

# **East Hill Road at Davis Creek Bridge (No. 10C-0113) Replacement Project**

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## **Proposed Mitigated Negative Declaration and Initial Study**

**November 2013**

*Prepared for:*

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Department of Transportation  
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NSR 51357

- 1. Project Title:** East Hill Road at Davis Creek Bridge (No. 10C-0113) Replacement Project
- 2. Lead Agency Name and Address** Mendocino County Department of Transportation  
340 Lake Mendocino Drive  
Ukiah, CA 95482
- 3. Contact Person and Phone Number** Jackson Ford, Environmental Compliance Specialist  
(707) 463-4622
- 4. Project Location** East Hill Road at Davis Creek, approximately 2.5 miles southeast of Willits, Mendocino, County, California; Township 18 North, Range 13 West, sections 21 and 28, *Willits, California* quadrangle; Assessor Parcel Numbers: 104-21-014, 104-21-015, 104-21-012, 104-23-021, 104-22-001, and 104-23-005
- 5. Project Sponsor's Name** Scott Heegler, P.E., Project Manager  
Mendocino County Department of Transportation  
340 Lake Mendocino Drive  
Ukiah, CA 95482
- 6. General Plan Designation** Agricultural (AG40), Rural Residential (RR5)
- 7. Zoning** Agricultural, Rural Residential, and Floodplain

#### **8. Description of Project**

The Mendocino County Department of Transportation (County) proposes to replace the existing bridge (No. 10C-0113) on East Hill Road (project) over Davis Creek and construct the necessary roadway approach improvements. The existing bridge is currently classified as structurally deficient and functionally obsolete due to inadequate deck width and the approach roadway alignment. The County has nominated this bridge for replacement under the federal-aid Highway Bridge Program administered by the Federal Highway Administration (FHWA) through the California Department of Transportation (Caltrans) Local Assistance program. The new bridge will meet current design standards of Mendocino County, the American Association of State Highway and Transportation Officials (AASHTO), and Caltrans.

The new two-lane single span bridge would be constructed approximately 70-feet downstream of the existing bridge. The new bridge would be a 182.4-foot-long, cast-in-place, pre-stressed concrete, box-girder bridge with an 8 foot structure depth. The single-span bridge option would minimize environmental impacts on Davis Creek by avoiding the need to construct abutments or piers inside the active channel or below the 100-year flood ( $Q_{100}$ ) elevation. The roadway approaches would be widened and realigned to conform to the new bridge. East Hill Road would be realigned to improve the sharp horizontal curve located west of the bridge by increasing the curve radius. The existing bridge would remain in operation during construction and would be removed and disposed of offsite after the new bridge has been completed.

## **9. Surrounding Land Uses and Setting**

Rural Residential/Grazing/Pasture/Hay/Floodplain

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

- Federal Highway Administration
- U.S. Army Corps of Engineers (San Francisco District)
- National Oceanic and Atmospheric Administration Fisheries Service
- California Department of Fish & Wildlife (Region 1)
- California Regional Water Quality Control Board (North Coast Region)
- California Department of Transportation (District 1)
- Mendocino County Planning Department

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## Acronyms

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AASHTO	American Association of State Highway and Transportation Officials
AC	asphalt concrete
APN	Assessor's Parcel Number
AQMD	Air Quality Management District
ASR	Archaeological Survey Report
BA	Biological Assessment
BMP	Best Management Practice
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CDFW	California Department of Fish and Wildlife
CNDDDB	California Natural Diversity Database
CO <sub>2</sub>	carbon dioxide
Corps	U.S. Army Corps of Engineers
County	Mendocino County
CWA	Clean Water Act
dB	decibel
dbh	diameter at breast height
DPS	Distinct Population Segment
DTSC	Department of Toxic Substances Control
EFH	Essential Fish Habitat
EFHA	Essential Fish Habitat Assessment
EPA	U.S. Environmental Protection Agency
ESU	Evolutionarily Significant Unit
FHWA	Federal Highway Administration
GHG	greenhouse gas
HDPE	High Density Polyethylene
HEPA	high energy particulate air
HPSR	Historical Properties Survey Report
IS	Initial Study
MND	Mitigated Negative Declaration
NEPA	National Environmental Policy Act
NES	Natural Environmental Study
NMFS	National Marine Fisheries Service
NSR	North State Resources
OHWM	ordinary high water mark

PM<sub>10</sub> particulate matter 10 microns or less  
project East Hill Road at Davis Creek Bridge Replacement Project

Q<sub>50</sub> 50-year flood  
Q<sub>100</sub> 100-year flood

ROW right of way  
RSP rock slope protection  
RWQCB Regional Water Quality Control Board

SONCC Southern Oregon/Northern California Coast  
SWPPP Storm Water Pollution Prevention Plan

# 1 Introduction

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## 1.1 Introduction and Regulatory Guidance

This document is an Initial Study (IS) that summarizes the technical studies prepared for the proposed East Hill Road at Davis Creek Bridge (No. 10C-0113) Replacement Project (project). It includes an evaluation of potential environmental impacts that could result from the project and provides justification for a Mitigated Negative Declaration (MND) for the project. This document has been prepared in accordance with the current California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et seq., and the State CEQA Guidelines. Mitigation measures have been proposed to avoid or minimize any significant impacts that were identified.

## 1.2 Lead Agency

The Lead Agency is the public agency with primary responsibility for implementing a project. The project would receive funding through federal and state sources and would require approvals from the Federal Highway Administration (FHWA) and the California Department of Transportation (Caltrans). FHWA has designated Caltrans to act as the National Environmental Policy Act (NEPA) Lead Agency on its behalf. The Mendocino County Department of Transportation (County) is the CEQA Lead Agency. NEPA approval is anticipated to be in the form of a Categorical Exclusion supported by technical studies.

## 1.3 Supporting Technical Studies

The technical studies listed below are available for review at the County. Please contact:

Jackson Ford, Environmental Compliance Specialist  
Mendocino County Department of Transportation  
340 Lake Mendocino Drive  
Ukiah, CA 95482  
Phone: (707) 463-4622

Technical studies conducted for this project include:

- Archeological Survey Report (ASR)/Historical Properties Survey Report (HPSR) (confidential; available to qualified readers only)
- Biological Assessment/Essential Fish Habitat Assessment (BA/EFHA) Report
- Natural Environment Study (NES) Report
- Design Hydraulic Study
- Wetland Delineation Report
- Initial Site Assessment
- Preliminary Geotechnical Investigation
- Noise Study
- Farmland Impact Assessment Report



## 1.4 Document Organization

The IS 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, 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

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### 2.1 Location

East Hill Road at the Davis Creek bridge (No. 10C-0113) is located approximately 2.5 miles southeast of Willits, Mendocino County, California and about 2 miles east of U.S. Highway 101/State Route 20. The bridge crosses Davis Creek, a tributary to Outlet Creek thence the Eel River, which ultimately empties into the Pacific Ocean approximately 15 miles south of Eureka. The project site is found on the *Willits, California* 7.5 minute U.S. Geological Survey quadrangle, Township 18 North, Range 13 West, Sections 21 and 28, Mount Diablo Base & Meridian. The project location is shown in Figure 1. The project area corresponds to a Mendocino County right-of-way (ROW) easement through portions of the following Assessor Parcel Numbers (APN): 104-21-014, 104-21-015, 104-21-012, 104-23-021, 104-22-001, and 104-23-005.

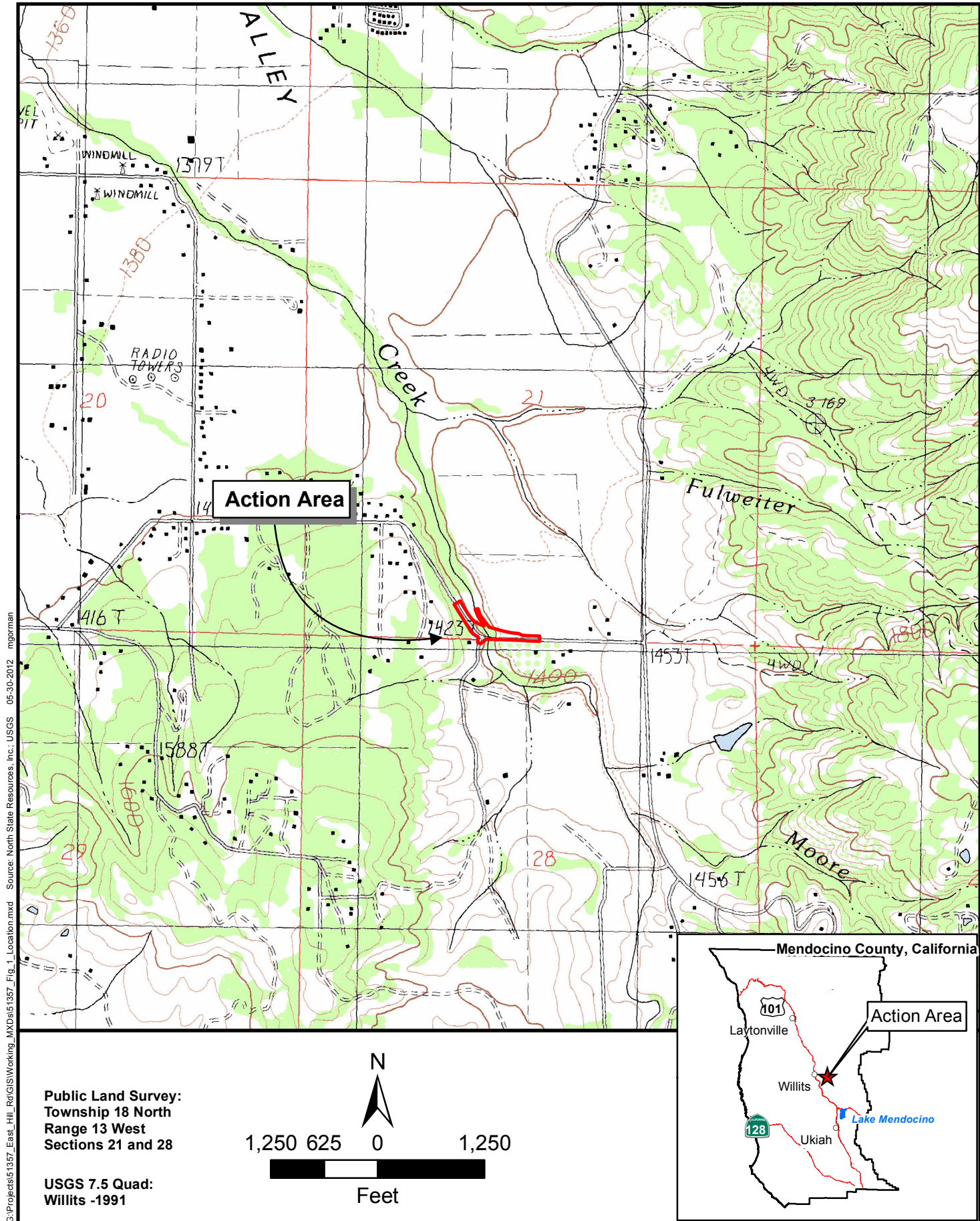
### 2.2 Existing Facility Conditions

East Hill Road, in the vicinity of the Davis Creek bridge, varies in width from about 22 to 24 feet with two 11-foot-wide travel lanes to accommodate two-way traffic. The roadway approach west of the bridge has a sharp horizontal curve and has a posted 25 miles-per-hour speed limit. East Hill Road has an Average Daily Traffic Volume of more than 2,000 vehicles per day. It is classified by the County as a Rural Minor Collector.

The bridge, completed in 1962, is a 130-foot-long through-Pratt-truss bridge with an 18-foot-wide deck (clear width) that carries East Hill Road over Davis Creek. The bridge deck is constructed of a reinforced concrete deck over timber stringers supported on steel floor beams. The reinforced concrete abutments have a timber post and lagging system in front of the footings, presumably to retain the fill that the footings bear on. The bridge is designated as a Category 5 (Not Eligible for Listing in the National Register of Historic Places) bridge in the Caltrans Historic Bridge Inventory-Local Agency. The bridge is currently classified as structurally deficient and functionally obsolete.

### 2.3 Project Purpose and Need

The purpose of this project is to improve public safety by providing safe and cost effective solutions for traffic to cross Davis Creek. In 2010 the County identified the need for replacement after the bridge was found to be structurally deficient due to substandard load carrying capacity and functionally obsolete due to inadequate deck width and approach roadway alignment.



Davis Creek on East Hill Road Bridge Replacement Project

**Figure 1**  
**Study Area and Vicinity Map**

## 2.4 Proposed Project

### 2.4.1 Replacement of Existing Bridge with a New Structure

The new two-lane single span bridge would be constructed downstream of the existing bridge (Figure 2). The new bridge would be a single span 182.4-foot-long, cast-in-place, pre-stressed concrete box-girder bridge with an 8-foot structure depth. The single-span bridge option would minimize environmental impacts on the stream by avoiding the need to construct abutments or piers inside the active channel or below the 100-year flood ( $Q_{100}$ ) elevation. In accordance with AASHTO requirements, the bridge would provide two 12-foot-wide traffic lanes with 8-foot-wide shoulders, providing a clear width between barrier rails of 40 feet per recommendations outlined in the County and AASHTO Standards for a Rural Minor Collector. Concrete barrier rails would be installed along both sides of the bridge. Railing would be a Caltrans Standard Concrete Barrier Type 80. The roadway approaches to the bridge would be widened and realigned to conform to the new bridge.

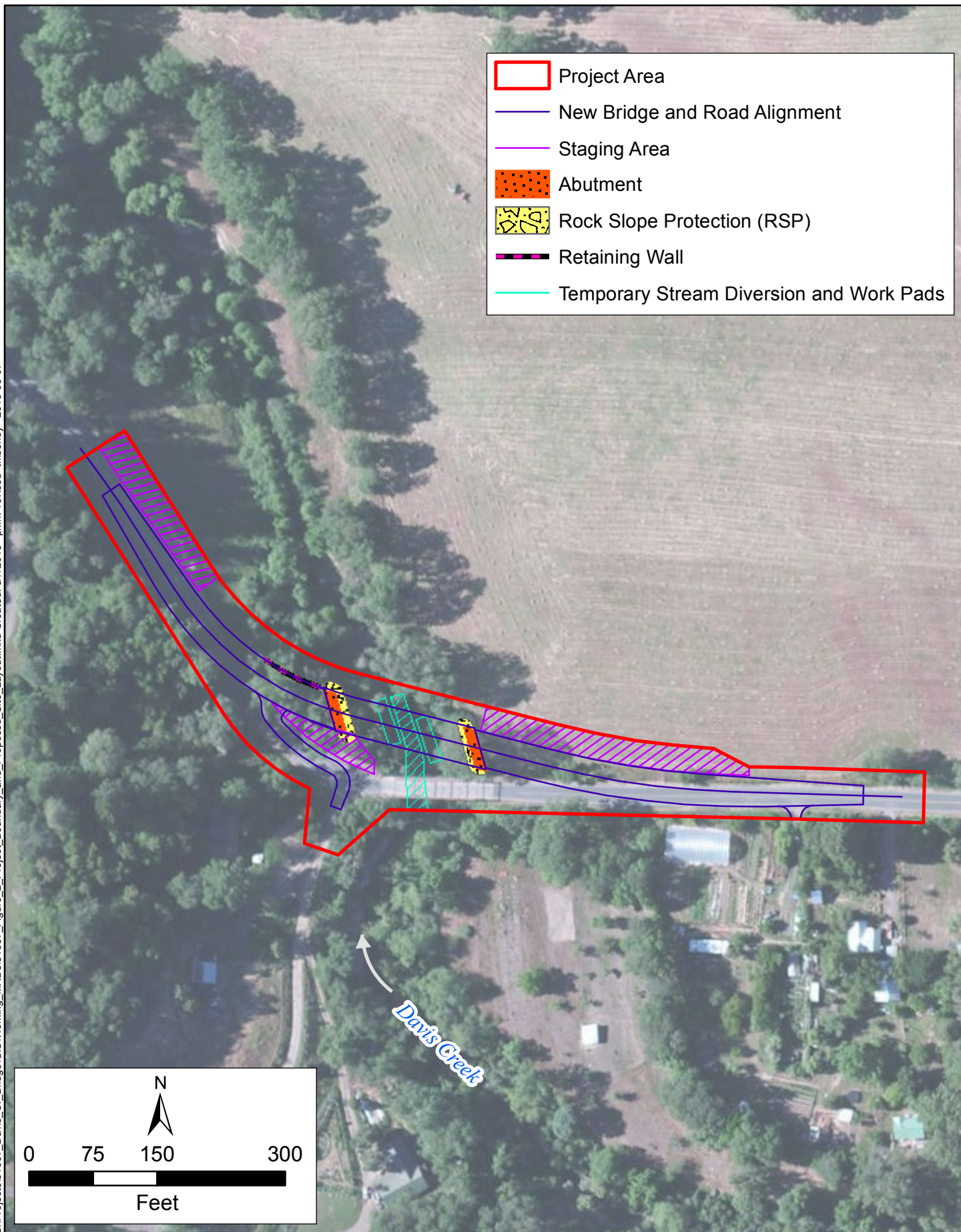
The vertical alignment of the existing bridge provides adequate clearance for freeboard, and the new bridge would not change much vertically. The Hydraulic Design Criteria established in the Caltrans Local Procedures Manual prescribe that the facility be capable of conveying the base or  $Q_{100}$  and passing the 50-year flood ( $Q_{50}$ ) without causing objectionable backwater, excessive flow velocities or encroaching on through traffic lanes. The minimum design criteria for this project would provide almost 10 feet of freeboard over the  $Q_{100}$ , which would provide more than sufficient freeboard to pass all drift.

East Hill Road would be realigned to improve the sharp horizontal curve located west of the bridge by increasing the curve radius. The new bridge is designed with a higher profile than the existing bridge to help smooth out the short “sag” vertical curve on the west side of the bridge and to meet minimum design standards for vertical curves. As a result, approach grading would be needed to conform back to existing grading. A new retaining wall would be constructed on the north side of the road, west of the bridge, to minimize impacts on the stream.

The existing bridge would remain in operation throughout construction and be removed and disposed of offsite after the new bridge has been completed. A temporary work area within the channel would be needed to construct the necessary falsework and to drop the existing bridge onto during its removal. The temporary work platforms would cover the channel from 20-feet upstream of the existing bridge to 20-feet downstream of the proposed bridge (140 feet in total) (Figure 2). Temporary work platforms would be constructed of suitably sized salmon spawning gravel “fish rock.” Gravel would be uncrushed, rounded, natural river rock with no sharp edges. It would be washed at least once and have a cleanliness value of 85 or higher based on Caltrans cleanliness test indicating the relative proportions of clay-sized material clinging to coarse aggregate and screenings (California Test No. 227). Gravel would also be completely free of oils, clay, debris, and organic material. The material used as fish rock for the project will follow the size criteria identified in Table 1.



G:\Projects\51357\_Davis\_Cr\_Bridge\GIS\Working\_MXD\51357\_Figure\_2\_Project\_Boundary\_and\_Proposed\_Site\_Layout.mxd Created: 8/7/2013 pkirk revised Imooney 2013-08-07



**Table 1. Size Criteria for Spawning-sized Gravel “Fish Rock” for Constructing Gravel Work Pad**

Particle Size	Percent Passing	Percent Retained
5-inch	95-100	0-5
2-inch	70-85	15-30
1-inch	40-50	56-60
3/4-inch	25-35	60-75
1/2-inch	10-20	85-90
1/4-inch	0-5	95-100

Because fish rock does not stay together under pressure of heavy equipment, clean crushed angular gravel would be placed on top of the fish rock with geotextile fabric to separate the crushed angular gravels from the fish rock. To convey flow beneath the temporary work platform, High Density Polyethylene (HDPE) culvert(s) would be installed to maintain flow through the site. All temporary structures would be installed to meet National Marine Fisheries Service (NMFS) Guidelines for Fish Salmonid Passage at Stream Crossings (National Marine Fisheries Service 2001) and Fish and Game Code Section 5901.

The roadway approach construction would include minor cuts and fills up to 20 feet high on the west side of the project boundary. Construction of the bridge abutments would require two excavation areas (Station 14+00 and 16+10), each measuring approximately 20 feet long by 50 feet wide (Figure 3). A retaining wall, approximately 75 feet in length would be required at the northwest approach to contain the roadway fill.

It is anticipated that the span length would be about 185 feet. Based on initial field observations, no problems with falsework are anticipated and the use of cast-in-place construction is therefore appropriate. Falsework would be placed within the 100-year floodplain of Davis Creek and is expected to consist of the typical post and beams founded on wooden pads. The primary work pad consisting of the cleaned and washed gravel would support this falsework. The work pads would measure approximately 50 feet by 15 feet.

Scour protection of the abutments from river flows would be required; the scour protection is expected to consist of 75 pound rock slope protection (RSP) along the east and west side of the riverbank for a stretch of approximately 75 feet and a width of 10 feet. This RSP would be placed outside of the summer baseflow channel, but would be within the ordinary high water mark (OHWM) of the east bank of Davis Creek.

It is anticipated that Davis Creek would have a relatively small amount of water flow during the construction season; abutment excavations would be well away from the baseflow channel. Following completion of construction, the falsework, diversion, and gravel work pads would be removed and the stream would be allowed to naturally reform the channel through any fish rock left in place.

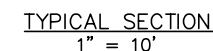
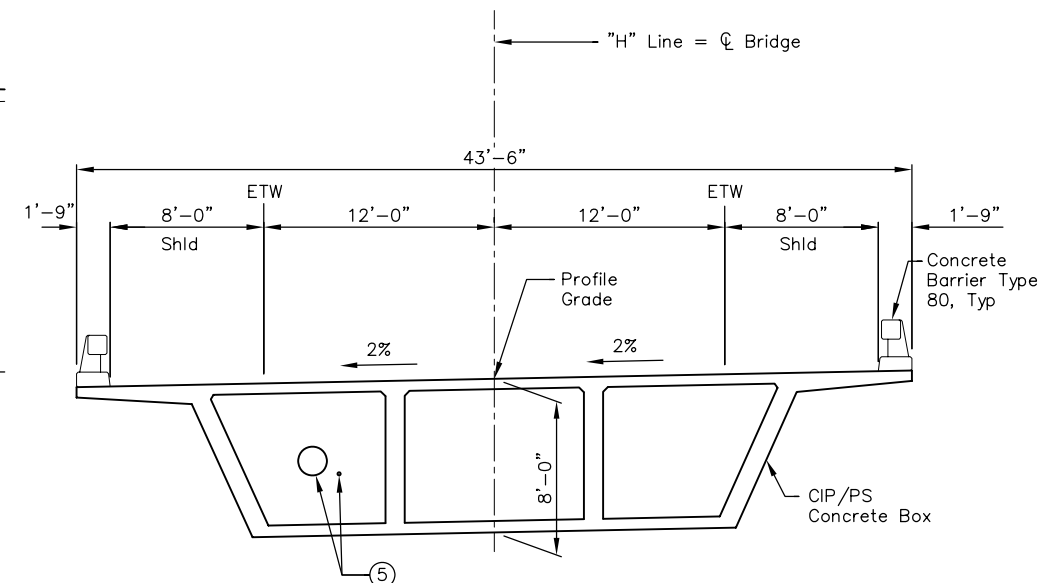
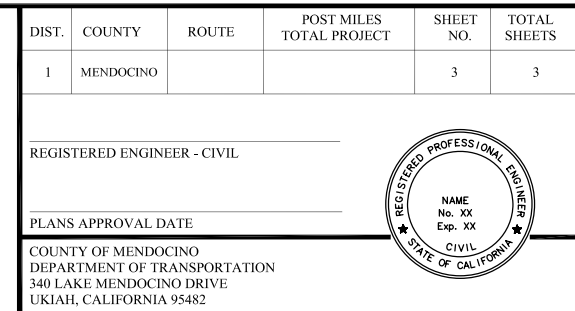
## 2.4.2 Construction Criteria and Methods



Construction specifications would be in accordance with Caltrans Standard Specifications in force at the time the construction contract is awarded and Standard Special Provisions. The following paragraphs describe the construction activities associated with the bridge replacement in more detail.

Equipment and materials would be staged in existing upland areas along East Hill Road on both sides of Davis Creek (Figure 2). During construction, traffic through the construction area would be maintained along the existing roadway and bridge. To facilitate construction of the new bridge structure and demolition and removal of the existing bridge, a work platform with a temporary stream diversion would be constructed in the channel of Davis Creek. To keep fish out of the work area during installation of the culvert pipes and temporary work platform, block nets would be installed upstream and downstream of the instream work area and maintained until the installation of the work platform is complete. Block nets would consist of 0.25-inch mesh nets spanning the entire channel and adequately secured to the channel bottom. Prior to installation of the culverts and temporary work platform, any fish present will be captured and relocated according to methods described in Section 3.2, Section IV, Biological Resources.

The temporary work platform would be constructed of fish rock and covered with clean crushed angular gravel placed on top of geotextile fabric to separate the crushed angular gravel from the fish rock. The temporary stream diversion component of the work platform would be approximately 140 feet long. Two additional work pads would be installed on either side of the temporary stream diversion to support falsework. The in-channel project elements would begin after June 15 when there is usually still a small quantity of flow in Davis Creek; the flow would be routed beneath the work pad through HDPE culvert(s). A temporary diversion system consisting of clean gravel and plastic sheeting at the upstream end of the work pad would be used to divert flow into the culverts and beneath the work pad. Culverts would be designed using the Hydraulic Design Method described in NMFS (2001) to match the hydraulic performance of the culverts with the swimming abilities of the target species and age class, which, for this project, is juvenile steelhead.

Both bridge abutments would be outside of the  $Q_{100}$  flow channel and above the  $Q_{100}$  water surface elevation. Pile cap foundations would be used at the abutments. The ground would be excavated to a depth of approximately 15 feet and concrete would be placed neat along the excavated area after the piles have been installed. Abutments would be constructed from cast-in-place concrete founded on driven piles. Approximately 80 10-inch steel H-piles would be driven to support the abutments, the wing walls, and the retaining wall. Each abutment would be founded on 30 driven steel H-piles (3-rows of 10). These steel H-piles are estimated to be approximately 60–80 feet in length and would be 10 inches in diameter. Piles would be driven with a diesel hammer to a depth of 60-80 feet, although the actual number may be decreased by 10-15 during completion of the project design. All piles would be located a minimum of 20 feet away from the baseflow channel. No pile driving would occur within or immediately adjacent to the active channel. These H-piles would be driven through substrates ranging from unconsolidated sand, silt, clay, and gravel to compact and semi-consolidated clay; silty sandstone; and silty, clayey gravel. Since the wing walls would be fairly long, a pile (same type as for the abutment) would be driven at the end of each wall.



 Direction of Traffic  
 Direction of Water Flow  
 Indicates Existing Structure

- ① Paint Bridge No. XXX-XXX and year completed
- ② Paint "East Hill Road Bridge over Davis Creek"
- ③ For Approach MBGR and Retaining Wall, see "Roadway Plans"
- ④ High Water Elevation = 1407' (100-yr Flood)
- ⑤ Possible location for relocated Gas and Water line

CURVE DATA				
NO.	R	T	L	$\Delta$
(C2)	350.00'	138.83'	264.33'	43°16'17"

PLAN  
1" = 30'



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A retaining wall would be required on the northwest approach. A row of approximately 12 steel piles H-piles (6-foot spacing) would be driven into the ground to a depth of approximately 40 feet. Timber or concrete lagging would be placed between the piles extending above ground and the soil would be backfilled in lifts behind the lagging. Backfill would be placed behind abutments and roadway base materials would be laid down.

The cast-in-place, post-tensioned concrete bridge would be built on falsework; a temporary framework on which the permanent bridge structure and construction activity would be supported during construction until the permanent bridge structure has reached sufficient strength to support loads. The falsework would be an engineered system, typically consisting of the required bridge concrete formwork supported on a temporary stringers-and-post system. It is likely that this falsework system would use timber and plywood forms, rolled steel girders, and timber posts supported on timber foundation pads. In order to provide an adequate and level support surface for the timber pads, imported clean gravel would be placed on the ground surface. Once the bridge construction has been completed, the falsework system would be disassembled and removed, including the imported clean gravel materials. Once the bridge deck is complete, formwork for the concrete barrier would be built on the new bridge deck; reinforcement and concrete would be placed in the forms.

Placement of RSP on the channel banks beneath and adjacent to the abutments would be required to protect the abutments from erosion. The RSP is expected to consist of a 2 foot minimum thickness of 75 pound rock with RSP fabric underneath. The RSP is anticipated to extend approximately 10 feet from the front face of each abutment footing. This would provide approximately 60 feet of natural channel bedding for the low flow channel between the keyed-in RSP toes. Where possible, willow cuttings and other riparian hardwood trees (e.g., Oregon ash) would be incorporated into the RSP to provide for revegetation of lost riparian habitat.

Once the new bridge is complete, the existing bridge would be removed. Demolition would begin by first stripping the asphalt concrete (AC) overlay and concrete deck off of the timber stringers and steel Pratt truss. The channel below would be protected by plastic or fabric sheets to contain debris that may fall through the timber stringers. The timber stringers would be removed using truck mounted cranes, followed by removal of the trusses and floor-beams. Upon removing the steel trusses, the existing abutments and columns would be removed a minimum of 1-foot below original ground per Caltrans standard specifications. The existing bridge would be dismantled and disposed of according to Caltrans Specifications. Additionally, lead-based paint has been found on the existing bridge, therefore painted bridge materials will be treated as hazardous waste, removed and disposed of appropriately.

Once the new bridge is complete, the existing bridge has been removed, and RSP has been placed, the crushed rock atop the gravel work pad would be removed and disposed of offsite. Culverts would be removed beginning at the downstream end of the diversion, leaving the suitable sized materials in place, and allowing any stream flow at the site to flow through the gravel material. Once these culverts have been removed, the upstream diversion (sand bags, etc.) would be removed and stream allowed to naturally flow through the site. If flow is present at the time of removal, the contractor will manually (by hand) redistribute the gravel materials so they would not constitute a barrier to upstream or downstream fish passage.

## **2.5 Tentative Schedule**

It is anticipated that the earliest that construction would start is May 2014. Construction is anticipated to require one construction season with project completion anticipated by October 2014. All instream activities, including bridge removal, and substructure and superstructure construction activities will be confined to a work period between June 15 through October 15 to minimize and avoid impacts on water quality. Construction activities below the ordinary high water mark (OHWM) of Davis Creek may be allowed outside of the June 15 through October 15 period if permitted by the California Department of Fish and Wildlife (CDFW) and the North Coast Regional Water Quality Control Board (RWQCB), depending on weather conditions.

## **2.6 Required Permits and Approvals**

The following permits and approvals likely will be required to implement the project:

- U.S. Army Corps of Engineers – San Francisco District (Eureka Field Office): Section 404 Nationwide Permit 14 (Linear Transportation Crossing Projects)
- National Marine Fisheries Service – Endangered Species Act Compliance (Biological Opinion)
- California Department of Fish and Wildlife – Redding Office: Section 1602 Streambed Alteration Agreement; State Endangered Species Act Compliance
- North Coast Regional Water Quality Control Board: Section 401 Water Quality Certification

## **2.7 No Project Alternative**

In addition to the action alternative, the County also considered a “No Project” alternative in its evaluation of the project, pursuant to CEQA. Under the No Project alternative, the County would not proceed with replacement of the existing East Hill Road bridge. However, Caltrans and FHWA have identified the existing bridge structure as being structurally deficient and functionally obsolete. Implementation of the No Project alternative could result in future public safety issues associated with structural integrity of the existing bridge.

### 3 Environmental Setting, Impacts, and Mitigation Measures

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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 that would be used by the County 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 17 environmental categories:

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gases
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation/Traffic
- Utilities and Service Systems

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 proposed project.
- **Less-than-Significant Impact:** Implementation of the proposed 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 proposed 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 Upper Main Eel River watershed is located primarily in Mendocino and Lake counties in northwestern California. The 688 square mile (approximately 440,384 acre) watershed is nearly evenly split between private ownership (359 square miles) and public ownership (329 square miles) (U.S. Environmental Protection Agency 2004). The main tributaries to the Upper Main Eel River are Tomki and Outlet creeks, the latter being a receiving water for Davis Creek flow. From its confluence with Outlet Creek, the Upper Main Eel River is designated by the state as “recreational” under the federal Wild and Scenic Rivers Act (California Department of Transportation 2013), while the reach of river upstream from the Outlet Creek confluence is state-designated as “wild” (California Department of Transportation 2013). Certain other reaches of the Upper Main Eel River are also federally designated as wild and scenic.

Regional geology is underlain by the Franciscan terrain that dominates most of California’s North Coast. This type of geology is sensitive to human disturbance and is naturally unstable. The climate of the Upper Main Eel River watershed is relatively dry and warm, and away from the influence of coastal fog. Approximately 40 inches of annual rainfall occurs mainly between November and April resulting in many of the region’s smaller tributaries becoming dry in the late summer. Land use activities in the Upper Main Eel River watershed include rural development, ranching, recreation, timber production, agriculture, and some urbanized areas in the Willits area.

### **3.1.2 Local Setting**

#### ***Climate***

The project area has a Mediterranean climate. Summers are warm to hot with occasional temperatures over 100 °Fahrenheit. Winters are cool to cold and can be accompanied by rare light snowfall. Frost and fog conditions can be expected to occur anytime throughout the winter months. As a reflection of the Mediterranean climate of the region, almost all precipitation falls as rain in winter, resulting in rapid rise and fall of the hydrograph following storms. There is virtually no rain in summer, so low stream flows occur May through October (Yoshiyama and Moyle 2010).

#### ***Existing Land Uses***

The East Hill Road project area is located in a part of Mendocino County that is zoned for Rural Residential, Agricultural, and Floodplain land uses (Mendocino County 2012). Residential parcels are limited to a minimum size of 5 acres, with the exception of one parcel (APN 104-23-021) that is zoned for a 160 acre minimum; while agricultural parcels can be no less than 40 acres. The project area is centered on the East Hill Road corridor, but would include pastureland and floodplain north of the road. Lands adjacent to the project on the south side of East Hill Road are developed as rural residential parcels.

The Davis Creek stream channel is deeply incised and densely buffered by vegetation along its banks, thus agricultural land uses are limited to the terraced uplands. South of the bridge and east of the

stream, parcels are developed as rural residential; however, these lands are used for small-scale agricultural production, including domestic gardens and other forms of horticulture.

### ***Topography***

The project is located within the Mendocino Highlands physiographic area. The Mendocino Highlands are the ridges and valleys that have a general north/northwest trend that is sub-parallel to the California coastline located approximately 22 miles to the west. Elevation within the project area ranges from 3,320 feet in the surrounding hillsides to 1,320 feet on the Little Lake Valley floor. The valley itself is relatively level, with an average slope from south to north of 0.25 percent. Although elevations in the region are moderate, relief is sometimes considerable.

### ***Hydrological Setting***

Davis Creek, a perennial stream, flows north/northwest through the project area and is a headwater tributary to Outlet Creek, which is a tributary to the Upper Main Eel River. The Outlet Creek Basin drains approximately 160 square miles of Northern California's Coast Range. Davis Creek is tributary to Outlet Creek and consists of about nine stream miles. It flows north and enters Outlet Creek via drainage channels in Little Lake Valley. Morris Dam, located about 5.5 miles upstream from the mouth of Davis Creek and 1.8 miles upstream of the project area, at the southern end of Little Lake Valley, was built in 1927 and is a total barrier to anadromous fish passage (Becker and Reining 2009). The 160 square mile Outlet Creek basin is tributary to the Eel River and consists of about 22.3 stream miles. It flows northeasterly, entering the Eel River at about stream mile 126 (Becker and Reining 2009). Based on historic and current maps, it appears that Davis Creek was straightened along property ownership lines, and in some areas, relocated and/or levied so that the land area could be used for agricultural and transportation activities (LeDoux-Bloom and Downie 2008). Davis Creek, like other tributaries to Outlet Creek, has a low-gradient channel with a mix of silt, sand, and gravel substrates (LeDoux-Bloom 2011). In the project area, the Davis Creek channel is deeply incised with dense tree and shrub vegetation on both banks.

### ***Soils***

Two soil map units occur within the project area boundaries (Natural Resources Conservation Service 2012):

- **Feliz loam, 0 to 2 percent slopes.** This soil type is associated with alluvial fans. The land capability classification for Feliz loam as prime farmland if irrigated.
- **Yokayo-Pinole-Pinnobie complex, 0 to 15 percent slopes.** This soil type is found on terraces. It is not a prime farmland.

### ***Geology***

The *Geologic Map of California, Ukiah Sheet* (1960) indicates the geology of the project area and vicinity is comprised of the Franciscan formation that dominates the North Coast of California (Jennings and Strand 1960, U.S. Environmental Protection Agency 2004). This formation is naturally unstable and is sensitive to human disturbance (U.S. Environmental Protection Agency 2004).

### ***Vegetation Community Types***

Vegetation community types were classified based on the descriptions provided in *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer Jr. 1988). The vegetation community types occurring within the project area include annual grassland, irrigated hayfield, montane hardwood, montane riparian, riverine, and ruderal and barren.

#### **Annual Grassland**

Annual grassland occurs in the western part of the project area, along the northeast side of East Hill Road, sloping down to the montane riparian vegetation that borders Davis Creek. It is dominated by tall fescue (*Festuca arundinacea*), little canary grass (*Phalaris minor*), and timothy (*Phleum pratense*). Dogtail grass (*Cynosurus echinatus*), tall manna grass (*Glyceria elata*), and wild teasel (*Dipsacus sativus*) are also present.

#### **Irrigated Hayfield**

A cultivated hayfield is located in the eastern part of the project area on the north side of East Hill Road. Dominant plants include timothy and little canary grass.

#### **Montane Hardwood**

Montane hardwood vegetation occurs along East Hill Road in the western part of the project area, bordering the annual grassland and the montane riparian vegetation that runs alongside Davis Creek. Oregon oak (*Quercus garryana*) and black oak (*Quercus kelloggii*) dominate the overstory. Pacific madrone (*Arbutus menziesii*) and Douglas fir (*Pseudotsuga menziesii*) are also present, but to a lesser extent. Himalayan blackberry (*Rubus armeniacus*) and poison oak (*Toxicodendron diversilobum*) dominate the understory with rose (*Rosa californica*) also present. Few herbaceous species are present due to the dense overstory canopy associated with the montane hardwood vegetation community.

#### **Montane Riparian**

Montane riparian vegetation extends along the entire length of Davis Creek through the project area. The montane riparian vegetation community is characterized as having a dense, multi-layered overstory canopy and a dense understory. The dominant overstory tree is white alder (*Alnus rhombifolia*) with bay laurel (*Umbellularia californica*) also present. Oregon ash (*Fraxinus latifolia*), Arroyo willow (*Salix lasiolepis*), and Lemmon's willow (*Salix lemmonii*) dominate the middle canopy, which in the project area completely covers much of the Davis Creek channel. Himalayan blackberry dominates the understory of this vegetation type within the project area.

#### **Riverine**

The Riverine community type is characterized by the flowing channel of Davis Creek and gravel bars within the OHWM. The substrate is gravel and sand, and the channel is incised throughout the project area. There is a dense accumulation of riparian vegetation adjacent to and/or overhanging most of the riverine habitat in the project area.

### **Ruderal and Barren**

Ruderal and barren vegetation community types occur along both shoulders of East Hill Road. The ruderal habitat is dominated by non-native annual grasses and forbs including Italian thistle, slender wild oats (*Avena barbata*), mustard (*Brassica nigra*), rip gut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), and winter vetch (*Vicia villosa*). Barren areas are generally devoid of vegetation and include the East Hill Road corridor, adjacent gravel shoulders, and parking areas. Sparse opportunistic weedy species may be present within the barren areas.



## 3.2 Environmental Impacts and Mitigation Measures

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>I. AESTHETICS</b> — Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### Discussion of Impacts

- a) **No Impact.** There are no scenic areas or resources within the project area. The project consists of replacing the East Hill Road bridge and roadway approaches with similar structures and would be constructed in a manner consistent with the existing aesthetic.
- b) **Less-than-Significant Impact.** East Hill Road is not designated as a local scenic highway in the County's General Plan. There are no scenic resources or historic buildings in the project area. The removal of vegetation to allow for the new bridge alignment downstream of the existing bridge would not significantly affect views of the project area from nearby homes or the road corridor and would therefore not be inconsistent with the existing scenic quality of the project area and vicinity.
- c) **Less-than-Significant Impact.** The project consists of replacing the East Hill Road bridge and roadway approaches with similar structures. The project would be constructed in a manner consistent with the existing aesthetic. The project would not introduce any elements that would degrade the existing visual character or quality of the site or surrounding area.
- d) **No Impact.** Construction and operation of the project are not expected to result in increased glare in the project area and no lighting is proposed as part of the project.

### Mitigation Measures

No project-specific mitigation is required under this subject.

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

## Discussion of Impacts

- a, b) ***Less-than-Significant Impact.*** Immediately north of the project area, east of the bridge, is fenced pastureland/hay production land. The new alignment is proposed to be located north of the existing alignment (approximately 70-feet downstream of the current alignment), thus requiring encroachment onto land designated by the state as Important Farmland – Grazing

Land (California Department of Conservation 2008). Land in the project area is zoned by the County as Agricultural, Rural Residential, and Floodplain (Mendocino County 2012). While the roadway approaches would be primarily within the existing County ROW, the new bridge alignment would require some permanent ROW acquisition of designated Grazing Land (0.59 acre) and the temporary use of 0.32 acre of designated Grazing Land (pasture/hay crop land) for contractor staging. A Farmland Conversion Impact Rating for Corridor Type Projects (NRCS-CPA-106) has been prepared for the project. A preliminary land evaluation and corridor assessment criteria score of 35 (Total Site Assessment Points out of 260 possible) indicates that the project would have minimal impact on prime farmland. Further, the project would be consistent with applicable federal, state, and local regulatory management guidelines pertaining to farmlands. Realignment of the bridge to the south is not practicable because of the homes that are located in close proximity to the south side of the existing road, and because to do so could result in a tighter curve angle of the roadway approaches. There are no Williamson Act contract lands in the project vicinity. The project impact on designated farmland would be less than significant.

- c) **No Impact.** The project would not cause rezoning of forestland, timberland, or timberland zoned timber production.
- d) **No Impact.** The project area does not include any forestland.
- e) **No Impact.** Other than the 0.59 acre of Grazing Land that would be converted to permanent ROW and the temporary use of 0.32 acre of Grazing Land for contractor staging, the project would have no impact on designated farmland. In addition, improvements to East Hill Road and the bridge would have no influence on growth in the East Hill Road vicinity. Residential parcels are limited to a minimum size of 5 acres, with the exception of one parcel (APN 104-23-021) that is zoned for a 160 acre minimum; while agricultural parcels can be no less than 40 acres.

## Mitigation Measures

No project-specific mitigation is required under this subject.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>III. AIR QUALITY</b> — 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:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Discussion of Impacts

- a, b) ***Less-than-Significant Impact.*** Air pollution control would conform to Caltrans Standard Specifications, which state that the contractor shall comply with all applicable air pollution control rules, regulations, ordinances, and statutes.
- c) ***Less than Significant with Mitigation Incorporated.*** Mendocino County is currently a state non-attainment area for particulate matter (PM<sub>10</sub>) (California Air Resources Board 2013). Construction activities associated with the project would result in a relatively minor net increase in PM<sub>10</sub>. While the amount of PM<sub>10</sub> 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 #1—Air Quality Fugitive Dust Control* will reduce this impact to a less-than-significant level.
- d) ***Less than Significant with Mitigation Incorporated.*** Several residences are located on parcels adjacent to the south side of East Hill Road throughout the project area. Air quality at these residences is influenced in part by the emissions generated by vehicle traffic on East Hill Road. The project would not result in increased traffic on East Hill Road, since there

would be no change in the road's level of service (i.e., the road would remain a two-lane road). The volume of air pollutants generated by construction of the project would be minor and consistent with existing conditions; however, project activities will be implemented according to Caltrans' Standard Specifications and Mendocino County AQMD's Particulate Matter Attainment Plan (Mendocino County Air Quality Management District 2005) for air quality. *Mitigation Measure #1—Air Quality Fugitive Dust Control* to ensure this impact will remain at a less-than-significant level.

- e) **No Impact.** The project would not create any objectionable odors.

## Mitigation Measures

### *Mitigation Measure #1—Air Quality/Fugitive Dust and Emission Controls*

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

- Water inactive construction sites and exposed stockpile sites at least twice daily, including during non-work days or until soils are stable.
- All earthmoving activities shall cease when sustained winds exceed 15 miles per hour.
- Pursuant to the California Vehicle Code, all trucks hauling soil and other loose material to and from the construction site shall be covered or shall maintain at least 6 inches of freeboard (i.e., minimum vertical distance between top of load and the trailer).
- Earth or other material that has been transported by trucking or earth moving equipment, erosion by water, or other means onto paved streets shall be promptly removed.
- Any topsoil that is removed during construction shall be stored onsite in piles not to exceed 4 feet in height to allow development of microorganisms prior to resoiling of the construction area. These topsoil piles shall be clearly marked and flagged. Topsoil piles that will not be immediately returned to use shall be revegetated with a non-persistent erosion control mixture.
- Soil piles for backfill shall be marked and flagged separately from native topsoil stockpiles. These soil piles shall also be surrounded by silt fencing, straw wattles, or other sediment barriers or covered unless they are to be immediately used.
- Equipment or manual watering shall be conducted on all stockpiles, dirt/gravel roads, and exposed or disturbed soil surfaces, as necessary, to reduce airborne dust.
- All unpaved surfaces, unless otherwise treated with suitable chemicals or oils, shall have a posted speed limit of 10 miles per hour.

- Construction vehicles shall minimize idling time and equipment shall be shut off when not in use pursuant to California Code of Regulations (Title 13, Division 3, Chapter 10 §2485).
- Construction equipment will be maintained in proper working conditions according to manufacturer's specifications. Equipment must be checked daily and determined to be in proper running condition before it is operated.
- The contractor shall keep a daily log of activities to control fugitive dust.

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

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>IV. BIOLOGICAL RESOURCES — Would the project:</b>				
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 Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Discussion of Impacts

- a) ***Less than Significant with Mitigation Incorporated.*** A Natural Environment Study (NES) report (North State Resources 2013a), which analyzes the project effects on biological resources, was approved by Caltrans on September 5, 2013. No special-status plant species were detected by North State Resources (NSR) during its protocol-level survey of the project area in April and June 2013. Suitable habitat does occur for the following special-status fish and wildlife species:
- Northern California Coast Distinct Population Segment (DPS) steelhead (*Oncorhynchus mykiss*) – Federally Threatened and Critical Habitat

- California Coastal Evolutionarily Significant Unit (ESU) Chinook salmon (*O. tshawytscha*) – Federally Threatened and Critical Habitat/Essential Fish Habitat
- Southern Oregon/Northern California Coasts (SONCC) ESU coho salmon (*O. kisutch*) – Federally Endangered and Critical Habitat/Essential Fish Habitat
- Northern red-legged frog (*Rana aurora aurora*) – Species of Special Concern
- Foothill yellow-legged frog (*Rana boylei*) – Species of Special Concern
- Western pond turtle (*Actinemys marmorata*) – Species of Special Concern
- Vaux's swift (*Chaetura vauxi*) – Species of Special Concern
- Long-eared owl (*Asio otus*) – Species of Special Concern
- White-tailed kite (*Elanus leucurus*) – State Fully Protected
- Yellow warbler (*Dendroica petechia brewsteri*) – Species of Special Concern
- Yellow-breasted chat (*Icteria virens*) – Species of Special Concern
- Sonoma tree vole (*Arborimus pomo*) – Species of Special Concern
- Ringtail (*Bassariscus astutus*) – State Fully Protected
- Pallid bat (*Antrozous pallidus*) – Species of Special Concern
- Western red bat (*Lasiurus blossevillei*) – Species of Special Concern

**Fish.** A Biological Assessment/Essential Fish Habitat Assessment (BA/EFHA) (North State Resources 2013b) was prepared in support of formal consultation with NMFS under Section 7 of the Federal Endangered Species Act. The BA/EFHA concluded that the proposed project is likely to adversely affect Northern California Coast DPS steelhead and may affect, but is not likely to adversely affect California Coastal ESU Chinook salmon or SONCC ESU coho salmon. Localized short-term impacts on designated critical habitat for Northern California Coast DPS steelhead could occur, and it has been determined that the proposed project may affect, but is not likely to adversely affect critical habitat for other special-status salmonid species. On May 3, 2013, NMFS issued a Biological Opinion that concurs with the findings of the BA/EFHA; the project is not likely to adversely affect designated critical habitat for Northern California Coast DPS steelhead, California Coast ESU Chinook salmon or SONCC ESU coho salmon or essential fish habitat (EFH) for salmon inhabiting Davis Creek (National Marine Fisheries Service 2013). Following is a discussion of anticipated project impacts on special-status fish:

Loss or Modification of Juvenile Rearing Habitat

Installation of the temporary stream diversion and platform will temporarily affect 140 feet of



stream. Davis Creek, within the project area, primarily functions as spawning and migration habitat for steelhead. Suitable, but not optimal, summertime juvenile rearing habitat occurs in the project area. Installation of the temporary work pad and diversion may directly impact some low-to-moderate quality juvenile steelhead rearing habitat. Due to the small area and marginal quality of rearing habitat, the seasonal work window, and the limitation of construction to a single season, the temporary impact on marginal quality juvenile steelhead rearing habitat would be less than significant.

Rock slope protection would be installed on the stream channel banks to protect the new abutments from erosion and ultimately hydraulic deficiencies. The RSP would be installed such that it is not inundated during seasonal base flows, thus reducing adverse morphological and hydrologic effects, reducing the frequency of predation, and allowing for revegetation. The limited and focused placement of RSP at the abutments would not adversely affect or modify juvenile steelhead rearing habitat in the project area. The new bridge has been designed to the extent practicable to minimize instream structures and would not require the use of instream structural supports. The new bridge would not result in a permanent net loss or modification of juvenile rearing habitat in the project area.

#### *Loss of Spawning Habitat*

Construction of the new bridge and demolition of the existing bridge would not result in a permanent loss of steelhead spawning habitat in the project area. While suitable spawning habitat occurs within the project area, seasonal work windows are designed to avoid the spawning period of steelhead. Installation of the temporary work pad would disturb or otherwise cover up approximately 250 square feet of suitable quality spawning habitat in the project area. Upon completion of instream work requiring use of the work pad, the work pad and culverts would be carefully removed from the stream—from downstream to upstream—and a thin veneer of the underlying fish rock (suitable sized spawning gravels) would be left in place to minimize impacts on channel substrates.

#### *Loss of Riparian Habitat*

Mature trees along the riverbank within the construction area would be removed to accommodate the new bridge alignment and allow for construction access to the work pad. Work activities such as vehicle parking and placement of storage containers on the upland terrace may temporarily affect the low growing grasses and forbs in the construction area, but no permanent impacts on this habitat will occur.

#### *Percussion Impacts*

No pile driving would occur within or immediately adjacent to the active channel. All piles would be located a minimum of 20 feet away from the baseflow channel. Therefore, the potential for pile-driving activities to result in barotraumas (i.e., injuries sustained in response to the sudden pressure change due to sound waves travelling underwater) on salmonid embryos or create behavioral changes in other salmonid life stages is unlikely. Percussion-related shock waves generated during construction pile-driving activities would not result in the mortality of salmonid eggs incubating in river gravels or injury or mortality of juvenile steelhead in the project area.

To facilitate construction of the bridge structure in a single season and minimize the potential effects associated with installation and operation of an instream gravel work pad for a second season, it was determined that pile-driving activities as described above could occur prior to the instream work window of June 15 to October 15 as long as the active channel remains a minimum of 20 feet from the piles being driven.

*Increased Turbidity and Suspended Sediment*

In the project area, silt and sand in the riverbanks and river bottom would be disturbed during installation of the work platform and RSP, construction of the new bridge, and removal of the existing bridge. These physical disturbances could mobilize silt and sand for a short distance downstream; however, the effect is expected to be localized and temporary due to the very limited amount of flow expected during the summer/autumn construction period. Best management practices (BMPs) will be implemented to minimize the potential for mobilization of disturbed stream banks post instream construction. Any juvenile steelhead rearing in the project area during the construction period could be temporarily displaced or their social behavior could be temporarily disrupted by an increase in turbidity. Behavioral disruption, even temporarily, could result in some increased vulnerability to competitive interactions or predation for juvenile salmonids (Berg and Northcote 1985). Suitable spawning habitat does occur in and immediately downstream of the project area. Project construction would be timed to avoid the spawning and incubation period of steelhead; therefore, there would be no impact on spawning adults and incubating alevins.

*Impaired Fish Passage During Construction*

Since steelhead occur as one or more life stages in the project area throughout the year, construction could not be scheduled to entirely avoid steelhead. Although project construction would be timed to avoid the spawning and incubation period of steelhead, other life stages like rearing juveniles and migrating juveniles could be impacted by project construction. Approximately 140 feet of Davis Creek would be conveyed through HDPE culverts under the temporary gravel work platform. Localized and temporary alteration of hydraulic conditions could affect fish behavior and migration in or immediately above or below the instream construction site. However, it is expected that with the receding hydrograph and often intermittent stream conditions in drier years, little movement would occur during the instream construction period. To ensure that hydraulic conditions are suitable and the temporary work platform would not impede the movement of aquatic organisms, the culverts have been designed and would be installed according to NMFS' *Guidelines for Salmonid Passage at Stream Crossings* (National Marine Fisheries Service 2001) and *Mitigation Measure #2 – Special-Status Fish*.

*Potential Spill of Hazardous Materials*

The potential spill of hazardous materials (i.e., oil, grease, gasoline, solvent) during construction and staging activities into Davis Creek could have deleterious effects on all life stages of the special-status fish species present within close proximity to construction activities. Additionally, operation of construction equipment in or adjacent to the river would increase the risk of a spill of hazardous materials into the river (i.e., construction equipment leaking fluids).

Construction activities typically include the refueling of construction equipment onsite. As a result, minor fuel and oil spills could occur and there would be a risk of larger releases. Without rapid containment and clean up, these materials could be toxic, depending on the location of the spill in proximity to surface water features including the Davis Creek. Oils, fuels, and other contaminants could have deleterious effects on all salmonid life stages within close proximity to construction activities. Incubating fry would be at greatest risk due to their limited mobility and the physiological kinetics of toxicant metabolism; however, these fry would not be present during the proposed construction period. Juvenile and adult fish exhibit a greater level of mobility and, thus possess a greater ability to avoid potentially hazardous materials provided there is sufficient flow and fish passage to allow fish to move from the area. Due to the lack of sufficient complex juvenile rearing habitat in the project area, the potential for localized impacts to juvenile steelhead resulting from the spill of hazardous materials is quite small. Further, most work would occur upon the gravel work pad, outside of the low-flow channel and in upland habitats, thereby reducing the potential for direct releases to surface water features.

*Injury and Mortality of Juvenile Salmonids During Construction*

Juvenile steelhead could potentially be present year round in the project area. The proposed instream construction activities associated with installation of the temporary work platform (including removal of fish from the work pad area by a qualified fishery biologist) could result in the entrapment, direct injury, or death of any special-status fish species present at the time of the work. Suitable spawning habitat does occur in the project area and incubating steelhead embryos or fry could also be subject to suffocation or entrapment, direct injury, or death; however, the proposed project work period has been selected to coincide with the time of year in which the steelhead incubation period is complete. Measures to minimize the potential for the direct injury or death of fish inflicted by abrupt impacts with construction equipment used for preparing the work site and installing the temporary work platform are described in *Mitigation Measure #2 – Special-Status Fish*.

*Mitigation Measure #2 – Special-Status Fish, Mitigation Measure #3 – Erosion and Sediment Control, Mitigation Measure #4 – Prevention of Accidental Spills of Pollutants, Mitigation Measure #5 – Replacement of Lost Riparian Habitat, and Mitigation Measure #6 – Prevention of Spread of Invasive Species* will be used to reduce project impacts on fish and the aquatic environment to a less-than-significant level.

**Northern red-legged frog and foothill yellow-legged frog.** Field assessments did not detect the presence of northern red-legged frog or foothill yellow-legged frog in the project area, although habitat is present. The nearest documented occurrences of northern red-legged frog in Mendocino County are all located in coastal watersheds, some distance from the project area, while there is one recorded occurrence of foothill yellow-legged frog within six miles of the project area, along Willits Creek, a tributary to Outlet Creek (North State Resources 2013a). Because habitat is present within the project area, construction activities have the potential to affect either species of frog. Therefore, *Mitigation Measure #7 – Frogs* will be implemented to reduce this potential construction impact to a less-than-significant level. These species may also be affected if construction activities result in degradation of aquatic habitat and water quality due to erosion and sedimentation, accidental fuel leaks, and spills.

Mitigation measures #3 and #4 will be used to maintain water quality. In addition, loss of riverine and riparian habitat may have a negative impact on these species; therefore, Mitigation Measure #5 will be used to reduce this impact to a less-than-significant level.

**Western pond turtle.** Western pond turtle was not observed during field assessments/surveys conducted for the project; however, Davis Creek, in the project area provides habitat for this species (North State Resources 2013a). There is one recorded occurrence of western pond turtle within 6 miles of the project area, along Willits Creek, a tributary to Outlet Creek. Although unlikely, construction related impacts, especially in-channel work, could result in an adverse effect via direct loss (e.g., due to operation of equipment in or adjacent to the river channel when flowing or standing water is present). The potential for direct loss would occur only during project construction. *Mitigation Measure #8 – Western Pond Turtle* will be used to reduce any impacts on turtles to a less-than-significant level. This species may also be affected if construction activities result in degradation of aquatic habitat and water quality due to erosion and sedimentation, accidental fuel leaks, and spills. Mitigation measures #3 and #4 will be used to maintain water quality. In addition, loss of riverine and riparian habitat may have a negative impact on this species; therefore, Mitigation Measure #5 will be used to reduce this impact to a less-than-significant level.

**Vaux's swift.** Vaux's swift was not observed during the field assessments/surveys conducted for the project; however, Vaux's swift may nest in or adjacent to the project area (North State Resources 2013a). Thus, construction disturbance during the breeding season could result in the loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Loss of fertile eggs or nesting swifts, or any activities resulting in nest abandonment, may adversely affect these species. The project may also result in a small, temporary reduction of foraging or roosting habitat for this species. However, due to the regional abundance of similar habitats, temporary habitat loss is not expected to result in an impact on this species. *Mitigation Measure #9 – Vaux's Swift* will be used to reduce any impacts on this species to a less-than-significant level.

**Long-eared owl and white-tailed kite.** Neither long-eared owl nor white-tailed kite were observed during the field assessments/surveys conducted for the project; however, riparian vegetation along Davis Creek provides nesting habitat for both of these species (North State Resources 2013a). Owls and kites may nest in or adjacent to the project area. Thus, construction disturbance during the breeding season could result in the loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Loss of fertile eggs or any activities resulting in nest abandonment may adversely affect these species. The project may also result in a small, temporary reduction of foraging or roosting habitat for these species. However, due to the regional abundance of similar habitats, temporary habitat loss is not expected to result in an impact on either species. *Mitigation Measure #10 – Raptors* will be used to reduce any impacts on owls and kites to a less-than-significant level.

**Yellow warbler and yellow-breasted chat.** Neither yellow warbler nor yellow-breasted chat were observed during the field assessments/surveys conducted for the project; however, the riparian vegetation along Davis Creek provides breeding habitat for both species (North State Resources 2013a). These migratory bird species may nest in or adjacent to the project

area. Thus, construction disturbance during the breeding season could result in the loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Loss of fertile eggs or nestlings, or any activities resulting in nest abandonment, may adversely affect these species. The proposed project may also result in a small, temporary reduction of foraging or roosting habitat for migratory bird species. However, due to the regional abundance of similar habitats, temporary habitat loss is not expected to result in an impact on migratory birds. *Mitigation Measure #11 – Migratory Birds* will be used to reduce any impacts on yellow warbler and yellow-breasted chat to a less-than-significant level.

**Sonoma tree vole and Ringtail.** Neither the Sonoma tree vole nor ringtail was observed during the field assessments/surveys conducted for the project; however the dense riparian vegetation along Davis Creek may provide a movement corridor for Sonoma tree vole (North State Resources 2013a). There are three recorded occurrences of Sonoma tree vole within five miles of the project area and no recorded occurrences of ringtail in the project vicinity. The riparian vegetation within the project area may also provide denning habitat for ringtail. Project implementation is unlikely to have an impact on Sonoma tree vole as they nest primarily in mature Douglas-fir stands. Project implementation is unlikely to have an impact on ringtail due to the abundance of suitable foraging habitat in the region and the temporary nature of impacts on riparian vegetation within the project area. Therefore, the project is not anticipated to result in significant impacts on either of these species.

**Pallid bat and western red bat.** Neither pallid bat nor western red bat was observed during the field assessments/surveys conducted for the project (North State Resources 2013a). The existing bridge does not have any suitable roosting crevices. The riparian vegetation along Davis Creek may provide suitable night roosting and foraging habitat for pallid bat and western red bat. The closest recorded occurrence of either species is for pallid bat; a 1947 occurrence recorded along Cold Creek about 15 miles southeast of the project area. Given the absence of mines, caves, rock crevices, and large snags, the project area is not anticipated to provide suitable breeding habitat (e.g., maternity roosts) for pallid bat. Given the absence of mature stands of cottonwood and sycamore and the rarity of the species in California, the project area is not anticipated to provide suitable breeding habitat for western red bat. Project implementation is unlikely to have an impact on foraging bats due to the abundance of suitable foraging habitat in the region and the temporary nature of impacts on riparian vegetation within the project area. Therefore, the proposed project is not anticipated to result in significant adverse impacts on these species. However, *Mitigation Measure #12 – Bats* will be used to reduce any potential impacts on pallid bats or western red bats to a less-than-significant level.

- b) ***Less than Significant with Mitigation Incorporated.*** Riparian habitat (montane riparian) is considered a sensitive natural community by the U.S. Army Corps of Engineers (Corps), CDFW, and the County, and is present in the project area. The project may result in direct permanent impacts on approximately 0.04 acre of upland montane riparian community, including the removal of approximately three Oregon ash trees having a diameter at breast height (dbh) greater than 24 inches. There are also approximately nine Oregon white oak trees with a dbh greater than 24 inches that may be removed as part of the project. These Oregon white oaks are in the woodland that is at the transition from montane riparian to

mixed conifer community on the west side of Davis Creek. Impacts would result from placement of the new bridge and the new road alignment.

Construction impacts could temporarily impact 0.14 acre of upland montane riparian vegetation, while the temporary stream diversion could impact 0.013 acre of riparian wetland. *Mitigation Measure #13 – Sensitive Natural Communities* will be used to reduce impacts on riparian vegetation to a less-than-significant level.

- c) ***Less than Significant with Mitigation Incorporated.*** The project would result in temporary impacts on wetland features under the jurisdiction of the Corps, pursuant to Section 404 of the Clean Water Act. The project would result in temporary impacts on a total of 0.041 acre (145 linear feet) of waters of the United States including 0.013 acre of riparian wetland and 0.028 acre (145 linear feet) of intermittent stream. The single-span bridge option would minimize environmental impacts on the stream by avoiding the need to construct abutments or piers inside the active channel or below the Q<sub>100</sub> elevation. *Mitigation Measure #5* and *Mitigation Measure #14 – Waters of the United States* will be used to reduce any potential impacts to waters to a less-than-significant level. Mitigation measures #3 and #4 will be used to maintain water quality.
- d) ***Less than Significant With Mitigation Incorporated.*** The project area does not encompass any wildlife nursery sites. However, replacement of the bridge could result in the temporary disruption of fish moving up and downstream. Since steelhead occur as one or more life stages in the project area throughout the year, construction could not be scheduled to entirely avoid the migration, rearing, and spawning periods. Approximately 140 feet of Davis Creek would be conveyed through HDPE culverts under the temporary gravel work platform. Localized and temporary alteration of hydraulic conditions could affect fish behavior and migration in or immediately above or below the instream construction site. However, it is expected that with the receding hydrograph and often intermittent stream conditions in drier years, little movement would occur during the instream construction period. To ensure that hydraulic conditions are suitable and the temporary work platform would not impede the movement of aquatic organisms, the culverts have been designed and would be installed according to NMFS' *Guidelines for Salmonid Passage at Stream Crossings* (National Marine Fisheries Service 2001). *Mitigation Measure #2* will be used to reduce impacts on fish passage to a less-than-significant level.
- e) ***Less than Significant With Mitigation Incorporated.*** The proposed project will comply with the goals and objectives described in the County's General Plan (Pacific Municipal Consultants 2009), including measures for water quality and biological resources protection. The proposed project will also comply with the County's oak tree retention/replacement provisions and riparian vegetation provisions specified in the General Plan, which include adhering to the County's grading ordinance and protecting and retaining natural vegetation to the extent possible. Construction of the new bridge would result in the loss of riparian vegetation, which may be inconsistent with riparian vegetation protection guidelines in the Land Use Element in the General Plan (County of Mendocino 2009). *Mitigation Measure #5* will be used to reduce any potential impacts to vegetation to a less-than-significant level.

- 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.

## Mitigation Measures

### ***Mitigation Measure #2 – Special-Status Fish***

The County shall include provisions in the construction bid documents to minimize project impacts on special-status fish species. The following measures shall be implemented during construction to reduce impacts on special-status fish:

- Prior to October 15, the temporary culverts, pipe, and work platforms shall be removed from the channel. The fish rock base shall be excavated down to the point at which there is a thin veneer remaining on the existing channel bed. Upon removal of the culverts and fish rock, hand crews may redistribute the remaining fish rock such that it does not become a barrier to the free passage of water or the movement of fish and aquatic animals. It shall not impede, or tend to impede, the passage of fish at any time, pursuant to Fish and Game Code Section 5901.
- The crossings shall not change the flow characteristics (i.e., velocity, depth, width) of the water as it flows through the project area. No ponding of flow shall occur above the pipe and culverts unless this type of ponding is typical of the area.
- Culverts shall be maintained and kept open while in place. Any ponding shall be corrected immediately. The County is responsible for such maintenance as long as the culvert remains in the stream.
- Any structure/culvert placed within a stream where fish do/may occur shall be designed, constructed, and maintained such that they do not constitute a barrier to upstream or downstream movement of aquatic life or cause an avoidance reaction by fish that impedes their upstream or downstream movement. This includes, but is not limited to, the supply of water at an appropriate depth, temperature, and velocity to facilitate upstream and downstream fish migration. For this project, this equates to designing the culverts to meet guidelines outlined in NMFS (2001).
- Impacts to herbaceous cover will be offset by reseeding any unvegetated and impacted areas with a suitable seed mixture post construction.
- All of the interstitial spaces of the RSP will be filled with well-graded soil to allow for revegetation.
- Any construction equipment operating upon work pads or adjacent to Davis Creek shall be inspected daily for leaks. External oil, grease, and mud shall be removed from equipment and disposed of properly. Spill containment booms shall be maintained onsite at all times during construction operations and/or staging of equipment or fueling supplies. Fueling trucks shall maintain adequate spill containment materials at all times.

- The contractor shall develop and implement site-specific BMPs, a water pollution control plan, and emergency spill control plan. The contractor shall be responsible for immediate containment and removal of any toxins released.

Timing/Implementation:	During and after construction
Enforcement:	NMFS, CDFW, Caltrans
Monitoring:	County and/or its contractor

### ***Mitigation Measure #3—Erosion and Sediment Control***

The County shall include provisions in the construction bid documents that the contractor shall implement to reduce the potential for erosion and sediment to result from project construction. Erosion and sediment controls shall include, but not be limited to, the following elements, as appropriate:

- Erosion control measures will be implemented during project construction. These measures will conform to the provisions in Section 20-2 and 20-3 of the Caltrans Standard Specifications and the special provisions included in the project contract. Such provisions include the preparation of a Storm Water Pollution Prevention Plan (SWPPP) that includes best management practices (BMP) to be used at the project site.
- Erosion control measures to be included in the SWPPP or to be implemented by the County include the following:
  - To the maximum extent practicable, activities that increase the erosion potential in the project area shall be restricted to the relatively dry summer and early fall period to minimize the potential for rainfall events to transport sediment to surface water features. In-channel construction will be conducted from June 15-October 15 and upland construction will likely occur throughout the year as long as work activities comply with the conservation and avoidance and minimization measures identified herein and for the protection of other sensitive or special-status plant or animal species. For upland construction activities that must take place during the late fall, winter, or spring, temporary erosion and sediment control structures shall be in place and operational at the end of each construction day and maintained until permanent erosion control structures are in place.
- Areas where wetland and upland vegetation need to be removed shall be identified in advance of ground disturbance and limited to only those areas that have been approved by the County. Exclusionary fencing will be installed around areas that do not need to be disturbed.
- Within 10 days of completion of construction in those areas where subsequent ground disturbance will not occur for 10 calendar days or more, weed-free mulch shall 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 shall be applied to all exposed areas upon completion of the day's activities. Soils shall not be left exposed during the rainy season.



- Suitable BMPs, such as silt fences, straw wattles, or catch basins, shall be placed below all construction activities at the edge of surface water features to intercept sediment before it reaches the waterway. These structures shall be installed prior to any clearing or grading activities. Further, sediment built up at the base of BMPs will be removed before BMP removal to avoid any accumulated sediments from being mobilized post-construction.
- If spoil sites are used, they shall be located such that they do not drain directly into a surface water feature, if possible. If a spoil site drains into a surface water feature, catch basins shall be constructed to intercept sediment before it reaches the feature. Spoil sites shall be graded and vegetated with native species to reduce the potential for erosion.
- Sediment control measures shall 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 with native species.
- Any new or previously excavated gravel material placed in the channel shall 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).

Timing/Implementation:	Prior to, during, and after construction
Enforcement:	Corps, North Coast RWQCB, CDFW
Monitoring:	County and/or its contractor

#### ***Mitigation Measure #4—Prevention of Accidental Spills of Pollutants***

The County shall include provisions in the construction bid documents that shall be implemented by the contractor to reduce the potential for accidental spills of pollutants during project construction. Measures to avoid accidental spills of pollutants shall include, but not be limited to, the following elements, as appropriate:

- Construction specifications shall include the following measures to reduce potential impacts on vegetation and aquatic habitat resources in the project area associated with accidental spills of pollutants (e.g., fuel, oil, and grease):
  - A site-specific spill prevention plan shall be implemented for potentially hazardous materials. The plan shall 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 shall be constructed to prevent spilled materials from reaching surface water features.
  - Equipment and hazardous materials shall be stored 50 feet away from surface water features.
  - Vehicles and equipment used during construction shall receive proper and timely maintenance to reduce the potential for mechanical breakdowns leading to a spill of

materials. Maintenance and fueling shall be conducted in an area at least 50 feet away from Davis Creek or within an adequate fueling containment area.

- Equipment operating within the OHWM shall use non-toxic vegetable oil for operating hydraulic equipment instead of traditional hydraulic fluids.

Timing/Implementation:	During construction
Enforcement:	Corps, North Coast RWQCB, CDFW
Monitoring:	County and/or its contractor

#### ***Mitigation Measure #5—Replacement of Lost Riparian Habitat***

The County shall include provisions in the construction bid documents to mitigate the loss of riparian habitat as a result of project construction. The following measures shall be implemented to reduce potential impacts on riparian habitat in the project area:

- The width of the construction disturbance zone within the riparian habitat shall be minimized through careful pre-construction planning.
- Exclusionary fencing shall be installed along the boundaries of all riparian areas to be avoided to ensure that impacts to riparian vegetation outside of the construction area are minimized.
- Riparian habitat areas temporarily disturbed shall be replanted using riparian species that have been recorded along Davis Creek in the project area, including willow (*Salix lasiolepis* and *Salix lemmonii*), white alder (*Alnus rhombifolia*), and Oregon ash (*Fraxinus latifolia*).
- Onsite creation/restoration shall occur in areas that have been disturbed during project construction and within interstitial spaces of the RSP. The amount of habitat created/restored shall be at a 3:1 ratio of new plantings per large (6 inch dbh) woody plants removed. This replanting ratio will help ensure successful establishment of at least one vigorous plant for each plant removed to accommodate the project.
- Plant spacing intervals will be determined as appropriate based on site conditions following construction.
- Non-native tree species removed during project construction will be replaced with native riparian species.
- Revegetation monitoring will be initiated immediately following completion of the planting, and extend for a period of up to five years. Monitoring surveys will consist of a general site walkover evaluating the survival and health of riparian plantings, signs of drought stress, weed or herbivory problems, and the presence or trash or other debris. Corrective measures including replacement of revegetation plantings, application of supplemental irrigation, hand removal of non-native weeds, replacement or removal of protective plant covers, and the removal of trash and debris will be implemented as necessary. Within the mitigation area, less than 50 percent total mortality of planted species (including container stock and

hardwood cuttings) will be considered a success. 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 would be implemented.

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

#### ***Mitigation Measure #6 – Prevention of Spread of Invasive Species***

The County shall include provisions in the construction bid documents to prevent the spread of invasive plant species as a result of project construction. The following measures shall be implemented to prevent the spread of invasive species in the project area:

- All equipment used for off-road construction activities will be weed-free prior to entering the action area.
- If project implementation calls for mulches or fill, they will be weed free.
- Any seed mixes or other vegetative material used for re-vegetation of disturbed sites will consist of locally adapted native plant materials to the extent practicable.
- Any gravels or materials used for the temporary stream diversion shall be new, from a local source, or properly disinfected or cleaned prior to installation.

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

#### ***Mitigation Measure #7 - Frogs***

The County shall include provisions in the construction bid documents to minimize project impacts on special-status frog species. The following measures shall be implemented to reduce construction-related impacts on special-status frogs:

- Because northern red-legged and foothill yellow-legged frogs may move into and out of the project area at any time, a pre-construction survey for the species is necessary to confirm their status (presence/absence) on the site immediately prior to the onset of project construction. Therefore, a qualified biologist shall conduct a minimum of one survey of the project area for these frog species. The survey shall be conducted a maximum of one week prior to construction. If either of these frog species is found within a construction impact zone, the biologist shall move it to a safe location having similar habitat. The County will inform Caltrans when such an activity occurs.
- If a northern red-legged or foothill yellow-legged frog is encountered during construction, activities in the vicinity shall cease until appropriate avoidance measures are implemented or

it is determined that the frog will not be harmed. Any frogs encountered during construction shall be allowed to move away on their own. Any trapped, injured, or killed frogs shall be reported immediately to CDFW.

Timing/Implementation:	Prior to and during construction
Enforcement:	CDFW, Caltrans
Monitoring:	County and/or its contractor

***Mitigation Measure #8—Western Pond Turtle***

The County shall include provisions in the construction bid documents to minimize project impacts on western pond turtles. The following measures shall be implemented to reduce construction-related impacts on western pond turtles:

- Because turtles may move into and out of the project site at any time, a preconstruction survey for the species is necessary to confirm its status (presence/absence) on the site immediately prior to the onset of project construction. Therefore, a qualified biologist shall conduct a minimum of one survey of the project site for pond turtles and their nests. The survey shall be conducted a maximum of one week prior to construction. If a pond turtle is found within a construction impact zone, the biologist shall move it to a safe location within similar habitat. If a pond turtle nest is found, the biologist shall flag the site and determine if construction activities can avoid affecting the nest. If the nest cannot be avoided, it will be excavated and re-buried at a suitable location outside of the construction impact zone by a qualified biologist. The County will inform Caltrans when such an activity occurs.
- If a western pond turtle is encountered during construction, activities in the vicinity shall cease until appropriate corrective measures have been implemented or it has been determined that the turtle will not be harmed. Any turtles encountered during construction shall be allowed to move away on their own. Any trapped, injured, or killed turtles shall be reported immediately to CDFW.

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

***Mitigation Measure #9—Vaux's Swift***

The County shall include provisions in the construction bid documents to minimize project impacts on Vaux's swift. The following measures shall be implemented to reduce construction-related impacts on Vaux's swift:

- Preconstruction surveys for nesting Vaux's swift shall be conducted by a qualified biologist within the project area and a 250-foot buffer around the project area to ensure that no nests will be disturbed during project implementation. At least one survey should be conducted no more than 15 days prior to the initiation of construction activities. During this survey, the biologist should inspect all trees immediately adjacent to the impact areas for Vaux's swift nests. If an active swift nest is found close enough (i.e., within 250 feet) to the construction

area to be disturbed by these activities, the biologist (in consultation with the CDFW) shall determine the extent of a construction-free buffer zone to be established around the nest. The County will inform Caltrans when such an activity occurs.

- If all necessary approvals have been obtained, potential nesting substrate (e.g., shrubs and trees) that will be removed by the project should be removed before the onset of the nesting season (February 15 through September 30), if practicable. This will help preclude nesting and substantially decrease the likelihood of direct impacts.

Timing/Implementation:	Prior to and during construction
Enforcement:	CDFW, Caltrans
Monitoring:	County and/or its contractor

#### ***Mitigation Measure #10—Raptors***

The County shall include provisions in the construction bid documents to minimize project impacts on raptors. The following measures shall be implemented to reduce construction-related impacts on raptors:

- Preconstruction surveys for nesting raptors shall be conducted by a qualified biologist within the project area and a 250-foot buffer around the project area to ensure that no nests will be disturbed during project implementation. At least one survey should be conducted no more than 15 days prior to the initiation of construction activities. During this survey, the biologist should inspect all trees immediately adjacent to the impact areas for raptor nests. If an active raptor nest is found close enough (i.e., within 250 feet) to the construction area to be disturbed by these activities, the biologist (in consultation with the CDFW) shall determine the extent of a construction-free buffer zone to be established around the nest. The County will inform Caltrans when such an activity occurs.
- If all necessary approvals have been obtained, potential nesting substrate (e.g., shrubs and trees) that will be removed as a result of the project shall be removed before the onset of the nesting season (February 15 through September 30), if practicable. This will discourage nesting in areas that would be directly impacted by the proposed project and substantially decrease the likelihood of direct impacts.

Timing/Implementation:	Prior to and during construction
Enforcement:	CDFW, Caltrans
Monitoring:	County and/or its contractor

#### ***Mitigation Measure #11—Migratory Birds***

The County shall include provisions in the construction bid documents to minimize project impacts on migratory bird species. The following measures shall be implemented to reduce construction-related impacts on migratory bird species:

- Grading and other construction activities shall be scheduled to avoid the nesting season to the extent possible. The nesting season for migratory bird species that occur in the project vicinity extends from March through August. If construction occurs outside of the breeding

season, no further mitigation is necessary. If the breeding season cannot be completely avoided, the following mitigations shall be implemented:

- A qualified biologist shall conduct a minimum of one preconstruction survey for yellow warblers and yellow-breasted chats within the project area and a 250-foot buffer around the project area. The survey should be conducted no more than 15 days prior to the initiation of construction in any given area. The preconstruction survey should be used to ensure that no nests of these species within or immediately adjacent to the project area would be disturbed during project implementation. If an active nest is found, a qualified biologist should determine the extent of a construction-free buffer zone to be established around the nest. The County will inform Caltrans when such an activity occurs.
- If vegetation is to be removed by the project and all necessary approvals have been obtained, potential nesting substrate (e.g., shrubs and trees) that will be removed by the project should be removed before the onset of the nesting season, if feasible. This will help preclude nesting and substantially decrease the likelihood of direct impacts.

Timing/Implementation:	Prior to and during construction
Enforcement:	CDFW, Caltrans
Monitoring:	County and/or its contractor

#### ***Mitigation Measure #12—Bats***

The County shall include provisions in the construction bid documents to minimize project impacts on bat species. The following measures shall be implemented to reduce construction-related impacts on bats:

- To the extent practicable, the removal of any large trees shall occur outside of the breeding season of pallid bat and western red bat. For the purposes of implementation of this measure, the breeding season is considered to be from April 1 through August 15th.

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

#### ***Mitigation Measure #13 – Sensitive Natural Communities***

The County shall include provisions in the construction bid documents to minimize project impacts on sensitive natural communities. The following measures shall be implemented to reduce construction-related impacts on sensitive natural communities:

- The project shall be designed and constructed to avoid and minimize removal of riparian vegetation to the maximum extent practicable. Staging areas and construction access routes shall avoid encroachment into riparian vegetation where practicable and minimize encroachment where complete avoidance is not practicable. Avoided riparian habitat will be clearly identified in the construction drawings and contractor work plans. Exclusionary fencing will be installed to mark boundaries of all avoided riparian areas. All pedestrian and vehicular traffic into the avoided areas delineated by the fencing shall be prohibited during

construction. The exclusionary fencing shall be inspected and maintained on a regular basis throughout project construction.

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

***Mitigation Measure #14 – Waters of the United States***

The County shall include provisions in the construction bid documents to minimize project impacts on waters of the United States. The following measures shall be implemented to reduce construction-related impacts on waters of the United States:

- To the extent practicable, the discharge of dredged or fill material into waters of the United States, including wetlands shall be avoided (this also includes waters not subject to Corps jurisdiction, but subject to RWQCB jurisdiction). Being that the proposed project will have temporary impacts on waters of the United States, the following measures shall be implemented to avoid or minimize the potential for these project-related impacts:
  - To the maximum extent practicable, activities that increase the erosion potential in the project area shall be restricted to the relatively dry summer and early fall period to minimize the potential for rainfall events to transport sediment to surface water features. If these activities must take place during the late fall, winter, or spring, then temporary erosion and sediment control structures shall be in place and operational at the end of each construction day and maintained until permanent erosion control structures are in place.
  - Areas where wetland and upland vegetation need to be removed shall be identified in advance of ground disturbance and limited to only those areas that have been approved by the County.
  - Within 10 days of completion of construction in those areas where subsequent ground disturbance will not occur for 10 calendar days or more, weed-free mulch shall 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 shall be applied to all exposed areas upon completion of the day's activities. Soils shall not be left exposed during the rainy season.
  - Suitable BMPs, such as silt fences, straw wattles, or catch basins, shall be placed below all construction activities at the edge of surface water features to intercept sediment before it reaches the waterway. These structures shall be installed prior to any clearing or grading activities.
  - If spoil sites are used, they shall be located such that they do not drain directly into a surface water feature, if possible. If a spoil site drains into a surface water feature, catch

basins shall be constructed to intercept sediment before it reaches the feature. Spoil sites shall be graded and vegetated to reduce the potential for erosion.

- Sediment control measures shall 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 shall be washed at least once and have a cleanliness value of 85 or higher based on Caltrans Test No. 227.
- A site-specific spill prevention plan shall be implemented for potentially hazardous materials. The plan shall 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 shall be constructed to prevent spilled materials from reaching surface water features.
- Equipment and hazardous materials shall be stored 50 feet away from surface water features.
- Vehicles and equipment used during construction shall receive proper and timely maintenance to reduce the potential for mechanical breakdowns leading to a spill of materials. Maintenance and fueling shall be conducted in an area at least 50 feet away from the Davis Creek or within an adequate fueling containment area.

Timing/Implementation:	Prior to, during, and after construction
Enforcement:	Corps, North Coast RWQCB, CDFW
Monitoring:	County



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>V. CULTURAL RESOURCES</b> — Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Discussion of Impacts

- a) ***Less than Significant with Mitigation Incorporated.*** The East Hill Road Over Davis Creek Bridge (10C-0113) Replacement Project, Mendocino County, California, Archaeological Survey Report (North State Resources 2013c) states that no historic properties were identified in the project area that meet the significance criteria of the National Register of Historic Places. The bridge (10C-0113) 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. However, the presence of documented historic-era resources in the general vicinity of the project area suggests there is a potential for presently unrecorded historic-era resources to be encountered during ground-disturbing activities associated with project construction. *Mitigation Measure #15 – Cultural Resources* will be used to reduce any potential impacts on historic resources to a less-than-significant level.
- b) ***Less than Significant with Mitigation Incorporated.*** The East Hill Road Over Davis Creek Bridge (10C-0113) Replacement Project, Mendocino County, California, Archaeological Survey Report (North State Resources 2013c) states that no archaeological resources were identified in the project area. However, being situated adjacent to a perennial watercourse (Davis Creek) on well-drained landforms that are generally level, the eastern portion of the project area could have been suitable for early Native American activities and habitation. The presence of documented prehistoric-era resources in the general vicinity of the project area suggests there is a potential for presently unrecorded resources to be encountered during ground-disturbing activities associated with project construction. *Mitigation Measure #15 – Cultural Resources* will be used to reduce any potential impacts on prehistoric resources to a less-than-significant level.
- c) ***No Impact.*** The project site is not known to support any unique paleontological resources or unique geologic features. Soil profiles and geologic map for the project area suggest that

alluvial and weathering processes have shaped the region for a considerable period of time. Soils in the project area are derived from the weathering processes on the sedimentary rock laid down millions of years ago. Soils found in terraces along stream channels have considerable depths and consequently any archaeological resources are likely buried, becoming visible only in cut banks or on scoured ground surfaces.

- d) ***Less than Significant with Mitigation Incorporated.*** Although no impacts to known cultural resources are anticipated, currently undetected cultural resources or evidence of human remains could be exposed during project excavation activities. This would be a significant impact. *Mitigation Measure #15 – Cultural Resources* and *Mitigation Measure #16 – Human Remains* will be used to reduce any potential impacts to cultural resources to a less-than-significant level.

## Mitigation Measures

### ***Mitigation Measure #15—Cultural Resources***

The County shall include provisions in the construction bid documents to minimize project impacts on cultural resources. The following measure shall be implemented to avoid construction-related impacts on cultural resources:

- In the event archaeological deposits—other than those determined to lack eligibility for listing in the National Register of Historic Places—are discovered during project activities, all work in the immediate vicinity of the discovery shall be stopped immediately and the Mendocino County Department of Transportation shall be notified. An archaeologist meeting the Secretary of Interior’s Professional Qualifications Standards in prehistoric or historical archaeology, as appropriate, shall be retained to evaluate the find and recommend appropriate conservation measures. The conservation measures shall be implemented prior to re-initiation of activities in the immediate vicinity of the discovery.

Timing/Implementation:	During construction
Enforcement:	Native American Heritage Commission and County
Monitoring:	County and/or its contractor

### ***Mitigation Measure #16—Human Remains***

The County shall include provisions in the construction bid documents to address the inadvertent discovery of human remains. The following measure shall be implemented to avoid construction-related impacts on inadvertently discovered human remains:

- If human remains are discovered during project activities, all activities in the vicinity of the find shall be suspended and the Mendocino County Sheriff–Coroner shall be notified. If the coroner determines that the remains may be those of a Native American, the coroner shall contact the Native American Heritage Commission. Treatment of the remains shall be conducted in accordance with the direction of the County Coroner and/or the Native American Heritage Commission, as appropriate.

Timing/Implementation:	During construction
Enforcement:	Native American Heritage Commission and County
Monitoring:	County and/or its contractor

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>VI. GEOLOGY AND SOILS</b> — Would the project:				
a) Expose people or structures to 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Be located on strata 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Discussion of Impacts

- a) i, ii) ***Less-than-Significant Impact.*** The main trace of the Maacama Fault (historically active within the past 200 years) is mapped approximately 8,000± feet to the southwest of the project site (Taber Consultants 2012). Other fault splays—Quaternary active within the past 1.6 million years—are mapped between the main fault trace and the project site. The nearest fault splay is approximately 1,100± feet to the southwest of the project site. Approximately 10 fault splays are mapped between the main trace and the site. However, faults are not mapped passing through the project area and the site is not within an Alquist-Priolo area for fault-rupture hazard (Taber Consultants 2012). To ensure that potential seismically induced hazards do not affect the replacement bridge, Caltrans seismic design parameters, including staged increases in spectral acceleration, are incorporated into the project design.

- iii) ***Less-than-Significant Impact*** The risk of liquefaction will be analyzed after the subsurface investigation has been performed (Taber Consultants 2012). Groundwater elevations are likely to be shallow and “wet” installation of piles is anticipated (Taber Consultants 2012). Depth to adequate bearing materials for the construction of foundations is currently unknown, but based on the potential lack of stability (particularly on the west side of the stream bank), potential for scour of bearing materials, the need for extensive bank stabilization, and anticipated dewatering during construction driven piles would be the likely preferred method of bridge support (Taber Consultants 2012) to address the potential for liquefaction.
- iv) ***Less-than-Significant Impact.*** Landslides have occurred in several areas downstream and within about 0.25 mile of the bridge site (Taber Consultants 2012). At the west abutment, data collected for the project geologic study (Taber Consultants 2012) suggests that the bridge site is moving/creeping towards the Davis Creek channel. Measurements taken between 2005 and 2007 indicate as much as one inch of movement may have occurred; however, aerial photographs taken during the same time period suggest little or no movement (Taber Consultants 2012). Previous mapping indicates that the project area has no to a low landslide hazard potential based on the slopes at the site (URS 2007, Taber Consultants 2012). During the geotechnical site visit conducted for the project, evidence of recent erosion/materials slide was noted along the channel bank beneath the bridge. Other occurrences of landslides have been documented in the Davis Creek channel within and in proximity to the project area (Taber Consultants 2012). The project design includes stabilization methods such as RSP and a retaining wall to prevent landslides within the project area.
- b) ***Less than Significant with Mitigation Incorporated.*** The potential for severe erosion in the project area is generally low in the project area, despite evidence of recent erosion and slumping along the west bank of Davis Creek (Taber Consultants 2012). Ground-disturbing construction activities would expose soils and make them susceptible to erosion in the event of rain; however, once soils are paved or overlain with RSP, the potential for erosion would be significantly reduced. Mitigation Measure #3 has been incorporated into the project to minimize erosion pre- and post-construction, and reduces this impact to a less-than-significant level.
- c, d) ***Less-than-Significant Impact.*** The project area is underlain by sedimentary deposits, including semi-consolidated clay, sand, and silt (Taber Consultants 2012). Soils in the project area are generally stable and suited to mechanical site preparation activities (Natural Resources Conservation Service 2012). Onsite soils are not expansive and have a low to moderate shrink-swell potential (Natural Resources Conservation Service 2012). Construction of footings would be consistent with Caltrans Design Specifications.
- e) ***No Impact.*** The proposed project does not involve septic or wastewater systems.

## Mitigation Measures

Implement *Mitigation Measure #3 - Soil Erosion and Sedimentation Control* to prevent degradation of water quality.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>VII. GREENHOUSE GAS EMISSIONS — Would the Project:</b>				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Discussion of Impacts

- a) ***Less than Significant with Mitigation Incorporated.*** Construction of the proposed bridge replacement project would generate greenhouse gas (GHG) emissions. In order to determine the significance of the impact, a “carbon footprint” was estimated based on the proposed project’s generation of GHG emissions, primarily carbon dioxide (CO<sub>2</sub>). Online calculator tools<sup>1</sup> specifically developed to estimate GHG emissions resulting from construction projects were used to generate an estimate of the carbon footprint for the proposed project. For purposes of the proposed project, the following constants for combustible fuel, area of vegetation disturbance, and project duration were used:
- an average of 300 gallons per day of diesel fuel would be used by heavy construction equipment<sup>2</sup>;
  - onsite, mobile construction equipment would travel an average of approximately 5 miles per day as the vehicles work throughout the construction site;
  - offsite construction equipment, including worker’s personal vehicles used to commute to the construction site (assuming five (5) personal diesel pick-up roundtrips) and equipment/materials haul trucks (assuming five (5) heavy duty diesel truck roundtrips) from Willits (10 miles roundtrip) would travel a total of approximately 100 miles per day;
  - onsite miscellaneous combustion engine equipment, including generators would operate 8 hours per day;

<sup>1</sup> The mobile combustion CO<sub>2</sub> Emissions Calculation Tool was used to calculate GHG emissions for combustible fuel (Greenhouse Gas Protocol Initiative 2013). The Construction Carbon Calculator Build Carbon Neutral (2013) was used to calculate GHG emissions for vegetation loss.

<sup>2</sup> The amount of fuel used by the project is based on operating three (3) pieces of heavy equipment at any given time (e.g., a grader, an excavator, crane) that each have an average fuel consumption of 100 gallons per day.

- approximately 0.38 acre of vegetation (including 0.01 acre of annual grassland; 0.12 acre of irrigated hayfield; 0.12 acre of montane hardwood; and 0.13 acre of montane riparian vegetation) would be removed at the site as a result of excavation and grading activities; and
- project construction would require approximately 120 days to complete.

Based on the above values, the proposed project would generate approximately 0.01 metric tons of GHG emissions (primarily CO<sub>2</sub>) from construction equipment and worker vehicles during project construction. The volume of vegetation that would be removed as a result of project implementation would generate approximately 13-metric tons of CO<sub>2</sub> emissions as a result of its absence. Revegetation included in the installation of the RSP was included in the calculation and would act to create a net offset of CO<sub>2</sub> emissions over a five to ten year period. Upon completion of the new bridge and roadway approaches, there would be no change from the existing volume of GHG emissions generated by vehicle use of East Hill Road.

While the project's GHG emissions would be measurable, they would not necessarily be significant and would be limited to the project construction period. Plantings of riparian trees and shrubs in the interstices of the RSP to replace those removed as a result of the project (having a greater than 6 inch dbh) would ultimately offset almost twice as much CO<sub>2</sub> as would be generated by project construction. In addition, the new project facilities including wider road shoulders and a wider bridge would be conducive to alternative forms of non-motorized transportation such as bicycles and pedestrians. Measures included in *Mitigation Measure #17–Greenhouse Gas Emissions* have been incorporated into the project design and/or would be used during construction to ensure that project related impacts would remain less than significant (California Attorney General's Office 2010).

- (b) ***Less-than-Significant Impact.*** The Mendocino County AQMD has not adopted a plan, policy, or regulation for reducing GHG emissions (Mendocino County Air Quality Management District 2013). However, 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 operations would adhere to statewide efforts aimed at minimizing GHG emissions.

## Mitigation Measures

### ***Mitigation Measure #17–Greenhouse Gas Emissions***

The County shall include provisions in the construction bid documents to minimize project-related greenhouse gas emissions. The following measures shall be implemented to reduce construction-related greenhouse gas emissions:

- Reuse and recycle construction and demolition waste, including, but not limited to soil, vegetation, concrete, lumber, metal, and cardboard.

- Ensure that the project enhances, and does not disrupt or create barriers to, non-motorized transportation.
- Protect existing trees to the extent possible and encourage the planting of new trees.

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

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>VIII. HAZARDS AND HAZARDOUS MATERIALS</b> — Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Discussion of Impacts

- a) ***Less than Significant with Mitigation Incorporated.*** Project construction and operation would not routinely generate any hazardous materials. Project operation would not involve the use or storage of any hazardous materials. Although construction would not generate any hazardous materials, a potential hazard to the public and the environment would be posed by the use of diesel or gasoline powered construction equipment (trucks, excavators, etc.) and



lubricants such as oil and hydraulic fluids. The potential for such a hazard would be temporary and mitigable since equipment would be routinely maintained and inspected to avoid leaks, and is similar to vehicles operating on nearby roads. Best management practices described in *Mitigation Measure #4—Prevention of Accidental Spills of Pollutants* will be used to reduce potential impacts associated with accidental spills of pollutants (i.e., fuel, oil, grease, etc.) on vegetation and aquatic habitat resources within the project area. Best management practices included in Mitigation Measure #4 will be provided in the project design construction specifications. In the event of an accidental spill, implementation of this measure will reduce the potential hazard to the public and the environment to a less-than-significant level.

- b) ***Less than Significant with Mitigation Incorporated.*** No hazardous materials are currently stored, or proposed for use or storage, in the project area. The bridge does not appear to contain asbestos; however, the bridge does contain lead-based paint. While the original paint (orange paint) is in generally poor condition, some sections of the bridge have been repainted using silver overcoat paint and are in generally good condition (Taber Consultants 2013). Analytical concentrations of lead were found in paint samples taken from the bridge; therefore, painted surfaces must be disposed of in accordance with Caltrans Standard Special Provisions for removal of lead paint (Provision 14-11.08, Disturbance of Existing Paint Systems on Bridges) (Taber Consultants 2013). Measures included in *Mitigation Measure #18—Lead-based Paint* have been incorporated into the project design and/or will be used during construction to ensure that project related impacts will remain less than significant.
- c) ***No Impact.*** The nearest schools are in Willits approximately 2 miles west of the project area. The project would not pose a hazard to a school.
- d) ***No Impact.*** A search of the State Department of Toxic Substances Control (DTSC) EnviroStar database (California Department of Toxic Substances Control 2013) and the State Regional Water Quality Control Board's GeoTracker database (State Water Resources Control Board 2013) was conducted. There is no record of any gas stations, auto wrecking yards, landfills, or storage tanks within the project area. The project area is not included on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.
- e, f) ***No Impact.*** The proposed project is not located near any public or private airstrip.
- g) ***Less-than-Significant Impact.*** During construction of the replacement bridge, the existing bridge would remain open to allow two-way vehicular access through the project area. Although temporary, short duration disruptions to normal traffic operations would occur during construction, but the effect would be less than significant. The project is not anticipated to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan because vehicular access would be maintained through the project area during construction.
- h) ***Less than Significant with Mitigation Incorporated.*** The project area is surrounded by grassy oak-studded foothills of eastern Mendocino County. Dispersed rural residences, including ranches and small subdivisions are accessed via East Hill Road. Although

alternative routes leading to many of the places accessed via East Hill Road exist, they are widespread, mainly because of the need to cross Davis Creek when coming from the west (e.g., Willits, U.S. Highway 101/State Route 20). East Hill Road is one of the primary connecting routes between U.S. Highway 101/State Route 20 and Eastside Road, and the lesser roads that connect to East Hill Road. East Hill Road is an important evacuation route (or alternatively, a way to gain access for the purposes of fire suppression). Fire hazard in the project area and vicinity is mapped as “moderate” with areas of “very high” fire hazard in close proximity (County of Mendocino 2007). The use of construction equipment in and around vegetated areas increases the potential for wildfire ignition. *Mitigation Measure #19 - Wildfire Potential* will be implemented to reduce the risk of wildfire associated with project construction to a less-than-significant level. Operation of the project would have no effect on wildfire potential.

## Mitigation Measures

Implement *Mitigation Measure #4 - Prevention of Accidental Spills of Pollutants* to prevent degradation of the project area environment.

### ***Mitigation Measure #18–Lead-based Paint***

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

- Lead-based paint will be removed using one of several methods approved by the Federal Environmental Protection Agency (EPA), at the contractor’s discretion. Acceptable methods include wet scraping or the use of a dustless needle gun connected to a vacuum unit with a high efficiency particulate air (HEPA) filter that empties directly into a waste container. The waste container will be properly documented and disposed of at a Class I landfill, such as the USS-Posco Industries Waste Management Unit II Landfill in Pittsburg, California (CalRecycle 2010).

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

### ***Mitigation Measure #19–Wildfire Potential***

The County shall include provisions in the construction bid documents to minimize the potential for ignition of wildfire as a result of project construction. The following measure shall be implemented to reduce construction-related wildfire ignition potential:

- Per the requirements of Public Resources Code 4442, the County shall include a note on all construction plans that internal combustion engines shall be equipped with an operational spark arrester, or the engine must be equipped for the prevention of fire.

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

	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
<b>XI. HYDROLOGY AND WATER QUALITY</b> — Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there should be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j) Inundation of seiche, tsunamis, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Discussion of Impacts

- a) ***Less-than-Significant Impact.*** Construction and operation of the project would not violate any water quality standards or waste discharge requirements set forth by the North Coast RWQCB in its Water Quality Control Plan for the North Coast region (North Coast Regional Water Quality Control Board 2011). Water pollution control measures have been incorporated into the project design and are required according to Caltrans Standard Specifications (Section 7-1.01G). Additionally, project activities would comply with the requirements set forth in a 401 Water Quality Certification, which is required by the RWQCB prior to project implementation.
- b) ***No Impact.*** Construction and operation of the project would have no effect on groundwater supplies. There would be no net change in local aquifers or the local groundwater table as a result of the project.
- c) ***Less-than-Significant Impact.*** Construction activities associated with the project are not anticipated to alter the existing drainage pattern of the site or area in a way that would result in downstream erosion and/or sedimentation. Scour protection of the abutments from river flows would be required; the scour protection is expected to consist of 75 pound RSP along the east and west side of the riverbank for a stretch of approximately 75 feet and a width of 10 feet. This RSP would be placed outside of the summer baseflow channel, but would be within the ordinary high water mark (OHWM) of the east bank of Davis Creek. A temporary work area within the channel would be needed to construct the necessary falsework and to drop the existing bridge onto during its removal. This temporary work area would consist of a temporary stream diversion and work pads constructed of clean spawning gravel and would be removed following completion of the new bridge construction.
- d) ***Less-than-Significant Impact.*** The project would not substantially alter the existing surface or instream drainage patterns of the project area. The vertical alignment of the existing bridge provides adequate clearance for freeboard and the new bridge would not change much vertically. The minimum design criteria for this project would provide almost 10 feet of freeboard over the  $Q_{100}$ , which would provide more than sufficient freeboard to pass all drift.
- e) ***Less-than-Significant Impact.*** The larger, wider new bridge structure and extended roadway approaches would increase the amount of impervious surface in the project area. The additional surface area would result in a slight, but less-than-significant increase in storm water runoff and the potential for polluted runoff (e.g., lubricants). The existing bridge structure and roadway approaches would be removed and their footprints would be restored to natural conditions.
- f) ***Less than Significant with Mitigation Incorporated.*** Construction and operation of the project would involve the use of hazardous materials, such as petroleum-based fuels and lubricants used by motor vehicles, in and adjacent to waterways. Construction activities could also temporarily increase the potential for sediment to enter the river. These project activities could degrade water quality in Davis Creek. It is anticipated that roadway and bridge deck drainage for this project would be diverted away from the approach fills and

directly into the natural drainage swales within the 100-year flood plain of Davis Creek. Once the water is within the drainage swales, it is expected to infiltrate into the ground following typical rainfall events. The following resource protection measures will be used during construction to reduce this potential impact to a less-than-significant level:

- Water pollution control measures have been incorporated into the project description and will be included in the construction contract pursuant to Caltrans Standard Specifications (Section 7- 1.01G).
- Erosion control measures will be implemented during construction of the proposed project in accordance with Mitigation Measure #3—Erosion and Sediment Control.
- Construction specifications will include Mitigation Measure #4—Prevention of Accidental Spills of Pollutants to reduce potential impacts associated with hazardous materials.
- In-channel construction work and operation of the new bridge will be conducted in accordance with all measures contained in permits or associated with agency approvals.

g) **No Impact.** The project does not include the construction of new housing within a flood hazard area.

h) **Less-than-Significant Impact.** The hydraulic study conducted for the project concludes that the water surface elevation at the upstream face of the replacement bridge would decrease compared to the existing conditions due to the new longer bridge that would no longer cause a constriction (Avila and Associates 2012). The minimum soffit elevation of the existing bridge is at elevation 1,419.9 while the proposed bridge would be approximately 3.4 feet lower at elevation 1,416.5. Even with the lower soffit elevation, 9.5 feet of freeboard would be provided over the  $Q_{100}$  water surface elevation. The length, height, and structural design of the proposed bridge would meet the Caltrans Highway Design Manual for hydraulic capacity requirements and scour depth. The new bridge and the approach embankments would not encroach into the low-flow channel of Davis Creek.

Project materials that would be placed in the  $Q_{100}$  floodplain of Davis Creek include temporary false work and a gravel work platform. Bridge abutments, including footings, would be outside of the  $Q_{100}$  flow channel and above the  $Q_{100}$  water surface elevation. Placement of RSP on the channel banks beneath and adjacent to the abutments would be required to protect the abutments from erosion. Placement of the RSP along the abutments outside of the OHWM would avoid impinging hydraulic flow within the channel and would not adversely impact the upstream flooding characteristics of the river.

Temporary materials and structures would be in place during the instream construction window (June 15 through October 15) and would be removed following construction and prior to October 15<sup>th</sup>. The area disturbed by the temporary gravel construction pad would be restored to preconstruction contours. Falsework—temporary bridge structure support—would be placed in the  $Q_{100}$  floodplain of Davis Creek during construction. It is likely that

this falsework system would use timber and plywood forms, rolled steel girders, and timber posts supported on timber foundation pads. All falsework materials, including imported clean gravel materials, would be removed after bridge construction is complete (prior to October 15).

- i) ***Less-than-Significant Impact.*** Hydraulic Design Criteria prescribed in Caltrans' *Local Procedures Manual* (California Department of Transportation 2009) have been incorporated into the project design to ensure that the new structure would be capable of conveying the base or  $Q_{100}$  flood. The new bridge would be designed to avoid problems stemming from the transport of woody debris in the channel during periods of high flow by avoiding the use of piers and by providing the minimum drift clearance recommended by Caltrans and FHWA. A temporary diversion would be used to maintain typical river flows during construction.
- j) ***No Impact.*** The project site is not at risk of seiche, tsunami, or mudflow.

## Mitigation Measures

Implement *Mitigation Measure #3 - Soil Erosion and Sedimentation Control* and *Mitigation Measure #4 - Prevention of Accidental Spills* to prevent degradation of water quality.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>X. LAND USE AND PLANNING</b> — Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural communities' conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Discussion of Impacts

- a) ***Less-than-Significant Impact.*** The proposed bridge would replace the existing bridge over Davis Creek. East Hill Road is used primarily by residents to access private properties and as a route connecting Willits and U.S. Highway 101/State Route 20 with outlying areas to the east. The project would not divide a community. While there may be minor delays to traffic passing through the project area during construction, the existing East Hill Road bridge over Davis Creek would remain open for use since the new bridge alignment is approximately 70 feet downstream. The impact of project construction on residents and other travelers would be temporary and less than significant because the bridge would remain passable during construction and alternative routes are available.
- b) ***Less-than-Significant Impact.*** Construction of the project is consistent with the Mendocino County General Plan, Development Element (County of Mendocino 2009). The General Plan includes several Development Goals with which the project would be directly compatible. These include:
- **Goal DE-1 (Land Use):** Land use patterns that maintain the rural character of Mendocino County, preserve its natural resources, and recognize the constraints of the land and the limited availability of infrastructure and public services.
  - **Goal DE-4 (Land Use):** Functional, safe, and attractive communities compatible with the General Plan and community objectives, infrastructure availability, and environmental safety, as well as economic and other opportunities and constraints.
  - **Goal DE-5 (Noise):** A county in which existing residential and other sensitive uses are protected from excessive noise and in which noise-intensive uses are protected from encroachment by residential and other noise-sensitive uses.

- **Goal DE-7 (Infrastructure):** Basic infrastructure—roadways, water and sewer service, schools, libraries, internet access, etc.—sufficient to support existing and future development, in place when needed, and fully funded both initially and on an ongoing basis.
- **Goal DE-8 (Transportation):** A balanced and coordinated transportation system that:
  - Is an integrated and attractive part of each community.
  - Is functional, safe and pleasant to use, and supports emergency services.
  - Provides a choice of modes accessing and connecting places frequented in daily life.
  - Promotes compact development and infrastructure efficiencies.
  - Is consistent with principles of sustainability and conservation of resources.
  - Is not solely dependent on the continuation of fossil fuel resources.
  - Can be maintained, used, and justified if available energy sources change during the duration of the General Plan.
- **Goal DE-9 (Road Systems):** A countywide road system that provides safe, efficient and attractive access, coordinated with interstate, state, local and area-wide systems.
- **Goal DE-10 (Pedestrian & Bicycle):** Functional, safe and attractive pedestrian and bicycle systems coordinated with regional and local transportation plans and other transportation modes.

Replacement of the existing bridge structure would ensure safe and efficient movement of people and goods; meets environmental and circulation objectives; and implements funding strategies for construction, improvement, and maintenance of an existing roadway in Mendocino County. Project design and mitigation measures address local, state, and federal safety improvements to existing county roads.

- c) **No Impact.** Currently, there are no adopted habitat conservations plans, natural community conservation plans, or other approved habitat conservation plans that cover the project area.

## Mitigation Measures

No project-specific mitigation is required under this subject.



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>XI. MINERAL RESOURCES</b> — Would the project:				
a) Result in the loss of availability of a known mineral resource classified MRZ-2 by the State Geologist that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Discussion of Impacts

- a) **No Impact.** The project area has not been mapped by the State Division of Mines and Geology as containing marketable aggregate (California Geological Survey 2006). Gravel mining activities do not occur at this location. It is unlikely that the project site would be considered an important aggregate resource. The closest mining operation (Northern Aggregates Incorporated, Harris Quarry) is located approximately 4.5 miles northwest of the project area north of Willits.
- b) **No Impact.** No locally important mineral resource recovery sites are located within the project area.

## Mitigation Measures

No project-specific mitigation is required under this subject.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>XII. NOISE</b> — Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 of public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Discussion of Impacts

- a) ***Less than Significant with Mitigation Incorporated.*** During construction, a minor increase in ambient noise levels is anticipated at the project activity site. However, construction-related noise would be temporary and would occur only during daylight hours (typically 7:00 a.m. to 7:00 p.m., Monday through Saturday). Noise generated by construction and operation of the project from sources such as vehicle traffic is common in the project vicinity. Residential and agricultural truck traffic routinely uses East Hill Road. *Mitigation Measure #20 – Construction Noise* will be used to reduce project-related noise impacts to a less-than-significant level. Operation of the new bridge would not generate noise above existing levels.
- b) ***Less than Significant with Mitigation Incorporated.*** The project would include pile driving. Construction-related ground vibration resulting from pile driving would be temporary and localized, and would occur only during daylight hours (typically 7:00 a.m. to 7:00 p.m., Monday through Saturday). The project area and vicinity are rural, but homes are located as close as 200 feet from the existing bridge. It is possible that nearby residents could experience ground vibration and be exposed to increased ambient noise levels as a result of

pile driving. Mitigation Measure #20 will be used to ensure that noise impacts associated with pile driving are less than significant. The project does not involve the use of explosives.

- c) **No Impact.** Construction and operation of the project would not result in a permanent (on-going) increase in ambient noise because traffic levels would not increase as a result of the project.
- d) **Less than Significant with Mitigation Incorporated.** Heavy equipment used during construction would contribute to short duration increases in ambient noise levels in the project vicinity that may be noticeable at nearby homes, but restricting construction to the hours between 7:00 a.m. and 7:00 p.m., Monday through Saturday, as specified by Mitigation Measure #20, will make this a less-than-significant impact.
- e, f) **No Impact.** The project is not located in the vicinity of an airport or landing strip.

## Mitigation Measures

### *Mitigation Measure #20—Construction Noise*

The County shall include in the construction specifications the following measures to reduce potential impacts associated with construction noise to a less-than-significant level:

- Construction shall be limited to the hours between 7:00 AM and 7:00 PM, Monday through Saturday.
- Pile driving can create loud percussive sounds and ground-borne vibration within 100 feet of the operation. Standard mitigation is to pre-drill pile bores to minimize the number of blows needed. Residents should be notified when pile driving will occur, and work should only occur in the daytime.
- Each internal combustion engine used for any purposed on the job site shall be equipped with a muffler of a type recommended by the manufacturer.

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

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>XIII. POPULATION AND HOUSING</b> — Would the project:				
a) Induce substantial 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Discussion of Impacts

- a) **No Impact.** Replacement of the existing Davis Creek bridge structure would have no effect on population or housing in the vicinity of East Hill Road. It would not increase traffic capacity or extend road access beyond what is available without the project. It would improve traffic safety on East Hill Road where it crosses Davis Creek.
- b) **No Impact.** Existing housing in the vicinity of East Hill Road would not be displaced by the project and no replacement housing would be required.
- c) **No Impact.** No people would be displaced as a result of the project and no replacement housing would be required.

## Mitigation Measures

No project-specific mitigation is required under this subject.

	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
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**XIV. PUBLIC SERVICES** — Would the project:

- 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Discussion of Impact

- a) ***Less-than-Significant Impact.*** The project would have a less-than-significant impact on public resources, including fire protection, police protection, and schools. East Hill Road is not used to access any parks or other public facilities. The proposed bridge would provide an improved, safer road and bridge across Davis Creek. During construction of the replacement bridge, traffic would be routed over the existing bridge, which would remain operational pending completion of the new bridge. No adverse impacts on service ratios, response times, or service objectives for any of the public services are anticipated.

## Mitigation Measures

No project-specific mitigation is required under this subject.

	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
<b>XV. RECREATION</b> — Would the project:				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Discussion of Impacts

(a, b) ***No Impact.*** The project would have no effect on existing recreational facilities.

## Mitigation Measures

No project-specific mitigation is required under this subject.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>XVI. TRANSPORTATION/TRAFFIC</b> — Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Discussion of Impacts

- a) ***Less-than-Significant Impact.*** The project is not anticipated to increase either the number of vehicle trips, volume-to-capacity ratio, or congestion at intersections. The project is consistent with the goals and policies of the Mendocino County Regional Transportation Plan and the County's General Plan.
- b) ***Less-than-Significant Impact.*** The primary purpose of the project is to provide for safer traffic circulation. There is a potential for minor delays during construction. However, there would not be a lowered level of service during the construction phase of the project, as East Hill Road would remain open and traffic would continue to be routed over the existing bridge. Based on current traffic levels in the project vicinity, traffic congestion along East

Hill Road at the Davis Creek bridge crossing is not anticipated during the construction phase of the project. Any impacts on traffic during construction would be temporary and less than significant.

- c) **No Impact.** The project would not result in a change in air traffic patterns.
- d) **No Impact.** The project would not result in the creation of sharp curves, dangerous intersections, or incompatible uses. The project is designed to provide an improved alignment and a safer bridge across Davis Creek.
- e) **Less-than-Significant Impact.** During construction of the replacement bridge, traffic would be routed over the existing bridge. Stop signs during non-construction times and flagging during construction are anticipated. Although temporary, short-duration disruptions to normal traffic operation may be required during project construction. East Hill Road would remain open to traffic during construction and no significant impact on emergency vehicle access is anticipated.
- f) **No Impact.** The project would not be in conflict with any adopted plans, policies, or programs that support alternative transportation, and would be consistent with the goals and policies of the County's Regional Transportation Plan and the Mendocino County General Plan. The existing bridge crossing would remain open to alternative forms of transportation (e.g., pedestrian, bicycles) during construction.

## Mitigation Measures

No project-specific mitigation is required under this subject.



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>XVII. UTILITIES AND SERVICE SYSTEMS</b> — Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Discussion of Impacts

- a) **No Impact.** The project does not involve any actions that would generate wastewater.
- b) **Less-than-Significant Impact.** A water line belonging to the City of Willits is located within the project area and crosses Davis Creek via the existing bridge. This water line would be relocated within the area of direct impact associated with the bridge replacement project and would be connected to the new bridge structure to avoid impacts on Davis Creek. No additional impacts on utilities are anticipated.
- c) **No Impact.** Construction and operation of the project would not require new facilities or alterations to existing storm water facilities. The project profile would provide sufficient gradient for drainage of roadway and bridge surfaces. It is anticipated that roadway and bridge deck drainage for this project would be diverted away from the approach fills and

directly into the natural drainage swales within the 100-year flood plain of Davis Creek. Once the water is within the drainage swales, it is expected to infiltrate into the ground following typical rainfall events.

- d) **No Impact.** No new or expanded water entitlements would be required for the project.
- e) **No Impact.** The project would be limited to improvements to the existing bridge and approaches, and would not result in a change in the current demand for wastewater treatment.
- f) **Less-than-Significant Impact.** Construction activities associated with the project could generate solid waste in the form of demolished materials, metal pilings, and other trash. Solid waste generated at the project site would be disposed of at a suitable facility such as the Ukiah Transfer Station. The project is not likely to generate solid waste in amounts that would adversely affect the existing capacity of the local landfill. The contractor would be responsible for removing the existing bridge from the site.
- g) **Less-than-Significant Impact.** Any solid waste generated by the project would be disposed of at an approved landfill, in compliance with local, state, and federal regulations pertaining to solid waste disposal.

## Mitigation Measures

No project-specific mitigation is required under this subject.

	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>
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### XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

(To be filled out by Lead Agency if required)

- |  |                          |                                     |                                     |                          |
|--|--------------------------|-------------------------------------|-------------------------------------|--------------------------|
| 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? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| 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)?   | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?  | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |

## Discussion

- a) ***Less than Significant with Mitigation Incorporated.*** As discussed in the preceding sections, the proposed project has a potential to result in adverse effects on air quality, biological resources, and cultural resources. Special status wildlife species that could be affected by the project are Northern California Coast DPS steelhead, California Coastal ESU Chinook salmon, SONCC ESU coho salmon, northern red-legged frog, foothill yellow-legged frog, western pond turtle, Vaux's swift, long-eared owl, white-tailed kite, yellow warbler, yellow-breasted chat, Sonoma tree vole, ringtail, pallid bat, and western red bat. Potential impacts on resources and the specified species are discussed in detail in the corresponding sections above. Mitigation measures required to reduce the significance of project impacts are summarized in Chapter 5. With implementation of the required mitigation measures, potential impacts would be reduced to a less-than-significant level. Although cultural resources are not likely to be affected, there is the potential for previously undetected cultural resources or human remains to be affected by project activities. Therefore, mitigation measures (see Chapter 5) have been incorporated into the proposed project to ensure protection of any such resources in the event of inadvertent discovery. The project is consistent with the existing land uses, and the relevant plans and policies that govern such projects.

- b) ***Less-than-Significant Impact.*** The project would include improvements to an existing transportation system by replacing an existing bridge structure with a new bridge. The project would not introduce new development into a previously undeveloped area. The project site is near rural residential and agricultural land uses. Although the bridge and roadway approaches alignments would shift slightly outside of the existing alignments, open space will be retained to the extent possible. Impacts associated with the project would be limited to the construction phase for the most part, and can be fully mitigated for at the project level. As a result, cumulative impacts are considered to be less than significant.
  
- c) ***Less than Significant with Mitigation Incorporated.*** The proposed East Hill Road bridge replacement project could result in a variety of impacts on human beings, particularly during the construction phase. Potential adverse effects on adjacent residential areas along East Hill Road are related to temporary decreases in air quality, geology and soils, hazards and hazardous materials, hydrology and water quality, and temporary increases in noise levels during construction. Chapter 5 contains mitigation measures that will be implemented to avoid or minimize potentially adverse effects to humans resulting from the construction and operation of the project. 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.


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## 4 Determination

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On the basis of 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.
- ☒ 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 EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

  
Signature  
Jackson Ford, Environmental Compliance Specialist  
Mendocino County Department of Transportation

11.13.13  
Date



## **5 Summary of Mitigation Commitments**

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Mendocino County is committed to implementing the following mitigation measures during construction of the East Hill Road Bridge (No. 10C-0113) Replacement Project:

### **5.1 Air Quality**

#### **5.1.1 Mitigation Measure #1—Air Quality/Fugitive Dust and Emission Controls**

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

- Water inactive construction sites and exposed stockpile sites at least twice daily, including during non-work days or until soils are stable.
- All earthmoving activities shall cease when sustained winds exceed 15 miles per hour.
- Pursuant to the California Vehicle Code, all trucks hauling soil and other loose material to and from the construction site shall be covered or shall maintain at least 6 inches of freeboard (i.e., minimum vertical distance between top of load and the trailer).
- Earth or other material that has been transported by trucking or earth moving equipment, erosion by water, or other means onto paved streets shall be promptly removed.
- Any topsoil that is removed during construction shall be stored onsite in piles not to exceed 4 feet in height to allow development of microorganisms prior to resoiling of the construction area. These topsoil piles shall be clearly marked and flagged. Topsoil piles that will not be immediately returned to use shall be revegetated with a non-persistent erosion control mixture.
- Soil piles for backfill shall be marked and flagged separately from native topsoil stockpiles. These soil piles shall also be surrounded by silt fencing, straw wattles, or other sediment barriers or covered unless they are to be immediately used.
- Equipment or manual watering shall be conducted on all stockpiles, dirt/gravel roads, and exposed or disturbed soil surfaces, as necessary, to reduce airborne dust.
- All unpaved surfaces, unless otherwise treated with suitable chemicals or oils, shall have a posted speed limit of 10 miles per hour.
- Construction vehicles shall minimize idling time and equipment shall be shut off when not in use pursuant to California Code of Regulations (Title 13, Division 3, Chapter 10 §2485).



- Construction equipment will be maintained in proper working conditions according to manufacturer's specifications. Equipment must be checked daily and determined to be in proper running condition before it is operated.
- The operator shall keep a daily log of activities to control fugitive dust.

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

## 5.2 Biological Resources

### 5.2.1 Mitigation Measure #2 – Special-Status Fish

The County shall include provisions in the construction bid documents to minimize project impacts on special-status fish species. The following measures shall be implemented during construction to reduce impacts on special-status fish:

- Prior to October 15, the temporary culverts, pipe, and work platforms shall be removed from the channel. The fish rock base shall be excavated down to the point at which there is a thin veneer remaining on the existing channel bed. Upon removal of the culverts and fish rock, hand crews may redistribute the remaining fish rock such that it does not become a barrier to the free passage of water or the movement of fish and aquatic animals. It shall not impede, or tend to impede, the passage of fish at any time, pursuant to Fish and Game Code Section 5901.
- The crossings shall not change the flow characteristics (i.e., velocity, depth, width) of the water as it flows through the project area. No ponding of flow shall occur above the pipe and culverts unless this type of ponding is typical of the area.
- Culverts shall be maintained and kept open while in place. Any ponding shall be corrected immediately. The County is responsible for such maintenance as long as the culvert remains in the stream.
- Any structure/culvert placed within a stream where fish do/may occur shall be designed, constructed, and maintained such that they do not constitute a barrier to upstream or downstream movement of aquatic life or cause an avoidance reaction by fish that impedes their upstream or downstream movement. This includes, but is not limited to, the supply of water at an appropriate depth, temperature, and velocity to facilitate upstream and downstream fish migration. For this project, this equates to designing the culverts to meet guidelines outlined in NMFS (2001).
- Impacts to herbaceous cover will be offset by reseeding any unvegetated and impacted areas with a suitable seed mixture post construction.
- All of the interstitial spaces of the RSP will be filled with well-graded soil to allow for revegetation.

- Any construction equipment operating upon work pads or adjacent to Davis Creek shall be inspected daily for leaks. External oil, grease, and mud shall be removed from equipment and disposed of properly. Spill containment booms shall be maintained onsite at all times during construction operations and/or staging of equipment or fueling supplies. Fueling trucks shall maintain adequate spill containment materials at all times.
- The contractor shall develop and implement site-specific BMPs, a water pollution control plan, and emergency spill control plan. The contractor shall be responsible for immediate containment and removal of any toxins released.

Timing/Implementation:	During and after construction
Enforcement:	NMFS, CDFW, Caltrans
Monitoring:	County and/or its contractor

### **5.2.2 Mitigation Measure #3—Erosion and Sediment Control**

The County shall include provisions in the construction bid documents that the contractor shall implement to reduce the potential for erosion and sediment to result from project construction. Erosion and sediment controls shall include, but not be limited to, the following elements, as appropriate:

- Erosion control measures will be implemented during project construction. These measures will conform to the provisions in Section 20-2 and 20-3 of the Caltrans Standard Specifications and the special provisions included in the project contract. Such provisions include the preparation of a Storm Water Pollution Prevention Plan (SWPPP) that includes best management practices (BMP) to be used at the project site.
- Erosion control measures to be included in the SWPPP or to be implemented by the County include the following:
  - To the maximum extent practicable, activities that increase the erosion potential in the project area shall be restricted to the relatively dry summer and early fall period to minimize the potential for rainfall events to transport sediment to surface water features. In-channel construction will be conducted from June 15-October 15 and upland construction will likely occur throughout the year as long as work activities comply with the conservation and avoidance and minimization measures identified herein and for the protection of other sensitive or special-status plant or animal species. For upland construction activities that must take place during the late fall, winter, or spring, temporary erosion and sediment control structures shall be in place and operational at the end of each construction day and maintained until permanent erosion control structures are in place.
  - Areas where wetland and upland vegetation need to be removed shall be identified in advance of ground disturbance and limited to only those areas that have been approved by the County. Exclusionary fencing will be installed around areas that do not need to be disturbed.
  - Within 10 days of completion of construction in those areas where subsequent ground disturbance will not occur for 10 calendar days or more, weed-free mulch shall 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 shall be applied to all exposed areas upon completion of the day's activities. Soils shall not be left exposed during the rainy season.

- Suitable BMPs, such as silt fences, straw wattles, or catch basins, shall be placed below all construction activities at the edge of surface water features to intercept sediment before it reaches the waterway. These structures shall be installed prior to any clearing or grading activities. Further, sediment built up at the base of BMPs will be removed before BMP removal to avoid any accumulated sediments from being mobilized post-construction.
- If spoil sites are used, they shall be located such that they do not drain directly into a surface water feature, if possible. If a spoil site drains into a surface water feature, catch basins shall be constructed to intercept sediment before it reaches the feature. Spoil sites shall be graded and vegetated with native species to reduce the potential for erosion.
- Sediment control measures shall 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 with native species.
- Any new or previously excavated gravel material placed in the channel shall 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).

Timing/Implementation:	Prior to, during, and after construction
Enforcement:	Corps, North Coast RWQCB, CDFW
Monitoring:	County and/or its contractor

### **5.2.3 Mitigation Measure #4—Prevention of Accidental Spills of Pollutants**

The County shall include provisions in the construction bid documents that shall be implemented by the contractor to reduce the potential for accidental spills of pollutants during project construction. Measures to avoid accidental spills of pollutants shall include, but not be limited to, the following elements, as appropriate:

- Construction specifications shall include the following measures to reduce potential impacts on vegetation and aquatic habitat resources in the project area associated with accidental spills of pollutants (e.g., fuel, oil, and grease):
  - A site-specific spill prevention plan shall be implemented for potentially hazardous materials. The plan shall 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 shall be constructed to prevent spilled materials from reaching surface water features.

- Equipment and hazardous materials shall be stored 50 feet away from surface water features.
- Vehicles and equipment used during construction shall receive proper and timely maintenance to reduce the potential for mechanical breakdowns leading to a spill of materials. Maintenance and fueling shall be conducted in an area at least 50 feet away from Davis Creek or within an adequate fueling containment area.
- Equipment operating within the OHWM shall use non-toxic vegetable oil for operating hydraulic equipment instead of traditional hydraulic fluids.

Timing/Implementation:	During construction
Enforcement:	Corps, North Coast RWQCB, CDFW
Monitoring:	County and/or its contractor

#### **5.2.4 Mitigation Measure #5—Replacement of Lost Riparian Habitat**

The County shall include provisions in the construction bid documents to mitigate the loss of riparian habitat as a result of project construction. The following measures shall be implemented to reduce potential impacts on riparian habitat in the project area:

- The width of the construction disturbance zone within the riparian habitat shall be minimized through careful pre-construction planning.
- Exclusionary fencing shall be installed along the boundaries of all riparian areas to be avoided to ensure that impacts to riparian vegetation outside of the construction area are minimized.
- Riparian habitat areas temporarily disturbed shall be replanted using riparian species that have been recorded along Davis Creek in the project area, including willow (*Salix lasiolepis* and *Salix lemmonii*), white alder (*Alnus rhombifolia*), and Oregon ash (*Fraxinus latifolia*).
- Onsite creation/restoration shall occur in areas that have been disturbed during project construction and within interstitial spaces of the RSP. The amount of habitat created/restored shall be at a 3:1 ratio of new plantings per large (6 inch dbh) woody plants removed. This replanting ratio will help ensure successful establishment of at least one vigorous plant for each plant removed to accommodate the project.
- Plant spacing intervals will be determined as appropriate based on site conditions following construction.
- Non-native tree species removed during project construction will be replaced with native riparian species.
- Revegetation monitoring will be initiated immediately following completion of the planting, and extend for a period of up to five years. Monitoring surveys will consist of a general site walkover evaluating the survival and health of riparian plantings, signs of drought stress,

weed or herbivory problems, and the presence or trash or other debris. Corrective measures including replacement of revegetation plantings, application of supplemental irrigation, hand removal of non-native weeds, replacement or removal of protective plant covers, and the removal of trash and debris will be implemented as necessary. Within the mitigation area, less than 50 percent total mortality of planted species (including container stock and hardwood cuttings) will be considered a success. 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 would be implemented.

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

### **5.2.5 Mitigation Measure #6 – Prevention of Spread of Invasive Species**

The County shall include provisions in the construction bid documents to prevent the spread of invasive plant species as a result of project construction. The following measures shall be implemented to prevent the spread of invasive species in the project area:

- All equipment used for off-road construction activities will be weed-free prior to entering the action area.
- If project implementation calls for mulches or fill, they will be weed free.
- Any seed mixes or other vegetative material used for re-vegetation of disturbed sites will consist of locally adapted native plant materials to the extent practicable.
- Any gravels or materials used for the temporary stream diversion shall be new, from a local source, or properly disinfected or cleaned prior to installation.

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

### **5.2.6 Mitigation Measure #7 - Frogs**

The County shall include provisions in the construction bid documents to minimize project impacts on special-status frog species. The following measures shall be implemented to reduce construction-related impacts on special-status frogs:

- Because northern red-legged and foothill yellow-legged frogs may move into and out of the project area at any time, a pre-construction survey for the species is necessary to confirm their status (presence/absence) on the site immediately prior to the onset of project construction. Therefore, a qualified biologist shall conduct a minimum of one survey of the project area for these frog species. The survey shall be conducted a maximum of one week

prior to construction. If either of these frog species is found within a construction impact zone, the biologist shall move it to a safe location having similar habitat. The County will inform Caltrans when such an activity occurs.

- If a northern red-legged or foothill yellow-legged frog is encountered during construction, activities in the vicinity shall cease until appropriate avoidance measures are implemented or it is determined that the frog will not be harmed. Any frogs encountered during construction shall be allowed to move away on their own. Any trapped, injured, or killed frogs shall be reported immediately to CDFW.

Timing/Implementation:	Prior to and during construction
Enforcement:	CDFW, Caltrans
Monitoring:	County and/or its contractor

### **5.2.7 Mitigation Measure #8—Western Pond Turtle**

The County shall include provisions in the construction bid documents to minimize project impacts on western pond turtles. The following measures shall be implemented to reduce construction-related impacts on western pond turtles:

- Because turtles may move into and out of the project site at any time, a preconstruction survey for the species is necessary to confirm its status (presence/absence) on the site immediately prior to the onset of project construction. Therefore, a qualified biologist shall conduct a minimum of one survey of the project site for pond turtles and their nests. The survey shall be conducted a maximum of one week prior to construction. If a pond turtle is found within a construction impact zone, the biologist shall move it to a safe location within similar habitat. If a pond turtle nest is found, the biologist shall flag the site and determine if construction activities can avoid affecting the nest. If the nest cannot be avoided, it will be excavated and re-buried at a suitable location outside of the construction impact zone by a qualified biologist. The County will inform Caltrans when such an activity occurs.
- If a western pond turtle is encountered during construction, activities in the vicinity shall cease until appropriate corrective measures have been implemented or it has been determined that the turtle will not be harmed. Any turtles encountered during construction shall be allowed to move away on their own. Any trapped, injured, or killed turtles shall be reported immediately to CDFW.

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

### **5.2.8 Mitigation Measure #9—Vaux's Swift**

The County shall include provisions in the construction bid documents to minimize project impacts on Vaux's swift. The following measures shall be implemented to reduce construction-related impacts on Vaux's swift:

- Preconstruction surveys for nesting Vaux's swift shall be conducted by a qualified biologist within the project area and a 250-foot buffer around the project area to ensure that no nests will be disturbed during project implementation. At least one survey should be conducted no more than 15 days prior to the initiation of construction activities. During this survey, the biologist should inspect all trees immediately adjacent to the impact areas for Vaux's swift nests. If an active swift nest is found close enough (i.e., within 250 feet) to the construction area to be disturbed by these activities, the biologist (in consultation with the CDFW) shall determine the extent of a construction-free buffer zone to be established around the nest. The County will inform Caltrans when such an activity occurs.
- If all necessary approvals have been obtained, potential nesting substrate (e.g., shrubs and trees) that will be removed by the project should be removed before the onset of the nesting season (February 15 through September 30), if practicable. This will help preclude nesting and substantially decrease the likelihood of direct impacts.

Timing/Implementation:	Prior to and during construction
Enforcement:	CDFW, Caltrans
Monitoring:	County and/or its contractor

### 5.2.9 Mitigation Measure #10—Raptors

The County shall include provisions in the construction bid documents to minimize project impacts on raptors. The following measures shall be implemented to reduce construction-related impacts on raptors:

- Preconstruction surveys for nesting raptors shall be conducted by a qualified biologist within the project area and a 250-foot buffer around the project area to ensure that no nests will be disturbed during project implementation. At least one survey should be conducted no more than 15 days prior to the initiation of construction activities. During this survey, the biologist should inspect all trees immediately adjacent to the impact areas for raptor nests. If an active raptor nest is found close enough (i.e., within 250 feet) to the construction area to be disturbed by these activities, the biologist (in consultation with the CDFW) shall determine the extent of a construction-free buffer zone to be established around the nest. The County will inform Caltrans when such an activity occurs.
- If all necessary approvals have been obtained, potential nesting substrate (e.g., shrubs and trees) that will be removed as a result of the project shall be removed before the onset of the nesting season (February 15 through September 30), if practicable. This will discourage nesting in areas that would be directly impacted by the proposed project and substantially decrease the likelihood of direct impacts.

Timing/Implementation:	Prior to and during construction
Enforcement:	CDFW, Caltrans
Monitoring:	County and/or its contractor

### 5.2.10 Mitigation Measure #11—Migratory Birds

The County shall include provisions in the construction bid documents to minimize project impacts on migratory bird species. The following measures shall be implemented to reduce construction-related impacts on migratory bird species:

- Grading and other construction activities shall be scheduled to avoid the nesting season to the extent possible. The nesting season for migratory bird species that occur in the project vicinity extends from March through August. If construction occurs outside of the breeding season, no further mitigation is necessary. If the breeding season cannot be completely avoided, the following mitigations shall be implemented:
- A qualified biologist shall conduct a minimum of one preconstruction survey for yellow warblers and yellow-breasted chats within the project area and a 250-foot buffer around the project area. The survey should be conducted no more than 15 days prior to the initiation of construction in any given area. The preconstruction survey should be used to ensure that no nests of these species within or immediately adjacent to the project area would be disturbed during project implementation. If an active nest is found, a qualified biologist should determine the extent of a construction-free buffer zone to be established around the nest. The County will inform Caltrans when such an activity occurs.
- If vegetation is to be removed by the project and all necessary approvals have been obtained, potential nesting substrate (e.g., shrubs and trees) that will be removed by the project should be removed before the onset of the nesting season, if feasible. This will help preclude nesting and substantially decrease the likelihood of direct impacts.

Timing/Implementation:	Prior to and during construction
Enforcement:	CDFW, Caltrans
Monitoring:	County and/or its contractor

### 5.2.11 Mitigation Measure #12—Bats

The County shall include provisions in the construction bid documents to minimize project impacts on bat species. The following measures shall be implemented to reduce construction-related impacts on bats:

- To the extent practicable, the removal of any large trees shall occur outside of the breeding season of pallid bat and western red bat. For the purposes of implementation of this measure, the breeding season is considered to be from April 1 through August 15th.

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



### **5.2.12 Mitigation Measure #13 – Sensitive Natural Communities**

The County shall include provisions in the construction bid documents to minimize project impacts on sensitive natural communities. The following measures shall be implemented to reduce construction-related impacts on sensitive natural communities:

- The project shall be designed and constructed to avoid and minimize removal of riparian vegetation to the maximum extent practicable. Staging areas and construction access routes shall avoid encroachment into riparian vegetation where practicable and minimize encroachment where complete avoidance is not practicable. Avoided riparian habitat will be clearly identified in the construction drawings and contractor work plans. Exclusionary fencing will be installed to mark boundaries of all avoided riparian areas. All pedestrian and vehicular traffic into the avoided areas delineated by the fencing shall be prohibited during construction. The exclusionary fencing shall be inspected and maintained on a regular basis throughout project construction.

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

### **5.2.13 Mitigation Measure #14 – Waters of the United States**

The County shall include provisions in the construction bid documents to minimize project impacts on waters of the United States. The following measures shall be implemented to reduce construction-related impacts on waters of the United States:

- To the extent practicable, the discharge of dredged or fill material into waters of the United States, including wetlands shall be avoided (this also includes waters not subject to Corps jurisdiction, but subject to RWQCB jurisdiction). Being that the proposed project will have temporary impacts on waters of the United States, the following measures shall be implemented to avoid or minimize the potential for these project-related impacts:
  - To the maximum extent practicable, activities that increase the erosion potential in the project area shall be restricted to the relatively dry summer and early fall period to minimize the potential for rainfall events to transport sediment to surface water features. If these activities must take place during the late fall, winter, or spring, then temporary erosion and sediment control structures shall be in place and operational at the end of each construction day and maintained until permanent erosion control structures are in place.
  - Areas where wetland and upland vegetation need to be removed shall be identified in advance of ground disturbance and limited to only those areas that have been approved by the County.
  - Within 10 days of completion of construction in those areas where subsequent ground disturbance will not occur for 10 calendar days or more, weed-free mulch shall 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 shall be applied to all exposed areas upon completion of the day's activities. Soils shall not be left exposed during the rainy season.

- Suitable BMPs, such as silt fences, straw wattles, or catch basins, shall be placed below all construction activities at the edge of surface water features to intercept sediment before it reaches the waterway. These structures shall be installed prior to any clearing or grading activities.
- If spoil sites are used, they shall be located such that they do not drain directly into a surface water feature, if possible. If a spoil site drains into a surface water feature, catch basins shall be constructed to intercept sediment before it reaches the feature. Spoil sites shall be graded and vegetated to reduce the potential for erosion.
- Sediment control measures shall 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 shall be washed at least once and have a cleanliness value of 85 or higher based on Caltrans Test No. 227.
- A site-specific spill prevention plan shall be implemented for potentially hazardous materials. The plan shall 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 shall be constructed to prevent spilled materials from reaching surface water features.
- Equipment and hazardous materials shall be stored 50 feet away from surface water features.
- Vehicles and equipment used during construction shall receive proper and timely maintenance to reduce the potential for mechanical breakdowns leading to a spill of materials. Maintenance and fueling shall be conducted in an area at least 50 feet away from the Davis Creek or within an adequate fueling containment area.

Timing/Implementation:	Prior to, during, and after construction
Enforcement:	Corps, North Coast RWQCB, CDFW
Monitoring:	County

## 5.3 Cultural Resources

### 5.3.1 Mitigation Measure #15—Cultural Resources

The County shall include provisions in the construction bid documents to minimize project impacts on cultural resources. The following measure shall be implemented to avoid construction-related impacts on cultural resources:

- In the event archaeological deposits—other than those determined to lack eligibility for listing in the National Register of Historic Places—are discovered during project activities, all work in the immediate vicinity of the discovery shall be stopped immediately and the Mendocino County Department of Transportation shall be notified. An archaeologist meeting the Secretary of Interior’s Professional Qualifications Standards in prehistoric or historical archaeology, as appropriate, shall be retained to evaluate the find and recommend appropriate conservation measures. The conservation measures shall be implemented prior to re-initiation of activities in the immediate vicinity of the discovery.

Timing/Implementation:	During construction
Enforcement:	Native American Heritage Commission and County
Monitoring:	County and/or its contractor

### 5.3.2 Mitigation Measure #16—Human Remains

The County shall include provisions in the construction bid documents to address the inadvertent discovery of human remains. The following measure shall be implemented to avoid construction-related impacts on inadvertently discovered human remains:

- If human remains are discovered during project activities, all activities in the vicinity of the find shall be suspended and the Mendocino County Sheriff–Coroner shall be notified. If the coroner determines that the remains may be those of a Native American, the coroner shall contact the Native American Heritage Commission. Treatment of the remains shall be conducted in accordance with the direction of the County Coroner and/or the Native American Heritage Commission, as appropriate.

Timing/Implementation:	During construction
Enforcement:	Native American Heritage Commission and County
Monitoring:	County and/or its contractor

## 5.4 Geology and Soils

Implement *Mitigation Measure #3 - Soil Erosion and Sedimentation Control* to prevent degradation of water quality.

## 5.5 Greenhouse Gas Emissions

### 5.5.1 Mitigation Measure #17—Greenhouse Gas

The County shall include provisions in the construction bid documents to minimize project-related greenhouse gas emissions. The following measures shall be implemented to reduce construction-related greenhouse gas emissions:

- Reuse and recycle construction and demolition waste, including, but not limited to soil, vegetation, concrete, lumber, metal, and cardboard.

- Ensure that the project enhances, and does not disrupt or create barriers to, non-motorized transportation.
- Protect existing trees to the extent possible and encourage the planting of new trees.

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

## 5.6 Hazards and Hazardous Materials

Implement Mitigation *Measure #4 - Prevention of Accidental Spills of Pollutants* to prevent degradation of the project area environment.

### 5.6.1 Mitigation Measure #18–Lead-based Paint

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

- Lead-based paint will be removed using one of several methods approved by the Federal Environmental Protection Agency (EPA), at the contractor's discretion. Acceptable methods include wet scraping or the use of a dustless needle gun connected to a vacuum unit with a high efficiency particulate air (HEPA) filter that empties directly into a waste container. The waste container will be properly documented and disposed of at a Class I landfill, such as the USS-Posco Industries Waste Management Unit II Landfill in Pittsburg, California (CalRecycle 2010).

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

### 5.6.2 Mitigation Measure #19–Wildfire Potential

The County shall include provisions in the construction bid documents to minimize the potential for ignition of wildfire as a result of project construction. The following measure shall be implemented to reduce construction-related wildfire ignition potential:

- Per the requirements of Public Resources Code 4442, the County shall include a note on all construction plans that internal combustion engines shall be equipped with an operational spark arrester, or the engine must be equipped for the prevention of fire.

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

## 5.7 Hydrology and Water Quality

Implement *Mitigation Measure #3—Soil Erosion and Sedimentation Control* and *Mitigation Measure #4—Prevention of Accidental Spills* to prevent degradation of water quality.

## 5.8 Noise

### 5.8.1 Mitigation Measure #20—Construction Noise

The County shall include in the construction specifications the following measures to reduce potential impacts associated with construction noise to a less-than-significant level:

- Construction shall be limited to the hours between 7:00 AM and 7:00 PM, Monday through Saturday.
- Pile driving can create loud percussive sounds and ground-borne vibration within 100 feet of the operation. Standard mitigation is to pre-drill pile bores to minimize the number of blows needed. Residents should be notified when pile driving will occur, and work should only occur in the daytime.
- Each internal combustion engine used for any purposed on the job site shall be equipped with a muffler of a type recommended by the manufacturer.

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

## **6 Report Preparation**

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### **6.1 Mendocino County Department of Transportation – CEQA Lead Agency**

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### **6.2 North State Resources, Inc. – Environmental Compliance**

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Principal Archaeological Investigator  
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Cultural Resources  
GIS Analyst

### **6.3 Drake Haglan and Associates – Design Engineers**

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Project Manager  
Bridge Engineer

### **6.4 Avila and Associates – Design Hydraulics**

Catherine M.C. Avila, P.E.      Principal

### **6.5 Taber Consultants – Geotechnical and Initial Site Assessment**

Martin McIlroy  
Ellen Pyatt, MSc.  
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Task Manager  
Project Geologist  
Principal Hydrogeologist

### **6.6 Bollard Acoustical Consultants, Inc. – Noise**

Paul Bollard

President

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