

**Rowes Creek Bridge  
(No. 10C-0123) on Sherwood Road  
Replacement Project**

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**Proposed Mitigated Negative Declaration and Initial Study  
Public Draft**

**February 2015**

*Prepared for:*  
Mendocino County  
Department of Transportation  
340 Lake Mendocino Drive  
Ukiah, California 95482

*Prepared by:*

 North State Resources, Inc.  
5000 Bechelli Lane, Suite 203  
Redding, California 96002

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- 1. Project Title:** Rows Creek Bridge (No. 10C-0123) on Sherwood Road 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** Rows Creek bridge on Sherwood Road, approximately 5.6 miles northwest of Willits, Mendocino, County, California; Township 19 North, Range 14 West, Section 22, *Burbeck, California* quadrangle;  
Assessor Parcel Numbers: 037-640-19, 037-640-06, 037-640-07, 037-690-02, and 037-690-01
- 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** Upland Residential (RMR20)
- 7. Zoning** Upland Residential (UR)
- 8. Description of Project**

The Mendocino County Department of Transportation (County) proposes to replace the existing bridge (No. 10C-0123) on Sherwood Road (project) over Rows Creek and construct the necessary roadway approach improvements. The existing bridge is currently classified as structurally deficient due to substandard load carrying capacity and functionally obsolete. Although its sufficiency rating of 79.7 normally would not make it eligible for replacement under the Federal Aid Highway Bridge Program (HBP), the California Department of Transportation (Caltrans) has approved its replacement because the Federal Highway Administration (FHWA) typically does not authorize widening of a functionally obsolete timber bridge. Bridge replacement would be funded through the HBP and Federal Toll Credits through the 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, reinforced concrete, box-girder bridge would be constructed upstream of the existing alignment. The new bridge would be a 140-foot long and 28-feet wide and would be supported by reinforced concrete seat abutments founded on either spread footings, driven steel piles or cast-in-drilled-hole piles. Both roadway approaches to the bridge will be widened to accommodate two 10-foot-wide traveled lanes with 2-foot-wide unpaved shoulders on each side. The single-span bridge option would minimize environmental impacts on Rows Creek by avoiding the need to construct bridge supports inside the active channel or below the 100-year flood ( $Q_{100}$ ). The roadway approaches would be widened and realigned to conform to the new bridge. Sherwood Road would be

realigned to remove the sharp reversing curves located on either end of the bridge and increase the roadway approach 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

## **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)
- 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
ACBM	asbestos-containing building material
APN	Assessor's Parcel Number
AQMD	Air Quality Management District
ASR	Archaeological Survey Report
BA	Biological Assessment
BMPs	Best Management Practices
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
dbh	diameter at breast height
DTSC	Department of Toxic Substances Control
EFHA	Essential Fish Habitat Assessment
EPA	U.S. Environmental Protection Agency
°F	degree Fahrenheit
FHWA	Federal Highway Administration
GHG	greenhouse gas
HBP	Highway Bridge Project
HEPA	high energy particulate air
HPSR	Historical Properties Survey Report
IS	Initial Study
LCP	lead-containing paint
MND	Mitigated Negative Declaration
msl	mean sea level
NEPA	National Environmental Policy Act
NES	Natural Environmental Study
NSR	North State Resources
OHWL	ordinary high water mark

PM <sub>10</sub>	particulate matter 10 microns or less
project	Rowes Creek Bridge on Sherwood Road
	Replacement Project
Q <sub>50</sub>	50-year flood
Q <sub>100</sub>	100-year flood
RMR20	Upland Residential zoned for 20 acres minimum
	(land use)
ROW	right of way
RSP	rock slope protection
RWQCB	Regional Water Quality Control Board
SWPPP	Storm Water Pollution Prevention Plan
UR	Upland Residential (zoning)
USGS	United States Geological Survey



# 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 Rows Creek Bridge (No. 10C-0123) on Sherwood Road Replacement Project (project). It includes an evaluation of potential environmental impacts that could result from the project and provides justification for adopting 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)
- Natural Environment Study (NES) Report
- Hydrology and Design Hydraulic Study
- Wetland Delineation Report
- Initial Site Assessment
- Draft Foundation Report
- Farmland Impact Assessment Technical Memorandum

## 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

The project is located along Sherwood Road in a rural area approximately 5.6 miles northwest of Willits, California in Mendocino County, California. The Rows Creek bridge on Sherwood Road links Willits and Brooktrails subdivision with Sherwood Valley. The proposed project area consists of a linear alignment approximately 1,000 feet long that includes portions of Sherwood Road on both sides of Rows Creek. It is shown on the *Burbeck, California* 7.5-minute U.S. Geological Survey (USGS) quadrangle in Township 19 North, Range 14 West, Section 22 (Figure 1). The approximate center of the project area is located at latitude 39.48116°, longitude -123.40889° (World Geodetic System 84 datum).

The project area boundaries were established to encompass the maximum limits of potential ground-disturbing construction activities that could reasonably be expected from the proposed project, including but not limited to, all existing and proposed new rights-of-way (ROW), temporary construction easements, utility relocations, and any borrow, disposal, and/or equipment staging areas (Figure 2). The project area includes the following Assessor Parcel Numbers (APNs) or portions thereof: 037-640-19, 037-640-06, 037-640-07, 037-690-02, and 037-690-01.

### 2.2 Existing Facility Conditions

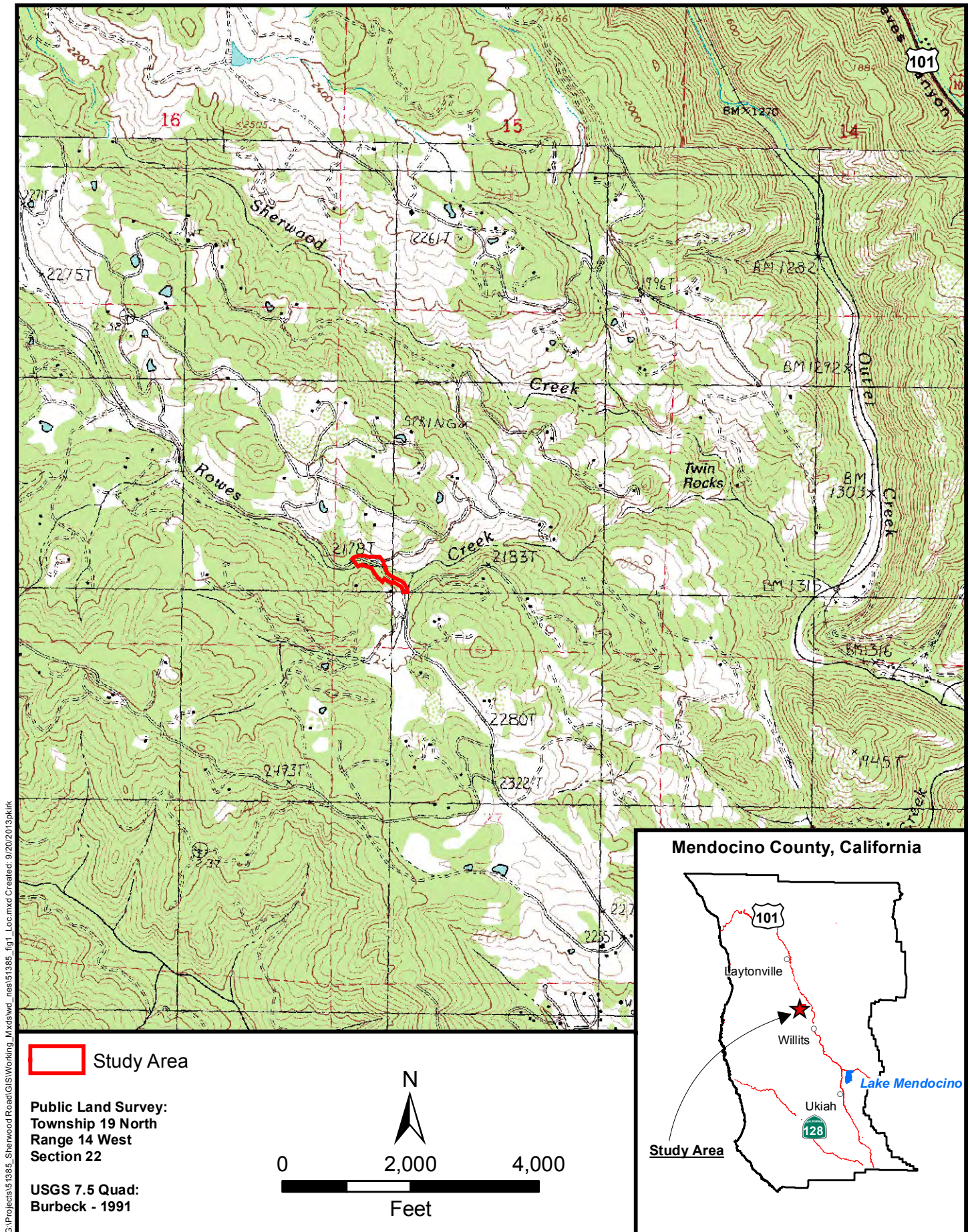
The existing structure, originally constructed in 1965 and located on a small tangent segment of the roadway between two sharp reversing curves, is 70 feet long by 20 feet wide. The roadway approaching the bridge is approximately 20 feet in width. First Gate Road is located approximately 300 feet north of the existing bridge and a property owner's driveway is within 50 feet of the south abutment. Signed as a single-lane bridge, Bridge 10C-0123 no longer meets the safety and functional needs of the public who use Sherwood Road. The overall roadway alignment is consistent with the rolling terrain and the remote nature of the location. This stretch of Sherwood Road winds through a steep narrow canyon along Rows Creek. Rows Creek is an intermittent stream with surface flow tapering off during the dry season and little to no flow by August.

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 Rows 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. The existing two-lane bridge is signed as a single-lane bridge and no longer meets the safety and functional needs of the public who use Sherwood Road.

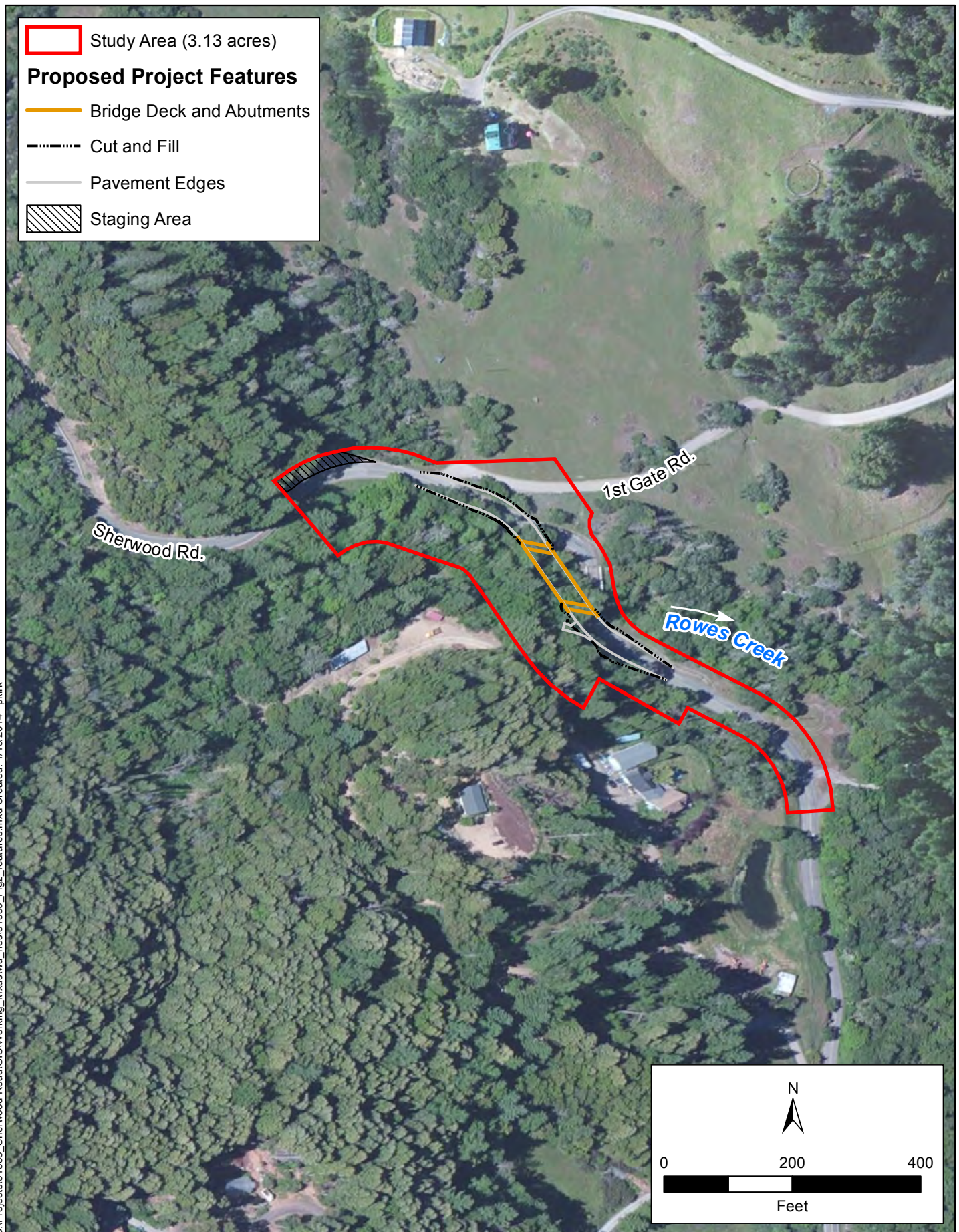




**Figure 1. Location and Vicinity**



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**Figure 2. Proposed Project Features**

## 2.4 Proposed Project

### Replacement of Existing Bridge with a New Structure

The proposed new structure would be a cast in place, pre-stressed, concrete box girder bridge 28 feet wide by 140 feet long supported on reinforced concrete seat abutments founded on either spread footings, driven steel piles, or cast-in-drilled-hole piles. Roadway approaches to the bridge would be widened to accommodate two 10-foot-wide travel lanes with 2-foot-wide unpaved shoulders on each side.

The preferred construction alternative is to replace the existing bridge on a new alignment upstream from the existing alignment. The new bridge would be constructed while the old bridge and approach roadway remain in place and open to traffic. In accordance with AASHTO requirements, the bridge would provide two 10-foot traffic lanes with 5-foot shoulders and barrier rails along both sides. The vertical alignment of the new bridge would provide adequate clearance for freeboard. It is anticipated that Rows Creek would have a relatively small amount of water flow during the construction season. The single-span bridge option would minimize the environmental impacts on the river, as it would not require any supports below the ordinary high water mark (OHWM) of the channel.

A work area within the channel would be needed to build the necessary falsework, gravel access pad, remove the existing bridge, and to construct the new bridge. A series of culverts topped with clean and washed gravel would be constructed downstream of the existing bridge and would serve as the contractor's access across Rows Creek.

Mainline roadway approach construction would include cuts and fills up to 15 feet and 22 feet, respectively. Construction of the bridge abutments would require two excavation areas, each measuring approximately 50 feet long by 10 feet wide. A retaining wall at the northwest corner of the new bridge may be required in order to reduce permanent environmental impacts. The County has a 70 foot ROW from the centerline of Sherwood Road. It is anticipated that additional ROW and temporary construction easements would be required to accommodate the new alignment and modifications to adjacent property owners' driveways and contractor staging areas.

The replacement structure will be designed for the standard and permit live loading as specified in Caltrans Bridge Design Specifications as well as the current Seismic Design Criteria Version 1.7 (California Department of Transportation 2013a). The span length would be set based on the hydraulic capacity requirements and scour depth. It is anticipated that the span length would be about 140 feet. Based upon initial field observations, no problems with falsework are anticipated and therefore the use of cast-in-place construction is appropriate. Falsework will be placed within the 100-year floodplain of Rows 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 will support this falsework.

The Hydraulic Design Criteria established in the Caltrans Local Procedures Manual prescribe that the facility be capable of conveying the base or 100-year flood ( $Q_{100}$ ) and passing the 50-year flood ( $Q_{50}$ ) without causing objectionable backwater, excessive flow velocities or encroaching on through traffic lanes. Additionally, the minimum design criteria for this project would provide at least 2 feet of



freeboard for drift above the  $Q_{50}$  and the ability to withstand the potential scour effects of the base flood (i.e.,  $Q_{100}$ ). Preliminary calculations are showing that clearance would not be an issue.

Scour protection of the abutments from Rows Creek flows would be required and is expected to consist of 0.25-ton rock slope protection (RSP). RSP installation would occur while the creek is diverted and would consist of digging a keyway trench. RSP would be installed using Method B placement so that the top surface of the RSP would be at the approximate elevation of the original channel grade. This would avoid impinging hydraulic flow within the channel and would not adversely affect the upstream flooding characteristics of the creek. RSP is expected to have a minimum thickness of 3 feet 4 inches laid over a 1-foot 3-inch-thick No. 2 backing layer with RSP fabric underneath. The depth of the end of the RSP key is expected to be approximately 6 feet deep and would slope back to the bottom of the abutment front footing face.

In-water construction activities would occur in the following sequence:

- Construct falsework and work containment structures required to remove and dispose of the existing bridge.
- Construct abutments that are located outside of the low-flow channel. Abutment 1 (north abutment) would be constructed from cast-in-place concrete founded on spread footings from the new approaches outside of the low-flow channel, while Abutment 2 (south abutment) would be constructed from driven piles.
- Install new RSP along both banks of Rows Creek using the existing ground slope with a 10-foot wide flat RSP apron at the base. A large excavator with a bucket/thumb attachment would pick and place or fit together the RSP. As the apron is placed, the excavator would progress with the installation. Installation is anticipated to take approximately 2–3 weeks.
- Because large RSP typically has voids between the rocks, gravel would be used to fill the interstices below the OHWM. Well-graded soil would be used to fill the interstices above the OHWM to support plantings (e.g., willow cuttings, cottonwood seedlings). Planting would occur along the face of the RSP at a variety of elevations.
- Construct falsework for new bridge upon gravel pad.
- Construct retaining wall and bridge deck.
- Remove falsework for new bridge.
- Construct roadway approaches to new bridge.

During construction, the existing road and bridge would remain in use to allow traffic to pass through the construction area. Following completion of the work, the falsework, diversion, and gravel pad will be removed and the stream restored to its pre-construction condition.

## Existing Bridge Dismantling

Once the new bridge has been constructed upstream of the existing bridge and opened to traffic, the existing bridge would be dismantled using a crane to remove the superstructure and excavators with demolition tips (pneumatic hammers) to demolish the concrete portions of the substructure. Modifications may be made to a property owner's driveway to accommodate the alignment. A work area within the channel would be needed to build the necessary falsework, gravel access pad, remove the existing bridge, and to construct the new bridge. A series of culverts topped with clean and washed gravel would be constructed downstream of the existing bridge and would serve as the contractor's access across Rowes Creek. The abutment footings would be excavated and the materials likely used for roadway embankment. The new bridge and the approach embankments would not encroach into the low flow channel of Rowes Creek.

## 2.5 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.

The contractor would be required to install temporary Best Management Practices (BMPs) to control any runoff or erosion from the project area into surface waters. These temporary BMPs would be installed prior to any construction operations and would be in place for the duration of the project. Removal of these BMPs would be the final operation along with the project site cleanup. To minimize and control sediment movement the following BMPs will be instituted:

- Construction will occur during the dry season in late summer when stream flow and the chance of precipitation are lowest. Work within the channel will be complete prior to the start of the rainy season (i.e., October 31). If water is present in the stream during construction it will not be entered or disturbed during placement and removal of false work or during other construction activities. Appropriate BMPs will be used to ensure that any stream flows or pools present during construction would not be impacted.
- Dust control measures will consist of watering the construction area as needed with a water truck.
- Construction equipment will be cleaned and inspected prior to use. Equipment maintenance and fueling will be done at designated staging areas.
- Silt fence or fiber rolls will be placed at bridge abutments, new abutment excavation areas, onsite stockpiles, and any other locations where construction activities could lead to the discharge of sediment into the stream. The silt fence/fiber rolls will be maintained and remain in place for the duration of the project. Any sediment or debris captured by the silt fence/fiber rolls will be removed before the silt fence/fiber rolls are removed.
- Upon completion of construction activities, areas disturbed by construction will be re-vegetated using fast-growing non-invasive plants. Mulch will be used in uplands to control



erosion. In addition, the streambed within the project area will be restored to natural condition, including re-vegetation where appropriate.

## **Staging Areas and Utility Relocations**

Various types of heavy equipment would be used during construction, including an excavator (with jackhammer attachment), front-end loader, bulldozer, crane, dump trucks, grader, asphalt paver, and a roller. Equipment and materials staging, and equipment fueling and maintenance, would be located within the existing ROW, in a pullout northwest of the bridge (Figure 2) and could also include the existing roadway approaches on either side of the existing bridge.

The existing bridge does not have utility lines located on it. Utility openings in the existing bridge would be included on the new bridge to accommodate future utilities. At least two overhead utility poles (communication and power) within the project area boundary would likely require temporary, if not permanent, relocation as a part of the project.

## **2.6 Tentative Schedule**

It is anticipated that the earliest that construction would start is May 2016. Construction is anticipated to require one construction season with project completion anticipated by October 2016. All instream activities, including bridge removal, and substructure and superstructure construction activities will be confined to a work period between June 15 through October 31 to minimize and avoid impacts on water quality. Construction activities below the OHWM of Rowes Creek may be allowed outside of the June 15 through October 31 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.

## **2.7 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)
- 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

## **2.8 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 Rowe’s Creek 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.

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### 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

### 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 Sherwood Creek to which Rowes Creek is tributary. 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 2013b), while the reach of river upstream from the Outlet Creek confluence is state-designated as “wild” (California Department of Transportation 2013b). 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.

### Local Setting

#### *Climate*

The project area has a Mediterranean climate. Summers are warm to hot with occasional temperatures over 100 °Fahrenheit (°F). 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. Average annual rainfall is approximately 51 inches (Western Regional Climate Center 2010). There is virtually no rain in summer, so low stream flows occur May through October (Yoshiyama and Moyle 2010). The growing season (i.e., 50 percent probability of air temperature 28 °F or higher) in the project area is approximately 214 days and occurs between March and October. The soil temperature regime is thermic.

#### *Existing Land Uses*

The Sherwood Road project area is located in a part of Mendocino County that is zoned for Upland Residential land use (Mendocino County 2014a). Residential parcels are limited to a minimum size of 20 acres. The terrain is fairly steep in the project area with the Rowes Creek drainage forming a narrow canyon. The Rowes Creek stream channel is deeply incised and densely buffered by vegetation along its banks, thus agricultural land uses are limited to the uplands. Sherwood Road largely follows Rowes Creek through the project area, occupying the lowlands along the stream channel. Residential development is primarily on nearby hilltops. The project area is centered on the

Sherwood Road corridor, but would include a stretch of First Gate Road, which is located approximately 300 feet north of the existing bridge. A private driveway is also within the project area, less than 50 feet from the south abutment.

### ***Topography***

Topography within the project area is generally characterized by the channel and narrow terrace of Rowes Creek that drains from west to east, and hillslopes to the north and south. The bridge deck is at an approximate elevation of 2,175 feet above mean sea level (msl). Elevation in the project area ranges from 2,210 feet above msl on the north hillslope to approximately 2,160 feet above msl along Rowes Creek. In the project area, the Rowes Creek channel is deeply incised with dense tree and shrub vegetation on both banks.

### ***Hydrological Setting***

Rowes Creek, an intermittent stream, flows eastward through the project area to Outlet Creek approximately 1.5 river miles east of the project area (Becker and Reining 2009). Outlet Creek is a tributary to the Upper Main Eel River approximately 14 miles northeast of the project area. The Outlet Creek Basin drains approximately 160 square miles of Northern California's Coast Range. The 160 square mile Outlet Creek basin is tributary to the Eel River and consists of about 22.3 stream miles.

### ***Soils***

The soil map units and miscellaneous land types within the project area and vicinity are described in the *Soil Survey Geographic (SSURGO) Database for Mendocino County, Eastern Part and Southwestern Part of Trinity County, California* (U.S. Department of Agriculture and Natural Resources Conservation Service 1998). Three soil map units occur within the project area:

- **Casabonne-Wohly loams, 30 to 50 percent slopes.** This is a non-hydric, well-drained soil formed in residuum weathered from sandstone and shale. The depth to a restrictive layer is 24 to 62 inches.
- **Pardaloe-Woodin complex, 50 to 70 percent slopes.** This is a non-hydric, well-drained soil formed in colluvium derived from siltstone, sandstone, and shale. The depth to a restrictive layer is 24 to 62 inches.
- **Updegraff-Sanhedrin complex, 15 to 50 percent slopes.** This is a non-hydric, well-drained soil formed in colluvium derived from schist and/or residuum derived from graywacke. The depth to a restrictive layer is from 43 inches to greater than 80 inches.

### ***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, California Department of Conservation 2014). 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, montane hardwood-conifer, montane riparian, riverine, and ruderal and barren.

**Annual Grassland.** Annual grassland occurs in a relatively small portion of the project area on the open hillslope along First Gate Road. Common grasses and forbs include wild oat (*Avena fatua*), California oatgrass (*Danthonia californica*), rose clover (*Trifolium hirtum*), and winter vetch (*Vicia villosa*).

**Montane Hardwood-Conifer.** Montane hardwood-conifer is the dominant vegetation community in the project area, occurring along both sides of Sherwood Road. In the project area, the dominant overstory species are Oregon white oak (*Quercus garryana*), canyon live oak (*Q. chrysolepis*), and black oak (*Q. kelloggii*). Douglas-fir (*Pseudotsuga menziesii*) is a minor component of this vegetation community in the project area and is more prevalent on the adjacent hillslopes. Understory trees and shrubs include Pacific madrone (*Arbutus menziesii*), deerbrush (*Ceanothus integrissimus*), California hazelnut (*Corylus cornuta* var. *californica*), tanoak (*Notholithocarpus densiflorus*), interior live oak (*Q. wislizenii*), poison oak (*Toxicodendron diversilobum*), and California bay (*Umbellularia californica*). Herbaceous species are sparse and include western bittercress (*Cardamine oligosperma*), white hawkweed (*Hieracium albiflorum*), gold back fern (*Pentagramma triangularis* ssp. *triangularis*), and western brackenfern (*Pteridium aquilinum*).

**Montane Riparian.** The montane riparian community occurs along the banks and on the terraces of Rowes Creek. Dominant tree species are big-leaf maple (*Acer macrophyllum*), white alder (*Alnus rhombifolia*) and Oregon ash (*Fraxinus latifolia*). Trees and shrubs that are part of the adjacent montane-hardwood conifer community are also present including California bay and canyon live oak. Understory shrubs and herbaceous species include mugwort (*Artemisia douglasiana*), white sedge (*Carex barbae*), torrent sedge (*Carex nudata*), blue wildrye (*Elymus glaucus*), western sword fern (*Polystichum munitum*), California rose (*Rosa californica*), California blackberry (*Rubus ursinus*), and meadow rue (*Thalictrum fendleri* var. *polycarpum*).

**Riverine.** The riverine community type occurs within the OHWM of Rowes Creek. It is dominated by run and riffle that are devoid of vegetation and have a substrate of angular boulders and cobbles. Vegetation within the OHWM channel is sparse with occasional clumps of sedges embedded around boulders.

**Ruderal and Barren.** Ruderal and barren vegetation community types occur along both shoulders of Sherwood Road. The ruderal community type is dominated by opportunistic non-native annual grasses and forbs such as 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 Sherwood Road corridor, adjacent gravel shoulders, and pullouts 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 Rowes Creek bridge on Sherwood Road and roadway approaches with similar structures and would be constructed in a manner consistent with the existing aesthetic.
- b) **Less-than-Significant Impact.** Sherwood 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 upstream 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 Rowe's Creek bridge on Sherwood Road 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 type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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) **No Impact.** The proposed project area does not contain lands mapped as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance by the Farmland Mapping and Monitoring Program (California Department of Conservation 2012a; North State Resources 2014a). Soils within the project area are not prime agricultural soils.



- b) ***No Impact.*** There are no parcels zoned for agricultural use in the project area vicinity and none are currently under a Williamson Act contract (California Department of Conservation 2012b; North State Resources 2014a). The project area includes an existing roadway and would not split an existing agricultural parcel.
- 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.*** Construction and operation of the project would not result in the conversion of any farmlands to a non-agricultural use or forest lands to non-forest use.

## **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 and Emission Controls* 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 Sherwood Road throughout the project area. Air quality at these residences is influenced in part by the emissions generated by vehicle traffic on Sherwood Road. The project would not result in increased traffic on Sherwood 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 and Emission Controls* 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 (Chapter 12, Article 1, §23114) (State of California 2014), 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.
- 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</b> — Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife 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 Wildlife 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 type="checkbox"/>	<input checked="" 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 2014b), which analyzes the project impacts on biological resources was prepared and submitted to Caltrans for approval. No special-status plant species were detected by North State Resources (NSR) during a protocol-level survey of the project area in April and June 2012. Based upon the review of habitat requirements and the results of the field assessments, literature reviews, and conversations with agency staff (Harris, pers. comm. 2013; Larson, pers. comm. 2013), it was determined that Rows Creek is inaccessible to federal- and state-listed anadromous salmonids because of a fish passage

barrier downstream of the project area near the confluence of Rowes Creek and Outlet Creek. Suitable habitat does occur for the following special-status wildlife species:

- Northern red-legged frog (*Rana aurora aurora*) – Species of Special Concern
- Foothill yellow-legged frog (*Rana boylei*) – 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

**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. Rowes Creek is considered an intermittent stream; however, water was present in the channel at the time of a June 19, 2012 survey—slow-flowing water was approximately 12 feet wide and 12 inches deep. The nearest documented occurrences of northern red-legged frog in Mendocino County are all located in coastal watersheds, more than 13 miles from the project area. There are two recorded occurrences of foothill yellow-legged frog within five miles of the project area; both were in the Upper Eel hydrologic subbasin—as is the project area (North State Resources 2014b). Because habitat is present within the project area, construction activities have the potential to affect either species of frog. Therefore, *Mitigation Measure #2 – Frogs* will be implemented to reduce this potential construction impact to a less-than-significant level. These species may also be impacted if construction activities result in degradation of aquatic habitat and water quality due to erosion and sedimentation, accidental fuel leaks, and spills. *Mitigation Measure #3 – Erosion and Sediment Control* and *Mitigation Measure #4 – Prevention of Accidental Spills of Pollutants* 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 – Replacement of Lost Riparian Habitat* will be used to reduce this impact to a less-than-significant level.

**Long-eared owl and white-tailed kite.** Neither long-eared owl nor white-tailed kite was observed during the field assessments/surveys conducted for the project; however, riparian vegetation along Rowes Creek provides nesting habitat for both of these species (North State Resources 2014b). 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 impact 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 #6 – 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 was observed during the field assessments/surveys conducted for the project; however,

the riparian vegetation along Rowes Creek provides breeding habitat for both species. These migratory bird species may nest in or adjacent to the project area, and there is one recorded occurrence for each of these species within one mile of the project area (North State Resources 2014b). 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 impact 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 #7 – 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 (North State Resources 2014b). Sonoma tree vole is usually associated with mature Douglas fir forest, which the project area contains in scattered patches. These patches of mature Douglas fir could provide foraging or nesting habitat for voles. There are six California Natural Diversity Database (CNDDB) occurrence records for Sonoma tree vole within 5 miles of the project area with one of these occurrences located along Rowes Creek less than 2 miles upstream of the project area. However, project implementation is unlikely to have a significant impact on Sonoma tree vole as they nest primarily in mature, contiguous Douglas-fir stands.

Mature riparian habitat within the project area may contain snags or logs that could provide denning habitat for ringtail. However, project implementation is unlikely to have a significant 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.

*Mitigation Measure #8 – Sonoma Tree Vole and Ringtail* will be used to reduce any impacts on these species to a less-than-significant level.

**Pallid bat.** Pallid bat was not observed during the field assessments/surveys conducted for the project (North State Resources 2014b). The existing timber bridge has crevices between the planks that form the bridge deck; however, these crevices are considered marginal roosting habitat as the planks are approximately 3 inches thick—any crevices would have a maximum depth of 3 inches. Ideal bridge roosting crevices are at least 6 to 12 inches deep (Keeley and Tuttle 1999). There are no recorded occurrences for pallid bat within five miles of the project area (North State Resources 2014b). The riparian vegetation along Rowes Creek provides foraging habitat for pallid bat and may also contain large snags that could provide suitable breeding habitat. The project area does not contain any mines, caves, rock crevices, or buildings, and no evidence of bat roosting was observed. Project implementation is unlikely to have an impact on roosting bats due to the limited presence of suitable roosting habitat in the project area and the relative abundance of suitable roosting habitat in the region. In addition, impacts on montane hardwood conifer and montane riparian communities within the project area would be limited. The proposed project is not anticipated to result in significant impacts on this species. However, *Mitigation Measure #9 – Bats* will be used to reduce any potential impacts on pallid bats to a less-than-significant level.

### ***Other Migratory Birds***

Cliff swallows (*Petrochelidon pyrrhonota*), barn swallows (*Hirundo rustica*), black phoebes (*Sayornis nigricans*), and other migratory birds are known to build nests under artificial structures such as bridges. The existing bridge structure was visually surveyed for evidence of previous migratory bird nesting activity (e.g., remnant mud nests) during the June 19, 2012 field assessment. No bird nesting activity was observed under the bridge. Given that the existing bridge structure provides suitable nesting habitat for migratory birds, there is a potential for active nests to be disturbed during project construction. *Mitigation Measure #7 – Migratory Birds* will be used to reduce any impacts on migratory birds to a less-than-significant level.

- b) ***Less than Significant with Mitigation Incorporated.*** Montane riparian and montane hardwood-conifer vegetation communities are considered to be sensitive natural communities by the U.S. Army Corps of Engineers (Corps), CDFW, or the County. The proposed project may result in direct permanent impacts on approximately 0.10 acre of, and direct temporary impacts on approximately 0.07 acre of, montane hardwood-conifer vegetation; and approximately 0.09 acre of direct temporary impacts on montane riparian vegetation. Permanent impacts would be due to the construction of the two new abutments, placement of RSP, and the new roadway approaches. Temporary impacts would be due to the construction of the new bridge, including the placement of temporary work platforms, a temporary access ramp, and removal of the old bridge. *Mitigation Measure #5* and *Mitigation Measure #10 – Prevention of Invasive Species* 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 up to a total of 0.06 acre (298 linear feet) of waters of the United States including significantly less than 0.01 acre of roadside ditch (111 linear feet) and 0.06 acre (187 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. Temporary impacts would result from the use of the temporary work platform and stream diversion within Rows Creek and construction of the new road approach on the north side of the stream. *Mitigation Measure #5* and *Mitigation Measure #11 – 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 Impact.*** The project area does not encompass any wildlife nursery sites. Rows Creek may serve as a travel corridor for species such as Sonoma tree vole and ringtail, but because alternative routes are available in the project vicinity and construction would be temporary and limited to daylight hours—many species using the river as a travel corridor are nocturnal—the impact would be less than significant. Accessibility throughout the area following completion of the project would not differ from existing conditions.



Based upon the review of habitat requirements, literature review, conversations with agency staff, and the results of the field assessments, it was determined that Rows Creek is inaccessible to federal and state listed anadromous salmonids because of a fish passage barrier approximately one mile downstream of the project area (North State Resources 2014b). Approximately 187 feet of Rows Creek would be temporarily re-directed within the creek channel during project construction. Localized and temporary alteration of hydraulic conditions could affect the behavior of fish in or immediately above or below the instream construction site. However, it is expected that with the receding hydrograph and intermittent stream conditions, little movement would occur during the instream construction period.

The impact of the project on wildlife and fish movement would be less than significant.

- e) ***Less than Significant With Mitigation Incorporated.*** The proposed project will comply with the goals and objectives described in the County's General Plan (Mendocino County 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 (Mendocino County 2009). Mitigation measures #5, #9, and #10 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 - 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 #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 31 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 Rows 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 Rows Creek in the project area, including big-leaf maple (*Acer macrophyllum*), white alder (*Alnus rhombifolia*), Oregon ash (*Fraxinus latifolia*), Oregon white oak (*Quercus garryana*), and California bay (*Umbellularia californica*).
- Onsite creation/restoration shall occur in areas disturbed during project construction and the amount of habitat created/restored shall be at a 3:1 ratio of new plantings per each large woody plant removed that is greater or equal to 6 inches diameter at breast height (dbh). These replanting ratios will help ensure successful establishment of at least one vigorous plant for each large woody 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 implemented in compliance with regulatory permit conditions and will be initiated immediately following completion of the planting. The 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 of trash or other debris. Within the mitigation area, less than 50 percent total mortality of planted species—including container stock and hardwood cuttings—would 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. Revegetation monitoring will be conducted for a minimum of three years. If monitoring results indicate that revegetation efforts are not meeting established success criteria, corrective measures will be implemented.

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

#### ***Mitigation Measure #6—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 #7—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 #8—Sonoma Tree Vole and Ringtail***

The County shall include provisions in the construction bid documents to minimize project impacts on Sonoma tree vole and ringtail. The following avoidance and minimization measures are recommended to further reduce the potential for adverse impacts on Sonoma tree vole or ringtail:

- **Sonoma tree vole**—If vegetation removal occurs outside of the primary breeding period (February 1 to September 30) no further mitigation is necessary. If vegetation removal occurs during the primary breeding season (February 1 to September 30), a qualified biologist will conduct a preconstruction survey for potential nest trees no more than 2 weeks before construction activities begin. If an active nest is found, a qualified biologist, in consultation with CDFW, will determine a construction-free buffer zone to be established around the nest tree until the mother and young have dispersed.
- **Ringtail**—If vegetation removal occurs outside of the natal denning period (February 1 to June 30) no further mitigation is necessary. If vegetation removal occurs during of natal denning period (February 1 to June 30), a qualified biologist will conduct a preconstruction survey for potential natal or maternity den trees no more than 2 weeks before construction activities begin. If an active den is found, a qualified biologist, in consultation with CDFW, will determine a construction-free buffer zone to be established around the den until the mother and young have dispersed.

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

### ***Mitigation Measure #9—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. For the purposes of implementation of this measure, the breeding season is considered to be from late April through July. If the removal of any large trees shall occur during the breeding season, the County shall conduct a preconstruction survey for special-status bat species within the project boundaries, specifically at the existing bridge structure and trees that provide suitable roosting habitat (i.e.,  $\geq 12$  inches in diameter at 4.5 feet above grade and containing hollows). This survey would include a minimum of one daytime and one evening survey a maximum of one week prior to construction to search for hibernating or roosting bats on and around the existing bridge structure and suitable trees that are proposed for removal. If the visual surveys result in the detection of bats or secondary evidence of their presence (e.g., guano), a Pettersson bat detector will be used to record ultrasonic bat calls. The recorded calls will be analyzed and identified to species using the Sonobat program. If special-status bats are determined to be roosting within the disturbance zone, the County will contact CDFW to determine appropriate protective measures.
- To the extent practicable, the County shall prohibit demolition activities associated with removal of the existing bridge during the breeding season (late April through July). Winter habitats are poorly known and pallid bats appear to hibernate (Sherwin and Rambaldini 2005); therefore, should demolition activities be extended into the winter months, a survey for the presence or absence of bat roosting under the bridge should be conducted by a knowledgeable biologist prior to activity commencement.

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

### ***Mitigation Measure #10 – 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 #11 – 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:
  - 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 washed at least once and have a cleanliness value of 85 or higher based on Caltrans Test No. 227.

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, b) **Less than Significant with Mitigation Incorporated.** The Sherwood Road Bridge (10C-0123) over Rows Creek Replacement Project, Mendocino County, California, Archaeological Survey Report (North State Resources 2014c) states that no historic or prehistoric properties were identified in the project area. The bridge (10C-0123) 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. Neither archaeological survey nor archival investigations suggest that any significant historic-era activities other than road and bridge construction occurred in this area. Consequently, the non-sensitive nature of the landform and the lack of evidence for prehistoric and historic-era habitation or activities suggest that the project area possesses a low level of sensitivity for containing presently undocumented cultural sites, features, or artifacts.

Surface surveys are not infallible and unknown buried resources may be present and potentially discovered during construction. Therefore, *Mitigation Measure #12 – Cultural Resources* will be used, if necessary, to reduce any potential impacts on prehistoric and historic 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. The shallow presence of bedrock and the composition of the parent material in relationship to soil deposition in the project area suggest that cultural resources related to prehistoric or historic interactions with the landscape should be visible on exposed soils.
- 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 #12 – Cultural Resources* and *Mitigation Measure #13 – Human*

*Remains* will be used to reduce any potential impacts on cultural resources to a less-than-significant level.

## **Mitigation Measures**

### ***Mitigation Measure #12—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 in consultation with Caltrans District 1. The conservation measures shall be implemented prior to re-initiation of activities in the immediate vicinity of the discovery.

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

### ***Mitigation Measure #13—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 1 mile west of the project site (Mendocino County 2014b). However, faults are not mapped passing through the project area and the site is not within an Alquist-Priolo area for fault-rupture hazard (California Department of Conservation 2012c). 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. Although there is a potential for seismic activity in the project vicinity, the project would not put the public in any greater danger than exists elsewhere in the region. This impact would be less than significant.

- iii) ***Less-than-Significant Impact*** Based on the soil and rock conditions that underlie the project site and the depth to groundwater, the potential for liquefaction to occur would be very low to nonexistent (Blackburn Consulting 2014).
- iv) ***Less-than-Significant Impact.*** There is no known record of landslides having occurred in the project area or immediate vicinity (Blackburn Consulting 2014). The risk of slope instability in the form of landslides or mudslides at the site is generally low, with the possible exception of localized bank instability (Blackburn Consulting 2014). 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 high in the project area and vicinity (Natural Resource Conservation Service 2014). 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 colluvium derived from sandstone, shale, schist, and greywacke (Natural Resources Conservation Service 2014). Soils in the project area are in general, rated as being poorly suited for surface mechanical site preparation; however, limitations associated with these soils can be overcome by project design features and maintenance (Natural Resource Conservation Service 2014). 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</b> — Would the Project:				
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>). An online calculator tool<sup>1</sup> specifically developed to estimate GHG emissions’ resulting from construction projects was 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 and project duration were used:
- an average of 100 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 (12 miles roundtrip) would travel a total of approximately 120 miles per day;
  - onsite miscellaneous combustion engine equipment, including generators would operate 8 hours per day; and

<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 2014).

<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.

- project construction would require approximately 120 days to complete.

Based on the above values, the proposed project would generate approximately 1 metric ton of GHG emissions (primarily CO<sub>2</sub>) from construction equipment and worker vehicles during project construction. 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 Sherwood Road.

Approximately 0.353 acre of vegetation—0.012 acre of annual grassland; 0.219 acre of barren/ruderal; and 0.122 acre of montane-hardwood conifer vegetation types—would be permanently removed at the site as a result of excavation and grading activities. The volume of carbon sequestered by the vegetation removed as a result of project implementation would be minor and partially or totally offset by planned revegetation.

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 #14–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 #14–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. However, it is possible that the painted surfaces of the bridge have lead-containing paint (LCP) and that some of the structure may contain asbestos-containing building material (ACBM) (Blackburn Consulting 2012) and chemically treated wood. Prior to dismantling, testing for LCP, ACBM, and chemically treated wood will be conducted and if either is found to be present, work will be conducted by a contractor certified to perform such work. Painted surfaces, ACBM, and chemically treated wood must be disposed of in accordance with Caltrans Standard Special Provisions for removal of hazardous waste and materials (California Department of Transportation 2014). Measures included in *Mitigation Measure #15—Lead-based Paint*, *Mitigation Measure #16—Asbestos-Containing Building Materials*, and *Mitigation Measure #17—Treated Wood Waste* have been incorporated into the project design and/or will be used during construction, if appropriate, to ensure that project related impacts will remain less than significant.
- c) ***No Impact.*** The nearest schools are in Willits approximately 5 miles south 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 2014) and the State Regional Water Quality Control Board's GeoTracker database (State Water Resources Control Board 2014) 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 uninterrupted 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, annual grasslands, and dense riparian vegetation. Dispersed rural residences, including ranches and small subdivisions are accessed via Sherwood Road. Although alternative routes leading to many of the places accessed via Sherwood Road exist, they are widespread, mainly because of the need to cross numerous drainages and steep topography in the region. Sherwood Road is one of the primary connecting routes between U.S. Highway 101/State Route 20, Willits, and the lesser roads that connect to Sherwood Road. Sherwood 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 “high” (Mendocino County 2007). The use of construction equipment in and around vegetated areas increases the potential for wildfire ignition. *Mitigation Measure #18 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 #15–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:

- A limited assessment for lead in the soil under the bridge will be performed for the project area. Samples shall be collected at each of the four corners of the two bridge abutments. In order for hazardous waste management requirements of Health and Safety Code, Chapter 6.5 and California Code of Regulations, title 22 to be waived, lead-contaminated soils must not exceed the contaminant concentrations discussed in section 9 of the variance and must meet all the conditions contained within the same section. Required handling of lead contaminated soils is outlined below and would depend on the level of lead contamination in the soils at the site.

### Lead Soil Management

Soluble Lead (mg/l)	Total Lead (mg/kg)	Soil Type	Handling
<b>California Testing</b>			
STLC <5.0	TTLc <1000	X	Non-hazardous Waste. Notify and require Lead Compliance Plan for worker safety.
	1000 – 1411 and DI WET < 1.5 mg/l	Y1	Hazardous Waste. Variance applies – cover with minimum 1 foot of clean soil.*
	1411 – 3397 and DI WET < 150 mg/l	Y2	Hazardous Waste. Variance applies – cover with pavement structure.*
	1000 – 3397 but Surplus	Z2	Hazardous Waste. Surplus. Dispose at Class 1 disposal site.
	> 3397 or 1000 – 3397 and DI WET > 150 mg/l	Z2	Hazardous Waste. Not reusable under Variance. Dispose at Class 1 disposal site.
TLC >5.0	TTLc < 1411 and DI WET < 1.5 mg/l	Y1	Hazardous Waste. Variance applies – cover with minimum 1 foot of clean soil.*
	1411 – 3397 and DI WET < 150 mg/l	Y2	Hazardous Waste. Variance applies – cover with pavement structure.*
	< 3397 and DI WET < 150 mg/l but Surplus	Z2	Hazardous Waste. Surplus. Dispose at Class 1 disposal site.
	> 3397 or DI WET > 150 mg/l	Z2	Hazardous Waste. Variance applies – cover with pavement structure.
<b>Federal Testing</b>			
TCLP > 5.0 mg/l	N/A	Z3	RCRA Hazardous Waste. Dispose at Class 1 disposal site as a RCRA waste regardless of TTLc and STLC results.

\* Note: For hazardous waste levels of lead – if pH is less than 5.5 soil must be placed under a pavement structure. If pH is less than 5.0 variance cannot be used and the soil must be disposed as Z-2 material. (Source: Caltrans Website: [http://www.dot.ca.gov/hq/env/haz/hw\\_adl.htm](http://www.dot.ca.gov/hq/env/haz/hw_adl.htm))

- 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 Clean Harbors Buttonwillow LLC facility in Buttonwillow, CA (CAD980675276) or the Chemical Waste Management Inc. Kettleman facility in Kettleman, CA (CAT000646117).

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

***Mitigation Measure #16–Asbestos-Containing Building Material***

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

- Prior to the start of construction, the existing bridge’s building material will be tested for asbestos. If present, the following measure will be used:
  - Asbestos-containing building material will be removed using one of several methods approved by the Federal EPA and California Occupational and Safety Hazard Administration (CalOSHA), 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 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 Clean Harbors Buttonwillow LLC facility in Buttonwillow, CA (CAD980675276) or the Chemical Waste Management Inc. Kettleman facility in Kettleman, CA (CAT000646117).

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

***Mitigation Measure #17–Treated Wood Waste***

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

- The contractor will remove treated wood waste following the alternative management standards specific under Caltrans Special Stand Provision 14-11.09 for treated wood waste, as well as California Code of Regulations Title 22, Chapter 34, Sections 67386.1 through 67386.12 for labeling, accumulation, offsite shipment tracking, notification, treatment, and disposal. All personnel that may come into contact with treated wood waste will receive, at a minimum, training on safe handling, sorting and segregating, storage, labeling (including date), and proper disposal methods.

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

***Mitigation Measure #18–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 type="checkbox"/>	<input checked="" 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, tsunami, 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 will comply with the requirements set forth in a Section 401 Clean Water Act 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 impact 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. 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. Scour protection of the abutments from Rows Creek flows would be required; the scour protection is expected to consist of 0.25-ton RSP. RSP installation would occur while the river is diverted and would consist of digging a keyway trench. RSP would be installed using Method B placement so that the top surface of the RSP would be at the approximate elevation of the original channel grade. This would avoid impinging hydraulic flow within the channel and would not significantly impact the upstream flooding characteristics of the creek. The depth of the end of the RSP key is expected to be approximately 6 feet deep and would slope back to the bottom of the abutment front footing face.
- 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 new bridge would provide adequate clearance for freeboard. The single-span bridge option will minimize the environmental impacts to the river, as it will not require any supports in the creek channel. The minimum design criteria for this project will provide at least 2-feet of freeboard for drift above the  $Q_{50}$  and the ability to withstand the potential scour effects of the base flood (i.e.,  $Q_{100}$ ).
- e) ***Less-than-Significant Impact.*** The larger, wider new bridge structure and extended roadway approaches, particularly the north approach and roadway improvements, 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 Rowes 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 runoff into Rowes Creek. 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 minimum design criteria for this project will provide at least 2-feet of freeboard for drift above the  $Q_{50}$  and the ability to withstand the potential scour effects of the base flood (i.e.,  $Q_{100}$ ). 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 Rowes Creek.

Project materials that would be placed in the  $Q_{100}$  floodplain of Rowes 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 31) and would be removed following construction and prior to October 31. 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 Rowes 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 31).

- 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 in-channel supports 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 of Pollutants* 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 Rowes Creek. Sherwood Road is used primarily for residential access. The project would not divide a community. While there may be minor delays to traffic passing through the project area during construction, the existing Rowes Creek bridge on Sherwood Road would remain open for use since the new bridge alignment would be upstream. 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 a network of alternative routes are available.
- b) ***Less-than-Significant Impact.*** Construction of the project is consistent with the Mendocino County General Plan, Development Element (Mendocino County 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 conservation 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 (Grist Creek Aggregates) is located approximately 6 miles northeast of the project area northeast 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 type="checkbox"/>	<input checked="" 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 Impact.*** 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 truck traffic routinely use Sherwood Road. There are no homes in the immediate project area. Noise resulting from construction would be buffered by mature vegetation and the canyon in which the project is located. Operation of the new bridge would not generate noise above existing levels. The impact of noise on persons in the project vicinity would be less than significant.
- b) ***Less-than-Significant With Mitigation Incorporated.*** The project could 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 300 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 #19 – Construction Noise* 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 #19 – Construction Noise*, 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 #19–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 Rowes Creek bridge structure would have no impact on population or housing in the vicinity of Sherwood Road. It would not increase traffic capacity or extend road access beyond what is available without the project, so there is no potential for the project to induce growth. It would improve traffic safety on Sherwood Road where it crosses Rowes Creek.
- b) **No Impact.** Existing housing in the vicinity of Sherwood 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. Sherwood Road is not used to access any parks or other public facilities. The proposed bridge would provide an improved, safer road and bridge across Rows 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. A graveled road—First Gate Road—forms a Y-intersection with Sherwood Road within the project area approximately 300 feet north of the existing bridge and a private driveway is within 50 feet of the south abutment. Temporary, short-duration disruptions to normal traffic operation may be required during project construction; however, based on current traffic levels in the project vicinity, traffic congestion at these intersections with Sherwood Road is not anticipated during the construction phase of the project. The project is consistent with the goals and policies of the Mendocino County Regional Transportation Plan and the County's General

Plan. Any impacts on traffic during construction would be temporary and less than significant.

- 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 Sherwood 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 Sherwood Road at the Rows 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 Rows 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 on Sherwood Road may occur during project construction. Sherwood 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.** The existing bridge is not used to convey any utility lines across Rowes Creek. However, utility openings will be included on the new bridge to accommodate the possible future expansion of utilities. At least two overhead utility poles (communication and power) within the project area would likely require permanent relocation as a part of the project. There would be no significant disruption of service during utility relocation. The impact of utility relocation would be temporary and less than significant.
- 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 of Rows Creek. Once the water is within the drainage, it is expected to either infiltrate into the ground or become part of the stream flow that is typical following 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.

Potentially  
Significant  
Impact

Less than  
Significant  
with  
Mitigation  
Incorporated

Less than  
Significant  
Impact

No  
Impact

## 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 red-legged frog, foothill yellow-legged frog, long-eared owl, white-tailed kite, yellow warbler, yellow-breasted chat, Sonoma tree vole, ringtail, and pallid 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 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 Sherwood Road bridge replacement project could result in a variety of impacts on human beings, particularly during the construction phase. Although residential development is not present within the immediate project area, there is the potential for nearby homes to be temporarily impacted by project construction. Potential adverse effects on nearby residential areas 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.




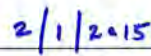
## 4 Determination

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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

  
\_\_\_\_\_  
Date

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## 5 Summary of Mitigation Commitments

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Mendocino County is committed to implementing the following mitigation measures during construction of the Rowes Creek Bridge (No. 10C-0123) on Sherwood Road Replacement Project:

### 5.1 Air Quality

#### 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 (Chapter 12, Article 1, §23114) (State of California 2014), 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.
- 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

## 5.2 Biological Resources

### Mitigation Measure #2 – 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 #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 through October 31 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 Rows 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 Rowes Creek in the project area, including big-leaf maple (*Acer macrophyllum*), white alder (*Alnus rhombifolia*), Oregon ash (*Fraxinus latifolia*), Oregon white oak (*Quercus garryana*), and California bay (*Umbellularia californica*).
- Onsite creation/restoration shall occur in areas disturbed during project construction and the amount of habitat created/restored shall be at a 3:1 ratio of new plantings per each large woody plant removed that is greater or equal to 6 inches diameter at breast height (dbh). These replanting ratios will help ensure successful establishment of at least one vigorous plant for each large woody 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 implemented in compliance with regulatory permit conditions and will be initiated immediately following completion of the planting. The 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 of trash or other debris. Within the mitigation area, less than 50 percent total mortality of planted species—including container stock and hardwood cuttings—would 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. Revegetation monitoring will be conducted for a minimum of three years. If monitoring results indicate that revegetation efforts are not meeting established success criteria, corrective measures will be implemented.

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

## Mitigation Measure #6 – 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 #7 - 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 #8—Sonoma Tree Vole and Ringtail**

The County shall include provisions in the construction bid documents to minimize project impacts on Sonoma tree vole and ringtail. The following avoidance and minimization measures are recommended to further reduce the potential for adverse impacts on Sonoma tree vole or ringtail:

- **Sonoma tree vole**—If vegetation removal occurs outside of the primary breeding period (February 1 to September 30) no further mitigation is necessary. If vegetation removal occurs during the primary breeding season (February 1 to September 30), a qualified biologist will conduct a preconstruction survey for potential nest trees no more than 2 weeks before construction activities begin. If an active nest is found, a qualified biologist, in consultation with CDFW, will determine a construction-free buffer zone to be established around the nest tree until the mother and young have dispersed.
- **Ringtail**—If vegetation removal occurs outside of the natal denning period (February 1 to June 30) no further mitigation is necessary. If vegetation removal occurs during of natal denning period (February 1 to June 30), a qualified biologist will conduct a preconstruction survey for potential natal or maternity den trees no more than 2 weeks before construction activities begin. If an active den is found, a qualified biologist, in consultation with CDFW, will determine a construction-free buffer zone to be established around the den until the mother and young have dispersed.

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

### **Mitigation Measure #9—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. For the purposes of implementation of this measure, the breeding season is considered to be from late April through July. If the removal of any large trees shall occur during the breeding season, the County shall conduct a preconstruction survey for special-status bat species within the project boundaries, specifically at the existing bridge structure and trees that provide suitable roosting habitat (i.e.,  $\geq 12$  inches in diameter at 4.5 feet above grade and containing hollows). This survey would include a minimum of one daytime and one evening survey a maximum of one week prior to construction to search for hibernating or roosting bats on and around the existing bridge structure and suitable trees that are proposed for removal. If the visual surveys result in the detection of bats or secondary evidence of

their presence (e.g., guano), a Pettersson bat detector will be used to record ultrasonic bat calls. The recorded calls will be analyzed and identified to species using the Sonobat program. If special-status bats are determined to be roosting within the disturbance zone, the County will contact CDFW to determine appropriate protective measures.

- To the extent practicable, the County shall prohibit demolition activities associated with removal of the existing bridge during the breeding season (late April through July). Winter habitats are poorly known and pallid bats appear to hibernate (Sherwin and Rambaldini 2005); therefore, should demolition activities be extended into the winter months, a survey for the presence or absence of bat roosting under the bridge should be conducted by a knowledgeable biologist prior to activity commencement.

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

### **Mitigation Measure #10—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 #11—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:

- 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.

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

## 5.3 Cultural Resources

### Mitigation Measure #12—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 in consultation with Caltrans District 1. The conservation measures shall be implemented prior to re-initiation of activities in the immediate vicinity of the discovery.

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

### Mitigation Measure #13 – 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 Greenhouse Gas Emissions

### Mitigation Measure #14—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

## 5.5 Geology and Soils

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

## 5.6 Hazards and Hazardous Materials

### Mitigation Measure #15—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:

- A limited assessment for lead in the soil under the bridge will be performed for the project area. Samples shall be collected at each of the four corners of the two bridge abutments. In order for hazardous waste management requirements of Health and Safety Code, Chapter 6.5 and California Code of Regulations, title 22 to be waived, lead-contaminated soils must not exceed the contaminant concentrations discussed in section 9 of the variance and must meet all the conditions contained within the same section. Required handling of lead contaminated soils is outlined below and would depend on the level of lead contamination in the soils at the site.

### Lead Soil Management

Soluble Lead (mg/l)	Total Lead (mg/kg)	Soil Type	Handling
<b>California Testing</b>			
STLC <5.0	TTLC <1000	X	Non-hazardous Waste. Notify and require Lead Compliance Plan for worker safety.
	1000 – 1411 and DI WET < 1.5 mg/l	Y1	Hazardous Waste. Variance applies – cover with minimum 1 foot of clean soil.*
	1411 – 3397 and DI WET < 150 mg/l	Y2	Hazardous Waste. Variance applies – cover with pavement structure.*
	1000 – 3397 but Surplus	Z2	Hazardous Waste. Surplus. Dispose at Class 1 disposal site.
	> 3397 or 1000 – 3397 and DI WET > 150 mg/l	Z2	Hazardous Waste. Not reusable under Variance. Dispose at Class 1 disposal site.
TLC >5.0	TTLC < 1411 and DI WET < 1.5 mg/l	Y1	Hazardous Waste. Variance applies – cover with minimum 1 foot of clean soil.*
	1411 – 3397 and DI WET < 150 mg/l	Y2	Hazardous Waste. Variance applies – cover with pavement structure.*
	< 3397 and DI WET < 150 mg/l but Surplus	Z2	Hazardous Waste. Surplus. Dispose at Class 1 disposal site.
	> 3397 or DI WET > 150 mg/l	Z2	Hazardous Waste. Variance applies – cover with pavement structure.
<b>Federal Testing</b>			
TCLP > 5.0 mg/l	N/A	Z3	RCRA Hazardous Waste. Dispose at Class 1 disposal site as a RCRA waste regardless of TTLC and STLC results.

\* Note: For hazardous waste levels of lead – if pH is less than 5.5 soil must be placed under a pavement structure. If pH is less than 5.0 variance cannot be used and the soil must be disposed as Z-2 material. (Source: Caltrans Website: [http://www.dot.ca.gov/hq/env/haz/hw\\_adl.htm](http://www.dot.ca.gov/hq/env/haz/hw_adl.htm))

- 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 Clean Harbors Buttonwillow LLC facility in Buttonwillow, CA (CAD980675276) or the Chemical Waste Management Inc. Kettleman facility in Kettleman, CA (CAT000646117).

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

### **Mitigation Measure #16–Asbestos-Containing Building Material**

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

- Prior to the start of construction, the existing bridge’s building material will be tested for asbestos. If present, the following measure will be used:
  - Asbestos-containing building material will be removed using one of several methods approved by the Federal EPA and California Occupational and Safety Hazard Administration (CalOSHA), 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 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 Clean Harbors Buttonwillow LLC facility in Buttonwillow, CA (CAD980675276) or the Chemical Waste Management Inc. Kettleman facility in Kettleman, CA (CAT000646117).

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

### **Mitigation Measure #17–Treated Wood Waste**

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

- The contractor will remove treated wood waste following the alternative management standards specific under Caltrans Special Stand Provision 14-11.09 for treated wood waste, as well as California Code of Regulations Title 22, Chapter 34, Sections 67386.1 through 67386.12 for labeling, accumulation, offsite shipment tracking, notification, treatment, and disposal. All personnel that may come into contact with treated wood waste will receive, at a minimum, training on safe handling, sorting and segregating, storage, labeling (including date), and proper disposal methods.

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

### **Mitigation Measure #18—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 of Pollutants* to prevent degradation of water quality.

## **5.8 Noise**

### **Mitigation Measure #19—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**

Scott Heegler, P.E.	Project Manager
Jackson Ford	Environmental Compliance Specialist

### **6.2 Quincy Engineering, Inc. – Design Engineers**

Jim Foster	Project Manager
Jason Jurens	Bridge Engineer

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

Wirt Lanning	Project Manager/Environmental Analyst
Connie MacGregor Carpenter	Environmental Analyst
Paul Kirk	Biologist
Sarah Tona	Botanist
Mike Gorman	Fisheries Biologist
Chris Geach	Fisheries Technician
Brian Ludwig	Principal Archaeological Investigator
Kristina Crawford	Cultural Resources
Mim Roeder	Cultural Resources
Teri Mooney	GIS Analyst

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

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

### **6.5 Blackburn Consulting – Geotechnical and Initial Site Assessment**

David Buck, CEG	Senior Project Manager
Jeff Patton, PE	Principal Engineer

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