install most of the barrier while keeping a small section open for fish egress/removal. After fish are removed from the isolated area, the isolation barrier will be closed off. Additional turbidity control measures, if needed, will be installed to reduce/prevent turbidity from escaping the containment area (e.g., adding plastic sheeting to concrete blocks, adding a turbidity curtain). Gravels to be used for work pads and/or detour approaches will be pushed out into the isolated portions of river channel, using clean washed gravel, to displace the water until the sheet piles can be placed inside of the containment area. If water within the isolation barrier is deeper than one foot, water will be pumped out to a settling basin created on the floodplain, where sediment will settle out and water can percolate through the gravel bar back to the river channel, as gravel is placed in order to keep turbid water from being displaced through/under the barrier. This operation will be continuously monitored by a biological monitor as needed.

Timing/Implementation:	During construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #6 – Erosion and Sedimentation Control

MM6-1 Erosion and sediment control measures will be implemented during construction of the project. These measures will conform to the provisions in Section 21 of the Caltrans Standard Specifications (2018) and any special provisions included in the contract for the project. Such provisions include the preparation of a Storm Water Pollution Prevention Plan (SWPPP), which will describe and illustrate the types and locations of best management practices (BMPs) in the project site to be implemented based on local conditions and would require regular inspections and a Rain Event Action Plan.

Erosion and sediment control measures to be included in the SWPPP or to be implemented by the County will include the following:

- To the extent practicable, activities that increase the erosion potential will be restricted to the relatively dry summer and early fall period to minimize the potential for rainfall to transport sediment to surface water features. If these activities must take place during the late fall, winter, or spring, temporary erosion and sediment control structures will be in place and operational at the end of each construction day and will be maintained until permanent erosion and sediment control structures are in place.

- Areas where vegetation needs to be removed will be identified in advance of ground disturbance and limited to only those areas that have been approved by the Mendocino County Department of Transportation. Exclusionary fencing will be installed around areas that are not to be disturbed

- Within 10 days of completion of construction in areas where subsequent ground disturbance will not occur for 10 calendar days or more, weed-free mulch will be applied to disturbed areas to reduce the potential for short-term erosion. Prior to a rain event or when there is a greater than 50 percent possibility of rain within the next 24 hours, as forecasted by the National Weather Service, weed-free mulch will be applied to all exposed areas upon completion of the day's activities. Soils will not be left exposed during the rainy season.

- Suitable BMPs, such as silt fences, straw wattles, or catch basins, will be placed below all construction activities at the edge of surface water features to intercept sediment before it reaches the waterway. These structures will be installed prior to any clearing or grading activities. Sediment accumulation at the base of BMPs will be removed before BMP removal to avoid sediment mobilization. Erosion and sediment control measures that employ monofilament netting will be prohibited within the work area.

- If spoil sites are used, they will be placed where they do not drain directly into a surface water feature, if possible. If a spoil site would drain into a surface water feature, catch basins will be constructed to intercept sediment before it reaches the feature. After construction, spoil sites will be graded and vegetated to reduce the potential for erosion.

- Sediment control measures will be in place prior to the onset of the rainy season and will be monitored and maintained in good working condition until disturbed areas have been revegetated.

- Any new or previously excavated gravel material placed in the channel will meet Caltrans' cleanness test indicating the relative proportions of clay-sized material clinging to coarse aggregate and screenings (California Test No. 227) with a value of 85 or higher (excluding such materials as soil in the RSP to allow for riparian planting.

- Water removed from the coffer dammed area for east arch foundation removal and abutment footings will be pumped to a temporary sediment retention basin outside of the

active channel on the floodplain to allow sediment of settle out and water to percolate through the alluvial floodplain to return to the river channel.

Timing/Implementation:	Prior to and during construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #7 – Prevention of Accidental Spills

MM7-1 Construction specifications will include the following measures to minimize the potential for adverse effects resulting from accidental spills of pollutants (e.g., fuel, oil, grease):

- A site-specific Spill Prevention Plan will be implemented if potentially hazardous materials are used or stored at the construction site. The plan will include the proper handling and storage of all potentially hazardous materials, as well as the proper procedures for cleaning up and reporting any spills. If necessary, containment berms will be constructed to prevent spilled materials from reaching surface water features.
- Equipment and hazardous materials will be stored a minimum of 50 feet away from surface water features.
- Vehicles and equipment used during construction will receive proper and timely maintenance to reduce the potential for mechanical breakdowns leading to a spill of potentially hazardous materials. Maintenance and fueling will be conducted in an area at least 50 feet away from surface water features or within an adequate fueling containment area.
- Equipment operating within the ordinary high water mark will use non-toxic vegetable oil for operating hydraulic equipment instead of traditional hydraulic fluids.
- Place plastic materials under asphaltic concrete paving equipment while not in use, to catch and/or contain drips and leaks.
- Minimize sand and gravel from new asphalt getting into storm drains, streets, and creeks by sweeping. Old or spilled asphalt must be recycled or disposed as approved by the Resident Engineer.
- Asphaltic concrete grindings, pieces, or chunks used in embankments or shoulder backing must not be allowed to enter any storm drain or watercourses. Install silt fence until structure is stabilized or permanent controls are in place.
- Collect and remove all broken asphalt and recycle when practical; otherwise, dispose in accordance with Standard Specification 7-1.13.
- During chip seal application and sweeping operations, petroleum or petroleum covered aggregate must not be allowed to enter any storm drain or water courses. Use silt fence until installation is complete.

- Use only non-toxic substances to coat asphalt transport trucks and asphalt spreading equipment.
- Drainage inlet structures and manholes will be covered with filter fabric during application of seal coat, tack coat, slurry seal, and/or fog seal.
- Seal coat, tack coat, slurry seal, or fog seal will not be applied if rainfall is predicted to occur during the application or curing period.

Timing/Implementation:	Prior to and during construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #8 – Replacement of Lost Riparian Habitat

The following measures will be implemented to reduce potential impacts on riparian habitat in the project area:

MM8-1 The width of the construction disturbance zone within the riparian habitat will be minimized through careful pre-construction planning.

MM8-2 Exclusionary fencing will be installed along the boundaries of all riparian areas to be avoided to minimize impacts on riparian vegetation outside of the construction area.

MM8-3 Riparian habitat areas temporarily disturbed will be replanted using riparian species that have been recorded along Navarro River near the project area, including white alder (*Alnus rhombifolia*), red alder (*Alnus rubra*), willow (*Salix* spp.), and Oregon ash (*Fraxinus latifolia*).

MM8-4 On-site creation/restoration will occur in areas disturbed during project construction and the amount of habitat created/restored will be at a 3:1 ratio of new plantings for each large woody plant removed that is greater or equal to 6 inches in diameter at breast height. These replanting ratios will help promote successful establishment of at least one vigorous plant for each large woody plant removed to accommodate the project.

MM8-5 Plant spacing intervals will be determined as appropriate based on-site conditions following construction.

MM8-6 Non-native tree species removed during project construction will be replaced with native riparian species.

MM8-7 Revegetation monitoring will be implemented in compliance with regulatory permit conditions and be initiated immediately following completion of the planting; and will be described within a Riparian Wetland Mitigation and Monitoring Plan to be reviewed and approved by the U.S. Army Corps of Engineers, North Coast Regional Water Quality Control Board, and CDFW. It is anticipated that this plan will provide for a five year monitoring and contingency program to provide for successful restoration of riparian vegetation. The monitoring surveys will consist of a general site walkthrough evaluating the survival and health of riparian plantings, signs of drought stress, weed or herbivory problems, and the presence of trash or other debris. In the

revegetation area, 85 percent or greater survival of planted species (including container stock and hardwood cuttings) will be considered a success when measured at the end of a five year monitoring period. However, greater than 50 percent mortality of planted species will be considered acceptable if "volunteer" native species provide complete vegetation coverage in the mitigation area. If monitoring results indicate that revegetation efforts are not meeting established success criteria, corrective measures will be implemented.

Timing/Implementation:	Prior to, during, and after construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #9 – Prevention of Spread of Invasive Species

The following measures will be implemented to prevent the spread of invasive species:

MM9-1 All equipment used for off-road construction activities will be weed-free prior to entering the project area.

MM9-2 Any mulches or fill used will be weed-free.

MM9-3 Any seed mixes or other vegetative material used for revegetation of disturbed sites will consist of locally adapted native plant materials to the extent practicable.

MM9-4 Any gravels or materials used for the temporary stream diversions will be new, from a local source, or properly disinfected or cleaned prior to installation.

MM9-5 Any equipment (including boots/waders) and construction equipment will be properly disinfected or cleaned according to guidance provided by the State of California Aquatic Invasive Species Management Plan (California Department of Fish and Game 2008) prior to in-stream work to prevent the spread of aquatic invasive species.

Timing/Implementation:	Prior to and during construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #10 – General Measures for Protection of Special-Status Wildlife Species

The following measures will be implemented to avoid or minimize the potential for adverse effects on special-status wildlife species:

MM10-1 Prior to initiation of construction activities, workers will participate in environmental awareness training provided by a qualified biologist. The training will instruct workers about the following: 1) how to identify special-status species, their various life forms, and their habitat components; 2) the potential for these species to be discovered and affected during construction activities; 3) how to identify sensitive habitats (e.g., nests); and 4) what to do if special-status species are encountered during construction activities.

MM10-2 Construction access and equipment will be located on existing roads or previously disturbed parking areas.

MM10-3 Vehicle speeds within off-road portions of the work area will not exceed 15 miles per hour to avoid collisions with wildlife.

MM10-4 Disturbance of soil, vegetation, naturally occurring debris piles (including fallen trees, woodrat nests, or dead tree snags), rocky outcrops, and existing burrows or crevices will be avoided or minimized to the extent practicable.

MM10-5 To the extent practicable, all holes or trenches will be covered at the end of each workday to prevent wildlife from becoming trapped. All holes and trenches will be inspected before each workday to facilitate the release of any trapped wildlife. A qualified biologist will be consulted if work crews are unable to safely assist in the release of trapped wildlife.

MM10-6 To minimize attractants to wildlife, trash will be stored in containers that can be closed and latched or locked to prevent access by wildlife. All loose trash will be cleaned up daily.

Timing/Implementation:	Prior to and during construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #11 – Special-Status Amphibian Species

The following measures will be implemented to avoid or minimize the potential for adverse impacts on special-status amphibians and reptiles.

MM11-1 A qualified biologist will conduct pre-construction surveys for red-bellied newt, northern red-legged frog, and foothill yellow-legged frogs within the project area. If these species are detected during the pre-construction surveys or at any time during construction, CDFW will be consulted for guidance on further avoidance measures to avoid impacts on the species.

MM11-2 Prior to moving equipment or materials each day, a qualified biologist will inspect underneath and around equipment and other project materials when located within 200 feet of aquatic habitat for red-bellied newt, northern red-legged frog, and foothill yellow-legged frog. If these species are detected, they will be allowed to move out of the construction area under their own volition, or a qualified biologist will relocate them to the nearest suitable habitat that is at least 100 feet outside of the construction impact area.

Timing/Implementation:	Prior to and during construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #12 – Special-Status Birds and Migratory Birds and Raptors

The following measures will be implemented to avoid or minimize the potential for adverse impacts on nesting special-status birds and migratory birds and raptors:

MM12-1 To the extent practicable, vegetation removal should be scheduled to avoid the nesting season (February 1 to August 31) for raptors and other special-status birds. Removal of vegetation outside of the nesting season is intended to minimize the potential for delays in vegetation removal due to active nests.

MM12-2 If construction activities during the nesting season (February 1 to August 31) cannot be avoided, pre-construction surveys for nesting raptors within 500 feet and for other migratory birds within 250 feet of the project area (where accessible) will be conducted by a qualified biologist within 14 days prior to the initiation of construction activities. These surveys may occur on the same day as the pre-construction surveys for other species. Areas to be surveyed will be limited to those areas subject to increased disturbance as a result of construction activities. Areas where existing traffic, human activity, etc., is greater than or equal to construction-related disturbance need not be surveyed. If any active special-status bird, migratory bird, or raptor nests are identified, appropriate conservation measures (as determined by a qualified biologist) will 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 in the vicinity of the active nest site until the young have fledged.

Timing/Implementation:	Prior to and during construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #13 – Sonoma Tree Vole, Ring-Tailed Cat, and Northern California/Southern Oregon Distinct Population Segment Fisher

The following measures will be implemented to avoid or minimize the potential for adverse impacts on Sonoma tree vole, ring-tailed cat, and Northern California/Southern Oregon DPS fisher:

MM13-1 If construction (including the removal of large trees) occurs during the reproductive season (February 1 through September 30), a qualified biologist will conduct a pre-construction survey of suitable nesting habitat for Sonoma tree vole, ring-tailed cat, and Northern California/Southern Oregon fisher within the project area. The pre-construction survey will be performed no more than 14 days prior to the implementation of construction activities (including staging and equipment access). If a lapse in construction activities for 14 days or longer occurs between those dates, another pre-construction survey will be performed. If any active nests are present, removal of trees or other vegetation or structures containing active nests will not occur until it is determined that the young are not dependent on the nest.

Timing/Implementation:	Prior to and during construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #14 – Pallid Bat, Western Red Bat, and Other Bat Species

The following measures will be implemented to avoid or minimize the potential for adverse impacts on pallid bat, western red bat, and other bat species:

MM14-1 To the extent practicable, removal of large trees and removal of the existing timber approach span will occur before maternity colonies form (i.e., prior to March 1) or after young are volant (i.e., after August 15).

MM14-2 Humane bat exclusion devices may be placed over potential bat habitat on the timber approach span of the existing bridge between March 1–April 15 or between September 1–October 15 during the year prior to construction to prevent bats from forming maternity colonies while allowing bats in the bridge to exit safely. Blockage materials should be installed wherever unoccupied crevices or portions of crevices that are 3/8 inch or wider occur between sistered stringers between bents, and where stringers rest atop bent caps. Active roost locations will require fitting with one-way exits to permit bats to emerge from roost crevices but prevent re-entry. If netting is used, it is to be made of thick plastic with no exposed, overlapping joints and the mesh size will not exceed 1/4 inch. Once bats have been excluded, the exclusion devices will be monitored by a qualified bat biologist on a regular basis to confirm they are in good condition and that bats do not recolonize the bridge.

MM14-3 If construction (including the removal of large trees) occurs during the non-volant season (March 1 through August 15), a qualified biologist will conduct a pre-construction survey of the project area for maternity colonies. Surveys will involve visual emergence surveys, acoustic monitoring, and daytime inspection of potential roost habitat within the bridge as conditions allow. The pre-construction survey will be performed no more than 14 days prior to the implementation of construction activities (including staging and equipment access). If a lapse in construction activities for 14 days or longer occurs between those dates, another pre-construction survey will be performed. If any maternity colony is present, bridge construction or tree removal will not occur until it is determined that the young are volant.

MM14-4 In order to replace existing bat roosting habitat that will be removed, during bridge installation, forgo the bottom closure pour between parallel box girders, and install lightweight concrete panels of sufficient height, width, length, and thickness of the inner walls of the bridge bay in the closure pour along the length of the structure.

MM14-5 Guidance for humane bat exclusion and replacement of bat roosting habitat contained in the *Bat Habitat Assessment and Replacement Habitat Recommendations* memorandum (Appendix C of the *Natural Environment Study* [Stantec 2023]) will be implemented to the extent practicable.

Timing/Implementation:	Prior to and during construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #15 – Wetlands and Other Waters of the U.S./Waters of the State

The following measures will be implemented to avoid or minimize the potential for adverse impacts on wetlands and other waters of the U.S./waters of the state to a less-than-significant level:

MM15-1 Prior to any discharge of dredged or fill material into waters of the U.S./waters of the state, the required permits and authorizations will be obtained from the U.S. Army Corps of Engineers and the Regional Water Quality Control Board. All terms and conditions of the required permits/authorizations will be implemented.

MM15-2 Prior to any activities that would obstruct the flow of, or alter the bed, channel, or bank of any stream or river, a Notification of Streambed Alteration will be submitted to the California Department of Fish and Wildlife (CDFW). If required, a Streambed Alteration Agreement will be obtained from CDFW, and all conditions of the agreement will be implemented.

MM15-3 All wetlands and other waters of the U.S./waters of the state that are temporarily affected by project construction will be restored as close as practicable to their original contour and conditions within 10 days of the completion of construction activities.

MM15-4 Riparian vegetation removal within riparian wetlands will be minimized to the greatest extent practicable. Where practicable, vegetation will be cut with hand tools at ground level to enable regrowth from roots when construction is complete.

Timing/Implementation:	Prior to, during, and after construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #16 – Cultural Resources

The following measure will be implemented to minimize or avoid project-related impacts on cultural resources:

MM16-1 **Inadvertent Discovery of Cultural Resources.** If cultural resources, such as chipped or ground stone, historic debris, building foundations, or bone are discovered during ground disturbance activities, work will be stopped within 20 meters (66 feet) of the discovery, per the requirements of CEQA (Title 14 California Code of Regulations [CCR] 15064.5 (f)) and Section 106 (36 CFR 800.13). Work near the archaeological finds will not resume until a professional archaeologist who meets the Secretary of the Interior's Standards and Guidelines has evaluated the materials and offered recommendations for further action.

MM16-2 **Inadvertent Discovery of Human Remains.** If human remains are discovered during project construction, work will stop at the discovery location, within 20 meters (66 feet), and any nearby area reasonably suspected to overlie adjacent to human remains (Health and Safety Code, Section 7050.5). The Mendocino County coroner will be contacted to determine whether the cause of death must be investigated. If the coroner determines that the remains are of Native American origin, it is necessary to comply with state laws relating to the

disposition of Native American burials, which fall within the jurisdiction of the NAHC (PRC, Section 5097). The coroner will contact the NAHC. The descendants or most likely descendants of the deceased will be contacted, and work will not resume until they have made a recommendation to the landowner or the person responsible for the excavation work for means of treatment and disposition, with appropriate dignity, of the human remains and any associated grave goods, as provided in PRC, Section 5097.98. Work may resume if NAHC is unable to identify a descendant or the descendant failed to make a recommendation.

Timing/Implementation:	During construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #17 – Greenhouse Gas Emissions

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

MM17-1 The project will comply with Caltrans Standard Specifications Section 14-8 regarding air quality.

- In accordance with Caltrans Standard Specifications, the contractor will comply with all of the Air District rules, ordinances, and regulations regarding air quality restrictions.
- The project will comply with Title 13 CCR 2485 which restricts construction vehicles idling to no longer than five consecutive minutes.

Timing/Implementation:	During construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #18 – Lead-Based Paint

The following measure will be implemented to reduce potential impacts from lead-based paint to a less-than-significant level:

MM18-1 The County will include provisions in the construction bid documents to provide for the proper removal and disposal of lead-based paint coated surfaces found on the existing bridge. The following measures will be implemented to reduce construction-related environmental impacts that could result from lead-based paint removal:

- LBP will be abated before planned construction/demolition by a licensed contractor in accordance with 17 CCR 3500.
- LBP must be transported under a Uniform Hazardous Waste Manifest (Title 22 CCR, Section 6626.23). It must be disposed of either at a Class I landfill or at other landfills that have specific permits to accept these wastes.

- Demolition and construction work will be subject to the applicable work practices for LBP and lead hazards including:

  - California Construction Order 1532.1(a)
  - Lead-in-Construction Standard
  - Title 17, CCR (CCR), Division 1, Chapter 8
  - Work Practices for Lead-Based Paint and Lead Hazards

  Timing/Implementation: During construction
  Enforcement: County
  Monitoring: County and/or its contractor

Mitigation Measure #19 – Treated Wood Waste

The following measure will be implemented to reduce potential impacts from treated wood waste to a less-than-significant level:

MM19-1 The County will include provisions in the construction bid documents to provide for the proper removal and disposal of treated wood waste material found on the existing bridge. The following measure will be implemented to reduce construction-related environmental impacts that could result from treated wood waste removal:

- The contractor will remove treated wood waste following the alternative management standards specific under Caltrans Special Standard Provision 14-11.14 for treated wood waste, as well as California Code of Regulations Title 22, Division 4.5, Chapter 34, Sections 67386.1 through 67386.12 for labeling, accumulation, off-site shipment tracking, notification, treatment, and disposal. All personnel that may come into contact with treated wood waste will receive, at a minimum, training on safe handling, sorting and segregating, storage, labeling (including date), and proper disposal methods.

  Timing/Implementation: During construction
  Enforcement: County
  Monitoring: County and its contractor

Mitigation Measure #20 – Wildfire Prevention

The following measure will be implemented to reduce potential impacts from wildfire to a less-than-significant level:

MM20-1 The County will include provisions in the construction bid documents to require measures to minimize project-related potential for wildfire ignition.

MM20-2 Per the requirements of PRC Section 4442, the County will include a note on all construction plans that internal combustion engines will be equipped with an operational spark arrester, or the engine must be equipped for the prevention of fire.

Timing/Implementation: During construction
Enforcement: County

Monitoring:	County and its contractor

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6 Report Preparation

6.1 Mendocino County, CEQA Lead Agency

Howard Dashiell	Director of Transportation
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Alicia Meier	Acting Deputy Director–Engineering

6.2 California Department of Transportation District 1, Office of Local Assistance

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Vincent Heim	Associate Environmental Planner (Archaeologist)
Julia Peterson	Associate Environmental Planner (Generalist)
Russell Hansen	District Local Assistance Engineer
Sara Thomas	Native American Liaison
Christa Unger	Environmental Planner (Natural Resources)

6.3 Consor Engineering (Formerly Quincy Engineering, Inc.), Engineering Consultant

Jason Jurrens	Principal Engineer/Project Manager
Mike Sanchez	Project Engineer

6.4 Avila and Associates, Design Hydraulic Study

Han-Bin Liang	Registered Civil Engineer

6.5 Crawford and Associates, Initial Site Assessment

Stephen J. Carter	Senior Geologist
W. Eric Nichols	Senior Project Manager

6.6 Alta Archaeological Consulting, Archaeological Survey and Extended Phase I Report, Historic Property Survey Report

Alex DeGeorgey	PQS, Prehistoric Archaeology
Marlene McVey	Archaeologist

6.7 Stantec Consulting Services Inc. Environmental Compliance Subconsultants

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Wirt Lanning	Program/Project Manager
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David Pluth	Biologist
Sarah Tona	Associate Biologist/Botanist/Environmental Analyst
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7 References

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