

Incline Road over Moss Canyon Bridge (#40C0064) Replacement Project BRLO-5940(114) Initial Study/Mitigated Negative Declaration



Prepared for:

**Mariposa County
Public Works
Department**

June 2023

Prepared by:



Incline Road over Moss Canyon Bridge (#40C0064)

Initial Study/Proposed Mitigated Negative Declaration

Prepared for:

CEQA Lead Agency:

Mariposa County Public Works Department
4639 Ben Hur Road
Mariposa, CA 95338

Contact:

Matiel Holloway, P.E.
Senior Civil Engineer
209.966.5356

Prepared by:

GEI Consultants, Inc.

2868 Prospect Park Drive, Suite 400
Sacramento, CA 95670

Contact:

Ray Weiss
Project Manager
916.621.9115

June 2023

Table of Contents

Abbreviations and Acronyms	iii
Chapter 1. Mitigated Negative Declaration	1-1
1.1 Introduction	1-1
1.2 Purpose of the Initial Study	1-1
1.3 Project Information	1-2
1.4 Environmental Determination	1-3
Chapter 2. Project Description	2-1
2.1 Introduction	2-1
2.2 Project Background and Setting	2-1
2.3 Project Objectives	2-5
2.4 Project Description	2-5
2.5 Required Permits and Approvals	2-10
2.6 Mitigation and Best Management Practices	2-10
2.7 Oversized Figures	2-10
Chapter 3. Initial Study Checklist	3-1
3.1 Introduction	3-1
3.2 Evaluation of Environmental Impacts	3-1
3.3 Aesthetics	3-3
3.4 Agriculture and Forestry Resources	3-9
3.5 Air Quality	3-12
3.6 Biological Resources	3-16
3.7 Cultural Resources	3-44
3.8 Energy	3-53
3.9 Geology and Soils	3-55
3.10 Greenhouse Gas Emissions	3-60
3.11 Hazards and Hazardous Materials	3-62
3.12 Hydrology and Water Quality	3-66
3.13 Land Use and Planning	3-73
3.14 Mineral Resources	3-75
3.15 Noise	3-76
3.16 Population and Housing	3-80
3.17 Public Services	3-81
3.18 Recreation	3-82
3.19 Transportation	3-84
3.20 Tribal Cultural Resources	3-87
3.21 Utilities and Service Systems	3-89
3.22 Wildfire	3-91
3.23 Mandatory Findings of Significance	3-93
Chapter 4. References Cited	4-1
Appendix A. Biological Resources	A-1

Tables

Table 1-1.	Summary of Mitigation Measures	1-4
Table 2-1.	Proposed Construction Work Order and Schedule	2-6
Table 2-2.	Summary of Temporary and Permanent Effects by Vegetation Community	2-7
Table 2-3.	Proposed Equipment and Purpose	2-9
Table 2-4.	Project Related Permits and Approvals.....	2-10
Table 3-1.	Viewer Sensitivity	3-4
Table 3-2.	Mariposa County Air Quality Attainment Status	3-13
Table 3-3.	Vegetation Communities within the Biological Study Area.....	3-18
Table 3-4.	Impacts to Vegetation Communities within the Biological Study Area	3-40
Table 3-5.	Previously Recorded Resources within 0.5 miles of the Project Site	3-45
Table 3-6.	Native American Contact Efforts	3-47
Table 3-7.	Soil Types within the Project Site	3-56

Figures

Figure 2-1.	Regional Location	2-3
Figure 2-2.	Project Site	2-4
Figure 2-3.	Proposed Project Site Plan (Including Area of Potential Effect).....	2-11
Figure 2-4.	Proposed Project Plan.....	2-12
Figure 2-5.	Proposed Project Traffic Detour	2-13
Figure 3-1.	Vegetation Communities within the BSA	3-19
Figure 3-2.	Delineation of Waters of the U.S. and State	3-22
Figure 3-3.	Overview of Project Components.....	3-27
Figure 3-4.	Permanent and Temporary Vegetation Community Impacts	3-28
Figure 3-5.	Hydrologic Unit Watershed Map.....	3-68

Photos

Photo 2-1.	View Facing East Approaching Incline Road ridge.....	2-2
Photo 2-2.	View Facing West Traveling Away from Existing Bridge	2-2
Photo 2-4.	View of Existing Light Standard (Northeast Corner).....	2-5
Photo 2-3.	View of Concrete Planter along Bridge Railing	2-5
Photo 3-1.	Typical Motorist View Facing East.....	3-4
Photo 3-2.	Typical Motorist View Facing West.....	3-4

Abbreviations and Acronyms

AASHTO	American Association of State Highway and Transportation Officials
AB	Assembly Bill
ADA	Americans With Disabilities Act
ADT	Average Daily Traffic
amsl	above mean sea level
APE	Area of Potential Effect
ASR	Archaeological Survey Report
BCC	Bird of Conservation Concern
BMPs	Best Management Practices
BRM	Bedrock Mortar
BSA	Biological Study Area
Caltrans	California Department of Transportation
CAAQS	California Ambient Air Quality Standards
Cal-IPCs	California Invasive Plant Council's
CARB	California Air Resources Board
CCIC	Central California Information Center
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDO	Cease and Desist Order
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGF	California Fish and Game Code
CFR	Code of Federal Regulation
Cfs	Cubic feet per second
CGS	California Geological Survey
CH ₄	Methane
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CNPS	California Native Plant Society
CO ₂	carbon dioxide
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CWA	Clean Water Act
dB	decibel

dBA	A-weighted sound level
dbh	diameter at breast height
DPM	Diesel Particulate Matter
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
ESA	Environmentally Sensitive Area
ESU	Evolutionarily Significant Unit
FE	Federally Endangered
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FNAE-No SC	Finding of No Adverse Effect Without Standard Conditions
FSS	Forest Service Sensitive
FSTIP	Federal State Transportation Improvement Program
GHGs	Greenhouse gases
GWh	Gigawatt hours
HAPC	Habitat Areas of Particular Concern
HBP	Highway Bridge Program
HFC	Hydrofluorocarbons
HPSR	Historic Property Survey Report
HUC	Hydrologic Unit Code
ILE	Institute of Lighting Engineers
IS/MND	Initial Study/proposed Mitigated Negative Declaration
IPAC	Information, Planning, and Conservation System
Ldn	day/night sound level
Leq	equivalent continuous sound level
Lmax	maximum instantaneous noise level
LOS	level of service
MBTA	Migratory Bird Treaty Act
MLD	Most Likely Descendant
MMCO2e	million metric tons CO2 equivalent
MUTCD	Manual of Traffic Control Devices
N2O	nitrogen dioxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NEPA	National Environment Policy Act
NHPA	National Historic Preservation Act

NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination Discharge
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
OEHHA	Office of Environmental Health Hazard Assessment
OHWM	Ordinary High Water Mark
PCE	Primary Constituent Elements
PFC	Perfluorocarbons
PM ₁₀	PM equal to or less than 10 micrometers in diameter
PM _{2.5}	PM equal to or less than 2.5 micrometers in diameter
PPV	Peak Particle Velocity
ROG	reactive organic gases
RSP	Rock Slope Protection
RWQCB	Regional Water Quality Control Board
SE	State Endangered
SF ₆	Sulfur Hexafluoride
SHPO	State Historic Preservation Officer
SSC	Species of Special Concern
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminants
TMDL	Total Maximum Daily Load
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USFS	U.S. Forest Service
USGS	U.S. Geologic Survey
WPCP	Water Pollution Control Program
WQAR	Water Quality Assessment Report
WRCC	Western Regional Climate Center
WSE	Water Surface Elevation
YVRR	Yosemite Valley Railroad

This page intentionally left blank.

Chapter 1. Mitigated Negative Declaration

1.1 Introduction

The Mariposa County Public Works Department (County) has prepared this Initial Study/proposed Mitigated Negative Declaration (IS/MND) in compliance with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines to address the potentially significant environmental impacts of the proposed Incline Road over Moss Canyon Bridge (#40C0064) Replacement Project (proposed project) located on Incline Road in the north-east portion of the County, roughly 2 miles from the center of the Town of El Portal, California. The County is the lead agency under CEQA.

To satisfy specific CEQA requirements for the proposed project, this document includes:

- a proposed MND and the environmental determination (see Chapter 1),
- location and description of the proposed project (see Chapter 2),
- initial study checklist (see **Chapter 3**).

1.2 Purpose of the Initial Study

This document is an IS/MND prepared in accordance with CEQA (California Public Resources Code, Section 21000 et seq.) and the State CEQA Guidelines (Title 14, Section 15000 et seq. of the California Code of Regulations [CCR]). The purpose of this IS is to (1) determine whether proposed project implementation would result in potentially significant or significant impacts on the physical environment; and (2) incorporate mitigation measures into the proposed project design, as necessary, to eliminate the proposed project's potentially significant or significant project impacts or reduce them to a less-than-significant level. An MND is prepared if the IS identified potentially significant impacts, but: (1) revisions in the proposed project plans or proposals mitigate the impacts to a point where clearly no significant impacts would occur; and (2) there is no substantial evidence, considering the whole record before the agency, that the proposed project as revised may have a potentially significant or significant impact on the physical environment.

An IS presents environmental analysis and substantial evidence in support of its conclusions regarding the significance of environmental impacts. Substantial evidence may include expert opinion based on facts, technical studies, or reasonable assumptions based on facts. An IS is neither intended nor required to include the level of detail provided in an environmental impact report (EIR).

CEQA requires that all State and local government agencies consider the potentially significant and significant environmental impacts of projects they propose to carry out or over which they have discretionary authority, before implementing or approving those projects. The public agency that has the principal responsibility for carrying out or approving a proposed project is the lead agency for CEQA compliance (State CEQA Guidelines, CCR Section 15367). The County has principal responsibility for carrying out the proposed project and is therefore the CEQA lead agency for this IS/MND.

If there is substantial evidence (such as the findings of an IS) that a proposed project, either individually or cumulatively, may have a significant or potentially significant impact on the physical environment,

the lead agency must prepare an EIR (State CEQA Guidelines, CCR Section 15064[a]). If the IS concludes that impacts would be less than significant, or that mitigation measures committed to by the County would clearly reduce impacts to a less-than-significant level, a Negative Declaration or MND can be prepared.

After the required public review of this document is complete, the County will consider all comments received on the IS/MND, the entirety of the administrative record for the project, and whether to adopt the proposed MND and a Mitigation Monitoring and Reporting Program and approve the proposed project.

1.3 Project Information

1. Project title:	Incline Road over Moss Canyon Bridge (#40C0064) Replacement Project
2. Lead agency name and address:	Mariposa County Public Works Department 4639 Ben Hur Road Mariposa, CA 95338
3. Contact person and phone number:	Matiel Holloway, P.E., Senior Civil Engineer 209.966.5356
4. Project location:	The project site is located within the boundaries of the Stanislaus National Forest in the central portion of Mariposa County. Incline Road is a paved rural road crossing Moss Creek, roughly 2 miles from the center of the Town of El Portal, California. Per the United States Geological Survey, the site is in the El Portal (1992) 7.5-minute United States Geological Survey (USGS) quadrangle, Section 13, Township 3 South, Range 19 East. The approximate center coordinates are Latitude 37.670044 north and Longitude -19.819220 east using the World Geodetic System 1984 (WGS84) datum (USGS 1992).
5. Project sponsor's name and address:	Mariposa County Public Works Department
6. General plan designation:	Agriculture/Working Landscape and Natural Resources. Adjacent to El Portal Planning Study Area
7. Zoning:	Agricultural Exclusive Use
8. Description of project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)	The Mariposa County Public Works Department proposes to replace the existing Incline Road Bridge (#40C0064) over Moss Creek, which is required to ensure current safety and design standards for bridges and roadways are maintained. Replacement of the existing bridge structure would occur with a single span, cast-in-place, post-tensioned concrete, slab bridge, approximately 55 feet long. The replacement structure will require falsework (temporary form work used to support the concrete until it develops strength) within locations of the creek channel. With a span length of 55 feet, it may be possible to keep falsework out of the creek by spanning the entire length with falsework stringers that are supported on the new abutment footings.

9. Surrounding land uses and setting: Briefly describe the project's surroundings:	The project site is located within the Merced River Canyon and the Stanislaus National Forest. Open space uses dominate the landscapes surrounding the existing bridge site. The Merced River forms the southern boundary of the project site, with natural communities including cismontane woodland and annual grasslands occurring along the north side of Incline Road. No residential land uses are located within the immediate vicinity of the project site.
10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)	California Department of Fish and Wildlife, Central Valley Regional Water Quality Control Board, State Water Resources Control Board, the United States Fish and Wildlife Service, and U.S. Army Corps of Engineers.
11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code (PRC) Section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.? Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See PRC Section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per PRC Section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that PRC Section 21082.3(c) contains provisions specific to confidentiality.	The County has sent letters requesting AB 52 consultation to the following federally recognized tribes and California tribes: North Fork Mono Tribe Ron Goode, Chairperson North Fork Rancheria of Mono Indians Fred Beihn, Chairperson Southern Sierra Miwuk Nation Sandra Chapman, Chairperson Tuolumne Band of Me-Wuk Indians Andrea Reich, Chairperson

1.4 Environmental Determination

1.4.1 Summary

The County has prepared an IS to assess the potential effects of the proposed project on the environment in the project area. The analysis of potential environmental impacts from the proposed project is based on data gathered for this project and other projects within the project vicinity. **Chapter 3** of this document contains the analysis and discussion of potential environmental impacts of the proposed project. Based on the issues evaluated in that chapter, it was determined that:

The proposed project would result in ***no impacts*** on the following issue areas:

- Agriculture and Forestry Resources
- Energy
- Land Use and Planning
- Mineral Resources
- Population and Housing
- Public Services/Utilities and Service Systems

The proposed project would result in ***less-than-significant*** impacts on the following issue areas:

- Aesthetics
- Air Quality
- Greenhouse Gas Emissions

The proposed project would result in ***less-than-significant impacts*** after ***mitigation*** implementation on the following issue areas:

- | | |
|-------------------------------|-----------------------------|
| ▪ Biological Resources | ▪ Noise |
| ▪ Cultural Resources | ▪ Recreation |
| ▪ Geology and Soils | ▪ Transportation |
| ▪ Hazards/Hazardous Materials | ▪ Tribal Cultural Resources |
| ▪ Hydrology and Water Quality | ▪ Wildfire |

1.4.2 Mitigation Measures

Mitigation measures have been identified to reduce all potentially significant impacts of the proposed project. Implementation of identified mitigation measures would avoid or reduce all the proposed project's potentially significant impacts to a less than significant level. The mitigation measures are summarized below in **Table 1-1** by initial study topic.

Table 1-1. Summary of Mitigation Measures

Initial Study Topic	Mitigation Measure
Biological Resources	Mitigation Measure BIO-1: Conduct Preconstruction Species Surveys Mitigation Measure BIO-2: Conduct Environmental Awareness Training Mitigation Measure BIO-3: Install Temporary Fencing around Environmentally Sensitive Habitat Mitigation Measure BIO-4: Restore Temporarily Disturbed Areas Mitigation Measure BIO-5: Implement Water Quality Best Management Practices Mitigation Measure BIO-6: Provide Escape Ramps or Cover Open Trenches Mitigation Measure BIO-7: Avoid Limestone Salamander Active Period Mitigation Measure BIO-8: Restrict In-stream Work to Low-flow Period Mitigation Measure BIO-9: Monitor during Dewatering Activities Mitigation Measure BIO-10: Monitor during Ground Disturbance and Vegetation Removal Mitigation Measure BIO-11: Avoid the Spread of Invasive Plant Species Mitigation Measure BIO-12: Install Catchment Tarps Prior to any Work Activity to the Bridge
Cultural Resources & Tribal Cultural Resources	Mitigation Measure CUL-1: Archaeological Site Avoidance Measures Mitigation Measure CUL-2: Discovery of Cultural Resources during Ground-Disturbing Activities Mitigation Measure CUL-3: Accidental Finding of Human Remains
Geology & Soils	Mitigation Measure GEO-1: Avoid and Minimize Impacts to Paleontological Resources
Hazards & Hazardous Materials	Mitigation Measure HAZ-1: Implement BMPs for Wildland Fire Prevention Mitigation Measure TC-1: Prepare and Implement a Traffic Detour and Control Plan
Hydrology & Water Quality	Mitigation Measure BIO-3: Install Temporary Fencing around Environmentally Sensitive Habitat Mitigation Measure BIO-4: Restore Temporarily Disturbed Areas Mitigation Measure BIO-5: Implement Water Quality Best Management Practices Mitigation Measure BIO-11: Avoid the Spread of Invasive Plant Species

Initial Study Topic	Mitigation Measure
	Mitigation Measure BIO-12: Install Catchment Tarps Prior to any Work Activity to the Bridge
Noise	Mitigation Measure NOS-1: Construction Noise Reducing Best Management Practices
Recreation	Mitigation Measure TC-1: Prepare and Implement a Traffic Detour and Control Plan
Transportation	Mitigation Measure TC-1: Prepare and Implement a Traffic Detour and Control Plan
Wildfire	Mitigation Measure TC-1: Prepare and Implement a Traffic Detour and Control Plan Mitigation Measure HAZ-1: Implement BMPs for Wildland Fire Prevention

1.4.3 Determination (To be completed by the Lead Agency)

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.

Matiel Holloway
Signature

6-7-2023
Date

Matiel Holloway, P.E.
Print Name

Senior Civil Engineer
Title

Mariposa County Public Works Department
Agency

This page intentionally left blank

Chapter 2. Project Description

2.1 Introduction

The Mariposa County Public Works Department (County) proposes to replace the existing Incline Road over Moss Canyon Bridge (#40C0064) Replacement Project (proposed project), considered by the most recent California Department of Transportation (Caltrans) bridge inspection report as “Structurally Deficient”, making the bridge eligible for replacement under the Highway Bridge Program (HBP). The replacement structure will be consistent with current roadway design standards.

To assess the environmental impacts of the project, this chapter includes design details and the expected construction process (e.g., equipment types, timing, etc.). Background information, along with a general site description, and a list of related regulatory permits and approvals required for the project is also provided below.

2.2 Project Background and Setting

The primary purpose of the project is to meet current design and safety standards for bridges and roads while minimizing impacts to Moss Creek and the Merced River. Periodic inspections by Caltrans have classified the existing Incline Road Bridge (built in 1965) as “Structurally Deficient”, with a sufficiency rating of 44.1, making the bridge eligible for replacement under the HBP.

The term “*Structurally Deficient*” is a federal designation that means a bridge isn't up to current building standards. Often this means there are structural conditions or waterway adequacy issues that warrant a "high priority of corrective action." The Federal Highway Administration uses a scoring system to determine whether to label a bridge "structurally deficient"

The proposed project is being implemented by Caltrans and the County as part of the HBP within the Federal State Transportation Improvement Program (FSTIP). Briefly, the purpose of the HBP is to replace or rehabilitate publicly owned bridges that the State and Federal Highway Administration have deemed significantly important but unsafe, due to structural deficiencies, physical deterioration, or functional obsolescence. Federal funding is available to local agencies annually, which HBP utilizes to provide reimbursement for eligible projects. For the purposes of compliance with the National Environment Policy Act (NEPA), Caltrans is identified as the “Lead Agency”, with the County identified as the “Lead Agency” for compliance with CEQA.

2.2.1 Environmental Setting

The proposed project is located on Incline Road in the north-east portion of the County, roughly 2 miles from the center of the Town of El Portal, California (see **Figure 2-1**). The roadway is a narrow paved rural road that provides access to several Stanislaus National Forest recreation areas (including day use and overnight camping facilities) and a small number of rural residents. According to the California Road System (CRS) Maps, it is designated as a Rural Local Road. The latest Caltrans Bridge Inspection Report lists the average daily traffic (ADT) to be 150 (1988) vehicles, with a future ADT to be 320 (2035).

Incline Road (located north of and parallel to the Merced River) connects to the regional Central Yosemite Highway (State Route 140), which is located south of and parallel to the Merced River 0.2 miles east of the Moss Canyon Bridge site (via Foresta Road). The bridge spans across Moss Creek just as the creek flows into the Merced River (**Figure 2-2** and **Photos 1** and **2**, below).

As a county maintained road within the Stanislaus National Forest, there is no formal County right-of-way on the roadway itself. Lands surrounding the bridge site are designated for a variety of open space, recreational, and related uses consistent with the Stanislaus National Forest Plan. The bridge site is also located within the 0.25-mile protected corridor of the Merced River, which is designated as a Wild and Scenic River by the National Park Service.

2.2.2 Surrounding Land Uses

Open space uses dominate the landscapes surrounding the existing bridge site. The Merced River forms the southern boundary of the Project site, with natural communities including cismontane woodland and annual grasslands occurring along the north side of Incline Road. Riparian habitat occurs immediately adjacent to Moss Creek and the Merced River. While the Project site is located approximately 2 miles west of the community of El Portal, no residential land uses are located within the immediate vicinity of the Project site. The Project is located at an approximate elevation of 1,675 feet above mean sea level (amsl).

2.2.3 Land Use Designations and Zoning

The project site is located within the Stanislaus National Forest, with lands surrounding the bridge site designated for a variety of open space, recreational, and related uses consistent with the Stanislaus National Forest Plan. The bridge site is also located within the 0.25-mile protected corridor of the Merced River, which is designated as a Wild and Scenic River by the National Park Service.

The County of Mariposa General Plan designates lands to the north, south, and west of the project site as “Agriculture/Working Landscape”. Lands to the east are designed as the “El Portal Planning Study Area”.



Photo 2-1. View Facing East Approaching Incline Road ridge



Photo 2-2. View Facing West Traveling Away from Existing Bridge



Figure 2-1. Regional Location

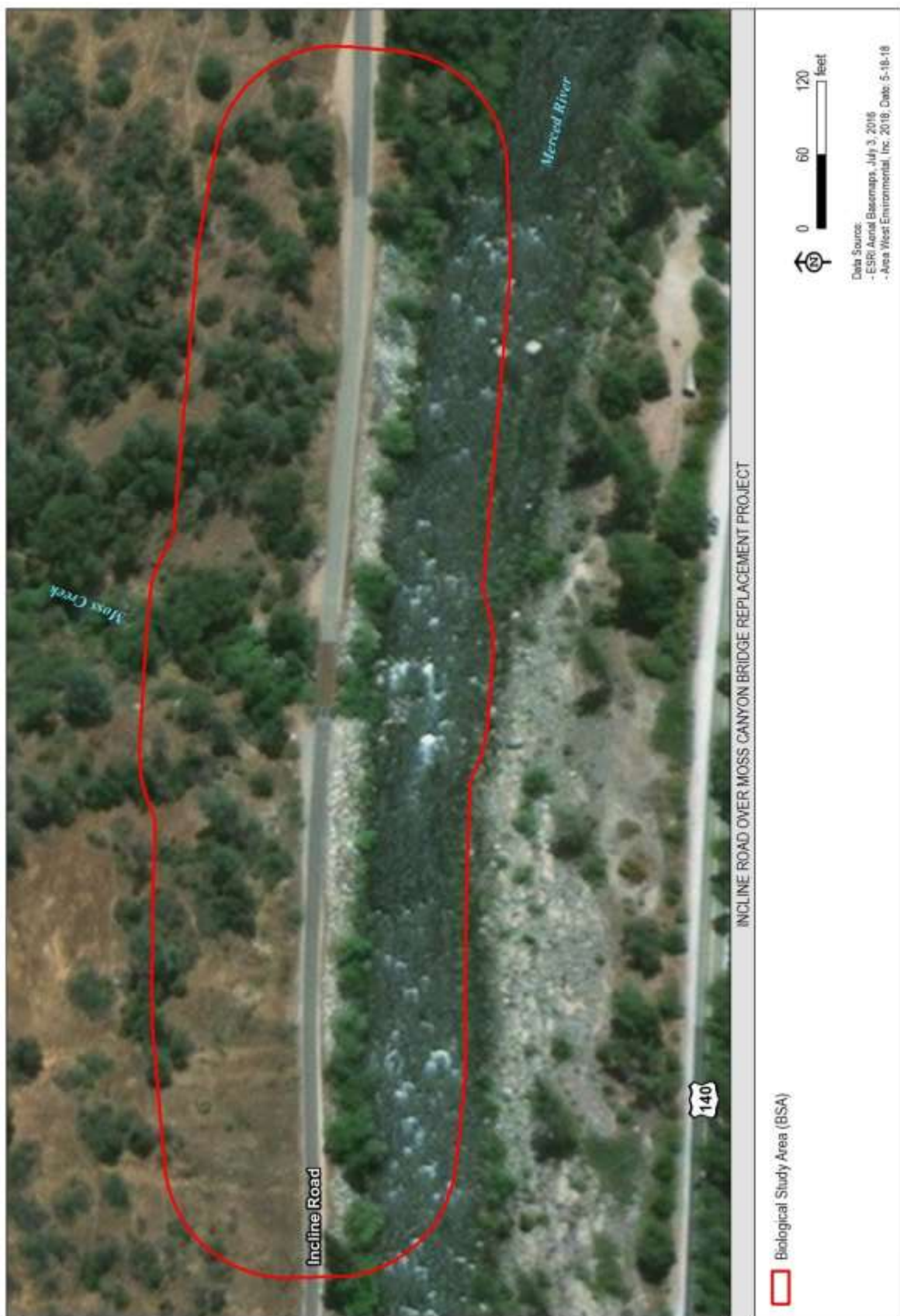


Figure 2-2. Project Site

2.3 Project Objectives

Specific objectives of the proposed project are to replace the existing Incline Road Bridge with a new structure that:

- Remove the existing structure, deemed "Structurally Deficient", and reconstruct a new bridge that will accommodate safe vehicular travel and pedestrian access;
- Provide a new structure that is wider to meet current design standards;
- Widen bridge approaches to accommodate the wider bridge structure; and
- Minimizes environmental impacts to local resources.

2.4 Project Description

The proposed project would replace the existing bridge with a new bridge in essentially the same location. Overall, The site encompasses approximately 1 acre, with the construction footprint including the existing bridge, the portion of Moss Canyon directly under the bridge deck, and areas adjacent to the existing bridge abutments (see **Figure 2-3** in **Section 2.7**, below).

This section begins with a description of the existing bridge structure, the proposed replacement structure and the construction process. **Figures 2-3** through **2-5**, referenced in this chapter, are oversized to show details of the construction process and are all located below in **Section 2.7 “Oversized Figures”**.

2.4.1 Description of Existing Bridge

The existing bridge, built in 1965, is a four-span structure approximately 65 feet long and 16 feet wide consisting of continuous rolled steel stringers with a timber deck. The supports consist of piers on steel cap and column bents and reinforced concrete closed-end seat abutments. The bridge is founded on spread footings that are the original foundations from a railroad bridge dating back to 1903. The timber decking was recently replaced. The bridge has timber guardrails on timber posts but no approach guard railing.



Photo 2-3. View of Concrete Planter along Bridge Railing



Photo 2-4. View of Existing Light Standard (Northeast Corner)

2.4.2 Construction Process

The primary activities and time periods that will comprise the construction process for the proposed project are summarized below in **Table 2-1**. The following section provides additional details regarding these activities.

Table 2-1. Proposed Construction Work Order and Schedule

Activity	Estimated Dates
Preconstruction Surveys & Environmental Awareness Training	March – May
<u>Initial Site Construction Activities</u> <i>Clearing Project Site and Installing Environmental Fencing</i> <i>Install Water Diversion (if necessary)</i> <i>Install Erosion Control Measures</i> <i>Install Temporary Bridge/Crossing</i>	May – June
Remove Existing Bridge Structure	June
<u>Construction of the New Bridge</u> <i>Footing construction at abutments</i> <i>Abutment construction</i> <i>Place cast-in-place, post-tensioned concrete slab bridge</i> <i>Finish bridge deck and complete barriers</i> <i>Install Scour Countermeasures (RSP – if necessary)</i> <i>Reconstruct Roadway Approaches</i> <i>Restore Project Site</i>	July to October

Preconstruction Surveys and Environmental Awareness Training

Onsite preconstruction activities would be focused on completing the regulatory agency (see **Section 2.6 “Required Permits and Approvals”** below) permitting conditions and implementation of the proposed project’s mitigation monitoring and reporting plan. Key activities would focus on completion of the following:

- Nesting bird/raptor surveys.
- Preconstruction species surveys.
- Construction worker environmental awareness training.

Initial Site Construction Activities

Prior to removal of the existing bridge structure, the initial stages of construction would include site clearing and vegetation removal, the installation of environmental fencing around sensitive trees and habitats, and implementation of a water diversion system, if necessary due to creek flow conditions. Additional details are provided below.

Site Clearing, Vegetation Removal, and Tree Preservation Measures

Portions of the project site within the Moss Creek area would require site clearing and vegetation removal. Some habitats within the project site (including Waters of the U.S. and State, and riparian vegetation communities) qualify as natural communities of special concern, as they are regulated by state and federal resource agencies. **Table 2-2** summarizes temporary and permanent impacts on these vegetation communities. The construction contractor will be responsible for the installation of environmental fencing, monitoring, and the protection of on-site sensitive habitats to the extent feasible as more fully described in Chapter 3, **Section 3.6 “Biological Resources”**.

Table 2-2. Summary of Temporary and Permanent Effects by Vegetation Community

Vegetation Community	Permanent Impact (acres)	Temporary Impact (acres)
Upland Communities		
Annual Grassland	0.038	0.053
Montane Hardwood	0.059	0.156
Waters of the U.S. and State and Riparian		
Montane Riparian (Moss Creek/Merced River)	0.006	0.055
Waters of the U.S. and State		
Perennial Stream (Moss Creek/Merced River)	0	0.021
Total	0.103	0.285

Source: Natural Environment Study for the Moss Canyon Bridge on Incline Road Replacement Project (Br. No. 40C0064) (Area West Environmental, Inc. 2020)

Proposed Dewatering Methods

The proposed Project will not involve permanent modifications to the Moss Creek channel. However, bridge demolition and new bridge construction will require temporary access to the creek channel to remove the existing bridge pier/abutments, to install and remove temporary falsework supports, and to install new rock slope protection at the abutments (if necessary). Depending on creek flows, a temporary creek diversion system may be necessary during both demolition of the existing bridge and the construction of the new bridge.

Depending on creek flows, a temporary creek diversion system may be necessary during both demolition of the existing bridge and the construction of the new bridge. Since work would occur during the low flow season, only localized dewatering is anticipated at the abutment locations to control groundwater during abutment construction. If water is flowing in the creek, water will be channelized through a cofferdam system at each abutment location. A temporary water diversion system (including a creek pipe diversion system, screened pumps, siltation baffles, and cofferdams) may be required to isolate the work area from flowing water. The temporary water diversion system will likely consist of a series of large diameter plastic pipes that would extend upstream and downstream of the proposed excavation areas, but within the construction area shown in **Figure 2-3**. Temporary berms consisting of clean crushed rock or gravel bags are typically located at both ends of the pipes to create a dam for the water. The berms will also have an impervious membrane made up of heavy-duty plastic to keep water from seeping into the work area. Impacted waters located in the work area would either be treated per Storm Water Pollution Prevention Plan (SWPPP) requirements or disposed of per RWQCB requirements. Activities within the channel would commence after appropriate dewatering and storm water quality best management practices (BMPs) are in place.

Erosion Control

As a result of permitting conditions from the California Department of Fish and Wildlife (Section 1602 Streambed Alteration Agreement), the RWQCB, and as referenced in Mitigation Measure BIO-3 “Implement Water Quality Best Management Practices”, the construction contractor will be required to install temporary BMPs (including silt fencing, straw bales/fiber rolls, etc.) to control any runoff or erosion from the project site into the surrounding waterways. These temporary BMPs would be installed prior to any construction operations and would remain in place for the duration of the construction period. The removal of these BMPs would be the final operation, along with project site cleanup and restoration. BMPs would consist of all applicable federal, state, and local erosion and sediment control

policies, as more fully described in Chapter 3, **Section 3.6 “Biological Resources”** and **Section 3.12 “Hydrology and Water Quality”**.

Removal and Construction of the New Bridge

Removal or demolition of the existing bridge would involve typical concrete removal methods including saw-cutting and jackhammering, with segments of the superstructure broken into relatively large pieces and removed by a crane situated on the roadway.

The replacement structure will be a single span, cast-in-place, post-tensioned concrete, slab bridge, approximately 55 feet long (**Figures 2-3 and 2-4**). With bedrock approximately 4 to 5 feet below grade at the bridge abutment locations, it is anticipated that the replacement bridge abutments would utilize spread footings founded approximately half a foot into the bedrock. This structure will require falsework (temporary form work used to support the concrete until it develops strength) within locations of the creek channel. With a span length of 55 feet, it may be possible to keep falsework out of the creek by spanning the entire length with falsework stringers that are supported on the new abutment footings.

Bridge Abutments. Construction of the new bridge abutments will require two excavation areas approximately 30 feet wide by 15 feet long by 10 feet deep. The new abutments will be placed in front of the existing abutments, which will minimize conflicts with the existing foundations and remain outside of the ordinary high-water area of Moss Creek.

Bridge Profile. The peak flows for the proposed project were determined using the U.S. Geological Survey (USGS) 2012 regional regression equations along with stream gauge data from the Merced River. This analysis shows the 100- and 50-year water surface elevations (WSE) at the existing bridge to be 1,671.4 and 1,668.9 feet amsl, respectively.

Projects utilizing federal funds must conform to the Caltrans/Federal Highway Administration (FHWA) design criteria, which requires bridges to be designed to pass the 100-year design discharge (with no freeboard) and the 50-year design discharge with sufficient freeboard to accommodate debris (Caltrans design criteria recommends 2 feet). With a soffit elevation of 1,672.5 feet amsl, the new bridge will pass the 100-year WSE and the 50-year WSE with 1.1 feet and 3.6 feet of freeboard respectively (Quincy Engineering 2016). Therefore, no increases to the existing bridge elevation or profile are anticipated.

Roadway Approaches, Railing, and Bridge Width. The proposed road improvements will be designed to meet or exceed the American Association of State Highway and Transportation Officials (AASHTO)’s Policy on Geometric Design of Highways and Streets (Greenbook) as well as AASHTO’s Guidelines for Geometric Design of Very Low-Volume Local Roads (ADT<400). After discussion between the County and Caltrans District 10 Local Assistance, a 20-foot clear roadway width was determined appropriate to meet both AASHTO and Cal Fire requirements for this location. The new roadway approaches will be paved to conform to the existing roadway condition.

Caltrans standard Midwest Guardrail System guardrail is proposed at three of the four corners of the bridge to protect vehicles from the blunt end of the bridge concrete barriers. On the north ends of the bridge, the guardrail will consist of 25-foot long WB-31 transition sections with buried end anchors in to the hillside. The southeast corner will feature the standard inline terminal section. An Alternative Crash Cushion is proposed at the southwest corner of the bridge due to the limited available hinge width in this area. With railing, the anticipated bridge width will be approximately 24 feet.

In-Channel Work. As previously described, some work will be necessary within the Moss Creek channel to remove the existing piers and abutments, construct new abutments, and install new rock slope protection at the abutment locations (if necessary). Construction excavations within the creek channel would be restricted to as near the banks of the creek to the maximum extent practicable, and work conducted in the creek bed would be restricted to the period between June 15 and October 15 when the creek is flowing at its lowest point.

Utility Relocation

There is an overhead utility line that may require temporary relocation during construction of the bridge. There are no utilities attached to the existing bridge.

Right of Way

Incline Road is a County maintained road in the Stanislaus National Forest. While there is no formal County right-of-way on the road, land surrounding the bridge site is managed by the Sierra National Forest. Discussion with the County and Forest Service has indicated that work on the bridge will require a temporary construction easement.

The proposed project site is located between steep mountainous terrain to the north and the Merced River to the south. The replacement bridge will be centered on the current bridge/roadway alignment but offset approximately 2 to 3 feet to the north to accommodate the new wider structure. The new bridge will be crowned at the center with a 2% cross slope.

2.4.3 Construction Schedule, Site Access, and Equipment Staging

The proposed project is scheduled for construction during the summer months within the waterway of Moss Creek when flows are at their lowest levels. Primary construction activities would take place once the existing bridge is closed and would follow a simple two-step phasing: bridge demolition followed by new bridge construction, with foundation work in the creek followed by superstructure construction. Construction staging areas will be located on and adjacent to the bridge approaches.

The proposed order of work and associated schedule was previously provided above in **Table 2-1**. A general list of equipment that may be used during the construction process is identified below in **Table 2-3**.

Stage construction of the new bridge is not practical due to the narrow width of the existing roadway. Therefore, a temporary bridge immediately to the north of the existing bridge will be used to detour traffic during construction (see **Figures 2-3** and **2-5**). With this option, Incline Road can remain open and the new bridge can be built along the existing bridge alignment.

Table 2-3. Proposed Equipment and Purpose

Equipment	Construction Purpose
Dump Truck	Fill material delivery/surplus removal
Excavator	Soil manipulation
Front-end Loader	Dirt or gravel manipulation
Grader	Ground leveling
Haul Truck	Earthwork construction; clearing and grubbing
Paver	Roadway paving
Roller	Earthwork and compacting

Equipment	Construction Purpose
Scraper	Earthwork construction; clearing and grubbing
Truck with Seed Sprayer (hydroseeded)	Erosion control and landscaping
Water Truck	Earthwork construction; clearing and grubbing
Screen Pumps, Pipe Network, Siltation Baffles, Cofferdam, or Culvert	Equipment for dewatering

2.5 Required Permits and Approvals

Major permits or approvals that would likely be required for the proposed project are identified below in **Table 2-4**.

Table 2-4. Project Related Permits and Approvals

Agency	Permit/Approval
U.S. Army Corps of Engineers (USACE)	Clean Water Act Section 404 Permit for discharge of fill to Waters of the U.S.
U.S. Fish and Wildlife Service (USFWS)	Endangered Species Act compliance; Section 7 consultation. Consultation will take place through the Caltrans NEPA approval process.
State Historic Preservation Office	Section 106 of the National Historic Preservation Act. Consultation will take place through the Caltrans NEPA approval process.
California Department of Fish and Wildlife (CDFW)	Section 1602 Streambed Alteration Agreement.
Regional Water Quality Control Board (RWQCB)	Clean Water Act Section 401 Certification and Clean Water Act Section 402 National Pollutant Discharge Elimination System Stormwater Permit for General Construction.
County of Mariposa	Design and CEQA review from County.

2.6 Mitigation and Best Management Practices

Various environmental control measures will be required by the proposed project and incorporated into the project's construction plans and specifications. These may include the use of erosion control and silt fencing best management practices (BMPs) consistent with applicable federal, state, and local regulations. Additional BMPs would be enforced to maintain site appearance, control dust, and provide noise attenuation if needed. The following biological and cultural resources technical reports have been completed which identify measures that would be included in the contract documents to address potential impacts, including the need for preconstruction nesting bird surveys, revegetation measures, and other species avoidance measures. Other control measures will include water quality and environmental spill contingency plans for work near the creek channel.

2.7 Oversized Figures

This section provides the following oversized figures which illustrate the construction process described above in Section 2.4 "Project Description":

- Figure 2-3. Proposed Project Site Plan (Including Area of Potential Effect)
- Figure 2-4. Proposed Project Plan
- Figure 2-5. Proposed Project Traffic Detour

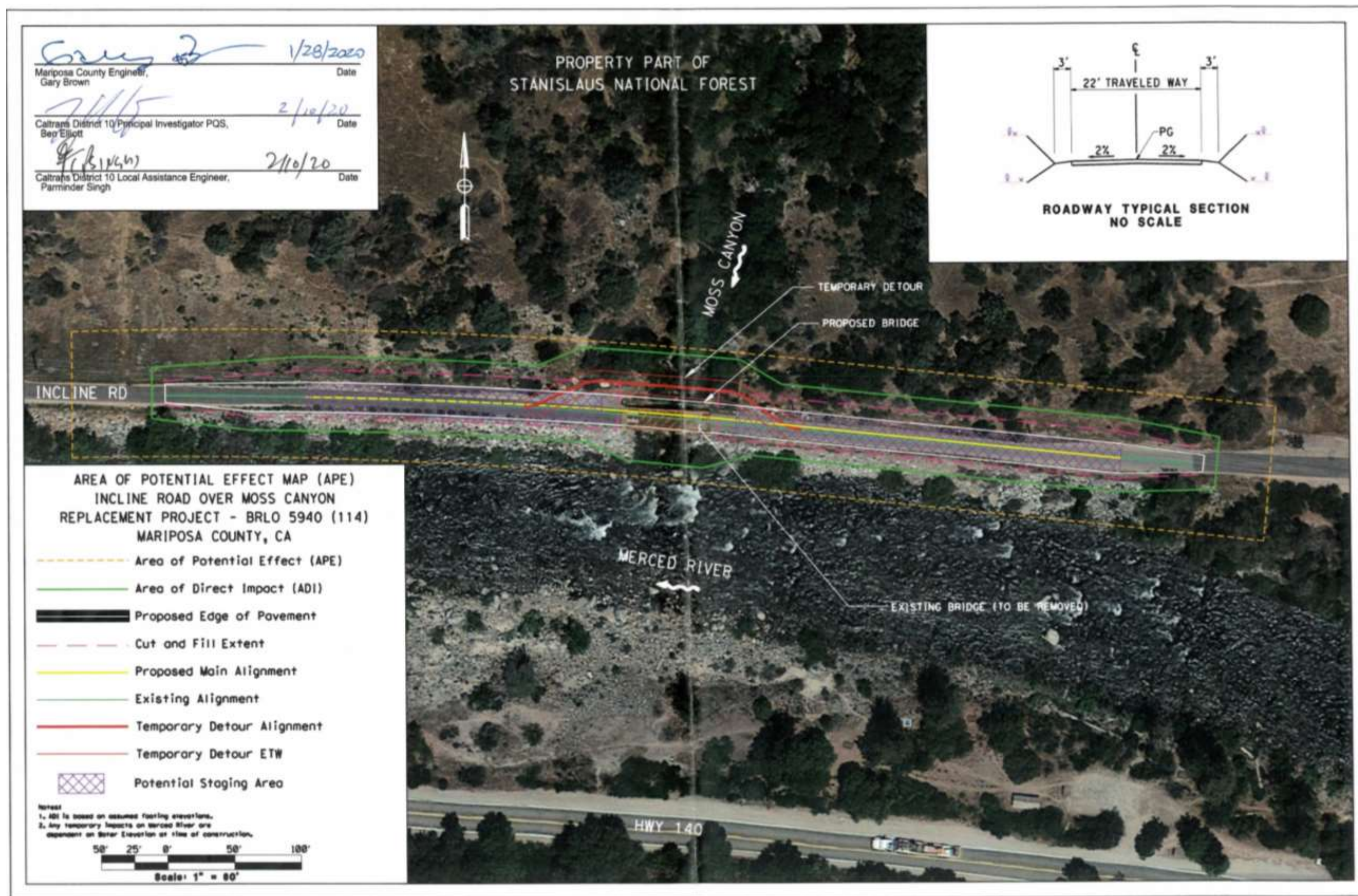


Figure 2-3. Proposed Project Site Plan (Including Area of Potential Effect)

This page intentionally left blank.

Chapter 3. Initial Study Checklist

3.1 Introduction

In compliance with the CEQA Guidelines, the County has prepared the following initial study checklist to analyze the environmental impacts of the proposed project. This checklist uses Appendix G of the CEQA Guidelines to provide a basis for the analysis of the resource areas addressed. An evaluation of potential impacts and mitigation measures to reduce potentially significant impacts is presented in the analysis.

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages. However, all impacts would be mitigated to a less than significant level as indicated on the following pages.

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

3.2 Evaluation of Environmental Impacts

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts. Operations and maintenance impacts of the proposed project are routine, minimal, and essentially the same as current operations and maintenance of the existing facilities. There is no potential for a significant impact to any resource category from project operations and maintenance of the existing and proposed facilities.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required. "Beneficial impact"

is also identified where appropriate to provide full disclosure of any benefits from implementing the proposed project.

- 4) "Less-than-Significant Impact with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less-than-Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less-than-significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (Section 15063[c][3][D]). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are a "Less-than-Significant Impact with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significance.

Significance thresholds are identified for certain resources, but others are not explicitly identified because there is clearly no impact or the checklist question itself serves as the significance threshold.

3.3 Aesthetics

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
I. AESTHETICS.					
Except as provided in PRC Section 21099, would the project:					
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	☐	☐	☒	☐	☐
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒	☐

3.3.1 Environmental Setting

A *Community Impact Technical Memo* (GEI Consultants, Inc 2020), *Section 7(a) of the Wild and Scenic Rivers Act Evaluation* (Area West Environmental, Inc, 2020), and a *Natural Environment Study* (Area West Environmental, Inc. 2020) were prepared as part of the CEQA and NEPA process for the proposed project.

Visual Character. The project site is located along Incline Road. At this location, the roadway traverses the Merced River Canyon, running parallel and just north of the Merced River. The project site is located within the Stanislaus National Forest (with management assistance from the Sierra National Forest) and within the 0.25-mile protected corridor of the Merced River Canyon (designated as a Wild and Scenic River by the National Park Service). The larger Merced River Canyon (located just west of Yosemite National Park) is recognized by the Mariposa County General Plan as exhibiting major scenic values (Mariposa County Countywide General Plan, Open Space and Conservation Element, 2006).

Open space land uses (including steep mountainous terrain, forested ridgelines, and the Merced River corridor) dominate the larger visual character of the area. Both motorists (travelling locally and regional along State Route 140) and river-related recreationists would be the primary user groups affected by aesthetic impacts occurring at the project site.

Incline Road is a narrow paved rural road that provides access to several Stanislaus National Forest recreation areas (including day use and overnight camping facilities), a small number of rural residents, and connects motorists to the regional Central Yosemite Highway (State Route 140) 0.2 miles east of the Moss Canyon Bridge site (via Foresta Road). Traffic volumes on Incline Road are considered low (estimated at 150 ADT). As a point of reference, estimated traffic volumes along State Route 140 (just

across the Merced River, as shown in **Figure 2-3**, page 2-13) are significantly higher at 2,900 (annual average daily traffic) vehicles travelling in either the eastbound or westbound direction (Caltrans, 2020).

Viewer Exposure and Sensitivity. Viewer sensitivity is a measure of viewer exposure and viewer awareness. Factors that affect the level of viewer concern are described below in **Table 3-1**.

Table 3-1. Viewer Sensitivity

Factor	Characteristics
Type of and Frequency of Use	Daily use from motorists traveling along Incline Road and State Route 140. Seasonal use from recreational activities along the Merced River Corridor.
Public Interest	Low (limited views outside of immediate area)
Adjacent Land Uses	Open Space Land Uses – Stanislaus National Forest

Incline Road serves predominantly rural residential and seasonal recreation-related vehicle traffic. Viewer sensitivity for residents driving along Incline Road between their homes and the regional roadway network is considered low due to the low number of viewers (vehicle trips), frequency of use and the limited area affected by the proposed project. Compared to the larger Merced River Corridor, the project site is relatively small in scale encompassing only the Incline Road Bridge area (confluence of Moss Creek with the Merced River).

A typical motorist view along Incline Road (looking primarily east or southeast) is shown in **Photo 3-1**. As shown in the photo, the foreground view experienced by motorists is focused on the Merced River and its rocky, vegetated banks, with the Foresta Road Bridge and forested mountain sides comprising the background views at this location. **Photo 3-2** provides a typical motorist view (facing primarily west), which identifies similar open space views to those experienced by west bound motorists.



Photo 3-2. Typical Motorist View Facing East



Photo 3-1. Typical Motorist View Facing West

State Route 140 is a designated scenic highway with highly rated visual quality. Due to nearby steep slopes, views from the highway are focused to foreground views of the Merced River and adjacent slopes. Incline Road and the Moss Canyon Bridge are visible from State Route 140. However, the view duration for passing motorists is brief due to the vegetated slopes of the Merced River which block a prolong and clear view of the roadway. Viewer sensitivity for motorists travelling along State Route 140 is considered high; however, views of the project site brief and limited (due to terrain and vegetation) due to the extent of the project site limits which are relatively small in scale compared to the larger Merced River Corridor.

Viewer sensitivity for recreation-related motorists, park-users, or visitors to the Merced River Canyon is higher, given the nature of the activity and the infrequency of use (roadway commuter versus seasonal recreation user or visitor). Incline Road and the Moss Canyon Bridge are also visible from the Merced River. However, the view duration for passing boaters is brief (*Section 7(a) of the Wild and Scenic Rivers Act Evaluation*, Area West Environmental, Inc, 2020). Recreation users and anglers at the Sierra National Forest's Red Bud picnic area on the Merced River's south bank near Foresta Road would have longer duration views, but the view of the Moss Canyon Bridge from the Red Bud picnic area is largely obscured by vegetation. Additional views of the project site may also occur at informal locations along the banks of the Merced River; however, recreation-related views from these locations would only be temporarily affected during the project's construction phase.

Scenic Routes and Vistas. According to the Caltrans State Scenic Highway Program, portions of State Route 140 are officially designated as a State Scenic Highway (Caltrans, 2019). Beginning near the Town of Mariposa (post mile 49.9), the section of State Route 140 to the Town of El Portal, is officially designated as a State Scenic Highway, with the remaining section of the roadway, to Yosemite National Park, considered *eligible* for official designation. Although this State Scenic Highway is located just south of the Merced River, views of the project site from the roadway are brief and limited due to the vegetated slopes of the Merced River which block a prolonged view of the site. The County's General Plan does not identify any additional roadways, routes, or trails near the project site as locally designated scenic routes or roadways.

Light and Glare. Light pollution is defined as any adverse effect of artificial light, including sky glow, glare, light trespass, light clutter, decreased visibility at night, and energy waste. Existing sources of light and glare are generally from motorists travelling on Incline Road and stationary sources (including street, security, and building lights) associated with the National Park Administrative and Maintenance buildings located 0.2 miles east of the project site

3.3.2 Discussion

a) Have a substantial adverse effect on a scenic vista?

A scenic vista is defined as a viewpoint that provides expansive views of a highly valued landscape (such as an area with remarkable scenery or a resource that is indigenous to the area) for the benefit of the general public. As shown in **Photos 3-1** and **3-2**, the mountain peaks, ridgelines, and the Merced River Corridor visible from the project site meet the criteria of a scenic vista or resource. The project site is also within the 0.25-mile protected corridor of the Merced River (designated as a Wild and Scenic River by the National Park Service), with the segment adjacent to the proposed project located in an area classified as a "Recreation Zone" under the Wild and Scenic River Act designation. The Recreation Zone classification means that the river is readily accessible by road or railroad, may have some development along their shorelines, and may have undergone some impoundment or diversion in the past (National Wild and Scenic Rivers System, 2018).

The proposed project will slightly alter the visual character of the bridge by removing the existing bridge piers and updating the bridge with modern railings and guardrails. The scale and location (vertical and horizontal alignment) would be in character with the existing structure. Changes to the bridge design would not substantially degrade the existing visual character of the area or adversely affect views from the highway or waterway. Vegetation removal for the temporary detour and bridge widening will occur north of the bridge and will not be clearly

visible from the Merced River or State Route 140 to the south. The existing slopes include unvegetated areas where bare rock and soil are visible. Vegetation changes would be temporary as disturbed areas are replanted and regrow over time. The new bridge will blend into the landscape and is consistent with views of other human-made structures in the Merced River corridor.

During construction, the presence of heavy equipment and construction materials could be visible from the highway and waterway. Traffic control equipment (orange cones, K-rail, temporary traffic control lights) may also be visible during construction. With night work not anticipated (possibility for single one or two-night event), no increase in light and glare from the project would occur. The general construction footprint is small, and changes in views due to construction activity would be minor and temporary. During and following construction, the implementation of site revegetation, replanting (using native vegetation), avoiding the spread of invasive plant species, and erosion control measures (see **Mitigation Measures BIO-3, BIO-4, BIO-5, BIO-11, and BIO-12 in Section 3.6 “Biological Resources”**) would be completed as part of the project to restore the construction site to pre-project conditions. Consequently, this impact to the views of surrounding scenic vistas and the Merced River Corridor is considered ***less-than-significant***, with no additional mitigation measures (other than those identified in **Section 3.6 “Biological Resources”**) required.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?

The State Route 140 is a designated scenic highway with highly rated visual quality. Due to nearby steep slopes, views from the highway are focused to foreground views of the Merced River and adjacent slopes. Incline Road and the Moss Canyon Bridge are visible from State Route 140. However, the view duration for passing motorists is brief due to the vegetated slopes of the Merced River which block a prolong and clear view of the roadway. Viewer sensitivity for motorists travelling along State Route 140 is considered high.

The proposed Project will slightly alter the visual character of the bridge by removing the existing bridge piers and updating the bridge with modern railings and guardrails. The scale and location (vertical and horizontal alignment) would be in character with the existing structure. Changes to the bridge design would not substantially degrade the existing visual character of the area or adversely affect views from the highway or waterway. Vegetation removal for the temporary detour and bridge widening will occur north of the bridge and will not be clearly visible from the Merced River or State Route 140 to the south. The existing slopes include unvegetated areas where bare rock and soil are visible. Vegetation changes would be temporary as disturbed areas are replanted and regrow over time. The new bridge will blend into the landscape and is consistent with views of other human-made structures in the Merced River corridor.

During construction, the presence of heavy equipment and construction materials could be visible from the highway and waterway. Traffic control equipment (orange cones, K-rail, temporary traffic control lights) may also be visible during construction. With night work not anticipated (possibility for single one or two-night event), no increase in light and glare from the project would occur. The general construction footprint is small, and changes in views due to construction activity would be minor and temporary. Following construction, the implementation of site revegetation, replanting (using native vegetation), avoiding the spread of invasive plant

species, and erosion control measures (see **Mitigation Measures BIO-3, BIO-4, BIO-5, BIO-11, and BIO-12 in Section 3.6 “Biological Resources”**) would be completed as part of the project to restore the construction site to pre-project conditions. Consequently, this impact to the views of the Merced River Corridor from State Route 140 are considered *less-than-significant*, with no additional mitigation measures (other than those identified in **Section 3.6 “Biological Resources”**) required.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Public views of the project site are from motorists travelling along roadways (Incline Road and State Route 140) and from the Merced River. The view duration for passing boaters and motorists is brief. Recreation users and anglers at the Sierra National Forest’s Red Bud picnic area would have longer duration views, but the view of the Moss Canyon Bridge from the Red Bud picnic area is largely obscured by vegetation.

Public views would be affected as follows:

Construction is anticipated to take approximately 5 to 6 months. During construction, the following activities and equipment may be easily seen in the project vicinity:

- Work crews accessing the project site.
- Removal of vegetation from the project site (traffic detour and bridge pier work areas).
- Large pieces of equipment used for moving earth; trenching ditches; transporting, lifting, and placing equipment; hauling concrete; spraying water to control dust; and other construction activities.

Construction activities would be temporary and limited to daylight hours. Due to intervening topography and vegetation, and because the project site is located adjacent to larger parcels within the Stanislaus National Forest, the project footprint is not visible to off-site roadways and properties. Sensitive viewers would be limited to motorists traveling through the area and river recreationists.

During construction, both the traffic detour and bridge pier work areas will be cleared of vegetation, as needed. During construction, the presence of heavy equipment and construction materials could be visible from the highway and waterway. Traffic control equipment (orange cones, K-rail, temporary traffic control lights) may also be visible during construction. With night work not anticipated (possibility for single one or two-night event), no increase in light and glare from the project would occur. The general construction footprint is small, and changes in views due to construction activity would be minor and temporary.

Following construction, the project site would be restored and revegetated using native vegetation (see **Mitigation Measures BIO-4 and BIO-11 in Section 3.6 “Biological Resources”**) as part of the construction process. The construction contractor will also be required

to install the use of bridge catchment tarps (see **Mitigation Measure BIO-12**) to ensure all construction debris is caught and removed daily from the work area and will install temporary fencing (see **Mitigation Measure BIO-3**) around environmentally sensitive habitats surrounding the work area to minimize visual impacts. Implementation of these mitigation measures (as more fully described in **Section 3.6 “Biological Resources”**) will ensure the project does not significantly change the existing visual setting and will minimize the introduction of visual elements that are uncommon in the area. While the proposed project will slightly alter the visual character of the bridge by removing the existing bridge piers and updating the bridge with modern railings and guardrails, the scale and location (vertical and horizontal alignment) would be in character with the existing structure. Changes to the bridge design would not substantially degrade the existing visual character of the area or adversely affect views from the highway or waterway. Consequently, this impact is **less-than-significant**, with no additional mitigation measures (other than those identified in **Section 3.6 “Biological Resources”**) required.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Currently, the only source of substantial light or glare in the project site are the relatively few vehicles traveling along Incline Road, vehicles travelling along State Route 140, and security lighting from the National Park Service Maintenance & Administrative Buildings located approximately ½ mile from the project site. Because the proposed project is not increasing roadway travel capacity or travel demands, the project would not result in additional traffic volumes along Incline Road; therefore, an increase in headlight and glare effects from additional vehicles traveling through the area is not expected. The proposed project does not include the installation of any light sources, and the materials used to construct the bridge do not include reflective materials that may introduce additional glare to the environment (the bridge would be constructed of concrete, the roadway approaches would be treated with asphalt, and rocks and revegetation would be used for slope protection). Consequently, the proposed project would not create a new source of substantial light or glare that would adversely affect day or nighttime views. **No impact** would occur.

3.4 Agriculture and Forestry Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
II. AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the State's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:					
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?	☐	☐	☐	☒	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒	☐
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220(g)), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒	☐
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒	☐
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?	☐	☐	☐	☒	☐

3.4.1 Environmental Setting

According to the Mariposa County General Plan (Mariposa County 2006) Land Use map, lands to the north, south, and west of the project site are designated as “Agriculture/Working Landscape”, with lands to the east designed as “El Portal Planning Study Area”. The project site is located within the Stanislaus National Forest, with lands surrounding the bridge site designated for a variety of open space, habitat, and recreational uses consistent with the Stanislaus National Forest Plan. No active agricultural or timber harvesting activities occur within or on lands directly adjacent to the project site. The bridge site is located within the 0.25-mile protected corridor of the Merced River, which is designated as a Wild and Scenic River by the National Park Service.

As a means of agricultural land preservation, the State Legislature enacted the California Land Conservation Act of 1965, commonly referred to as the “Williamson Act.” Under the Act, property owners may enter into contracts with the County to keep their lands in agricultural production for a minimum of 10 years, in exchange for property tax relief. Lands covered by Williamson Act contracts are assessed based on their agricultural value instead of their potential market value under non-agricultural uses and are known as “Agricultural Preserves.” According to County records, no land within the project site is designated, zoned, or covered by a Williamson Act contract. The project site is associated with existing transportation uses (i.e., Incline Road) and no timber management activities occur on site.

Important Farmlands – Farmland Mapping and Monitoring Program

Based upon a review of maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, the proposed project is located within an area that has not been surveyed or classified at this time (California Department of Conservation 2023).

3.4.2 Discussion

- 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?**

As described in **Chapter 2 “Project Description”**, the project site is located within the boundaries of the Stanislaus National Forest and is designated as Agriculture/Working Landscape under the County’s existing General Plan. As such, the project site does not contain any Important Farmlands as identified by the California Department of Conservation’s Farmland Mapping and Monitoring Program, parcels with an active Williamson Act contract, or lands designated as Forest or Timberlands. The project would replace an existing bridge, connecting a designated transportation route, with construction activities concentrated within and directly adjacent to the existing roadway, thus remaining consistent with existing development and current zoning and land use designations. No additional property right-of-way will be required for this project and its implementation will not affect the open space uses of surrounding parcels. Therefore, the project will not result in the conversion of Important Farmland, Timberland/Forest resources or is expected to encourage the non-renewal or cancellation of Williamson Act contracted lands. Consequently, ***no impact*** would occur.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

See checklist Item “a” above.

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

See checklist Item “a” above.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

See checklist Item “a” above.

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?

See checklist Item “a” above.

3.5 Air Quality

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to make the following determinations. Would the project:					
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard?	☐	☐	☒	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐	☐

3.5.1 Environmental Setting

Criteria Air Pollutants and Existing Air Quality Conditions

The proposed project is located within the boundaries of the Mariposa County Air Pollution Control District, which is within the Mountain Counties Air Basin (8 eastern sierra California counties from Plumas County, south to Mariposa County).

The U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have identified criteria air pollutants that are a threat to public health and welfare. These pollutants are called “criteria” air pollutants because standards have been established for each of them to meet specific public health and welfare criteria. These air pollutants include ozone, particulate matter less than 10 microns in diameter (PM10), particulate matter less than 2.5 microns in diameter (PM2.5), and nitrogen dioxide (NO2). **Table 3-2** (following page) presents the federal and state attainment status for these monitored pollutants. The primary sources of the precursors of ozone (ROG and NOx) are from motor vehicles. The primary sources of particulate matter are from residential burning, agricultural practices (including tilling and burning), and construction activities.

Sensitive Receptors

For the purposes of this air quality analysis, sensitive receptors are defined as facilities and land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples include residential areas, schools, hospitals, and daycare centers.

The nearest residences to the project site are located within the community of El Portal, approximately 2 miles east of the project site. The nearest school and medical facilities are also likely to occur within or nearby the community of El Portal.

Table 3-2. Mariposa County Air Quality Attainment Status

Criteria Air Pollutant	State Attainment Status	Federal Attainment Status
Ozone	Nonattainment	Nonattainment
Suspended Particulate Matter (PM10)	Unclassified (Nonattainment for Northeastern portion of County)	Unclassified
Fine Particulate Matter (PM2.5)	Unclassified	Unclassified/Attainment
Carbon Monoxide	Unclassified	Unclassified/Attainment
Nitrogen Dioxide	Attainment	Unclassified/Attainment
Lead	Attainment	Unclassified/Attainment
Sulfur Dioxide	Attainment	Unclassified/Attainment

Source: (California Air Resources Board, November 2022)

Construction Air Quality Emissions

Construction of the proposed project would generate temporary criteria pollutant exhaust emissions through the use of heavy-duty construction equipment, such as excavators and graders, and through vehicle trips generated from worker vehicles and haul trucks traveling to and from the project site. In addition, fugitive dust emissions would result from demolition of the existing bridge structure and various soil-handling and debris-management activities. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of construction activity, and prevailing weather conditions.

While fugitive dust emissions are typically generated during construction phases, studies have shown that the application of BMPs at construction sites significantly controls fugitive dust and individual measures have been shown to reduce fugitive dust by anywhere from 30 to 90 percent. The Mariposa County Air Pollution Control District implements two rules that address construction-related air quality emissions. These include Rule 202, which prohibits visible emissions and Rule 205, which is a general nuisance prevention rule. The air pollution control district recommends the implementation of the following measures to reduce construction-related emissions:

- Maintaining construction vehicles and equipment according to manufacturer's specifications.
- Limiting construction equipment engine idling time.
- Using water or chemicals to control dust from demolition, construction, or grading.
- Scheduling construction truck work trips to non-peak traffic hours.
- Minimizing the length of construction truck trips.
- Maintaining paved roadways in a clean condition.

3.5.2 Discussion

a) Conflict with or obstruct implementation of the applicable air quality plan?

A Preliminary Environmental Study (PES), completed by Caltrans in March 2016, determined that the proposed project is exempt from the air quality conformity determination under the EPA 40 CFR 93.126, "Exempt Projects" (see Table 2: widening narrow pavements or reconstructing bridges, no additional travel lanes).

This impact is determined based on whether the proposed project would conflict with or obstruct implementation of the local air quality plan and/or applicable portions of the State Implementation Plan, which would lead to increases in the frequency or severity of existing air quality violations. As a bridge replacement project (with the primary objective of maintaining public safety and accommodating safe vehicular and pedestrian access), the proposed project would not increase roadway capacity or service capabilities that would induce unplanned growth, remove an existing obstacle to growth, or lead to permanent increases in vehicle miles travelled by existing motorists. Therefore, the proposed project would not conflict with or obstruct implementation of the applicable air quality plan and **no impacts** would occur.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard?

Construction Emissions. The project site is in a region designated as non-attainment with respect to air quality due to emissions of precursors of ozone (ROG and NO_x). Construction-related emissions are described as “short term” or temporary in duration and have the potential to represent a significant impact with respect to air quality due to emissions of precursors of ozone (ROG and NO_x) and PM₁₀. Emissions of ozone precursors and PM₁₀ are primarily associated with off-road construction equipment exhaust. Worker commute trips and other construction-related activities (e.g., application of architectural coatings) also contribute to short-term increases in such emissions. Emissions of fugitive PM₁₀, dust, are associated primarily with ground disturbance activities during site preparation and grading activities and vary with soil silt content, soil moisture, wind speed, disturbance area, and vehicle miles traveled.

Because the proposed project was determined to be exempt, a quantitative air quality emission analysis was not performed. Construction-related emissions would result in a minimal impact on ambient air quality conditions at the project site or in the region, based on a review of similar bridge replacement projects and because the proposed project will be required to comply with all applicable Mariposa County Air Pollution Control District emissions and fugitive dust measures. Additionally, as stated above, emissions would be temporary. Therefore, impacts related to construction emissions would be **less than significant**, with no mitigation measures required.

Operational Emissions. The proposed project would accommodate existing traffic and would not result in new sources of air pollutant emissions. Thus, operation of the proposed bridge would not violate applicable air quality standards or substantially contribute to an existing or projected air quality violation. **No impacts** would occur from project operations.

The County is in non-attainment for ozone (NO_x and ROG). As discussed above, construction and operation of the proposed project are expected to result in a less than significant impact and no impact, respectively, related to criteria pollutant emissions. Therefore, the proposed project would not result in a cumulatively considerable net increase in criteria pollutants. A **less than significant** impact would result, and no mitigation would be necessary.

c) Expose sensitive receptors to substantial pollutant concentrations?

See checklist Item “b” above.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Combustion emissions from the use of diesel fuel in construction equipment, as well as tar or asphalt used for any paving improvements, could generate localized objectionable odors. If sensitive receptors are located in the immediate vicinity of these activities, odors could be perceivable and constitute a nuisance impact. As previously described, emissions of criteria air pollutants and potential odors associated with diesel construction equipment and vehicles during project construction would be temporary and localized within the immediate vicinity; additionally, no new air emissions or odors would be released during operation of the proposed bridge. With sensitive receptors located over a mile from the project site, overall air emissions would not expose sensitive receptors to substantial air pollutant concentrations or create objectionable odors. Consequently, this impact is ***less-than-significant***, with no additional mitigation measures required.

3.6 Biological Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
IV. BIOLOGICAL RESOURCES.					
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?	☒	☐	☐	☐	☐
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?	☒	☐	☐	☐	☐
c) Have a substantial adverse effect on State or Federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☒	☐	☐	☐	☐
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?	☒	☐	☐	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐	☐
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?	☐	☐	☐	☒	☐

3.6.1 Environmental Setting

A *Natural Environment Study* (Area West Environmental, Inc. 2020) was prepared for the proposed project. Biological surveys conducted for the proposed project included general biological surveys (which included habitat mapping), rare plant surveys, a delineation of wetlands and other waters of the U.S. and State, and a native tree survey. The study area for these biological surveys is referred to as the Biological Study Area (BSA) and includes both the construction site (see **Figure 2-4**, in **Chapter 2**) and a surrounding buffer area as shown in **Figure 3-1**, below.

The following description of the environmental setting is based on information provided from the Natural Environment Study prepared for the proposed project. Please refer to the Natural Environment Study for a detailed description of the methods used and the regulatory framework related to biological resources.

Key resource data sources reviewed and referenced, included:

- a species list for the *El Portal* 7.5 minute USGS topographic quadrangle from USFWS (2020);
- records search of CDFW's California Natural Diversity Database (CNDDDB) for species within 10 miles of the *El Portal* 7.5 minute USGS topographic quadrangles (2020);
- a search of the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants Database for the *El Portal* and eight surrounding USGS topographic quadrangles (2020);
- a list of Forest Service Sensitive (FSS) species for the Stanislaus National Forest (2013);
- California Invasive Plant Council's (Cal-IPC's) California Invasive Plant Inventory (2018);
- soils information from the Natural Resources Conservation Service (NRCS) Web Soil Survey (2018); and
- EPA's Hydrologic Unit Code (HUC) data for California watershed boundaries (2015).

The Natural Environment Study conclusions are the result of field survey findings and research to determine the potential for special-status species to occur within the study area and/or if these species could be impacted by project-related construction and operation activities.

Biologists conducted a reconnaissance-level field visit (on May 7 and 8, 2018) to determine the likelihood of sensitive resources occurring within the study area or BSA. Biologists walked the entirety of the BSA to document plant communities and habitat types. The survey focused on determining whether the BSA contained suitable habitat to support special-status species and whether jurisdictional waters and wetlands were present. In addition, wetlands were delineated using the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0) (USACE 2008). Other waters of the U.S. and State that did not meet the wetland criteria were delineated based on the location of the ordinary high water mark (OHWM) using the guidance identified in the *Corps Regulatory Guidance Letter No. 05-05 Subject: Ordinary High Water Mark Identification* (USACE 2005). All plants and animals observed in the BSA during the reconnaissance survey are listed in Appendix D of the Natural Environment Study.

On May 7 and 8, 2018, botanical surveys were conducted to assess habitat for special-status plants and to identify to presence of noxious weeds. All areas within the BSA were walked and all plants observed were identified to species level when applicable. Species not readily identifiable in the field were collected and later identified using *The Jepson Manual: Vascular Plants of California, 2nd Edition* (Baldwin 2012). Vegetation communities in the BSA were also identified and mapped during the botanical survey. A list of all plant species encountered during the botanical field survey is included in Appendix D of the Natural Environment Study.

During the botanical field surveys conducted for the project (May 7 and 8, 2018), biologists identified and inventoried trees located within the project site footprint in the BSA which may be impacted during project construction. This tree inventory is included in Appendix E of the Natural Environment Study and in **Appendix A** of this IS/MND. Data collected and presented includes a description of tree health and dbh (Diameter at breast height).

Natural Communities (Habitats and Land Cover Types)

The project site is located in rural Mariposa County. Elevation within the BSA ranges from 1,760 to 1,780 feet amsl. The topography within the BSA is generally steep. The site is also located within the Merced River Canyon, where the river has carved steep canyon walls. Natural features within the BSA include the Merced River, which runs parallel to Incline Road, and crosses Moss Creek, which has carved a gulch into the steep canyon walls north of the Merced River. The Merced River is lined with sparse riparian trees and Moss Creek is lined with more dense riparian vegetation. Underneath the existing bridge, concrete slurry has been placed around the existing concrete piers. Outside of the riparian zone, the vegetation is comprised of montane hardwood and annual grassland communities.

The BSA supports four generalized vegetation community types consisting of one aquatic community (Perennial Stream [comprised of Moss Creek and the Merced River]) and four upland communities (developed, annual grassland, montane hardwood, and montane riparian). A description of these community types, including dominant plant species, follows. **Figure 3-1** shows generalized vegetation communities in the BSA. **Figure 3-2** provides a delineation of potential waters of the U.S. and state, including wetlands, within the BSA. Acreages of vegetation communities within the BSA and project site are provided below in **Table 3-3**.

Table 3-3. Vegetation Communities within the Biological Study Area

Vegetation Community	Acres within the Biological Study Area	Acres within the Proposed Project Footprint
Developed	0.913	0.674
Annual Grassland	0.569	0.091
Montane Hardwood	1.972	0.215
Perennial Stream (Moss Creek/Merced River)	2.219	0.072
Total	5.673	1.052
Montane Riparian (Moss Creek/Merced River) *	0.571	0.061

* The Montane Riparian vegetation community is located within the banks of the perennial stream and acreage for this vegetation community is provided, but not added to the total to avoid double-counting.

Source: *Natural Environment Study* (Area West Environmental, Inc. 2020)

Developed. Developed areas within the BSA are characterized by the presence of anthropogenic features, including Incline Road, dirt pullouts for vehicles, and the bridge structure. These areas are continuously disturbed (active roadways) and are primarily un-vegetated. Vegetation, when present, is sparse and consists primarily of scattered upland annual grasses and forbs. The bridge structure has the potential to support bird nesting, but is unlikely to support bat roosting due to the lack of narrow expansion joints.

Annual Grassland. The annual grassland vegetation community is found in the western portion of the BSA. This community type is a diverse grassland that is dominated by annual non-native grasses and several species of native annual and perennial forbs. Within the BSA, this community is located on a steep, south-facing slope.

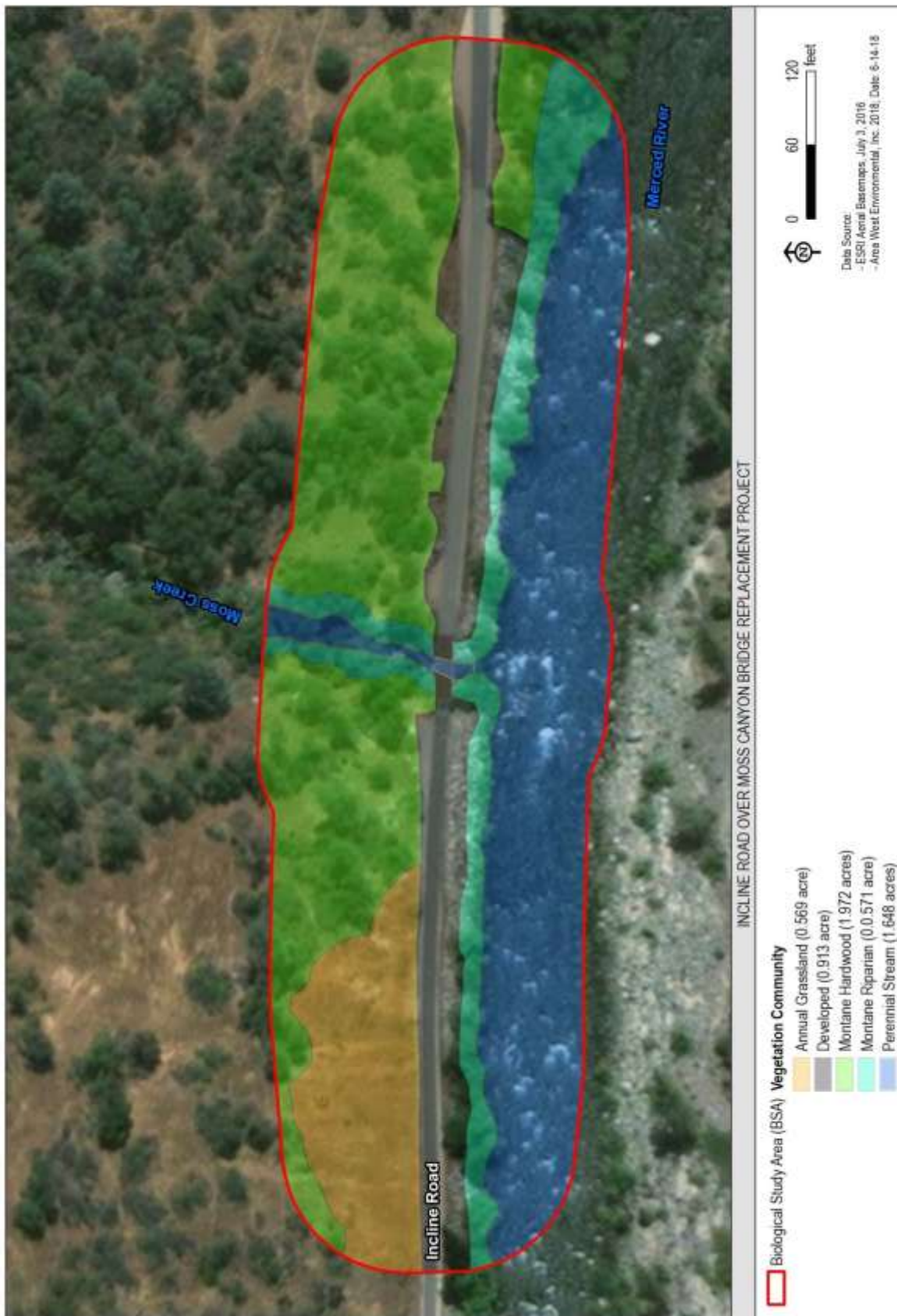


Figure 3-1. Vegetation Communities within the BSA

Vegetation present in the annual grassland vegetation community is dominated by upland species, which include soft brome (*Bromus hordeaceus*), slender wild oat (*Avena barbata*), rose clover (*Trifolium hirtum*), common madia (*Madia elegans*), white stemmed lupine (*Lupinus albicaulis*), blue head gilia (*Gilia capitata*), and dense flower owl's clover (*Castilleja densiflora*). This vegetation community supports scattered trees and shrubs, most notably small interior live oaks (*Quercus wislizeni*), California yerba santa (*Eriodictyon californicum*), and western poison oak (*Toxicodendron diversilobum*).

The annual grassland community provides habitat for a variety of species, although no species is totally dependent on it for breeding, feeding, or cover. Common wildlife species expected to use this community include western fence lizard (*Sceloporus occidentalis*), common garter snake (*Thamnophis sirtalis*), California ground squirrel (*Otospermophilus beecheyi*), coyote (*Canis latrans*), turkey vulture (*Cathartes aura*), and western meadowlark (*Sturnella neglecta*).

Montane Hardwood. The montane hardwood vegetation community is found in the northern portion of the BSA, north of Incline Road. This community type consists of a mixture of hardwoods, shrubs, and scattered conifers. The canopy composition of the montane hardwood vegetation community varies depending on slope aspect. An open canopy is characteristic of the dryer, south-facing slopes. The canopy becomes denser where shade and moisture increase on the east and west facing slopes of Moss Canyon. Rocky outcrops are mixed within the montane hardwood in Moss Canyon.

Vegetation present in the montane hardwood vegetation community is dominated by upland species which include canyon live oak, a shrub understory of primarily western poison oak, and interspersed patches of annual grasses and forbs. Other upland species contributing to the montane hardwood vegetation community present within Moss Canyon include wild mock orange (*Philadelphus lewisii*), gaping keckiella (*Keckiella breviflora*), and annual grasses and forbs described in the annual grassland and developed communities above. Trees contributing to the canopy on south-facing slopes include canyon live oak and interior live oak, with a sparse emergent canopy of gray pine (*Pinus sabiniana*). Dominant shrubs contributing to the understory on south facing slopes include California yerba santa, western poison oak, California coffee berry (*Frangula californica*), buckbrush (*Ceanothus cuneatus*), and whiteleaf manzanita (*Arctostaphylos viscida*).

The montane hardwood community provides habitat for a variety of species. Common wildlife species expected to use this community include western fence lizard, western rattlesnake (*Crotalus oreganus*), western gray squirrel (*Sciurus griseus*), mule deer (*Odocoileus hemionus*), Steller's jay (*Cyanocitta stelleri*), and acorn woodpecker (*Melanerpes formicivorus*).

Montane Riparian. Riparian habitats are important to aquatic environments; they serve as natural biofilters and plant root systems prevent erosion by providing soil stabilization. The montane riparian and perennial stream vegetation communities are all contained within the OHWM, but because the vegetation is different, they have been described separately. All montane riparian vegetation is located along the rocky banks of Moss Creek and the Merced River, growing within the active channel (below the OHWM). Trees and shrubs rooted in the montane riparian vegetation community provide instream shade over both Moss Creek and the Merced River. The canopy composition of the montane riparian vegetation community along Moss Creek and the Merced River is similar, although the canopy is denser and trees are smaller along the banks of Moss Creek. Trees located along the Merced River are larger and more spread out.

Dominant tree species contributing to the dense canopy layer at Moss Creek include Oregon ash (*Fraxinus latifolia*), white alder (*Alnus rhombifolia*), and arroyo willow (*Salix lasiolepis*). The dominant

shrubs along the creek include wild mock orange and spicebush (*Calycanthus occidentalis*). The herbaceous layer, when present, is sparse and includes torrent sedge (*Carex nudata*). Dominant trees growing along the bank of the Merced River include arroyo willow, Oregon ash, and polished willow (*Salix laevigata*).

Riparian habitat provides instream shade over the stream, refuge, migration corridors, and diverse nesting and feeding opportunities for many types of wildlife. Trees in the riparian vegetation community with tree hollows could provide habitat for cavity nesting birds and willows and shrubs provide habitat for many migratory nesting birds.

Perennial Stream (Moss Creek/Merced River). Two perennial streams are present in the study area: Moss Creek and the Merced River (**Figure 3-2**). These streams are characterized by waterways that originate in high elevation sites and exhibit a well-defined bed and bank. They typically have a hydroperiod that persists throughout the entire year, with the strongest flow during periods of snowmelt runoff and/or periods of precipitation. Perennial streams can support wetlands since significant flows following snowmelt can cause streams to engorge the active channel and cause dramatic shifts in sediment and vegetation within the channel and along the banks. Vegetation in perennial stream channels typically support riparian wetlands, whereas the low flow channels remain sparsely vegetated.

Moss Creek is a perennial stream in the study area characterized by flowing water within a low-flow channel that is largely un-vegetated and very rocky. Montane riparian vegetation is growing within the active channel of the creek (below the OHWM), as described above. Moss Creek has a small dam across the active channel north of the existing bridge. This check dam was installed to help provide water to a water tank for the Yosemite Valley Railroad via a hydraulic ram. The channel under the bridge is lined with concrete.

The Merced River is a perennial stream in the study area characterized by fast-flowing water, with rocky outcrops and boulders in the active channel. Within the active channel, montane riparian trees and shrubs occur along the margins of the stream, growing within the OHWM of the river, described above. The northern bank of the Merced River is lined with riprap rock and concrete.

Moss Creek and the Merced River are considered to be waters of the U.S. and State because they have a well-defined OHWM and because water that flows within these streams drain to a navigable waterway (see **Figure 3-2**). The montane riparian vegetation community is similarly below the well-defined OHWM, with vegetation growing within the active channel, and water within the montane riparian vegetation community drains to a navigable waterway. No wetlands were identified during field surveys.

Perennial stream habitat provides refuge and migration corridors for fish and aquatic species and foraging opportunities for waterfowl, raptors, and mammals. Common wildlife species expected to use this community include common fish species, tree frogs (*Pseudacris sp.*), common merganser (*Mergus merganser*), American dipper (*Cinclus mexicanus*), red-tailed hawk (*Buteo jamaicensis*), and North American river otter (*Lontra canadensis*).

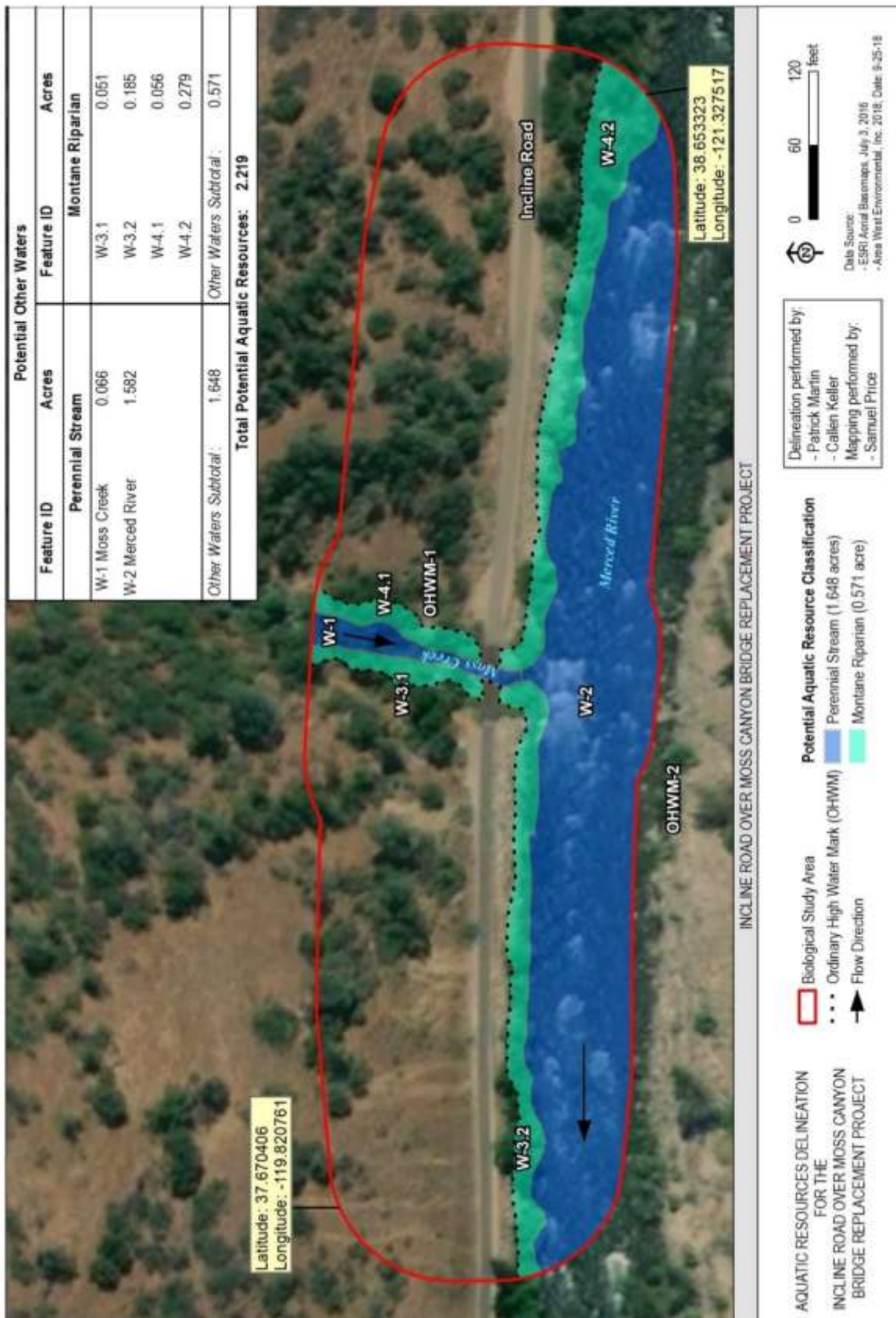


Figure 3-2. Delineation of Waters of the U.S. and State

Common Animal Species

The BSA provides habitat for an assemblage of wildlife species that are commonly found within stream/riparian corridors, as described above under each vegetation community description. During field surveys of the site, birds observed within the BSA included acorn woodpecker, oak titmouse (*Baeolophus inornatus*), California towhee (*Melospiza crissalis*), red-tailed hawk, and bushtit (*Psaltirparus minimus*).

Habitat Connectivity - Established Native Resident or Migratory Wildlife Corridors

Stream/riparian corridors such as Moss Creek are commonly used by wildlife as migration and movement corridors. Striped skunk (*Mephitis mephitis*), Virginia opossum (*Didelphis virginiana*), black-tailed deer (*Odocoileus hemionus*), mule deer, and song birds are commonly found traversing stream/riparian corridors. Species of special concern that could use Moss Creek as a migration corridor to reach breeding sites include foothill yellow-legged frog (*Rana boylei*), western pond turtle (*Actinemys marmorata*), and ringtail (*Bassariscus astutus*).

Habitats and Natural Communities of Concern

The County supports many special-status plants, animals, and unique habitats. The majority of special-status plant species identified during pre-field reviews are endemic to unique habitats such as marshlands, vernal pools, coniferous forests, and areas with serpentine soils, which are absent from the BSA. Similarly, special-status wildlife species are also typically associated with regional habitats of concern such as vernal pools, freshwater ponds, marsh habitat, and high elevation conifer forests, though some occur in more common plant communities like riparian and oak woodlands. Habitats of concern, including waters of the U.S. and State, located within the BSA include Moss Creek, the Merced River, and associated riparian habitat.

Special Status Species

Special-status species are plant and wildlife species that are legally protected under the Federal and California Endangered Species Acts (FESA), (CESA), or other State regulations, and species that are considered sufficiently rare by the scientific community to warrant conservation concern. The desktop literature and database review performed for the BSA identified 70 special-status plant and 28 special-status wildlife species. Of these, 21 plant and 13 wildlife species were determined to have at least some potential to occur in the BSA; these species, and their habitat requirements, are listed and more fully described in **Appendix A** of this IS/MND and the Natural Environment Study report.

Special-Status Plants. A complete list of special-status plants that are known to occur or have potential to occur in the project region is provided in **Appendix A** of this IS/MND. The list of species is based on USFWS and CNPS information and was cross-referenced against CNDDDB occurrence records. During the pre-field investigation, 70 special-status plant species were identified during the pre-field review as potentially occurring in the vicinity of the BSA. Based on the lack of suitable habitat (i.e., serpentine soils, acidic soils, vernal pools, and marsh/swamp) and the BSA being located outside the species known elevational range, 49 of the 70 special-status plant species listed do not have the potential to occur in the BSA. None of the remaining 21 special-status plant species were observed during the May 7 and 8, 2018 protocol-level botanical surveys, which were conducted during the appropriate bloom period for these species. Botanical surveys followed the *Protocols for Surveying and Evaluating Impacts to Special Status native Plant Populations and Sensitive Natural Communities* (CDFW 2018), the *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants*

(USFWS 1996), the *CNPS Botanical Survey Guidelines* (CNPS 2001), and the *General Rare Plant Survey Guidelines* (Cypher 2002).

Special-Status Wildlife. A complete list of special-status animals that are known to occur or have potential to occur in the project region is provided in **Appendix A** of this IS/MND. Based on the results of the field surveys and review of existing information including a search of the CNDDB, USFWS species lists, and species distribution and habitat requirements data, 28 special-status wildlife species were identified during the pre-field review as occurring or having the potential to occur within the vicinity of the proposed project. The listing status, preferred habitat, and potential for occurrence in the BSA for each of these species are provided in **Appendix A** of this IS/MND. Nesting birds and roosting bats, which are protected by the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code (CFGC), are also addressed.

Of the 28 special-status wildlife species listed, 15 species would not occur in the BSA or have the potential to be affected by the proposed project because: 1) the BSA lacks suitable habitat for the species, 2) the BSA is outside the species' known range, and/or 3) field surveys determined that the species is not present. The remaining 13 species, listed below, have the potential to occur within the BSA:

- Limestone salamander (*Hydromantes brunus*), forest service sensitive and state threatened;
- Foothill yellow-legged frog (*Rana boylei*), state candidate threatened;
- Western pond turtle (*Actinemys marmorata*), forest service sensitive and state species of special concern;
- Willow flycatcher (*Empidonax traillii*), forest service sensitive;
- American peregrine falcon (*Falco peregrinus anatum*), federally delisted, state delisted, and state fully protected;
- Golden eagle (*Aquila chrysaetos*), state fully protected;
- Bald eagle (*Haliaeetus leucocephalus*), federally delisted, forest service sensitive, state endangered, and state fully protected;
- Pallid bat (*Antrozous pallidus*), forest service sensitive and state species of special concern;
- Ringtail (*Bassariscus astutus*), state fully protected;
- Spotted bat (*Euderma maculatum*); state species of special concern;
- Western mastiff bat (*Eumops perotis californicus*); state species of special concern;
- Western red bat (*Lasiurus blossevillei*); state species of special concern; and
- American badger (*Taxidea taxus*); state species of special concern.

Special-Status Species Critical Habitat or Essential Fish Habitat. Based on the results of the field surveys and review of existing information, the BSA does not fall within any designated critical habitat for federally listed species or essential fish habitat.

3.6.2 Discussion

- 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 the U.S. Fish and Wildlife Service?**

Impacts of the proposed project on biological resources will result from vegetation removal, equipment access, traffic detour, and construction work within the Incline Creek corridor (see **Figure 2-3** in **Chapter 2** and **Figures 3-3** and **3-4**, below). Additionally, (as shown in the figures) in-water work will result in temporary disturbance to aquatic biological resource habitats, with work restricted to periods of low-flow, most likely beginning in late May or early June.

Special-Status Plant Species

As previously described above, only 21 of the identified 70 special-status plant species would be expected to occur in the study area. However, none of these species were observed within the BSA during the May 7, 2018 and May 8, 2018 protocol-level botanical surveys. Field surveys were conducted during the appropriate bloom period for these species and would have been detectable if they occurred there. Therefore, the proposed project would have **no impact** on special-status plant species.

Special-Status Amphibian and Reptile Species

Limestone salamander. Limestone salamander was state listed as threatened in 1971 and is a state fully protected species. The limestone salamander is endemic to steep north and east-facing slopes in mixed chaparral habitats along the Merced River and its tributaries.

No limestone salamanders were observed in the BSA during the wildlife surveys. CNDDDB records for the limestone salamander are suppressed, but limestone salamanders were observed during surveys for the Ferguson Slide Repair on SR 140, approximately 6 miles west of the BSA on the south side of the Merced River. Suitable habitat for this species is present within the BSA in Moss Canyon (steep east-facing slopes with rock outcrops that could provide active and over-summering habitat); however, the proposed project site is unlikely to provide habitat for this species since the bridge is on an exposed south facing slope and the surface around the bridge is covered in concrete without suitable refuge.

If limestone salamander is present within the project site or construction footprint, implementation of the proposed project activities may affect this species. Direct effects could include crushing and other injuries resulting from contact with vehicles and other construction equipment; entrapment in open trenches; a reduction of prey or forage items caused by silting, fill placement, or spilling of oil or other chemicals; obstruction of movement corridors due to the presence of people, cofferdams, equipment, and topographic changes; displacement from the BSA due to the presence of people and equipment; and an increased risk of predation by wildlife inadvertently attracted by the proposed project (trash in project site, freshly up-turned soils, etc.).

Moreover, construction of the temporary creek diversion system and dewatering activities could temporarily impede the movement of limestone salamander dispersing between refugia sites.

Implementation of the proposed project will have short-term construction activity that will be completed within a few months. Although the proposed project will convert a small amount of habitat (see **Figures 3-3** and **3-4**) to transportation uses (i.e., road fill and RSP under the bridge), construction of the new bridge is unlikely to result in changes to the rock outcroppings or eastern-facing slopes within the BSA. Therefore, the proposed project is not expected to significantly alter habitat suitability for limestone salamander from existing conditions. If limestone salamander is located under refugia within the BSA, they may be trapped within the construction area during the vegetation removal and dewatering process, resulting in a ***potentially significant*** construction-related impact.

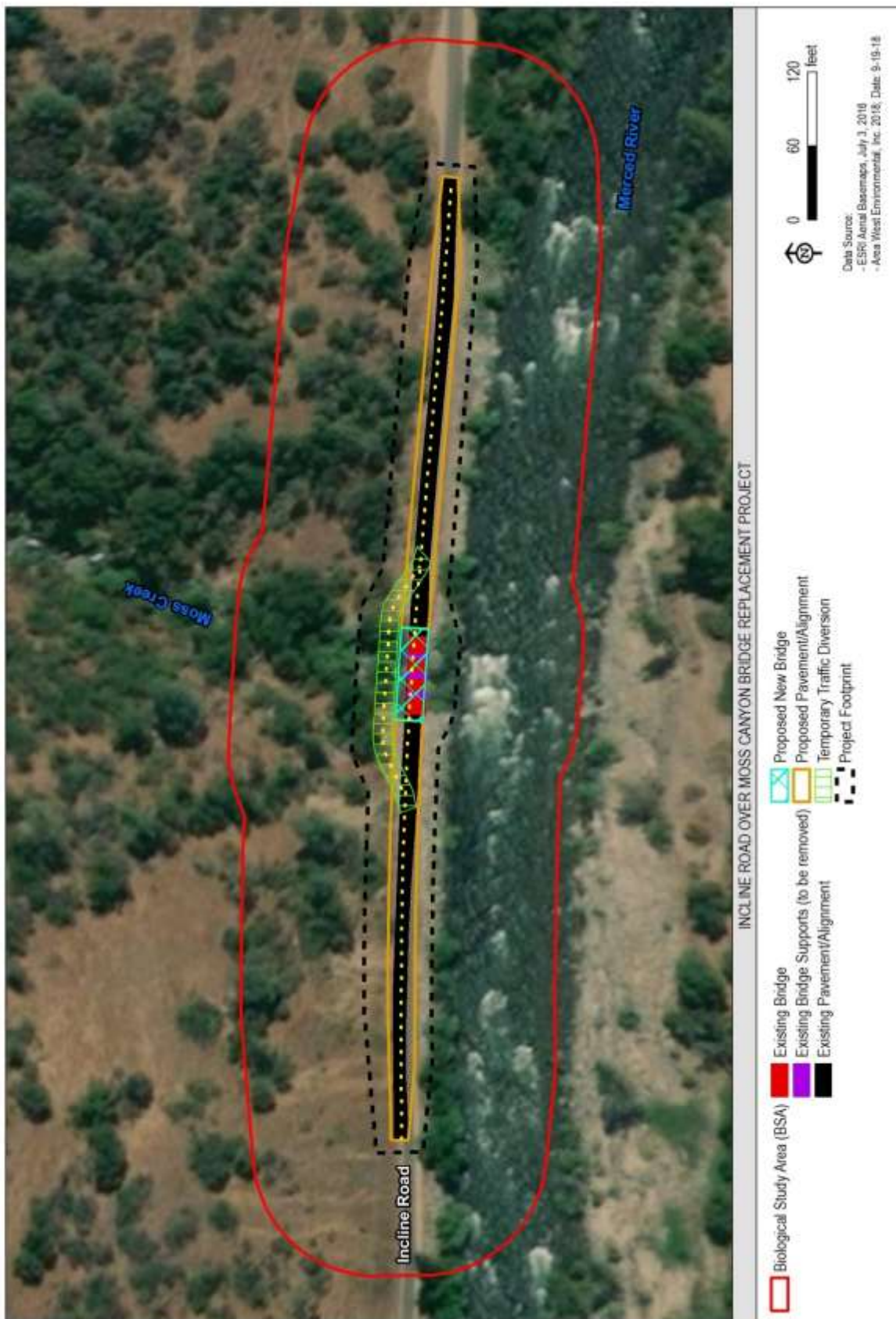


Figure 3-3. Overview of Project Components

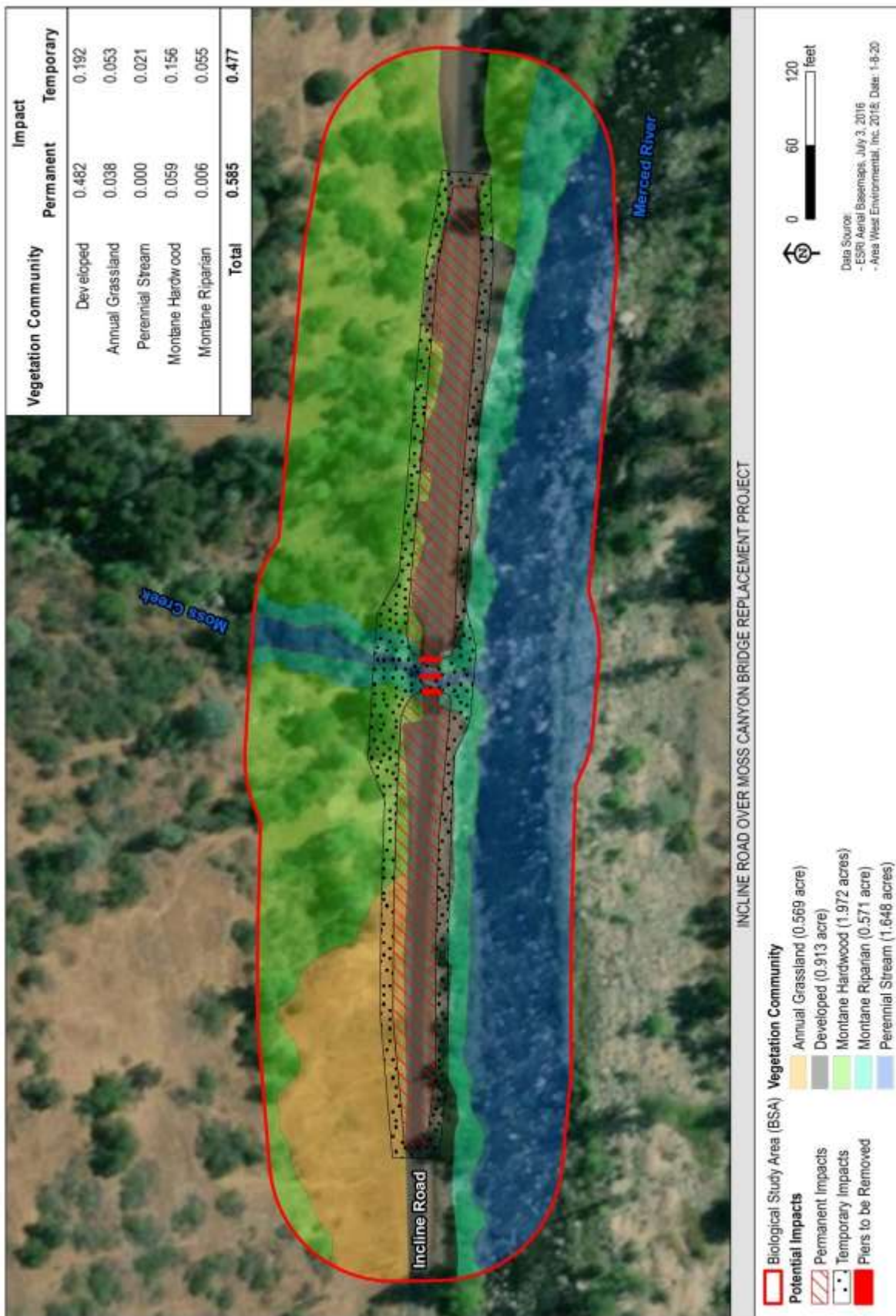


Figure 3-4. Permanent and Temporary Vegetation Community Impacts

Implementation of the species avoidance (including preconstruction surveys, environmental awareness training, site monitoring, water diversion/dewatering measures, site replanting, water quality best management practices, and wildlife refugia protection) measures identified in **Mitigation Measures BIO-1** through **BIO-7** (more fully described below) would reduce the potentially significant impact associated with habitat disturbance/loss and direct impacts to limestone salamander to a *less-than-significant* level.

Foothill Yellow-Legged Frog. No foothill yellow-legged frogs (a state candidate for threatened) were observed in the BSA during the wildlife surveys. Suitable breeding (rocky streams) and dispersal habitat for this species is present within the BSA in Moss Creek. Moss Creek flows fast with a steep stream gradient. It supports plunge pools approximately 3 to 4 feet deep, which likely persist throughout the year. Riparian vegetation is present and occurs along the banks and as emergent vegetation growing out of the stream and rocky substrate. Other creeks that could provide habitat for foothill yellow-legged frog are also present within 1 mile of this site.

If foothill yellow-legged frog is present within the project sites or construction footprint, implementation of the proposed project activities may affect this species. Direct effects could include crushing and other injuries resulting from contact with vehicles and other construction equipment; entrapment in open trenches; a reduction of prey or forage items caused by silting, fill placement, or spilling of oil or other chemicals; obstruction of movement corridors due to the presence of people, cofferdams, equipment, and topographic changes; displacement from the BSA due to the presence of people and equipment; and an increased risk of predation by wildlife inadvertently attracted by the proposed project (trash in project site, freshly up-turned soils, etc.). Moreover, construction of the temporary creek diversion system and dewatering activities could temporarily impede the movement of foothill yellow-legged frog dispersing between breeding areas and refugia sites.

Implementation of the proposed project will have short-term construction activity that will be completed within a few months. Although the proposed project will convert a small amount of aquatic habitat (see **Figures 3-3** and **3-4**) to transportation uses (i.e., road fill and RSP under the bridge), construction of the new bridge is unlikely to result in changes to the aquatic habitat provided by the creek within the BSA. Therefore, the proposed project is not expected to significantly alter habitat suitability for foothill yellow-legged frog from existing conditions. If Foothill Yellow-legged frogs are located under refugia within the BSA, they may be trapped within the construction area during the vegetation removal and dewatering process, resulting in a *potentially significant* impact.

Implementation of the species avoidance (including preconstruction surveys, environmental awareness training, site monitoring, water diversion/dewatering measures, water quality best management practices, and wildlife refugia protection) measures identified in **Mitigation Measures BIO-1** through **BIO-6** (more fully described above) along with the work restriction and monitoring measures described in **Mitigation Measures BIO-8, BIO-9, and BIO-10** (more fully described below) would reduce the potentially significant impact associated with aquatic habitat disturbance/loss and direct impacts to Foothill Yellow-legged frog to a *less-than-significant* level.

Western Pond Turtle. No western pond turtles (a state species of special concern) were observed in the BSA during the wildlife surveys. However, there are two documented CNDDDB records for western pond turtle within a 10 mile radius of the BSA. The nearest CNDDDB record

is dated 1999 and is located approximately 4.4 miles south of the BSA in Devil Gulch, a tributary to the South Fork Merced River. Potential aquatic habitat is available for this species in the BSA within Moss Creek.

If western pond turtle is present within the proposed project footprints during construction activities, the proposed project may affect this species. Direct effects could include impacts to nests containing eggs or young resulting from contact with vehicles and other construction equipment; entrapment in open trenches; a reduction of prey or forage items caused by silting, fill placement, or spilling of oil or other chemicals; obstruction of movement corridors due to the presence of people, cofferdams, equipment, and topographic changes; displacement from the BSA due to the presence of people and equipment; and, an increased risk of predation by wildlife inadvertently attracted by some project-related activities (trash in project site, freshly up-turned soils, etc.).

The proposed project will result in short-term construction activity that will be completed within a few months. Although the proposed project will convert a small amount of aquatic habitat (see **Figures 3-3** and **3-4**) to transportation uses (i.e., road fill and RSP under the bridge), construction of the new bridge is unlikely to result in changes to the aquatic habitat provided by the creek within the BSA. Therefore, the proposed project is not expected to significantly alter habitat suitability for western pond turtle from existing conditions. However, if western pond turtle are located under refugia within the BSA, they may be trapped within the construction area during the vegetation removal and dewatering process, resulting in a **potentially significant** impact.

Implementation of the species avoidance (including preconstruction surveys, environmental awareness training, site monitoring, water diversion/dewatering measures, site replanting, water quality best management practices, and wildlife refugia protection) measures identified in **Mitigation Measures BIO-1** through **BIO-6**, **BIO-8**, **BIO-9**, and **BIO-10** (more fully described above) would reduce the potentially significant impact associated with aquatic habitat disturbance/loss and direct impacts to western pond turtle species to a **less-than-significant** level.

Special-Status Amphibian and Reptile Species – Mitigation Measures

Mitigation Measure BIO-1: Conduct Preconstruction Species Surveys

- **Special Status Amphibians and Reptiles.** A qualified biologist shall conduct a preconstruction clearance survey for limestone salamander, foothill yellow-legged frog, and western pond turtle within 48 hours prior to any ground disturbance within the proposed project footprint and within Moss Creek. These surveys will consist of pedestrian surveys of the project site and BSA. The qualified biologist will investigate all potential cover sites for limestone salamander, foothill yellow-legged frog, and western pond turtle. If any of these species are found within the construction work area, the biologist will contact CDFW and the species shall be allowed to voluntarily move outside of the work area on its own. If a western pond turtle nest containing eggs or young is identified within the construction work area, the biologist shall consult with CDFW to determine an appropriate no-disturbance buffer to ensure avoidance of the nest.

- **Nesting Migratory Bird and Raptor Survey.** If construction or vegetation removal will occur during the breeding season for migratory birds and raptors (generally February through August), the County shall retain a qualified biologist to conduct a preconstruction nesting bird and raptor survey prior to the start of construction activities (including equipment staging). The preconstruction nesting bird and raptor surveys shall be conducted between February 1 and August 31 within suitable habitat within the designated proposed project footprint. Surveys for raptors' nests will also extend 1,250 feet from the project footprint, where access is feasible, to ensure that nesting raptors are not affected by construction disturbances. For raptor surveys outside the project footprint where property access has not been granted or access is limited by topography or site conditions, the surveying biologist shall use binoculars to scan any suitable nesting substrate for potential raptor nests from accessible roads. The preconstruction survey shall be conducted no more than 14 days before the initiation of construction activities.

If an active bird or raptor nest is identified within the construction work area or an active raptor nest is identified within 1,250 feet from the construction work area, a no-disturbance buffer shall be established around the nest to avoid disturbance of the nesting birds or raptors until a qualified biologist determines that the young have fledged and are foraging on their own. The extent of these buffers shall be determined by the biologist and shall depend on the species identified, level of noise or construction disturbance, line-of-sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographic or artificial barriers. In addition to the establishment of buffers, other avoidance measures may include monitoring of the nest during construction and restricting the type of work that can be conducted near the nest site. If no active nests are found during the preconstruction surveys, then no additional mitigation is required.

- **Bats.** If construction is scheduled between April and September, before construction begins, a qualified biologist will survey trees and rocky outcrops within the proposed project footprint and identify any snags, hollow trees, or other trees with cavities that may provide suitable roosting habitat for bats. If no suitable roosting trees are found, construction may proceed. If snags, hollow trees, or other trees with suitable cavities are found, they will be examined for roosting bats. Rocky outcrops in the BSA will also be examined. If bats are not found and there is no evidence of use by bats, construction may proceed. If bats are found or evidence of use by bats is present, the qualified biologist will work with CDFW to implement measures to avoid or minimize disturbance to the colony.
- **Special Status Mammals.** The following measures shall be implemented to minimize or avoid potential impacts to special-status mammal species:
 - A qualified biologist shall conduct a preconstruction survey for special-status mammals (ringtail and American badger) and active special-status mammal nests or dens within the BSA.
 - For surveys in inaccessible areas, the biologist shall use binoculars to scan any suitable denning substrate for potential individuals or nests/dens.
 - The preconstruction survey shall be conducted no more than 14 days before the initiation of construction activities.

- If no active nests/dens are found during the preconstruction surveys, then no additional mitigation is required.
- If an active special-status mammal nest/den is identified within the BSA, a no-disturbance buffer shall be established around the nest/den to avoid disturbance of the nesting/denning mammal until a qualified biologist determines that the young have dispersed. The extent of these buffers shall be determined by the biologist and shall depend on the species identified, level of noise or construction disturbance, line-of-sight between the den and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers.
- If any non-denning species are observed in the BSA before or during construction, the species will be allowed to move out of harm's way on its own.

Timing: Before and during construction.

Responsibility: County of Mariposa / Construction Contractor.

Mitigation Measure BIO-2: Conduct Environmental Awareness Training

Before any work occurs in the project footprint, including grading and equipment staging, all construction personnel shall participate in an environmental awareness training regarding special-status species and sensitive habitats present in the project limits. If new construction personnel are added to the projects, they must receive the mandatory training before starting work. The training shall be provided to all personnel and will discuss sensitive resources (i.e., waters of the U.S. and State, riparian habitat, special-status species and habitat, nesting birds/raptors) to be avoided during project construction and lists applicable permit conditions identified by state and federal agencies to protect these resources.

Timing: Before and during construction.

Responsibility: County of Mariposa / Construction Contractor.

Mitigation Measure BIO-3: Install Temporary Fencing around Environmentally Sensitive Habitat

Final proposed project construction drawings will identify the locations of temporary fencing around environmentally sensitive habitat areas to ensure that sensitive resources proposed for avoidance (waters of the U.S. and State, riparian vegetation, special-status species habitat, etc.) will be protected during construction activities. The County shall ensure that temporary construction barrier fencing, silt fencing, and/or flagging is installed between the work area and environmentally sensitive habitat areas, before any ground-disturbing activity occurs within the project footprints, as appropriate. Construction personnel and construction activity shall avoid areas identified as environmentally sensitive by the fencing/flagging. The fencing/flagging shall be checked regularly and maintained until all construction is complete. No construction activity shall be allowed until this condition is satisfied. Any required barrier or sediment fencing and a note reflecting this condition shall be shown on the final construction documents.

Timing: Before and during construction.

Responsibility: County of Mariposa / Construction Contractor.

Mitigation Measure BIO-4: Restore Temporarily Disturbed Areas

Immediately after bridge construction is complete, all exposed soil shall be stabilized. Soil stabilization may include, but is not limited to, seeding with a native grass seed mix, planting native plants, and placement of rock. These areas will be properly protected from washout and erosion using appropriate erosion control devices including coir netting, hydroseeding, and revegetation.

Timing: During and after construction.

Responsibility: County of Mariposa / Construction Contractor.

Mitigation Measure BIO-5: Implement Water Quality Best Management Practices

Before any ground-disturbing activities, the County shall ensure the construction contractor (as part of the construction specifications) implements erosion control measures and construction waste containment measures to ensure that waters of the state are protected during and after proposed project construction.

The erosion control and construction waste containment measures shall: (a) to identify pollutant sources, including sources of sediment, that may affect the quality of storm water discharges from the construction of the proposed project; (b) to identify BMPs to reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges from the proposed project during construction; (c) to outline and provide guidance for BMP monitoring; (d) to identify proposed project discharge points and receiving waters; to address post-construction BMP implementation and monitoring; and (f) to address sedimentation, siltation, and turbidity.

The erosion control and construction waste containment measures will require BMPs including, but not limited to:

- Conduct ground disturbing activities adjacent to and within Moss Creek during the low-flow period (generally between June 1 and October 15).
- Install sediment fencing, fiber rolls, or other equivalent erosion and sediment control measures between the designated work area and Moss Creek, as necessary, to ensure that construction debris and sediment does not inadvertently enter the drainage. The County will also cover or otherwise stabilize all exposed soil 48 hours prior to potential precipitation events of greater than 0.5 inch.
- No refueling, storage, servicing, or maintenance of equipment shall take place within 100 feet of aquatic habitat.
- All machinery used during construction of the proposed project shall be properly maintained and cleaned to prevent spills and leaks that could contaminate soil or water.

- Any spills or leaks from construction equipment (i.e., fuel, oil, hydraulic fluid, and grease) shall be cleaned up in accordance with applicable local, state, and/or federal regulations. A spill response and control plan would be developed and implemented by the contractor.

Timing: Before and during construction.

Responsibility: County of Mariposa / Construction Contractor.

Mitigation Measure BIO-6: Provide Escape Ramps or Cover Open Trenches

To avoid entrapment of wildlife, all excavated steep-walled holes, or trenches more than 4 inches deep will be provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each workday. If escape ramps cannot be provided, then holes or trenches will be covered with plywood or similar materials. Providing escape ramps or covering open trenches will prevent injury or mortality of wildlife resulting from falling into trenches and becoming trapped. The trenches will be thoroughly inspected for the presence of federally listed species at the beginning of each workday. Any species observed shall be allowed to voluntarily move outside of the work area on its own.

Timing: During construction.

Responsibility: County of Mariposa / Construction Contractor.

Mitigation Measure BIO-7: Avoid Limestone Salamander Active Period

Restrict construction-related activities during the limestone salamander active period, which is generally between November and March and during wet, rainy, or humid periods. If construction activities will occur during the active season, salamander exclusion fencing in the form of 24-inch sheet metal will be erected around the work area and a biological monitor will be onsite during all ground disturbing activities.

Timing: During construction.

Responsibility: County of Mariposa / Construction Contractor.

Mitigation Measure BIO-8: Restrict In-stream Work to Low-flow Period

To minimize impacts of dewatering and construction on foothill yellow-legged frog, western pond turtle, and other resident aquatic species, limit in-creek construction to between June 1 and October 15, unless otherwise specified by appropriate agencies. This window can be extended based on stream conditions, if approved in writing by regulatory agencies with jurisdiction. Work from the existing roadway, top of banks, and within falsework can occur year-round.

Timing: During construction.

Responsibility: County of Mariposa / Construction Contractor.

Mitigation Measure BIO-9: Monitor during Dewatering Activities

Appropriate temporary cofferdams shall be used to dewater the construction site and divert water through the project footprints during the construction period to prevent impeding water flow through the work area. When dewatering is required, a qualified biologist shall be present during the dewatering period to inspect and ensure that sensitive aquatic species will not be trapped within the temporary cofferdams and to monitor the construction site during aquatic species relocation and dewatering activities. If foothill yellow-legged frog or any other special-status aquatic species are found within the cofferdams, then all work shall stop and the appropriate agencies shall be notified. Any species observed shall be allowed to voluntarily move outside of the work area on its own. All cofferdams shall be inspected and maintained on a daily basis to ensure its integrity for the duration of the work below the OHWM of the creek. Pumps used for dewatering shall have fish screens, as identified in Project permits, installed to minimize intake of fish and other aquatic species into pumps. Diversion structures shall be left in place until all in-stream work is completed.

At the completion of project construction, the County/contractor shall remove from the streambed all materials used to maintain flow and divert water from the project site during the construction period, including cofferdams, pipes, and filter fabric. Temporary culverts and all construction materials and debris shall be removed from the affected area prior to reestablishing flow and prior to the rainy season. A monitor shall be present during the removal of dewatering materials.

Timing: During construction.

Responsibility: County of Mariposa / Construction Contractor.

Mitigation Measure BIO-10: Monitor during Ground Disturbance and Vegetation Removal

A qualified biological monitor will be present during all project activities requiring ground disturbance or vegetation removal within the construction area. Vegetation less than 3 inches in diameter will be cleared by hand or small engine weed eaters or chainsaws. Small material or grasses will be mowed close to ground with low impact rubber-tired tractors. Vegetation over 3 inches in diameter may require larger equipment such as telescoping chainsaws, hoe-mounted flail mowers, bucket machines to hoist crews and equipment, and climbing crews with chainsaws.

The biological monitor must be a biologist with demonstrated knowledge of limestone salamander, foothill yellow-legged frog, and western pond turtle natural history, ecology and identifying characteristics, as well as demonstrated field experience identifying other amphibian and reptile species within the range of these listed species.

Timing: During construction.

Responsibility: County of Mariposa / Construction Contractor.

Special-Status Bird Species

Willow Flycatcher. No willow flycatcher (state endangered and Forest Service sensitive species) or nests were observed in the BSA during biological surveys. However, there are two documented CNDDDB records for willow flycatcher within a 10 mile radius of the BSA. The nearest CNDDDB record is dated 1986 and is located approximately 8.7 miles north of the BSA. The record documents willow flycatcher nesting activity with territorial males in Yosemite National Park. Nesting habitat within the BSA consists of riparian vegetation within the river floodplain.

If willow flycatcher are present within the proposed project footprint during construction activities, the proposed project may affect this species. Noise associated with construction activities and vegetation removal involving heavy equipment operation that occurs during the breeding season (generally between March 1 and August 31) could directly affect nesting willow flycatcher if an active nest is located in or near the BSA. Additionally, vegetation removal and ground disturbance activities will result in alteration of suitable riparian habitat along Moss Creek (see **Figures 3-3 and 3-4**), resulting in a **potentially significant** impact.

Implementation of the species avoidance (including preconstruction nesting/species surveys, environmental awareness training, site monitoring, site replanting and revegetation, and wildlife refugia protection) measures identified in **Mitigation Measures BIO-1 through BIO-4 and BIO-10** (more fully described above) would reduce the potentially significant impact associated with disturbance and loss of willow flycatcher foraging and nesting habitat to a **less-than-significant** level.

American Peregrine Falcon. No American peregrine falcon (a federally delisted, state delisted, and fully protected species) or nests were observed in the BSA during the biological surveys conducted for the project. Nesting habitat in the project vicinity consists of steep cliffs along the Merced and Moss Canyons outside the BSA. Within the BSA, riparian vegetation may provide foraging habitat for American peregrine falcons. There is one documented CNDDDB record for American peregrine falcon within a 10 mile radius of the BSA.

If American peregrine falcon is present within the proposed project footprint during construction activities, the proposed project may affect this species. Noise associated with construction activities and vegetation removal involving heavy equipment operation that occurs during the breeding season (generally between March 1 and August 31) could directly affect nesting species if an active nest is located in or near the BSA. Additionally, vegetation removal and ground disturbance activities will result in alteration of suitable riparian habitat along Moss Creek (see **Figures 3-3 and 3-4**), resulting in a **potentially significant** impact.

Implementation of the species avoidance (including preconstruction nesting/species surveys, environmental awareness training, site monitoring, site replanting and revegetation, and wildlife refugia protection) measures identified in **Mitigation Measures BIO-1 through BIO-4 and BIO-10** (more fully described above) would reduce the potentially significant impact associated with disturbance and loss of American peregrine falcon foraging and nesting habitat to a **less-than-significant** level.

Golden Eagle. No golden eagle (state fully protected species) or nests were observed in the BSA during biological surveys. However, potential golden eagle nesting habitat is present in tall trees

that overlook the BSA, but it is unlikely that this species would nest in the BSA. The montane hardwood and annual grassland vegetation communities provide foraging habitat for golden eagles in the form of small rodent prey within and adjacent to the BSA.

If golden eagles are present within the proposed project footprints during construction activities, the proposed project may affect this species. Noise associated with construction activities and vegetation removal involving heavy equipment operation that occurs during the breeding season (generally between March 1 and August 31) could directly affect nesting golden eagle if an active nest is located in tall trees near the BSAs. Additionally, vegetation removal and ground disturbance activities will result in alteration of golden eagle foraging habitat (see **Figures 3-3 and 3-4**), resulting in a **potentially significant** impact.

Implementation of the species avoidance (including preconstruction nesting/species surveys, environmental awareness training, site monitoring, site replanting and revegetation, and wildlife refugia protection) measures identified in **Mitigation Measures BIO-1 through BIO-4 and BIO-10** (more fully described above) would reduce the potentially significant impact associated with disturbance and loss of golden eagle foraging and nesting habitat to a **less-than-significant** level.

Bald Eagle. No bald eagles (state listed endangered and fully protected species) or their nests were observed in the BSAs during the wildlife surveys. While large coniferous trees are located in the BSA, this species is more likely to occur nesting on larger trees within the project vicinity along the steep cliff faces where views are less obstructed and human disturbance is minimal. Suitable foraging habitat is present in and adjacent to the BSA.

While bald eagle nesting habitat may be present within the BSA, the likelihood of presence is considered low. Vegetation removal and ground disturbance activities could result in the alteration of a small area of bald eagle foraging habitat. However, vegetation removal and ground disturbance activities will only occur at the edge of the forest, along a roadway where bald eagles are less likely to forage (see **Figures 3-3 and 3-4**). Soil disturbance could result in temporary impacts to water quality in aquatic foraging habitat for bald eagle in the watershed. Consequently, vegetation removal and soil disturbance will result in impacts to water quality in aquatic foraging habitat for bald eagle, resulting in a **potentially significant** impact.

Implementation of the species avoidance (including preconstruction nesting/species surveys, environmental awareness training, site monitoring, site replanting and revegetation, and wildlife refugia protection) measures identified in **Mitigation Measures BIO-1 through BIO-4 and BIO-10** (more fully described above) would reduce the potentially significant impact associated with disturbance and loss of bald eagle foraging habitat to a **less-than-significant** level.

Other Protected Migratory Birds and Raptors. Although no potential raptor nests or other large bird nests were identified within the project footprint during the wildlife surveys, the BSA has the potential to support nesting birds and raptors within the riparian, ruderal, and the developed habitats. Migratory birds and raptors could nest in trees and along bridge structures within or adjacent to the BSA. The breeding season for most birds and raptors within the region is generally from March 1 to August 31. The occupied nests and eggs of these birds are protected by federal and state laws, including the MBTA and CFGC Sections 3503 and 3503.5.

Removal of trees, shrubs and the bridge structure will directly affect nesting birds if present. Additionally, noise associated with construction activities involving heavy equipment operation

that occurs during the breeding season (generally between March 1 and August 31) will disturb nesting migratory birds and raptors if an active nest is located near these activities. Any disturbance that causes migratory bird or raptor nest abandonment and subsequent loss of eggs or developing young at active nests located at or near the construction work area (**Figures 3-3 and 3-4**) would violate CFGC Sections 3503 or 3503.5 and the MBTA, resulting in a ***potentially significant*** impact.

Implementation of the species avoidance (including preconstruction nesting surveys, environmental awareness training, site monitoring, site replanting/revegetation, and wildlife refugia protection) measures identified in **Mitigation Measures BIO-1** through **BIO-4** and **BIO-10** (more fully described above) would reduce the potentially significant impact associated with disturbance and loss of protected migratory birds and raptors nesting habitat to a ***less-than-significant*** level.

Special Status Mammal Species

Roosting Bats. Four bat species designated as a state species of special concern have the potential to occur within the BSA: Pallid bat, spotted bat, western mastiff bat, and western red bat. Pallid bat is also a Forest Service Sensitive species. No pallid bats, spotted bats, western mastiff bats, western red bats, other roosting bats, or evidence of bat use (e.g., guano, staining) was observed in the BSA during wildlife surveys. Within the BSA, potential roosting habitat for western red bat occurs within large trees (with holes) in the montane riparian and montane hardwood vegetation communities. Potential roosting habitat for pallid bat, spotted bat, western mastiff bat, and western red bat is in the project vicinity along the Moss and Merced Canyons. Bat species could forage in openings in the montane hardwood vegetation community or above Moss Creek or the Merced River in the BSA.

If roosting bats are present within the bridge project footprint during construction activities, direct effects will include vegetation removal, soil disturbance, and construction activities in areas that could support roosting bats. Noise associated with construction activities involving heavy equipment operation will also disturb roosting bats if they are found to be using habitat near these activities. Bat foraging habitat will also be temporarily affected through vegetation removal activities (see **Figures 3-3 and 3-4**). However, construction activities are not expected to disturb foraging pallid bats, western red bats, or other bat species, as these activities would not be conducted during dusk or dark when bats would be actively foraging. Vegetation removal and ground disturbance activities will result in the temporary alteration of bat nesting and foraging habitat within and slightly adjacent to the project site resulting in a ***potentially significant*** impact.

Implementation of the species avoidance (including preconstruction nesting/species surveys, environmental awareness training, site monitoring, and site replanting/revegetation) measures identified in **Mitigation Measures BIO-1** through **BIO-4** and **BIO-10** (more fully described above) would reduce the potentially significant impact to bat nesting and foraging habitat to a ***less-than-significant*** level.

Ringtail. The ringtail is designated as fully protected by the state. While no ringtails or their sign were observed in the BSA during the wildlife surveys, potential foraging and den habitat for ringtail occurs within large trees in the montane hardwood and riparian hardwood vegetation communities in the BSA (see **Figure 3-4**). Forage that is present includes berries from berry

producing vegetation, insects, and small vertebrate prey such as mice or lizards. This species is nocturnal and very difficult to observe during the day and would not likely be detected during daytime surveys.

If ringtail are present within the bridge project footprint during construction activities, direct effects will include vegetation removal, soil disturbance, and construction activities in areas that could support potential foraging, cover, or denning habitat for this species. Additionally, noise associated with construction activities involving heavy equipment operation will also temporarily disturb ringtail that may forage within the BSA (see **Figures 3-3 and 3-4**). However, ringtails typically forage after sunset and so would not be foraging in the project construction footprints during daylight hours. Vegetation removal and ground disturbance activities will result in the temporary alteration of ringtail foraging, cover, and denning habitat within and slightly adjacent to the project site, resulting in a ***potentially significant*** impact.

Implementation of the species avoidance (including preconstruction species surveys, environmental awareness training, site monitoring, site replanting/revegetation, and wildlife escape/safety protocols) measures identified in **Mitigation Measures BIO-1 through BIO-4 and BIO-10** (more fully described above) would reduce the potentially significant impact to ringtail foraging, cover, and denning habitat to a ***less-than-significant*** level.

American Badger. The American badger is a state species of special concern. No American badger, their sign, or their burrows were observed in the BSA during the wildlife surveys. Potential habitat for this species is present throughout the BSA in areas with an open canopy and friable soils for digging. Small mammal prey was abundant throughout the BSA evidenced by small mammal burrows. Although this species is unlikely to den in the impact areas of the BSA, it is more likely to occur on the fringes of the BSA and further from the roads and human activities.

If American badger are present within the bridge project footprints during construction activities, direct effects will include vegetation removal, soil disturbance, and construction activities in areas that could support potential foraging, cover, or denning habitat for this species. Additionally, noise associated with construction activities involving heavy equipment operation will also temporarily disturb badgers that may forage within the BSA (see **Figures 3-3 and 3-4**). However, American badgers typically forage away from human activity so would not be foraging within the project footprint during daylight hours. Vegetation removal and ground disturbance activities will result in the temporary alteration of American badger foraging, cover, and denning habitat within and slightly adjacent to the project site, resulting in a ***potentially significant*** impact.

Implementation of the species avoidance (including preconstruction species surveys, environmental awareness training, site monitoring, site replanting/revegetation, and wildlife escape/safety protocols) measures identified in **Mitigation Measures BIO-1 through BIO-4 and BIO-10** (more fully described above) would reduce the potentially significant impact to American badger foraging, cover, and denning habitat to a ***less-than-significant*** level.

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?

Waters of the U.S. and State, and riparian vegetation communities qualify as natural communities of special concern, as they are regulated by state and federal resource agencies. **Table 3-4** summarizes temporary and permanent impacts on these vegetation communities (including sensitive natural communities). Areas classified as “Developed” are not included in the table below because they lack habitat value.

Table 3-4. Impacts to Vegetation Communities within the Biological Study Area

Vegetation Community	Permanent Impact (acres)	Temporary Impact (acres)
Upland Communities		
Annual Grassland	0.038	0.053
Montane Hardwood	0.059	0.156
Waters of the U.S. and State and Riparian		
Montane Riparian (Moss Creek/Merced River)	0.006	0.055
Waters of the U.S. and State		
Perennial Stream (Moss Creek/Merced River)	0	0.021
Total	0.103	0.285

Source: *Natural Environment Study* (Area West Environmental, Inc. 2020)

Within the project site, the bed, bank, and channel of Moss Creek are regulated by CDFW under Section 1602 of the CFGC for protecting fish and wildlife resources; riparian habitat along the creek bank may be evaluated as part of the Section 1602 permit. While the proposed project has been sited to minimize impacts within the project site (using developed areas and roadway approaches surrounding Bridge #40C0064 for staging), construction of the proposed project will result in both temporary and permanent impacts to both aquatic and riparian habitats or vegetation communities within the project site.

As summarized in **Table 3-4**, project construction activities would result in 0.076 acre temporary impact and 0.006 acre of permanent impact to waters of the U.S. and State (Moss Creek). Removal of the existing piers would alter approximately 0.001 acre within the perennial stream (Moss Creek) below the OHWM. The pier removal would eliminate a structure from within Moss Creek, but the creek channel is lined with concrete under the existing bridge and the concrete will remain after the removal of the piers; therefore, pier removal is not considered either restoration or an impact. Permanent impacts would occur from the fill of approximately 0.006 acre of waters of the U.S. and State for the installation of new rock slope protection along the new abutments.

Temporary impacts to Moss Creek would result from disturbance by vegetation removal, and water diversion (if necessary). Additionally, earth moving activities adjacent to Moss Creek due to construction of the new bridge abutments could result in increased sediment loads, turbidity, and siltation into the stream. The accidental introduction of washwater, solvents, oil, cement, or other pollutants during construction could also harm the aquatic environment in Moss Creek.

Within the BSA, the montane riparian vegetation community occupies the edge of Moss Creek and the Merced River, below the OHWM. While the proposed project has been designed or sited to minimize impacts on riparian vegetation by limiting disturbance to the smallest work limits possible, implementation of the proposed project will result in 0.055 acre of temporary impacts to riparian vegetation and 0.006 acre of permanent impacts to riparian vegetation within the

Moss Creek perennial stream OHWM (see **Table 3-4**). Permanent impacts will occur from the placement of approximately 52 cubic yards of rock slope protection within a 0.006 acre (260 square feet) area of montane riparian habitat (within Moss Creek perennial stream OHWM). Temporary impacts will occur from vegetation clearing, grubbing, or trimming of tree canopy that will be required in order to provide construction access, equipment access, and a temporary detour for Incline Road.

The loss of riparian vegetation can have adverse effects on terrestrial and aquatic habitat in Moss Creek. Riparian vegetation reduces sedimentation and erosion along stream banks. This vegetation community also provides nesting habitat for bird species, creates an important movement corridor for wildlife, overhanging canopies provide shade, and riparian vegetation offers habitat for invertebrates that are a source of food for aquatic and terrestrial life. Therefore, loss of riparian trees and shrubs can adversely affect the aquatic habitat for sensitive species.

As part of the proposed project, the County will obtain a California Fish and Game Code 1600-1602 Streambed Alteration Agreement (SAA) from the CDFW. Implementation of all SAA permit requirements and habitat revegetation measures including riparian/native vegetation habitat re-planting requirements (see **Mitigation Measures BIO-4**, more fully described above) will be required to mitigate impacts to these sensitive natural communities. Additionally, the implementation of best management practices to protect wildlife and habitats (**Mitigation Measures BIO-2** and **BIO-3** more fully described above), erosion prevention measures/water quality best management practices provided under **Mitigation Measure BIO-5** (also more fully described above), and the invasive plant species reduction measures provided in **Mitigation Measure BIO-11** and **Mitigation Measure BIO-12** (see below) would serve to further minimize impacts to sensitive natural communities. Consequently, this impact is *less-than-significant* with incorporation of **Mitigation Measures BIO-2** through **BIO-5**, **BIO-11**, and **BIO-12**.

Mitigation Measure BIO-11: Avoid the Spread of Invasive Plant Species

The following mitigation measures shall be implemented, as appropriate, to avoid the spreading of invasive plant species throughout the project sites during construction activities, particularly in riparian areas:

- All hay, straw, hay bales, straw bales, seed, mulch, or other material used for erosion control or landscaping on the project sites shall be free of noxious weed seeds and propagules.
- All equipment brought to the project sites for construction shall be thoroughly cleaned of all dirt and vegetation prior to entering the site, in order to prevent importing noxious weeds.
- All material brought to the sites, including rock, gravel, road base, sand, and top soil, shall be free of noxious weed seeds and propagules.

Timing: During and after construction.

Responsibility: County of Mariposa / Construction Contractor.

Mitigation Measure BIO-12: Install Catchment Tarps Prior to any Work Activity to the Bridge

Prior to any bridge demolition, decommissioning, or work activity within the channel floodway embankments, catchment tarps, or “bridge diapers” will be installed to ensure all construction debris is caught and removed daily from the work area.

Timing: Before and during construction.

Responsibility: County of Mariposa / Construction Contractor.

c) Have a substantial adverse effect on State or Federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Moss Creek and the Merced River are perennial streams and would be considered waters of the U.S. and State because they have a well-defined OHWM and because water that flows within these streams drain to a navigable waterway (see **Figure 3-2**). No wetlands were identified during field surveys.

Project construction activities would result in 0.076 acre temporary impact and 0.006 acre of permanent impact to waters of the U.S. and State (Moss Creek) (**Table 3-4, Figure 3-4**). Removal of the existing piers would alter approximately 0.001 acre within the perennial stream (Moss Creek) below the OHWM. The pier removal would eliminate a structure from within Moss Creek, but the creek channel is lined with concrete under the existing bridge and the concrete will remain after the removal of the piers; therefore, pier removal is not considered either restoration or an impact.

Temporary impacts to Moss Creek would result from disturbance by vegetation removal, and water diversion (if necessary). The water diversion system may include screened pumps, a temporary pipe network, siltation baffles, and installation of cofferdams in the form of water bladders, sheet piling, stacked sand bags, and/or clean rock/gravel with a plastic liner to route flow through and around the immediate work area, maintain dewatered conditions, and return flow to the downstream channel network without causing harm to biological resources or affecting water quality. Waters located in the proposed project footprint would either be treated per SWPPP requirements, or disposed of per RWQCB requirements.

Additionally, earth moving adjacent to Moss Creek due to construction of the new bridge abutments could result in increased sediment loads, turbidity, and siltation into the stream. The accidental introduction of washwater, solvents, oil, cement, or other pollutants during construction could also harm the aquatic environment in Moss Creek.

As part of the proposed project, the County will obtain a Clean Water Act Section 404 Nationwide Permit from the USACE; and a Clean Water Act Section 401 Water Quality Certification Waiver from the Regional Water Quality Control Board.

Implementation of all permit requirements and habitat revegetation measures including riparian/native vegetation habitat re-planting requirements (see **Mitigation Measures BIO-4**, more fully described above) will be required to mitigate impacts to these sensitive natural

communities. Additionally, the implementation of best management practices to protect wildlife and habitats (**Mitigation Measures BIO-2, BIO-3, BIO-7, BIO-10, BIO-11, and BIO-12** more fully described above) and the erosion prevention measures/water quality best management practices provided under **Mitigation Measure BIO-5** (also more fully described above) would serve to further minimize impacts to waters of the U.S. and State. Consequently, this impact is *less-than-significant* with incorporation of **Mitigation Measures BIO-2 through BIO-5, BIO-7, BIO-10, BIO-11, and BIO-12**.

- 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?**

See checklist Item “a” through “c” above.

- e) **Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**

The proposed project is likely to require the removal of up six (6) native trees with dbh greater than 2 inches within the montane riparian vegetation community. Tree types include Canyon live oak (*Quercus chrysolepis*), Interior live oak (*Quercus wislizeni*), and Oregon ash (*Fraxinus latifolia*). **Appendix A** of this IS/MND includes an inventory of all trees to be affected (removal or trimming) by the proposed project along with a description of the individual tree health and size. While Mariposa County does not have an oak tree ordinance or management plan, the Mariposa County Resource Management District does implement the County’s Voluntary Oak Woodland Management Guidelines which plans for the retention and replacement of all types of trees (including heritage sized oaks), to reforest oak species through natural or artificial regeneration, remove hazard trees, and retain wildlife trees. Implementation of the management practices to protect native trees and vegetation through the establishment of protective fencing around environmentally sensitive habitats (including riparian and oak woodlands) surrounding the construction sites, onsite revegetation requirements using native plant species, and preventative measures to minimize the spread of invasive plant species are consistent with the goals and objectives of the County’s Voluntary Oak Woodland Management Guidelines. Consequently, this impact is *less-than-significant* with incorporation of **Mitigation Measures BIO-2, BIO-3, BIO-4, BIO-10, and BIO-11** (more fully described above).

- 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?**

There are no adopted habitat conservation plans, natural community conservation plans, or other approved plans that apply to the project site. **No impact** would occur.

3.7 Cultural Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
V. CULTURAL RESOURCES.					
Would the project:					
a) Cause a substantial adverse change in the significance of a historical resource pursuant to California Code of Regulations (CCR) Section 15064.5?	☐	☒	☐	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CCR Section 15064.5?	☐	☒	☐	☐	☐
c) Disturb any human remains, including remains interred outside of dedicated cemeteries?	☐	☒	☐	☐	☐

3.7.1 Environmental Setting

A *Historic Property Survey Report (HPSR) / Archaeological Survey Report (ASR) / Environmentally Sensitive Area (ESA) Action Plan* / (Far Western Anthropological Research Group, Inc. 2019) was prepared and reviewed by the County and Caltrans environmental staff. An Area of Potential Effect (APE) Map was also prepared (see **Figure 2-3**, above in **Chapter 2**) and approved by Caltrans.

A *Finding of No Adverse Effect Without Standard Conditions (FNAE – No SC)* (Far Western Anthropological Research Group, Inc., 2021) document was also prepared to assist with project compliance under Section 106 of the National Historic Preservation Act (NHPA). The document applied the “Criteria of Adverse Effect” as set forth in Title 36 Code of Federal Regulations (CFR) Part 800.5 (36 CFR 800) to the Yosemite Valley Railroad Grade, a resource that passes through the APE, and is considered eligible for listing in the National Register of Historic Properties (NRHP). The FNAE- No SC concluded that implementation of the proposed project will have no adverse effect on the Yosemite Valley Railroad Grade. The Caltrans Cultural Studies Office has approved the FNAE-No SC conclusions and the State Historic Preservation Officer (SHPO), after reviewing the findings, provided a “No Objection” statement to the FNAE-No SC conclusions (letter dated July 29th, 2021).

The HPSR/ASR/ESA prepared for the proposed project includes archival research and outreach to the Native American Heritage Commission (NAHC) and local Native American representatives and/or tribal contacts, as detailed below. As described in the documents, an intensive pedestrian survey of the APE (including the area of direct impact, see **Figure 2-3**) was also performed by a qualified archaeologist on July 10, 2018.

The APE (or “study area”, as referenced in other sections of this Initial Study) incorporates all areas subject to project-related impacts, including staging areas and grading limits, as shown in **Figure 2-3** (see **Chapter 2**, above). The project study area includes the existing bridge (Bridge No. 40C0064), the creek bed directly under the bridge deck and areas adjacent to the existing bridge abutments.

Archival Search and Literature Review

As part of the background research for this project, a records search (File No. 10732M) at the California Historical Resource Information System Central California Information Center (CCIC) in Turlock was conducted. Records consulted included the NRHP, the California Register of Historical Resources (CRHR), the California Historic Landmarks list, topographic maps showing the locations of sites or surveys, historic topographic maps (USGS El Portal, California 7.5-minute map [1981]), and General Land Office maps (1885 General Land Office Plat Map for T03S, R019E [Mount Diablo Base Meridian]). A 0.5-mile search radius was utilized.

The CCIC records search indicated that 15 previous reports have been conducted within the 0.5-mile search radius. The search results also identified 10 previously recorded sites and the El Portal Archaeological District (P-22-001701) within the search area (**Table 3-5**). Of the 10 sites, four are within the area of direct impact for the APE. These four resources and the El Portal Archaeological District are described below.

Table 3-5. Previously Recorded Resources within 0.5 miles of the Project Site

Site Name	Resource Type / Description	Within APE
P-22-000502	Building/Prehistoric - Merriam's "Soo-wut-oo-lah"; Lithic scatter, milling features, historic-era refuse scatter and historic-era tungsten mill. Four milling features, with a total 16 cupules present.	No
P-22-000503	BRM (Bedrock mortar) - Merriam's "Oi-ko-bah"; One BRM feature with 5 cupules.	Yes
P-22-000658	BRM - Bedrock milling site; One BRM feature with 19 cupules Bedrock milling site; One BRM feature with 19 cupules.	Yes
P-22-000662	BRM - Bedrock milling site; Three BRM features with 15 Cupules.	No
P-22-001960	Refuse Scatter - Historic-era debris scatters.	No
P-22-001967	Habitation - Historic-era debris scatters and habitation features.	No
P-22-002669	Rock feature (circular alignment).	No
P-22-002960	Power Transmission - Exchequer-Yosemite 70kV Transmission Line.	Yes
P-22-001019	Transportation - Yosemite Valley Railroad built in 1907.	Yes
P-22-001604	Transportation - State Route 140.	No

Source: HPSR/ASR for the Moss Canyon Bridge Replacement Project in Mariposa County, California (Far Western Anthropological Research Group, Inc. 2019)

CA-MRP-184 (P-22-000503) - BRM (Bedrock mortar). The site was originally recorded by California State College, Stanislaus, in 1975, and consists of a single boulder bedrock milling location with five cupules. This site was identified by Merriam as "Oi-Ko-Bah" and is listed on the National Register as a contributing element to the El Portal Archaeological District (National Register status 1D). It is located on the east bank of Moss Canyon Creek next to a check dam. The site is located within the APE and less than two feet from the area of direct impact boundary.

CA-MRP-355 (P-22-000658) - BRM. The site was recorded by the Yosemite Archaeology Office in 1992 and consists of a single boulder bedrock milling location with at least 19 cupules. It is listed on the National Register as a contributing element to the El Portal Archaeological District (National Register status 1D). It is located on the south side of Incline Road and is within the area of direct impact. The records search indicated the site was located outside the project area, but fieldwork identified its location within the area of direct impact.

CA-MRP-720 (P-22-001019) - Yosemite Valley Railroad. The Yosemite Valley Railroad was originally recorded in 1981 and a small portion is located within the area of direct impact. The project is

located along Incline Road and within the area of direct impact the road follows the original alignment of the Yosemite Valley Railroad (YVRR). The construction of the YVRR commenced in 1905, after the US Secretary of the Interior signed a document that allowed the railroad to be constructed across forest reserve (modern Forest Service) lands to the edge of Yosemite National Park. The railway allowed for tourism and easier transport of exploited natural resources from the valley. The bridge is in the original location of the rail crossing of Moss Canyon but was replaced in 1965. The resource has been determined as ineligible (National Register status 6Y). The resource will not be further investigated for this study.

P-22-002960 - Exchequer-Yosemite 70kV Transmission line. The transmission line is a part of the Exchequer power transmission system, which carried power from the Exchequer Dam up the Merced River Canyon to support commercial mining and logging activities beginning in the 1920s. The transmission line was recorded in 2012 and was recommended (though not formally evaluated) as ineligible (National Register status 6Z). A segment of the transmission line was identified in the records search to cross the eastern portion of the area of direct impact. The records search indicated an adjacent line (P-22-003291/FS-05-15-51-01450) but this was determined to be a digital plotting error and misidentified site. The site number refers to the Indian Flat Substation and is located approximately one mile from the APE.

P-22-001701 - El Portal Archaeological District. The National Register El Portal Archaeological District is comprised of a series of sites and settlement locations that were originally identified in part by C. Hart Merriam in 1917. With the help of local informants, he identified dozens of Miwok village locations and important archaeological locations, both prehistoric and historic in significance, along the Merced River Valley. The El Portal Archaeological District comprises the extent of El Portal, a five-mile-long valley with Moss and Crane Creeks on the northern boundary and Cold Canyon to the south. It was originally identified in 1917 and it has been surveyed two additional times (the 1950s and the 1970s) before its National Register nomination in 1976. A total of 16 sites are identified in the nomination as contributing elements. All contributing elements are near the Merced River on the valley floor. Significance is placed on the El Portal Archaeological District through its potential to aid in understanding of how local ecology drives indigenous settlement patterns and resource use, and how these adaptations change through time. The project is located along the western most boundary of the El Portal Archaeological District.

Field Survey

On July 10, 2018, Far Western archaeologists conducted an intensive pedestrian survey of the area of direct impact (within the APE, see **Figure 2-3**). The area was systematically surveyed in five-meter transects on both sides of the road and bridge, though environmental constraints restricted some survey. These constraints include steep bedrock slopes and riprap lined inclines. Fieldwork also included efforts to re-locate the four previously recorded sites within the area of direct impact. Any changes in site condition were noted and necessary forms updated. Field survey results are summarized below.

No previously unrecorded resources were identified during survey. Three previously recorded sites and the El Portal Archaeological District were identified as at risk during the prefield records search. Of the three sites, one linear feature (P-22-002960) could not be relocated. Two remaining prehistoric sites (MRP-184 and MRP-355) were re-located. They are simple bedrock milling locations and are contributing elements to the El Portal Archaeological District. The sites will be avoided by the project through the implementation of an Environmentally Sensitive Area Action Plan.

Native American Consultation

As part of the tribal consultation process with Native American groups and individuals, as per 36 CFR Part 800.3, the initiation of the Section 106 (of the National Historic Preservation Act) process, and Assembly Bill (AB) 52 under the provisions of CEQA, the NAHC was contacted and a list of Native American contacts was provided. The NAHC also reported that no recorded Sacred Land was within or adjacent to the project sites. Section 106 letters to the NAHC list of contacts were sent on July 9, 2018. Follow-up voicemails and emails were sent to Native American Contacts on July 17, 2018. No response was received by any of the Native American contacts. **Table 3-6** provides a summary of all Native American consultation activities to date for the proposed project.

AB 52 consultation letters were originally sent in the summer of 2020 (see **Table 3-6**); however, with updated or new tribal contacts along with the amount of time passing from the original consultation date, letters have been sent to the current tribal contacts, as of December 2022.

Table 3-6. Native American Contact Efforts

Contact	Initial Date Contacted	Method of Contact	Response
NEPA Tribal Consultation			
North Fork Mono Tribe Ron Goode, Chairperson	July 9, 2018	Letter Follow-up email, and voicemail	Follow-up email sent July 17, 2018. Follow-up voicemail July 30, 2018. No comments received.
North Fork Rancheria of Mono Indians Gary Walker, Chairperson	July 9, 2018	Letter Follow-up email, and voicemail	Follow-up email sent July 17, 2018. Follow-up voicemail July 30, 2018. No comments received.
Southern Sierra Miwuk Nation Bill Leonard, Chairperson	July 9, 2018	Letter Follow-up voicemail.	No email provided. Follow-up voicemail July 30, 2018. No comments received.
CEQA (AB52) Tribal Consultation			
North Fork Mono Tribe Ron Goode, Chairperson	June 26, 2020	Letter	Updated letter sent December 2022. No comments received.
North Fork Rancheria of Mono Indians Gary Walker, Chairperson Fred Beihn, Chairperson (updated contact)	June 26, 2020	Letter	Updated letter sent December 2022. No comments received.
Southern Sierra Miwuk Nation Bill Leonard, Chairperson Sandra Chapman, Chairperson (updated contact)	June 26, 2020	Letter	Updated letter sent December 2022. No comments received.
Tuolumne Band of Me-Wuk Indians Kevin Day, Chairperson Andrea Reich, Chairperson (updated contact)	July 29, 2020	Letter.	Updated letter sent December 2022. No comments received.

Consultation with Other Interested Parties

On December 5, 2018, Erin Potter, United States Forest Service Archaeologist, was contacted to solicit any opinions on the built environment resources in the APE. Ms. Potter had been in contact with the archaeological team and was aware of the project. She had assumed that the bridge was not eligible and that a determination of not eligible had already been made for the Yosemite Valley Railroad grade. She forwarded the e-mail to other forest service professionals.

Kathy Strain, Forest heritage Resource and Tribal Relations Program Manager received the e-mail forwarded from Ms. Potter on December 5, 2018. She also believed the Yosemite Valley Railroad grade

to have been determined not eligible and had no concerns regarding the bridge. No further responses have been received to date.

3.7.2 Discussion

a) **Cause a substantial adverse change in the significance of a historical resource pursuant to in California Code of Regulations Section 15064.5?**

Under CEQA, public agencies must consider the effects of their actions on “historical resources.” CEQA defines an “historical resource” as any resource listed in or determined to be eligible for listing in the CRHR. The CRHR includes resources listed in or formally determined eligible for listing in the NRHP, as well as some California Historical Landmarks and Points of Historical Interest. Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts) or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR and are presumed to be significant resources for purposes of CEQA unless a preponderance of evidence indicates otherwise (California PRC Section 5024.1, 14 CCR Section 4850). The eligibility criteria for listing in the CRHR are similar to those for NRHP listing but focus on importance of the resources to California history and heritage. A cultural resource may be eligible for listing on the CRHR if it:

1. is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
2. is associated with the lives of persons important in our past;
3. embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of an important creative individual or possesses high artistic values; or
4. has yielded, or may be likely to yield, information important in prehistory or history.

In addition to meeting one or more of the above criteria, resources eligible for listing in the CRHR must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association resources (CCR, CRHR, Title 14, Chapter 11.5, Section 4852(c)).

As described above, the following archaeological sites within the APE are considered eligible for inclusion in the NRHP and/or as a California Historical Landmark:

- El Portal Archaeological District (P-22-001701).
- CA-MRP-184 (P-22-000503) – Prehistoric bedrock milling location (contributing element to District).
- CA-MRP-355 (P-22-000658) – Prehistoric bedrock milling location (contributing element to District).

Construction of the proposed project would require ground disturbing work during existing bridge removal and replacement, which may result in direct or indirect damage to the archaeological resources described above, resulting in a ***potentially significant impact*** to a cultural resource considered eligible for inclusion in the NRHP. To ensure the archaeological sites are protected from construction-related disturbances or damage, the construction contractor will be required to implement site specific ESAs (resource avoidance measures) throughout the duration of project-associated ground-disturbing activities. Implementation of ESA tasks (resource flagging, monitoring by an archaeologist, and coordination with Caltrans) identified in **Mitigation Measure CUL-1** would reduce this ***potentially significant*** impact to NRHP eligible resources to a ***less-than-significant*** level.

The “Environmental Setting” section describes two additional resources within the area of direct impact. These include “CA-MRP-720 (P-22-001019) - Yosemite Valley Railroad” and “P-22-002960 - Exchequer-Yosemite 70kV Transmission line”. P-22-002960 - Exchequer-Yosemite 70kV Transmission line could not be re-located during the field surveys conducted for the proposed project, with no powerlines or towers observed. For CA-MRP-720 (P-22-001019) - Yosemite Valley Railroad, Caltrans has received approval to consider the Yosemite Valley Railroad Grade, which passes through the APE (Incline Road), as eligible for listing in the NRHP, based on technical documents (HPSR/ASR) prepared for the proposed project. The FNAE- No SC prepared for the project concluded that implementation of the proposed project would not have an adverse effect on the Yosemite Valley Railroad Grade due to the project’s scale (single bridge replacement) compared to the larger project alignment (larger setting/feeling remaining unchanged).

Construction of the proposed project would require ground disturbing work during existing bridge removal, traffic detour, bridge abutment installation, grading, and RSP placement. During construction, the possibility remains that a previously undiscovered historic resource meeting NRHR or CRHR significance criteria may be discovered during project-related ground-disturbing activities. If these actions were to occur, then it would result in a ***potentially significant*** impact. Implementation of standard inadvertent discovery procedures (identified in **Mitigation Measures CUL-2**) would reduce this ***potentially significant*** impact to any previously undiscovered subsurface historic resources (including tribal resources) to a ***less-than-significant*** level. Consequently, this impact is ***less-than-significant*** with incorporation of **Mitigation Measures CUL-2**.

Mitigation Measure CUL-1: Archaeological Site Avoidance Measures

The two archaeological sites (Site CA-MRP-184/P-22-00503 and Site MRP-355/P-22-00658) will be protected as ESAs throughout the duration of project-related ground-disturbing activities. National Register-eligible sites Site CA-MRP-184/P-22-00503 and Site MRP-355/P-22-00658 are contributing elements of the National Register El Portal Archaeological District (P-22-001701). To avoid impacts to the two archaeological sites and the larger El Portal Archaeological District, the County and the construction contractor(s) shall implement the following measures from the ESA Action Plan prepared for the proposed project:

- The two ESAs will be flagged and covered with orange plastic mesh to protect designated site areas. Each ESA will be clearly delineated on construction plans and noted for avoidance.

- At least three weeks in advance, the Resident Engineer (RE) will notify the Caltrans PQS Archaeologist of the beginning construction date. Prior to construction, the Caltrans PQS will coordinate with the County Project Manager to ensure the ESAs are delineated according to **Table 1**. Qualified archaeological and biological consultants under the supervision of Caltrans PQS, will monitor the installation of flagging and orange plastic mesh covers. No project impacts may occur within the ESA, and the provisions of the Archaeological Monitoring Area Plan must be followed.

Table 1. Environmentally Sensitive Area and Archaeological Monitoring Area Locations.

Location	Management Measures
ESA 1	
CA-MRP-184/ P-22-00503	Temporary flagging (Type ESA) and covered with orange plastic mesh will be installed beginning 45 feet north of Incline Road, 10 ft west of Moss Creek. The flagging will be installed along the southern boundary of the archaeological site and is estimated at a total of 33 linear feet of ESA flagging.
ESA 2	
CA-MRP-355/ P-22-00658	Temporary flagging (Type ESA) and covered with orange plastic mesh will be installed beginning 10 feet south of Incline Road, 10 feet north of the Merced River. The flagging will be installed around the entirety of the archaeological site and is estimated at a total of 83 linear feet of ESA flagging.

- The ESAs will be flagged and covered with orange plastic mesh (Temporary Flagging [Type ESA]), and will be posted as an ESA. ESA 1 will be flagged along the southern boundary. ESA 2 flagging will entirely surround the site. If fencing placement around ESA 2 is not possible due to seasonal water inundation, the area will be otherwise delineated where possible. No construction or associated activities (e.g., parking, equipment storage) can take place within the ESAs.

Timing: Before and during construction.

Responsibility: County of Mariposa / Construction Contractor.

Mitigation Measure CUL-2: Discovery of Cultural Resources during Ground-Disturbing Activities

To minimize the potential for significant impacts to undiscovered historical resources and unique archaeological resources during project-related ground-disturbing activities, the County and the construction contractor(s) shall implement the following:

If a potentially significant historical or archaeological resource is encountered during subsurface construction activities (e.g., trenching, grading), all construction activities within a 50-foot radius of the identified potential resource shall cease until a qualified archaeologist evaluates the item for its significance and records the item on the appropriate State Department of Parks and Recreation forms. The archaeologist shall determine whether the item requires further study. If, after the qualified archaeologist conducts appropriate technical analyses, the item is determined to be significant under CEQA, the archaeologist shall recommend feasible mitigation measures, which may include avoidance, preservation in place or other appropriate measure, as outlined in Public Resources Code section 21083.2. Upon the County's approval of the recommended mitigation measures, the project proponent shall implement said measures. The County shall fund the costs of the qualified archaeologist and required analysis and shall include this mitigation measure in every construction contract to inform contractors of this requirement.

Timing: During construction.

Responsibility: County of Mariposa / Construction Contractor.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to California Code of Regulations Section 15064.5?

The State CEQA Guidelines require consideration of unique archaeological resources (CCR Section 15064.5). As used in California PRC Section 21083.2, the term “unique archaeological resource” refers to an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information,
- has a special and particular quality such as being the oldest of its type or the best available example of its type, or
- is directly associated with a scientifically recognized important prehistoric or historic event or person.

While implementation of the proposed project will result in the construction of a new bridge within the same alignment as the existing bridge, construction activities (including excavations and grading) could potentially damage or destroy any displaced artifacts within the study area boundaries from surrounding archaeological resources. If this were to occur, then it would result in a **potentially significant** impact. Implementation of resource avoidance and standard inadvertent discovery procedures (identified in **Mitigation Measures CUL-2**, see above) would reduce this **potentially significant** impact to any previously undiscovered subsurface archaeological resources to a **less-than-significant** level. Consequently, this impact is **less-than-significant** with incorporation of **Mitigation Measures CUL-2**.

c) Disturb any human remains, including remains interred outside of dedicated cemeteries?

No human remains have been identified or discovered in the study area (or surrounding area) and it is not anticipated that human remains, including those interred outside of dedicated cemeteries, would be discovered during ground disturbance activities resulting from the proposed project. However, should human remains, including those interred outside of formal cemeteries and including associated items and materials, be discovered during subsurface activities, the human remains and associated items and materials could be inadvertently damaged resulting in a **potentially significant** impact. However, implementation of resource discovery and avoidance measures consistent with the California Health and Safety Code and California PRC Section 5024.1, 14 CCR Section 4850 (as described in **Mitigation Measure CUL-3**) would reduce this **potentially significant** impact to a **less-than-significant** level. Consequently, this impact is **less-than-significant** with incorporation of **Mitigation Measures CUL-3**.

Mitigation Measure CUL-3: Accidental Finding of Human Remains

1. If human remains are found, the California Health and Safety Code requires that excavation be halted in the immediate area and that the Mariposa County Coroner be notified to determine the nature of the remains. The Coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (California Health and Safety Code, Section 7050.5[b]). If the Coroner determines that the remains are those of a Native American, he or she must contact the Native American Heritage Commission (NAHC) by telephone within 24 hours of making that determination (California Health and Safety Code, Section 7050.5[c]).
2. Once notified by the Coroner, the NAHC shall identify the person it believes is the Most Likely Descendant (MLD) of the Native American remains. With permission of the legal landowner(s), the MLD may visit the site and make recommendations regarding the treatment and disposition of the human remains and any associated grave goods. This visit should be conducted within 24 hours of the MLD's notification by the NAHC (California Public Resources Code [PRC], Section 5097.98[a]). If a satisfactory agreement for treatment of the remains cannot be reached, any of the parties may request mediation by the NAHC (California PRC, Section 5097.94[k]). Should mediation fail, the landowner or landowner's representative must reinter the remains and associated items with appropriate dignity on the property in a location not subject to further subsurface disturbance (California PRC, Section 5097.98[b]).

Timing: During construction.

Responsibility: County of Mariposa / Construction Contractor.

3.8 Energy

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
VI. ENERGY.					
Would the project:					
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐	☐
b) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒	☐

3.8.1 Environmental Setting

This section provides an evaluation of existing energy production/consumption conditions, as well as potential energy use and related impacts from the proposed project. The following discussion is consistent with and fulfills the intent of Appendix F (Energy Conservation) and Appendix G (Environmental Checklist Form) of the State CEQA Guidelines.

California Energy Overview

California's major sources of energy are petroleum products (i.e., gasoline, diesel, and oil), electricity, and natural gas.

Electricity. California's electricity needs are satisfied by a variety of entities, including investor-owned utilities, publicly owned utilities, electric service providers and community choice aggregators. In 2020, the California power mix totaled 272,576 gigawatt hours (GWh), down 2 percent from 2019. In-state generation accounted for 190,913 GWh, or 70 percent, of the state's power mix. The remaining electricity came from out-of-state imports (California Energy Commission 2021a).

Natural Gas. Nearly 45 percent of the natural gas burned in California is currently used for electricity generation. Much of the remainder was consumed in the residential (21 percent), industrial (25 percent), and commercial (9 percent) sectors for uses such as cooking, space heating, and as an alternative transportation fuel. California continues to depend upon out-of-state imports for nearly 90 percent of its natural gas supply (California Energy Commission 2021b).

Transportation Fuels. Transportation accounts for a major portion of California's energy budget. Automobiles and trucks consume gasoline and diesel fuel, which are nonrenewable energy products derived from crude oil. Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles. In 2015, 15.1 billion gallons of gasoline were sold in California (California Energy Commission 2021b). Diesel fuel is the second most consumed fuel in California, used by heavy-duty trucks, delivery vehicles, buses, trains, ships, boats, and farm and construction equipment. In 2015, 4.2 billion gallons of diesel were sold in California (California Energy Commission 2021c).

3.8.2 Discussion

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Implementation of the proposed project would require the temporary use of energy resources for removal and construction of the bridge replacement projects over a 6 month construction period. This energy use would primarily be in the form of petroleum products and electricity used to operate construction equipment and consumed during vehicle trips associated with material delivery/debris hauling and commuting workers. Indirect energy use would also occur and include the extraction, production, and transportation of goods and materials needed for construction. While construction activities would result in the temporary consumption of energy resources in the form of vehicle and equipment fuels (gasoline and diesel fuel) and electricity/natural gas (directly or indirectly), such consumption would be incidental and temporary and would not result in wasteful, inefficient, or unnecessary consumption of energy resources. Consequently, this impact is ***less-than-significant***, with no additional mitigation measures required.

Implementation of the proposed project would require the use of minimal energy resources for operation and maintenance of the bridge. Maintenance of these structures would require minimal energy use, similar to existing County infrastructure maintenance activities. These activities would occur on an annual, or as-needed, basis. Additionally, the proposed project does not involve constructing buildings for human inhabitation, therefore no energy efficiency policies apply. For these reasons, energy impacts during proposed project maintenance and operation would be ***less-than-significant***, with no mitigation measures required, as they are considered part of existing agency operations and would not require additional sources of energy to implement.

b) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

The proposed bridge replacement project would not conflict with or obstruct a plan for renewable energy or energy efficiency. Consequently, ***no impact*** would occur.

3.9 Geology and Soils

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
VII. GEOLOGY AND SOILS.					
Would the project:					
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☒	☐	☐
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)	☐	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated),, creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒	☐
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐	☐

3.9.1 Environmental Setting

The Conservation and Open Space Element (Technical Background Report) of the Mariposa County General Plan describes the geologic resources that occur within the County.

Seismicity and Ground Shaking Potential

As part of Mariposa County's location on the western slopes of the central Sierra Nevada Mountains, the Foothills Fault System traverses the County. This fault system has a total length of more than 200 miles, located primarily along the western front of the Sierra Nevada foothills and consists of two major parallel fault and fracture zones that trend northwest-southeast across Mariposa County: the Bear

Mountains Fault Zone and the Melones Fault Zone. The Bear Mountains Fault Zone crosses the north Mariposa County line at Highway 132 near the northwest corner of Lake McClure. It trends south-southeast through the main pool of the lake near New Exchequer Dam, but appears not to continue more than a few miles to the southeast beyond the lake. The Melones Fault Zone also trends southeast across the County closely following Highway 49 from the area of Jamestown through Bear Valley to the town of Mariposa. Both fault zones are not considered to be active and are therefore not recognized as Alquist-Priolo zones by the State of California.

The probability of earthquake occurrence on the Foothills Fault System is considered low and the fault zone is classified as a "C" Zone under the Universal Building Code. Historically, few earthquakes are known to have originated in Mariposa County, and these have been relatively minor. Only two are known; one occurred in 1954 and the second in 1974. Both caused only minor damage. The historic earthquake occurrences indicate that the area could experience rare earthquakes with magnitudes of up to 6.5 in the future.

Soils and Elevation

The project site lies with the Sierra Nevada Geomorphic Province of California, which is bounded by the California Great Valley to the west and the Basin and Range to the east. The Sierra is a tilted fault block nearly 400 miles long. Its east face is a high, rugged multiple scarp, contrasting with the gentle western slope that disappears under sediments of the Great Valley. Deep river canyons are cut into the western slope. The topography is generally steep, with elevation at the project site ranging from 1,760 to 1,780 feet amsl. The native geology at each project site consists of the soil map units presented in **Table 3-7**.

Table 3-7. Soil Types within the Project Site

Soil Series Symbol and Name	Parent Material	Depth to Restrictive Layer (inches)
Dystric Xeropsamments-Dystric Xerorthents association, 0 to 20 percent slope	Alluvium derived from granitoid rock	Greater than 80 inches
Humic Haploxerepts-Rock outcrop-Ultic Haploxerafals association, 45 to 100 percent slope	Colluvium derived from metasedimentary rock and minor amounts of granitoid rock	Greater than 80 inches

Source: *Natural Environment Study* (Area West Environmental, Inc. 2020)

3.9.2 Discussion

- a) **Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:**
 - i) **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)**

As more fully described above in the “Environmental Setting”, both the Bear Mountains Fault Zone and the Melones Fault Zone are not considered active and are therefore not recognized as Alquist-Priolo zones by the State of California. According to the Alquist-Priolo Earthquake Fault Zoning Map, the project site is not located within or near an Alquist-Priolo Earthquake Fault Zone. Implementation of the proposed project would

adhere to construction recommendations in the Caltrans Design Manual and the current design parameters of the Structural Engineers of California Uniform Building Code. Therefore, the proposed project would not expose people or structures to potential substantial adverse effects involving the rupture of a known earthquake fault. **No impact** would occur.

ii) Strong seismic ground shaking?

As more fully described above in the “Environmental Setting”, both the Bear Mountains Fault Zone and the Melones Fault Zone (Foothills Fault System) are not considered active, with the probability of earthquake occurrence on the Foothills Fault System considered low. Implementation of the proposed project would be constructed consistent with the requirements of the Caltrans Seismic Design Criteria, Caltrans Bridge Design Specification, and Structural Engineers of California Uniform Building Code, and the projects would withstand any potential seismic events. Therefore, the project would not expose people or structures to potential substantial adverse effects related to seismic shaking. Impacts would be **less than significant**, with no additional mitigation measures required.

iii) Seismic-related ground failure, including liquefaction?

As more fully described above in the “Environmental Setting”, both the Bear Mountains Fault Zone and the Melones Fault Zone (Foothills Fault System) are not considered active and the project sites are not located within areas susceptible to strong ground shaking, which can contribute to liquefaction. The project area is not considered to be at risk from liquefaction hazards. The Caltrans Bridge Design Specifications require an assessment of the potential for liquefaction prior to selecting foundation type to ensure that the foundation would provide adequate support. Therefore, the proposed project would not expose people or structures to potential substantial adverse effects related to liquefaction. **No impact** would occur.

iv) Landslides?

The As more fully described above in the “Environmental Setting”, both the Bear Mountains Fault Zone and the Melones Fault Zone (Foothills Fault System) are not considered active and the project sites are not considered to be at risk from landslides as a result of active faulting. Areas with steep slopes occur along the roadway shoulders of the bridge; however, construction activities would be conducted in accordance with the County’s grading regulations, and water quality/erosion BMPs would be implemented to minimize the potential for landslides associated with soil erosion. Therefore, the project would not expose people or structures to potential substantial adverse effects related to landslides. Impacts would be **less than significant**, with no additional mitigation measures required.

b) Result in substantial soil erosion or the loss of topsoil?

Construction activities associated with the project would involve grading and excavation activities within the project site. These activities could expose barren soils to sources of wind or water, resulting in the potential for erosion and sedimentation on and off the project site. The

County plans to complete construction in the dry season, such that any surfaces disturbed during construction would be paved or re-vegetated before the raining season, keeping the potential for erosion low. Furthermore, the County would ensure the construction contractor employ the appropriate erosion control BMPs to minimize the potential for offsite erosion and sedimentation in accordance with the construction specifications and with the National Pollutant Discharge Elimination Discharge (NPDES) General Permit for Storm Water Discharges associated with construction activity. Implementation of the erosion prevention measures/water quality best management practices provided under **Mitigation Measure BIO-5** and the vegetation habitat re-planting requirements provided under **Mitigation Measure BIO-4** (more fully described in **Section 3.6 “Biological Resources”**) would serve to further minimize the proposed project’s impacts to soil loss and substantial soil erosion. Consequently, this impact is *less-than-significant* with mitigation incorporated.

- c) **Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?**

The project site is not located on a geologic unit or soil that is unstable or that would become unstable as a result of the proposed project. The Caltrans Bridge Design Specifications require an assessment of the existing onsite soils and the proposed project would be constructed following the recommendations in the Caltrans Design Manual and the current design parameters of the Structural Engineers of California Uniform Building Code as to prevent construction on unstable soils. *No impact* would occur.

- d) **Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?**

The Caltrans Bridge Design Specifications require an assessment of the potential for soil swelling prior to selecting foundation type to ensure that the foundation would provide adequate support. Furthermore, the project would adhere to construction recommendation in the Caltrans Design manual and the current design parameters of the Structural Engineers of California Uniform Building Code to reduce any expansive soil risks. Impacts related to expansive soils would be *less than significant*, with no additional mitigation measures required.

- e) **Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?**

Portable toilets would be used for construction workers. The proposed project would not require or include the construction of wastewater disposal systems of any kind. Thus, there would be *no impact* related to the ability of project site soils to support the use of septic systems.

- f) **Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

None of the previous analyses of the area have identified the project site as sensitive for paleontological resources or other geologically sensitive resources, nor have testing or ground disturbing activities performed to date uncovered any paleontological resources or geologically

sensitive resources. While the likelihood encountering paleontological resources and other geologically sensitive resources is considered low, project-related ground disturbing activities could affect the integrity of a previously unknown paleontological or other geologically sensitive resource, resulting in a ***potentially significant*** impact. However, implementation of resource discovery and avoidance measures consistent with Public Resources Code Section 21083.2 (as described in **Mitigation Measure GEO-1**) would reduce this potentially significant impact to a ***less-than-significant*** level. Consequently, this impact is ***less-than-significant*** with incorporation of **Mitigation Measures GEO-1**.

Mitigation Measure GEO-1: Avoid and Minimize Impacts to Paleontological Resources

In the event a paleontological or other geologically sensitive resources (such as fossils or fossil formations) are identified during any phase of project development, all excavations within 100 feet of the find shall be temporarily halted until the find is examined by a qualified paleontologist, in accordance with Society of Vertebrate Paleontology standards. The paleontologist shall notify the appropriate representative at Mariposa County who shall coordinate with the paleontologist as to any necessary investigation of the find. If the find is determined to be significant under CEQA, the County shall implement those measures which may include avoidance, preservation in place, or other appropriate measures, as outlined in Public Resources Code Section 21083.2.

Timing: During construction.

Responsibility: County of Mariposa / Construction Contractor.

3.10 Greenhouse Gas Emissions

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
VIII. GREENHOUSE GAS EMISSIONS.					
Would the project:					
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐	☐

3.10.1 Environmental Setting

Greenhouse gases (GHGs) are global pollutants, unlike criteria air pollutants and toxic air contaminants. Global climate change can result in increased temperatures; changes in snow and rainfall patterns; and an increase in droughts, tropical storms, and heavy rain events. Listed below are the most prominent GHGs that have been identified as contributing to global climate change:

- Carbon dioxide (CO₂)
- Methane (CH₄)
- Nitrous oxide (N₂O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur hexafluoride (SF₆)

The State of California adopted the Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32) on September 27, 2006, to address the threat of global warming caused by the increase in GHG emissions. AB 32 requires a reduction of carbon emissions to 1990 levels by the year 2020. The 1990 emissions were estimated at 427 million metric tons CO₂ equivalent (MMCO₂e).

In December 2008, the California Air Resources Board (CARB) approved the AB 32 Scoping Plan outlining the state's strategy to achieve the 2020 GHG emissions limit. The Scoping Plan estimated a reduction of 174 million metric tons CO₂e from the transportation, energy, agriculture, forestry, and high climate-change-potential sectors, and proposed a comprehensive set of actions designed to reduce overall GHG emissions in California, improve the environment, reduce dependence on oil, diversify California's energy sources, save energy, create new jobs, and enhance public health. The Scoping Plan must be updated every 5 years to evaluate the mix of AB 32 policies to ensure that California is on track to achieve the 2020 GHG reduction goal.

In response to the 2030 GHG reduction target stipulated in Executive Order B-30-15 (see discussion below), CARB released the 2017 Climate Change Scoping Plan Update in January 2017 (CARB 2017).

The 2017 Climate Change Scoping Plan Update sets the groundwork to reach California's long-term climate goals set forth in Executive Orders S-3-05 and B-16-2012 (the latter of these ordered State

agencies to facilitate the rapid commercialization of zero-emission vehicles, setting a target for the number of them on California roads and also set a goal for reduction of emissions from the transportation sector). The Climate Change Scoping Plan Update highlights California's progress toward meeting the near-term 2020 GHG emission reduction goals defined in the initial Scoping Plan. SB 350 was passed in 2015 that requires 40 percent of California electricity sold to retail customers be generated by renewable resources by the end of 2024, 45 percent by 2027, and ultimately 50 percent by 2030.

3.10.2 Discussion

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Project construction-related activities would generate a variety of greenhouse gases, such as carbon dioxide (CO₂), methane (CH₄), and nitrogen dioxide (N₂O) from the exhaust of equipment and the exhaust of vehicles for employees, visitors, and construction hauling trips. The project would also result in the short-term generation of aerosols from diesel particulate matter exhaust. Aerosols are short-lived greenhouse gases, as they remain in the atmosphere for approximately one week. The project would emit nitrogen oxides (NO_x) and reactive organic gases (ROG), which are ozone precursors. Ozone is a greenhouse gas. However, unlike the other greenhouse gases, ozone in the troposphere is relatively short-lived and is being reduced in the troposphere daily. Overall, these emissions are considered temporary or short-term.

Construction GHG emissions are generated by vehicle engine exhaust from construction equipment, on-road hauling trucks, vendor trips, and worker commuting trips. These emissions would be temporary and would not result in a significant source of GHG. The PES prepared for the project by Caltrans, dated March 2013, found the project exempt from additional analysis. Additionally, the proposed project would accommodate existing traffic and would not result in new sources of GHG emissions. **No impact** would occur.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The proposed project would result in less than significant GHG emissions during construction and no increased emissions during operation. Because the project is not creating a new source of long-term emissions, the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Therefore, this impact would be **less than significant**, with no additional mitigation measures required.

3.11 Hazards and Hazardous Materials

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

3.11.1 Environmental Setting

An *Initial Site Assessment* (Kleinfelder, Inc. 2015) was prepared and reviewed by the County and Caltrans environmental staff. Information gathered and activities performed for this initial site assessment were consistent with those required to address the Caltrans' Initial Site Assessment Checklist for Hazardous Waste (Appendix DD, Hazardous Waste, Project Development Procedures Manual, June 18, 2009).

All project-related construction activities would include the use of equipment that would use fuels, oil and lubricants, and cleaning solvents. Petroleum products, such as gasoline, diesel fuel, oil, lubricants,

and cleaning solvents would be used to fuel and maintain construction vehicles and equipment for construction of all project elements (including traffic detour, bridge removal, and new bridge construction). The routine use or reasonably foreseeable upset and accident conditions for the various hazardous materials that would be used during construction and demolition activities could result in inadvertent releases of small quantities of hazardous materials, which could adversely affect construction workers or the environment.

Construction and demolition activities are required to comply with numerous hazardous materials and stormwater regulations designed to ensure that hazardous materials are transported, used, stored, and disposed of in a safe manner to protect worker safety, to reduce the potential for a release of construction-related fuels or other hazardous materials to affect stormwater and downstream receiving water bodies, and to respond to accidental spills, if any. State and federal regulations such as the Resource Conservation and Recovery Act of 1976, Toxic Substances Control Act of 1976, Hazardous and Solid Waste Act of 1984, and the Hazardous Materials Release Response Plans and Inventory Act require measures for the safe transportation, storage, handling, and disposal of hazardous materials used for construction, including implementation of a Hazardous Materials Business Plan, use of appropriate containers, and secondary containment to contain a potential release. As described in **Section 3.6 “Biological Resources”** and **Section 3.12 “Hydrology and Water Quality”**, construction contractors would be required to implement erosion control and construction waste containment measures to address construction related habitat and water quality impacts. Construction waste containment measures would include listing the hazardous materials (including petroleum products) proposed for use during construction and demolition, and describe spill prevention measures, equipment inspections, equipment and fuel storage, and protocols for responding immediately to spills.

3.11.2 Discussion

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Hazardous materials present during project construction may include gasoline, diesel fuel, hydraulic oils, equipment coolants, and any generated wastes that may include these materials. Fueling of equipment and vehicle would be performed on-site. Construction equipment and vehicles would use a minimal amounts of hazardous materials. Gasoline and diesel fuel would be stored in small quantities at the staging yards during construction. Although very few individuals live and work in the area, a hazard to the public or the environment could occur through the transport and use of gasoline and diesel fuel on the project site. Spill response and control would be addressed as part of the construction waste containment measures under **Mitigation Measure BIO-5, Section 3.6 “Biological Resources”**. Compliance with the spill control and response measures would reduce the risk to the public and environment from transport and use of hazardous materials. The impact to the public or the environment from use, disposal, or transport of hazardous materials during construction would be *less-than-significant*, with no additional mitigation measures (other than those identified in **Section 3.6 “Biological Resources”**) required.

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?

As previously described, small amounts of hazardous material such as petroleum hydrocarbon-based fuels and lubricant would be present as part of the construction activities, and there is the potential for the presence of hazardous materials during the demolition of the existing bridge and construction of the replacement bridge. The potential exists that the proposed project could create a hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Use of such materials would be required to comply with all applicable local, state, and federal standards associated with the handling and storage of hazardous material, including Caltrans specifications and California Code of Regulations Title 8, 1532. These specifications include spill prevention and cleanup measures applicable to hazardous waste. With the implementation of BMPs, impacts would be ***less than significant***, with no additional mitigation measures required.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No existing or proposed school is within 0.25 mile of the project site. The schools located nearest to the project site are in the community of El Portal. ***No impact*** would occur.

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?

A review of county, state, and federal databases listing hazardous material sites (including the State of California's EnviroStor database) determined that the project site is not located on a site included on a list of hazardous materials sites. One property, designated as "El Portal Landfill", located approximately 0.25-mile east (up-gradient of the site with respect to the direction of groundwater flow) was listed as an unpermitted solid waste disposal site owned by the United States Department of Interior National Park Service – Yosemite. The operational status of this landfill is "closed" as of January 7, 1994. No releases were reported at this facility. Based on the facility's closed operational status subsequent to California's Solid Waste Assessment Test Program (1985-1993), no reported releases, and its distance from the project site, it is not considered a hazardous waste impact to the site (Kleinfelder, Inc. 2015).

Based on a review of the database report, no other property listings were reported within a 1-mile search radius of the project site that may have had significant environmental releases or incidents, which may have resulted in a hazardous waste impact to the site. The project would result in no impacts associated with emissions from hazardous materials sites. Consequently, ***no impact*** would occur.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

The Mariposa-Yosemite Airport, located at 5020 Macready Way, Mariposa, CA is the nearest airport to the project sites and is located approximately 30 miles from the project site. The project sites are not located within an airport land use plan. The proposed project would have no impacts associated with airport hazards. Consequently, ***no impact*** would occur.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

While not considered a high-volume roadway (current ADT at 150 vehicles), the project will require a short-term roadway detour at the Incline Road bridge site during replacement of the existing bridge structures (and associated roadway approach work) to ensure construction is completed efficiently and with as short a construction period as possible. Implementation of the proposed project is considered to have a beneficial effect to local emergency response efforts. To minimize traveler delays and ensure residential circulation and access along Incline Road, during the construction period, the County will implement a traffic detour route and the circulation measures included under **Mitigation Measure TC-1** (see **Section 3.19 “Transportation”**) would minimize short-term construction-related roadway/access conflicts resulting from the project. Consequently, this impact is *less-than-significant*, with no further mitigation required.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Heavy equipment used during project construction has the potential to start a fire on surrounding open space areas near the project site. Vegetation removal activities resulting from the project will help to reduce the potential of wildland fires by providing a clearing, reducing fire fuels, and removing fire sustaining litter. In addition, during construction, spark arrestors or turbo chargers (which eliminate sparks in exhaust) and fire extinguishers would be required for all heavy equipment pursuant to **Mitigation Measure HAZ-1** that would serve to further minimize wild land fire impacts. Consequently, this impact is *less-than-significant* with mitigation incorporated.

Mitigation Measure HAZ-1: Implement BMPs for Wildland Fire Prevention

The County shall ensure that the construction contractor will clear dried vegetation or other materials that could serve as fuel for combustion from construction or building areas. To the extent feasible, the contractor shall keep these areas clear of combustible materials to maintain a firebreak. Construction contractors shall ensure that any construction equipment that normally includes a spark arrester shall be equipped with an arrester in good working order. This includes, but is not limited to, vehicles, heavy equipment, and chainsaws.

Timing: During construction.

Responsibility: County of Mariposa / Construction Contractor.

3.12 Hydrology and Water Quality

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
X. HYDROLOGY AND WATER QUALITY.					
Would the project:					
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☒	☐	☐	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	☐	☐	☒	☐	☐
i) result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐	☐
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐	☐
iv) impede or redirect flood flows?	☐	☐	☒	☐	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐	☐

3.12.1 Environmental Setting

A *Water Quality Assessment Report (WQAR)* (Area West Environmental, Inc. 2020) and a *Location Hydraulic Study Report* (WRECO 2019) was prepared for the proposed project. The purpose of the reports are to provide information, to the extent possible, to address water quality and flood-related impacts and has been incorporated into the analysis below.

Climate and Precipitation

The region around the Moss Creek Bridge has hot dry summers and wet winters. Climate details in the project area are based on historical data collected by the Western Regional Climate Center (WRCC) monitoring station at Sonora, located approximately 37 miles northwest of the project area at

approximately the same elevation. The warmest month, on average, is July with an average high temperature in July of 94.4 °F. The coolest month on average is January, with an average low of 33.3 °F. Average annual rainfall is 31.91 inches, mostly occurring from October through May. Additionally, the average length of the growing season (i.e., number of “frost-free” days) for the area is 311 days. Prior to the May 7 and 8, 2018 survey dates, 23.64 inches of rain had been recorded at the Sonora WRCC since the beginning of the wet-season (October 1, 2017) through the end of April 2018 although data is incomplete for October 2017 and January 2018. (WRCC 2018).

Local and Regional Hydrology

The proposed project lies within the Upper Merced Subbasin, part of the San Joaquin Basin, which is comprised of the San Joaquin Valley north of the San Joaquin River (Watershed Boundary Dataset 2018). The project site is located in the Yosemite Creek-Merced River watershed, and the Moss Creek-Merced River subwatershed (see **Figure 3-5**; USGS Hydrologic Unit Code [HUC] 180400080307). Surface waters from the San Joaquin Basin drain into the San Joaquin River and into the Pacific Ocean via Suisun and San Francisco Bay (Central Valley RWQCB 2016).

Moss Creek is a tributary to the Merced River, which flows approximately 25 miles from the project site to Lake McClure, an approximately 20 mile-long reservoir, which releases water back into the Merced River through the New Exchequer Dam. Water flows from the New Exchequer Dam for 60 miles on the Merced River to its confluence with the San Joaquin River, a traditional navigable water.

The proposed project is within the boundary of the 100-year floodplain for Moss Creek as indicated by the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map. The boundary of a 100-year floodplain is used to demarcate flood hazards and indicates the geographic area having a one percent chance of being flooded in any given year.

Floodplains. The project site is located within the 06043C0365C Flood Insurance Rate Map (FIRM). The area along Moss Creek is designated as Zone D, which is defined as, “Area of Undetermined Flood Hazard” (Federal Emergency Management Agency [FEMA] 2017). However, the area along the Merced River is designated as Zone A, which is defined as “Areas subject to inundation by the 1-percent-annual-chance flood event”.

Water Quality Conditions

Water quality conditions within Moss Creek are primarily dependent upon upstream precipitation and with no known sources of pollution upstream of the project sites; waters within the project sites are not listed on the Clean Water Act (CWA) Section 303(d) list of impaired waters (Central Valley RWQCB 2016). While Moss Creek is not under a Total Maximum Daily Load (TMDL) requirement, as regulated under the CWA, water eventually flows into Lake McClure which has a TMDL for mercury. Downstream from Lake McClure, both the Merced and San Joaquin Rivers have a number of TMDLs that include group A pesticides, water temperature, mercury, as well as toxicity (Central Valley RWQCB 2016).

Groundwater Hydrology

The project sites are not located within any designated groundwater basin or subbasin. However, the project sites are located in the Sierra Nevada foothills northeast of the San Joaquin Valley Turlock and

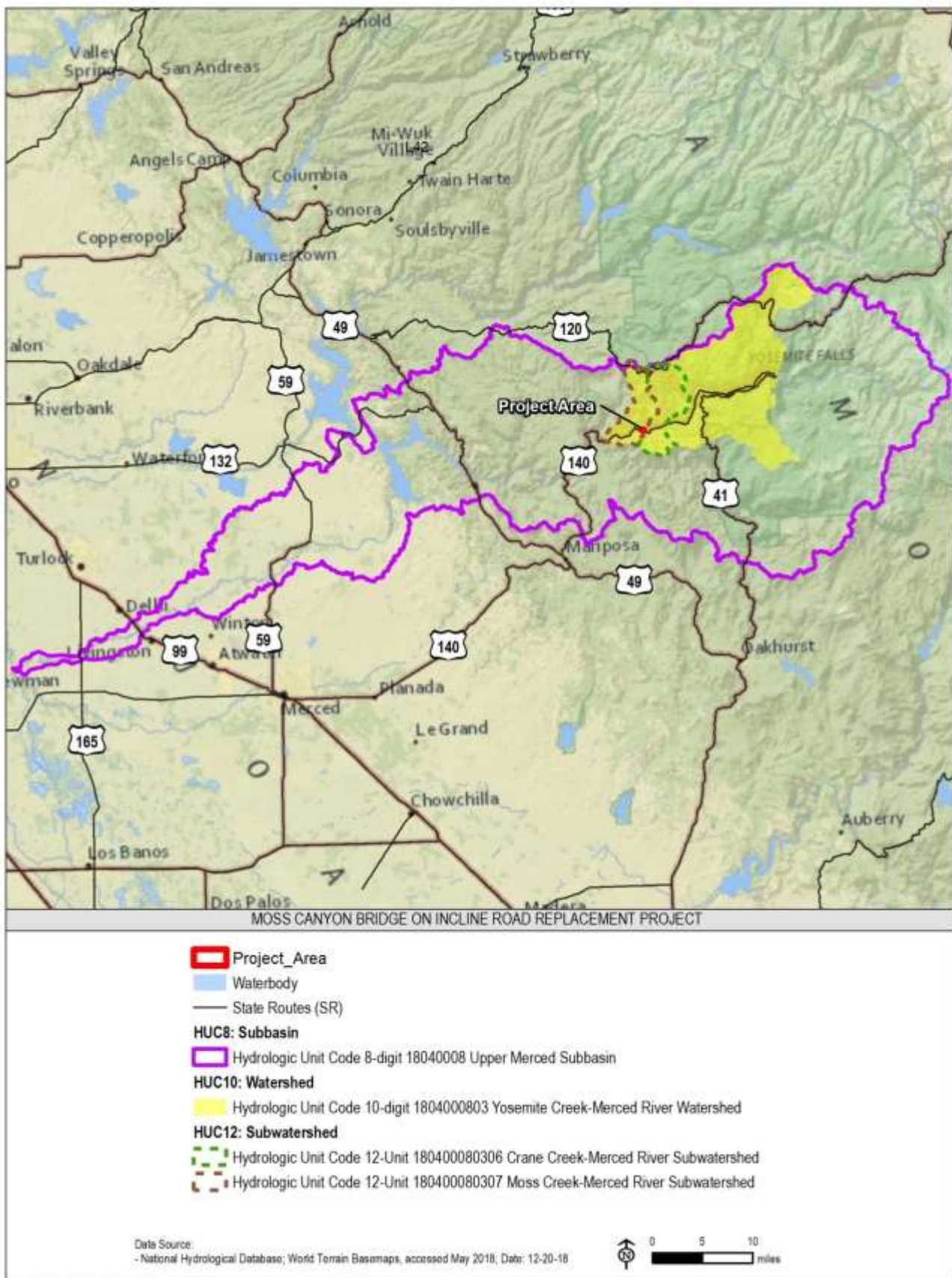


Figure 3-5. Hydrologic Unit Watershed Map

San Joaquin Valley Merced groundwater subbasins, which are part of the San Joaquin Valley Groundwater Basin (California Department of Water Resources 2016).

Depth to groundwater information was not available for the project site vicinity. However, because the site is located adjacent to the Merced River, groundwater is anticipated to be shallow beneath the site. Based on local topography, groundwater is anticipated to flow in a westerly direction, following the general flow direction of the Merced River.

Regulatory Framework Relating to Hydrology and Water Quality

Water quality is regulated according to the provisions of the CWA and the California Porter-Cologne Water Quality Control Act. California's State Water Resources Control Board (SWRCB) and RWQCB implement the discharge permitting provisions of the Clean Water Act based on water quality criteria and guidelines. The Porter-Cologne Water Quality Control Act has also established enforceable water quality objective to protect aquatic life from adverse impacts from various water quality constituents.

The USACE regulates discharged or fills into waters of the United States under Section 404 of the CWA via the Nationwide Permit. The USACE would also determine whether a particular aquatic feature is considered Waters of the U.S. and whether it is subject to regulation under Section 404. Discharge or fill into Waters of the U.S. from construction activities must be in accordance with NPDES program established in Section 402 of the CWA. NPDES permits establish enforceable discharge limitations, monitoring and reporting requirements, and require the permittee to perform BMPs.

Section 401 of the CWA specifies that any applicant for a federal license or permit to conduct any activity, including but not limited to the construction or operation of facilities that may result in any discharge into navigable waters, shall provide the federal licensing or permitting agency with a certification from the State in which the discharge originates or will originate from the State agency with jurisdiction over those waters that the proposed project will comply with water quality standards, meet water quality objectives, and comply with California anti-degradation policy.

3.12.2 Discussion

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Construction Site Stormwater Runoff. Construction-related activities from the proposed project (including bridge removal, traffic detour, and bridge replacement) would occur in areas adjacent to and within Moss Creek could result in violations of water quality standards or waste discharge requirements. Construction could degrade water quality as a result of construction-related soil disturbance and discharge of construction stormwater. Additionally, fuels and other chemicals used during construction could also degrade the water quality of receiving waters if spilled and entrained into stormwater runoff or dewatering discharges.

The primary stormwater pollutant at construction sites is excess sediment. Excess sediment can cloud the water, which reduces the amount of sunlight reaching aquatic plants, clog fish gills, smother aquatic habitat and spawning areas, and impede navigation in waterways. Sediment also transports other pollutants such as nutrients, metals, and oils and greases. Hazardous materials associated with construction equipment and practices, such as fuels, oils, antifreeze, coolants, and other substances, could also adversely affect water quality if released to surface waters.

Construction activities can impact a construction site's runoff sediment supply and transport characteristics both during and after the construction phase. Excess sediment could be mobilized anywhere earthwork occurs, including during establishment of the traffic detour, removal of the existing bridge structure, and placement of the new bridge abutments. Additionally, removal of any existing vegetation along the creek banks would expose underlying soils that were previously not as susceptible to erosion. Contact with loose bare soil could entrain sediments into the runoff causing sedimentation of the water which could impact water quality in receiving waters downstream.

As previously described above in **Sections 3.6 “Biological Resources”** and **3.9 “Geology and Soils”**, the County would ensure the construction contractor employ the appropriate water quality and erosion control BMPs to minimize the potential for offsite erosion and sedimentation in accordance with the construction specifications and with the NPDES General Permit for Storm Water Discharges associated with construction activity. These BMPs (such as use of check dams and fiber rolls for reducing erosion on slopes and retaining sediment in stormwater) will be in accordance with Caltrans's Construction Site Best Management Practices Manual and would ensure no water quality standards or waste discharge requirements would be violated. Additionally, the project is subject to the water quality and erosion prevention provisions outlined under the Clean Water Act Sections 401 and 404 and a CDFW Streambed Alteration Agreement.

Prior to in-channel construction activities, the County will complete the Section 404 Clean Water Act Nationwide Permitting Process, complete RWQCB Section 401 certification, and obtain a Streambed Alteration Agreement with California Department of Fish and Wildlife. Conditions of Approval outlined in the respective permits would help to alleviate any potential water quality impacts resulting from the proposed project activities occurring within Moss Creek. Additionally, the implementation of the erosion prevention measures/water quality best management practices provided under **Mitigation Measure BIO-5** and the vegetation habitat re-planting requirements provided under **Mitigation Measure BIO-4** (more fully described above under **Section 3.6 “Biological Resources”**) would serve to further minimize the project's impacts to water quality conditions. Consequently, this impact is *less-than-significant*, with no further mitigation (other than that identified in **Section 3.6 “Biological Resources”**) required.

Construction Dewatering. Construction dewatering at the project site would likely be required to create dry work areas for the traffic detour, excavations (new bridge abutment placement) and for work within the creek channel (existing bridge removal). Water pumped from dewatered areas could be redirected to the creek channel downstream of the work area. Sediment or other water pollutants originating from construction equipment or the surrounding disturbed land could be released with the dewatered water, degrading surface water quality. Discharged water could violate water quality standards or substantially degrade water quality.

Implementation of all permit requirements and habitat revegetation measures including riparian/native vegetation habitat re-planting requirements (see **Mitigation Measures BIO-4**, more fully described above) will be required to mitigate habitat and water quality impacts. Additionally, the implementation of best management practices to protect wildlife and habitats (**Mitigation Measures BIO-3, BIO-11, and BIO-12**, more fully described above) and the erosion prevention measures/water quality best management practices provided under **Mitigation Measure BIO-5** (also more fully described above in **Section 3.6 “Biological**

Resources”) would serve to further minimize impacts to waters of the U.S. and State. Consequently, this impact is ***less-than-significant*** with incorporation of **Mitigation Measures BIO-3 through BIO-5, BIO-11, and BIO-12.**

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

The proposed project would not require the use of groundwater or substantially interfere with groundwater recharge. Replacement of the bridge would not result in new amounts of impervious surfaces that would affect local groundwater levels. Therefore, the proposed project would not substantially deplete groundwater supplies and would not affect groundwater recharge such that a net deficit would occur. Consequently, ***no impact*** would occur, with no mitigation required.

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

i) Result in substantial erosion or siltation on- or off-site;

The project site drain into Moss Creek and the Merced River. Alterations to the existing drainage patterns of the creek, including changes to velocity, may result in erosion or siltation on or off-site. The proposed project has been designed to maintain the existing drainage patterns; however, flows along the creek would be temporarily altered during construction activities, and the proposed project design would result in slight modifications to on-site drainage.

Areas of the creek may need to be temporarily dewatered for construction of the traffic detour and the new bridge. If dewatering is necessary, it would occur within the project site (see **Figures 2-3, 2-4 and 2-5**), and flows would be diverted through the work area in the creek in a pipe. Depending on the seasonal water surface levels, water diversion may not be necessary during low flow or drought conditions. Following construction, the diversion structures would be removed, and the creek would be allowed to return to a natural state within the recontoured banks of the channel segment. Although there may be temporary alterations to flow during construction activities resulting from water diversion activities, any water diversion structures utilized would be in place for a relatively short time and are not anticipated to significantly alter the existing drainage pattern of the site in a way that would result in substantial erosion or siltation on- or off-site.

As more fully described in the Location Hydraulic Study Report (WRECO 2019) prepared for the proposed project, a hydraulic analysis was performed using the HEC-RAS hydraulic model to determine the overall flood inundation effects resulting from implementation of the proposed project. The hydraulic study conducted for the proposed bridge concluded that the proposed bridge would have a lower water surface elevation under 50- and 100-year flood conditions paired with a higher soffit elevation, resulting in an increase in available freeboard.

Implementation of the CWA Section 401 and 404 permit Conditions of Approval, as well as standard construction erosion control BMPs, and County and Caltrans standards would ensure any potential construction and post-construction erosion and siltation would not affect drainages. Consequently, this impact is ***less-than-significant***, with no mitigation required.

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

As described in the previous section, the proposed project would temporarily alter flows along the creek during construction activities, and the proposed project design would result in slight modifications to on-site drainage. Temporary dewatering activities in the creek during construction would not result in on- or off-site flooding.

Further, construction of the project would not substantially alter the existing drainage pattern of the site or area. While the proposed project would result in minor increases of impervious surfaces and would result in slight changes to water surface elevations from the slightly modified segment of Moss Creek through the project sites, the results of the hydraulic analysis indicated that the proposed project would not result in on- or off-site flooding. Additionally, compliance with Permit Conditions as well as construction BMPs would ensure the project would not substantially increase the rate or amount of surface runoff that would result in flooding. Consequently, this impact is *less-than-significant*, with no mitigation required.

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

There are no existing or planned stormwater drainage systems surrounding the project area. As described above, the proposed project would not result in a significant increase in runoff. Furthermore, implementation of the permit Conditions of Approval, and construction BMPs would reduce any potential pollution impacts during construction. Therefore, the proposed project would not result in substantial additional sources of polluted runoff. Consequently, this impact is *less-than-significant*, with no mitigation required.

iv) Impede or redirect flood flows?

See checklist Item “**ci**, **cii**, and **ciii**” above.

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

Tsunamis (seismic sea waves) are long-period waves that are typically caused by underwater seismic disturbances, volcanic eruptions, or submerged landslides. Low-lying coastal areas such as tidal flats, marshlands, and former bay margins that have been artificially filled but are still at or near sea level are generally the most susceptible to tsunami inundation. A seiche is caused by the oscillation of the surface of an enclosed body of water such as San Francisco Bay due to an earthquake or large wind event.

There are no bodies of water near the project sites capable of producing seiches. Areas surrounding the project sites consist primarily of vegetated slopes and are not likely to produce mudflows. Therefore, inundation by a seiche, tsunami, or mudflow is unlikely to occur on the project site, and *no impact* would occur.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

See checklist Item “**a** and **b**” above.

3.13 Land Use and Planning

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XI. LAND USE AND PLANNING.					
Would the project:					
a) Physically divide an established community?	☐	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒	☐

3.13.1 Environmental Setting

The Mariposa County General Plan estimated the 2006 population of Mariposa County to be approximately 18,216 and the U.S. Census Bureau estimated the 2016 population at approximately 17,410 residents (Mariposa County 2006, U.S. Census Bureau 2018).

Scenery is one of the main attractions to Mariposa County, primarily in the form of Yosemite National Park, internationally recognized as a natural wonder of the world. There are no ecological reserves or wildlife refuges directly adjacent to or immediately downstream of the proposed project. The County has classified land use adjacent to and southwest of the proposed project as Natural Resources and Agricultural/Working Landscape.

Incline Road is a narrow paved rural road that connects (via Foresta Road) to the Town of El Portal and the regional transportation network (State Route 140). There are scattered rural residences along Incline Road, but Incline Road is used primarily for access to recreational facilities along the Merced River.

Natural Resource areas adjacent to the Project include the Stanislaus National Forest, Sierra National Forest, and the Merced River Wild and Scenic River Corridor. The Merced River is the southern boundary of the Stanislaus National Forest and the northern boundary of the Sierra National Forest. The Merced Wild and Scenic River Corridor extends ¼-mile north and south of the Merced River and the corridor is managed by the Sierra National Forest, by special agreement with the Stanislaus National Forest.

3.13.2 Discussion

a) Physically divide an established community?

The proposed project would replace an existing bridge along an already established transportation corridor. Designed to improve public safety and local circulation, the proposed project is considered to have a beneficial effect to local emergency response efforts as the existing narrow bridge width has contributed to difficulties in evacuating the area during past fire events. No additional new right of way is required and the proposed project would not physically divide an established community. A traffic detour at the project site would be implemented during the construction period to minimize traveler delays and ensure residential circulation.

Consequently, implementation of the proposed project would not physically divide an established community and improve public safety by replacing the existing bridge, resulting in a ***beneficial impact***.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The proposed project would require small amounts of new right of way; however, replacement of the existing bridge would occur predominately within the County's existing right-of-way and the proposed pr

oject would remain consistent with the existing site land use and surrounding land use designations, requiring no further change or amendment to the General Plan land use designation or zoning assigned by the County. Therefore, the proposed project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project. Consequently, ***No impact*** would occur.

3.14 Mineral Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XII. MINERAL RESOURCES.					
Would the project:					
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	☐	☐	☐	☒	☐
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?	☐	☐	☐	☒	☐

3.14.1 Discussion

- a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?**

No mineral extraction activities exist on the project site and mineral extraction is not included as a part of the project. Consequently, ***no impact*** would occur.

- 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?**

See checklist Item “a” above.

3.15 Noise

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XIII. NOISE.					
Would the project:					
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable standards of other agencies?	☐	☒	☐	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒	☐

3.15.1 Environmental Setting

Terminology Used to Define Noise Conditions

Noise can be defined as unwanted and objectionable sound. Sound levels are usually measured and expressed in decibels (dB) with 0 dB corresponding roughly to the threshold of hearing. The method commonly used to quantify environmental sounds consists of evaluating all frequencies of a sound in accordance with a filter that reflects the fact that human hearing is less sensitive at very low and very high frequencies compared to mid-range frequencies. This is called “A” weighting, and the dB level measurement is called the A-weighted sound level (dBA).

A-weighted sound level (dBA) is expressed on a logarithmic (power of 10) scale using a frequency-weighted pattern that duplicates the human ear’s sensitivity to sound. A 70-dBA sound level is approximately twice as loud as a 60-dBA sound level and four times as loud as a 50-dBA sound level.

Sound intensity is normally measured through the A-weighted sound level (dBA). This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. The A-weighted sound level is the basis for many various sound level metrics, including the day/night sound level (L_{dn}) and the Community Noise Equivalent Level (CNEL), both of which represent how humans are more sensitive to sound at night. In addition, the equivalent continuous sound level (Leq) is the average sound energy of time-varying noise over a sample period and the (L_{max}) is the maximum instantaneous noise level occurring over a sample period.

Existing Noise Conditions

Land uses surrounding the proposed project site consist of a variety of open space uses (including steep mountainous terrain, forested ridgelines, and the Merced River corridor). The existing noise

environment in the immediate project area is dominated by the Merced River, song birds, and sporadic vehicle traffic along Incline Road.

Sensitive Receptors. Some land uses are considered more sensitive to ambient noise levels than others because of the amount of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities typically involved for those uses. Residences, schools, day cares, rest homes, hospitals, and churches are generally more sensitive to noise than commercial and industrial land uses.

Residential structures are typically not located along Incline Road, but are set back on the properties, away from the roadway. The nearest residences to the project site are well over a mile to the northeast, near the Town of El Portal.

Local Noise Regulations

There are no State or federal standards that specifically address construction noise. Additionally, the Mariposa County General Plan does not specifically limit hours during which construction may occur; however, it is common practice to limit hours of construction activity to minimize construction noise impacts in residential areas during the early morning and late evening hours, and on weekends and holidays. Although not specifically stated in the County's General Plan Noise Element, it is also a standard requirement of many jurisdictions that all construction equipment be properly maintained and muffled to minimize noise generation at the source.

Some guidance on construction-related noise is provided by Section 14-8.02 of the Caltrans Standard Specifications document which suggests that construction equipment not exceed 86 dB (L_{max}) at a distance of 50 feet from job site activities from 9 p.m. and 6 a.m.

Mariposa County does not have any established performance standards regarding groundborne vibration levels from construction activities. However, the Mariposa County General Plan Noise Element does include Implementation Measure 15.1a(3) which requires the County to implement standards that will reduce vibration from construction activities to a level that is less than perceptible at adjacent property lines. Therefore, for purposes of this analysis, the "severe" impact criterion of 0.4 inch per second peak particle velocity (PPV) for vibration is utilized from the Caltrans 2013 Transportation and Construction Vibration Guidance Manual (Caltrans 2013).

3.15.2 Discussion

- a) **Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable standards of other agencies?**

Implementation of the proposed project would result in potential noise impacts from short-term construction activities. Regarding long-term or operational noise impacts, implementation of the proposed project would not result in added travel lanes along the project alignments, nor would it move travel lanes substantially closer to any sensitive receptor in the project vicinity. In addition, implementation of the proposed project would not result in any increase in traffic volumes along Incline Road or the surrounding regional roadway network. As such, the project would not result in any new long-term operational noise sources, nor would it move existing operational noise sources (i.e., traffic) closer to existing sensitive land uses. No long-term or operational noise impacts are associated with the proposed project and this topic is not addressed further.

Construction such as clearing and grubbing (removal of trees), excavation, and staging location activities would temporarily increase noise levels in the vicinity of the proposed project. Construction would require heavy equipment during foundation excavation for the bridge abutments. Construction equipment utilized during this phase would include an excavator and a dump truck and a tracked drill with concrete pumper and concrete truck. Clearing and grubbing would require the use of chainsaws to cut down trees. Construction equipment used at the staging location would include a front-end loader, dump truck, and a generator.

As previously described, residential structures are set back on the properties surrounding the bridge site, with vegetation and topography shielding their views of or visibility from the project site. The nearest sensitive receptors to these noise sources at the project site are well over a mile to the northeast in the Town of El Portal.

Increases in ambient noise from these construction activities would be temporary and would not be expected to exceed Caltrans Standards (86 dB Lmax at a distance of 50 feet from job site activities). To ensure these project-related increases in ambient noise would not exceed applicable noise and land use standards, the noise reducing best management practices (limiting construction hours and maintaining standard equipment noise controls) pursuant to **Mitigation Measure NOS-1** will be implemented by the construction contractor. Consequently, this impact is *less-than-significant* with mitigation incorporated.

Mitigation Measure NOS-1: Construction Noise Reducing Best Management Practices

The County shall ensure the construction contractor implement the following construction noise reducing measures:

- The construction contractor shall ensure that all noise producing construction activities, including warming-up or servicing equipment and any preparation for construction, shall be limited to the hours between 7:00 a.m. and 6:00 p.m. The construction contractor shall locate on-site equipment staging areas to maximize the distance between construction-related noise sources and noise sensitive receptors nearest the project site during construction.
- The construction contractor shall ensure that all equipment will have sound control devices that are no less effective than those provided on the original equipment. Further, pavement breakers and jackhammers shall also be equipped with acoustically attenuating shields or shrouds recommended by the manufacturers thereof. In lieu of or in the absence of manufacturers' recommendations, the Director of Public Works shall have the authority to prescribe such means of accomplishing maximum noise attenuation as deemed to be in the public interest, considering the available technology and economic feasibility.

Timing: During construction.

Responsibility: County of Mariposa / Construction Contractor.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Construction activities such as excavation and roadway paving would temporarily increase groundborne vibration and/or groundborne noise levels in the vicinity of the project site. However, the nearest sensitive receptors to the project site are well over a mile from the construction site and would not experience excessive groundborne vibration or groundborne noise levels. Consequently, temporary construction-related vibration impacts associated with equipment use at the project site would be *less than significant*, with no mitigation required.

- c) **For a project located within-the vicinity of a private airstrip or-an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?**

The Mariposa-Yosemite Airport, located at 5020 Macready Way, Mariposa, CA is the nearest airport to the project sites and is located approximately 30 miles from the project site. The project sites are not located within an airport land use plan. The proposed project would have no impacts or expose workers to excessive airport noise levels. Consequently, *no impact* would occur.

3.16 Population and Housing

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

3.16.1 Discussion

- a) **Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?**

The proposed project would not directly or indirectly induce growth in the area. The new bridge would more efficiently and safely accommodate existing traffic volumes and is considered to have a beneficial effect to local emergency response efforts, given the existing bridge width. The replacement bridge and roadway approaches would not provide an extension to new destinations beyond the current extent of the existing road. Construction is expected to last up to 6 months (24 weeks) utilizing a construction crew of 12 workers from the surrounding workforce. No additional housing or temporary lodging facilities would be required by construction workers commuting to the project site. Consequently, ***no impact*** would occur.

- b) **Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?**

Replacing the existing bridge, within largely the same project footprint, would not involve the construction, displacement, or demolition of any existing housing structures. Consequently, ***no impact*** would occur.

3.17 Public Services

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

3.17.1 Discussion

- a) **Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:**

- Fire protection?
- Police protection?
- Schools?
- Parks?
- Other public facilities?

Implementing the proposed project would not create new housing or other structures and, therefore, would not require additional public services (including fire or police protection facilities, schools, or parks). Furthermore, the new bridge would more efficiently and safely accommodate existing traffic volumes and the proposed project is considered to have a beneficial effect to local emergency response efforts. Consequently, ***no impact*** would occur.

3.18 Recreation

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XVI. RECREATION.					
Would the project:					
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐	☐
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒	☐

3.18.1 Environmental Setting

Located on the western slope of the central Sierra Nevada mountain range, the Sierra National Forest, which encompasses more than 1.3 million acres and ranges in elevation between 900 and 13,986 feet, is known for its rolling, oak-covered foothills, heavily forested middle elevation slopes, and alpine landscape of the High Sierra. The Sierra National Forest was placed under federal protection and management in 1893, when the area was designated the Sierra Forest Reserve. Today, the Sierra National Forest provides numerous recreational opportunities for outdoor enthusiasts such as camping, hiking, fishing, hunting, or boating, and has become one of the most popular National Forests in the U.S (United States Forest Service [USFS] 2018).

Recreational sites associated with the Sierra National Forest in the project vicinity include the Redbud Picnic Grounds, Dirt Flat Campground, Dry Gulch Campground, the McClendon Beach Day Use Picnic Site, and the Cranberry Flat Day Use Picnic Site. These recreational sites are either within 0.5 mile of the Proposed Project (Redbud Picnic Grounds) or utilize Incline Road through the Proposed Project as the sole option for vehicle access. These recreation facilities are briefly described below.

Redbud Picnic Grounds. The Redbud Picnic Grounds is located on the south side of the Merced River along Highway 140 near the intersection of Highway 140 and Foresta Road. Access to the Redbud Picnic Grounds is from Highway 140. The facility is a day-use area with picnic tables, drinking water, and restrooms (USFS 2018)

Dirt Flat Campground. The Dirt Flat Campground is located on the north side of the Merced River on Incline Road approximately 2.5 miles west of the Proposed Project. Access to the Dirt Flat Campground is exclusively from Incline Road. The campgrounds are located on or have access to the Merced and offer picnic tables, restrooms, grills, and fire rings. The facility is managed by the California Land Management (USFS 2018).

Dry Gulch Campground. The Dry Gulch Campground is located on the north side of the Merced River on Incline Road approximately 1.1 miles west of the Proposed Project. Access to the Dry Gulch Campground is exclusively from Incline Road. The campgrounds are located on or have access to the

Merced River and offer picnic tables, restrooms, grills, and fire rings. The facility is managed by the California Land Management (USFS 2018).

McClendon Beach Day Use Picnic Site. The McClendon Beach Day Use Picnic Site is located on the north side of the Merced River on Incline Road approximately 4.3 miles west of the Proposed Project. Access to the McClendon Beach Day Use Picnic Site is exclusively from Incline Road. The facility is a day-use area with picnic tables and restrooms (USFS 2018).

Cranberry Flat Day Use Picnic Site. The Cranberry Flat Day Use Picnic Site is located on the north side of the Merced River on Incline Road approximately 3.1 miles west of the Proposed Project. Access to the Cranberry Flat Day Use Picnic Site is exclusively from Incline Road. The facility is a day-use area with picnic tables, drinking water, and restrooms (USFS 2018).

3.18.2 Discussion

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Implementation of the proposed project will not directly affect recreational opportunities or access along Incline Road or the Merced River. In the long term, the wider bridge will improve safety for bicyclists and hikers on the road. During construction, recreation visitors using Incline Road will experience traffic delays due to the temporary detour and one-way traffic control. Since the single-lane temporary bridge or crossing will be required to have sufficient load capacity to accommodate a CalFire Type 3 wildland fire engine (“Model 34-35” has a gross vehicle weight of 35,000 pounds), nearly all recreation vehicles will be able to use the temporary crossing. Although Incline Road will remain open during construction, temporary delays would be a minor inconvenience to recreation users accessing day use and camping areas within the project vicinity. Implementation of the construction notification measures under **Mitigation Measure TC-1** (more fully described below in **Section 3.19 “Transportation”**) would ensure that the traveling public and recreation users are aware of temporary delays and that recreational sites along Incline Road will be open during construction. Consequently, this impact is **less-than-significant**, with no further mitigation (other than that identified in **Section 3.19 “Transportation”**) required.

b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

The proposed project does not include the development of any new residential uses or include other land development that would directly induce additional population growth affecting existing recreation facilities or opportunities. Employment opportunities from the construction phase of the project would not induce any additional population growth within the Town of El Portal or Mariposa County. Therefore, the project would not cause physical deterioration of existing recreational facilities from increased usage or result in the need for new or expanded recreational facilities. Consequently, **no impact** would occur.

3.19 Transportation

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

3.19.1 Discussion

a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

As previously described, implementation of the proposed project would more efficiently and safely accommodate existing traffic volumes on Incline Road and is considered to have a beneficial effect to local emergency response and evacuation efforts as the existing bridge width has contributed to difficulties in evacuating the area during past fire events. The replacement bridge would be built to meet current design standards and are being implemented as part of the Caltrans Local Highway Bridge Program, which is a federal- and state sponsored program that provides funding for projects that replace bridges that have been deemed structurally deficient or functionally obsolete.

While the proposed project would not conflict with federal transportation programs or local County circulation policies, construction of the project would require the temporary detour of Incline Road vehicle traffic at the project site during the 5 to 6 month construction period, temporarily affecting local traffic accessing the area. Since the single-lane temporary bridge or crossing will be required to have sufficient load capacity to accommodate a CalFire Type 3 wildland fire engine (“Model 34-35” has a gross vehicle weight of 35,000 pounds), nearly all vehicles will be able to use the temporary crossing.

As part of the project, the County and the construction contractor would route residential traffic around the bridge sites as shown in **Figures 2-3, 2-4, and 2-5** (see **Chapter 2**). Temporary traffic controls will also be implemented to ensure that the project would remain consistent with County requirements regarding traffic control. To minimize traveler delays and ensure recreation and residential circulation and access along Incline Road, during the construction period, the County will implement the traffic detour and circulation controls included under **Mitigation**

Measure TC-1. Consequently, this impact is *less-than-significant* with incorporation of **Mitigation Measures TC-1.**

Mitigation Measure TC-1: Prepare and Implement a Traffic Detour and Control Plan

- At least one week prior to the commencement of work, the County's contractor' will be required to provide changeable message signs at each end of Incline Road to notify drivers of the upcoming project and potential delays. The contractor shall provide an informational sign at the entry points of the project identifying a contact person and phone number for any concerns or questions.
- During project construction, the County's contractor shall use standard cones and barricades to protect the public from entering the construction work area. The contractor will also install advance warning signs to alert approaching motorists of the work zones consistent with the most recent edition of the California Manual of Traffic Control Devices (MUTCD) for sign placement, etc. Advance warning signs may be reflective signs, changeable message boards, cones, and barricades. The contractor shall provide flaggers as needed to temporarily hold traffic for staging equipment or construction. The work will be limited to 8 a.m. to 5 p.m., with weekend work if approved by Public Works; no work shall occur on national holidays. Flagging and other means of traffic control will be required to allow for the movement of traffic through the work zone. Cones, signing and flagging for traffic control shall conform to the requirements of the MUTCD.
- The County shall notify the traveling public of construction delays via roadway signage or changeable message signs. A sign shall be placed at the intersection of Incline Road and Foresta Road stating that recreational sites along Incline Road remain open during construction. Weight restrictions associated with the temporary low water crossing or temporary detour bridge shall also be posted at the intersection of Incline Road and Foresta Road, if applicable. Additional signage shall be placed along Incline Road warning the traveling public of delays, and the expected delay in minutes shall be posted.

Timing: Before and During construction.

Responsibility: County of Mariposa / Construction Contractor.

b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

The proposed project does not include the development of any new residential uses or include other land development that would directly induce additional population growth or affect the existing "vehicle miles travelled" by residents or visitors within the area. Replacement of the existing bridge is considered a "Transportation Project" that would have no impact on vehicle miles travelled and therefore is presumed to result in a less than significant transportation impact consistent with CEQA Guidelines 15054.3(b)(2). Consequently, *no impact* would occur.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No hazards due to design features would occur through implementation of the proposed project, as the replacement bridge structures and associated roadway approaches would conform to

County and Caltrans design standards. Therefore, the proposed project would not substantially increase hazards due to a design feature or incompatible use. Consequently, ***no impact*** would occur.

d) Result in inadequate emergency access?

See checklist Item “a” above.

3.20 Tribal Cultural Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
VIII. TRIBAL CULTURAL RESOURCES. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:					
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or	☐	☒	☐	☐	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐	☐

3.20.1 Discussion

- a) **Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k)?**

Under PRC section 21080.3.1 and 21082.3, the County must consult with tribes traditionally and culturally affiliated with the project area that have requested formal notification and responded with a request for consultation. The parties must consult in good faith. Consultation is deemed concluded when the parties agree to measures to mitigate or avoid a significant effect on a tribal cultural resource when one is present or when a party concludes that mutual agreement cannot be reached. Mitigation measures agreed on during the consultation process must be recommended for inclusion in the environmental document.

As previously described above in **Section 3.7 “Cultural Resources”**, the NAHC was contacted and a list of Native American contacts was provided as part of the Section 106 process. The NAHC also reported that no recorded Sacred Land was within or adjacent to the project sites. Section 106 letters to the NAHC list of contacts were sent in July 2018. Follow-up voicemails and emails were sent to the contacts on July 17th, 2018, with no response received by any of the

Native American contacts. AB 52 consultation letters were first sent over the summer of 2020, with updated letters sent to the current tribal contacts (as of December 2022). No additional responses provided to date. **Table 3-6** (above in **Section 3.7**) provides a summary of all Native American consultation activities to date.

While no responses or tribal resources have been received or identified to date, portions of the proposed project area may be sensitive for the presence of tribal cultural resources. Implementation of the proposed project is not considered to result in an adverse change in the significance of a known tribal cultural resource pursuant to Public Resources Code 21074. However, while unlikely, construction of the proposed project could result in the inadvertent discovery of undocumented tribal cultural resources such as Native American archaeological sites, Native American human remains and associated objects and materials, features, sacred places, or objects with value to a Tribe that is culturally or traditionally affiliated with the proposed project, and the disturbance or destruction of these resources. Therefore, the proposed project could result in a ***potentially significant*** impact on tribal cultural resources. To ensure no adverse effects to tribal cultural resources, implementation of resource avoidance measures provided in **Mitigation Measures CUL-1, CUL-2, and CUL-3** (more fully described above in **Section 3.7 “Cultural Resources”**) would reduce the impact to less than significant. Therefore, the proposed project would have a ***less-than-significant*** impact with mitigation incorporated.

- b) **Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1.**

See checklist Item “a” above.

3.21 Utilities and Service Systems

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XIX. UTILITIES AND SERVICE SYSTEMS.					
Would the project:					
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider that 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?	☐	☐	☐	☒	☐
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☐	☒	☐
e) Comply with Federal, State, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒	☐

3.21.1 Discussion

- a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?**

The proposed project would not generate any new housing, businesses, or other changes that would increase the demand for utilities or related service systems beyond their current capacity. Therefore, the proposed project would not require or result in the construction of new or upgraded utility systems. Consequently, **no impact** would occur.

- b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?**

See checklist Item “a” above.

- c) **Result in a determination by the wastewater treatment provider that 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?**

See checklist Item "a" above.

- d) **Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?**

See checklist Item "a" above.

- e) **Comply with Federal, State, and local management and reduction statutes and regulations related to solid waste?**

See checklist Item "a" above.

3.22 Wildfire

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XX. WILDFIRE. If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project:					
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☒	☐	☐	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☒	☐	☐	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐	☐

3.22.1 Discussion

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

While not considered a high-volume roadway (current ADT estimated at 150 vehicles), the proposed project will require a short-term roadway detour at the bridge sites during replacement of the existing bridge structures (and associated roadway approach work) to ensure construction is completed efficiently and with as short a construction period as possible. To minimize traveler delays and ensure residential/recreation-related circulation and access along Incline Road, during the construction period, the County will implement the traffic detour route and the circulation control measures included under **Mitigation Measure TC-1** (see **Section 3.19 “Transportation”**) would ensure adequate emergency response and evacuation routes are maintained. Consequently, this impact is *less-than-significant*, with mitigation incorporated.

c) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Heavy equipment used during project construction has the potential to start a fire on surrounding open space areas near the project site. However, implementation of **Mitigation Measure HAZ-1** (more fully described above in **Section 3.11 “Hazards and Hazardous Materials”**) would reduce the potential for construction-related wildland fires by providing a clearing, reducing fire fuels and removing fire sustaining litter. In addition, during construction, spark arrestors or turbochargers (which eliminate sparks in exhaust) and fire extinguishers would be required for all heavy equipment. Consequently, this impact is *less-than-significant* with mitigation incorporated.

- c) **Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?**

As more fully described above in Chapter 2 “Project Description”, the proposed project will not require the relocation of any existing utilities at the sites. Consequently, *no impact* would occur.

- e) **Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?**

See checklist Item “c” in **Section 3.12 “Hydrology and Water Quality”** and **Section 3.23 “Mandatory Findings of Significance”**.

3.23 Mandatory Findings of Significance

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

3.23.1 Discussion

Cumulative impacts are evaluated based on an evaluation of other recent, past, present, and planned or adopted future projects in the vicinity of the proposed project. Currently, Caltrans is proposing to restore a section of SR 140 that was damaged by the Ferguson rockslide in 2006. The rockslide is located approximately 6 miles west of the proposed project on SR 140 on the south side of the Merced River.

When assessing cumulative impacts, the timing of combined effects of these projects and the proposed project's contribution to those potential effects have been considered.

- a) Would the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number, or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?**

As discussed in the Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Hazards, Hydrology and Water Quality, and Tribal Cultural Resources sections, any potentially significant impacts related to the quality of the environment, plant, fish, or wildlife habitat or

populations, special-status species, and important historical or cultural resources would be reduced to a less-than-significant level through implementation of avoidance and minimization measures and by incorporating mitigation measures. No known cultural resources would be affected by the proposed project and if unidentified resources are encountered during construction, mitigation measures are in place to ensure that impacts would be *less than significant*.

b) Would 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.)

Considering the surrounding rural nature of the County, past, present, and future projects are likely to be consistent with the developed nature of the surrounding area and would likely be focused on similar infrastructure (i.e., bridge replacement and flood protection) improvements or small-scale residential/commercial development projects. However, their impacts would not substantially interact with the proposed project’s impacts with the exception of regional construction-related impacts such as short-term air quality/GHG emissions, erosion, and water quality impacts.

Construction of the proposed project would result in temporary and short-term impacts that would be primarily limited to the project site and immediate vicinity. Although impacts related to resources such as air quality, greenhouse gas emissions, traffic, erosion, and water quality would contribute to regional impacts, these impacts would not make a cumulatively considerable incremental contribution to any significant cumulative impact resulting from other past, present, and reasonably foreseeable future projects in the project vicinity. This result is due to the relatively small size of the proposed project, the confined nature of construction-related impacts over a relatively short 5- to 6-month construction period, and implementation of the following mitigation measures that are proposed to avoid, minimize, rectify, reduce, eliminate, and/or compensate for any potentially significant impacts:

- Mitigation Measure BIO-1: Conduct Preconstruction Species Surveys
- Mitigation Measure BIO-3: Install Temporary Fencing around Environmentally Sensitive Habitat
- Mitigation Measure BIO-4: Restore Temporarily Disturbed Areas
- Mitigation Measure BIO-5: Implement Water Quality Best Management Practices
- Mitigation Measure BIO-11: Avoid the Spread of Invasive Plant Species
- Mitigation Measure CUL-1: Archaeological Site Avoidance Measures
- Mitigation Measure CUL-2: Discovery of Cultural Resources during Ground-Disturbing Activities
- Mitigation Measure CUL-3: Accidental Finding of Human Remains

- Mitigation Measure GEO-1: Avoid and Minimize Impacts to Paleontological Resources
- Mitigation Measure HAZ-1: Implement BMPs for Wildland Fire Prevention
- Mitigation Measure TC-1: Prepare and Implement a Traffic Detour and Control Plan
- Mitigation Measure NOS-1: Construction Noise Reducing Best Management Practices

As described in the evaluations of potential impacts in the preceding sections of this IS/MND, all potentially significant impacts of the proposed project would be reduced to a level of less than significant with the proposed mitigation measures incorporated. While ongoing and future activities in the area, such as timber harvest, agricultural activities, and other non-federal actions may result in cumulative impacts to resources also impacted by the proposed project, those actions would also be subject to avoidance and minimization measures and the appropriate mitigation, as necessary. With incorporation of the proposed mitigation contained in this IS/MND, the project's contribution to cumulative impacts would be ***less than significant***.

Consequently, the proposed project would not result in any cumulatively considerable incremental contribution to significant cumulative impacts resulting from the projects listed above or any other past, present, or probable future projects in the area.

c) Would the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

As discussed throughout this initial study, construction and operation of the proposed project would not cause substantial adverse effects on human beings, either directly or indirectly. The proposed project is being implemented for the specific purpose of restoring circulation and public safety. Furthermore, mitigation measures are provided as necessary to reduce the proposed project's potentially significant effects on air quality, biological resources, cultural resources, geology and soils, hazards, hydrology and water quality, and tribal cultural resources to less-than-significant levels. Thus, construction and operation of the proposed project would not cause substantial adverse effects on human beings, either directly or indirectly and would improve the quality of life for humans by improving recreational opportunities and access to surrounding recreational areas. There would be ***no impact***.

This page intentionally left blank.

Chapter 4. References Cited

Chapter 2. Project Description

Area West Environmental, Inc. 2020. *Natural Environment Study for the Moss Canyon Bridge on Incline Road Replacement Project (Br. No. 40C0064)*. Prepared for the County of Mariposa and Caltrans District 10. Orangevale, CA

Aesthetics (Section 3.3)

California Department of Transportation. 2020. 2017 Traffic Volumes for State Route 140. Available: <https://dot.ca.gov/programs/traffic-operations/census/traffic-volumes/2017/route-134-161>. Accessed June 23, 2020.

California Department of Transportation. 2019. Caltrans List of Designated Scenic Routes. Available: <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways>. Accessed May 2020.

County of Mariposa. 2006. *The County of Mariposa General Plan, Volume I Countywide General Plan, Conservation and Open Space Element*, page 11-2. Mariposa, CA.

Agriculture and Forestry Resources (Section 3.4)

California Department of Conservation. 2023. California Important Farmland Finder. Accessed April 27, 2023 at <https://maps.conservation.ca.gov/DLRP/CIFF/>.

Air Quality (Section 3.5)

California Air Resources Board. 2022. Maps of Current State and Federal Area Designations 2018/2019. Available: <https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations>. Accessed April 27, 2023.

BIOLOGICAL RESOURCES (SECTION 3.6)

Area West Environmental, Inc. 2020. *Natural Environment Study for the Moss Canyon Bridge on Incline Road Replacement Project (Br. No. 40C0064)*. Prepared for the County of Mariposa and Caltrans District 10. Orangevale, CA

Baldwin, B.G. (ed.). 2012. *The Jepson Manual: Vascular Plants of California, 2nd Edition*. University of California Press. Berkeley, California.

California Department of Fish and Wildlife. 2020. California Natural Diversity Data Base (CNDDB). Available at: <http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp>. Accessed January 2020.

California Department of Fish and Wildlife. 2018. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities. Available at: <https://www.wildlife.ca.gov/Conservation/Survey-Protocols>

- California Invasive Plant Council. 2018. California Invasive Plant Inventory. California Invasive Plant Council: Berkeley, CA. Available at <https://www.cal-ipc.org/plants/inventory/>. Accessed in August, 2018.
- California Native Plant Society. 2020. Inventory of rare, threatened, and endangered plants of California. Available at: <http://www.rareplants.cnps.org/>. Accessed January, 2020.
- California Native Plant Society. 2001. CNPS Botanical Survey Guidelines. Available at: <https://www.cnps.org/plant-science/field-protocols-guidelines/>.
- Cypher, E.A. 2002. General Rare Plant Survey Guidelines. California State University, Stanislaus Endangered Species Recovery Program. Bakersfield, California.
- Environmental Laboratory, Department of the Army. 1987. Corps of Engineers Wetland Delineation Manual. (Technical Report Y-87-1.) U.S. Army Corps of Engineers. Waterways Experimental Station. Vicksburg, MI.
- Natural Resources Conservation Service. 2018. Web Soil Survey. Available at <http://websoilsurvey.nrcs.usda.gov/app/>. Accessed on March 26, 2018.
- U.S. Army Corps of Engineers, Engineer Research and Development Center. 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*. Vicksburg, MI. September.
- U.S. Army Corps of Engineers. 2005. *Regulatory Guidance Letter No. 05-05 Subject: Ordinary High Water Mark Identification*, December 7, 2005.
- U.S. Department of Agriculture. 2015. National Hydrography Dataset. Available at <http://nhd.usgs.gov/data.html>. Accessed on March 2018.
- U.S. Fish and Wildlife Service. 2020. Official IPaC Trust Resource Report. Generated in January, 2020.
- U.S. Fish and Wildlife Service. 1996. Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants. Available at <https://www.fws.gov/sacramento/es/Survey-Protocols-Guidelines/>
- U.S. Forest Service Pacific Southwest Region. 2013a. Region 5 Regional Forester's 2013 Sensitive Animal Species List. <https://www.fs.usda.gov/main/r5/plants-animals/wildlife>. Accessed May 2019.
- U.S. Forest Service Pacific Southwest Region. 2013b. Region 5 Regional Forester's 2013 Sensitive Plant Species List. <https://www.fs.usda.gov/main/r5/plants-animals/plants>. Accessed May 2019.

CULTURAL RESOURCES (SECTION 3.7)

- McMorris, C. 2004. *Caltrans Historic Bridge Inventory Update: Concrete Arch Bridges*. Prepared for the State of California Department of Transportation Environmental Program. JRP Historical Consulting. On file at the Northwest Information Center, Rohnert Park, California.

ENERGY RESOURCES (SECTION 3.8)

California Energy Commission. 2021a. Energy Almanac: Total System Electric Generation. Available at <https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation>. Accessed on August 3, 2021.

California Energy Commission. 2021b. Energy Almanac: Supply: Supply and Demand of Natural Gas in California. Available at <https://www.energy.ca.gov/data-reports/energy-almanac/californias-natural-gas-market/supply-and-demand-natural-gas-california>. Accessed on August 3, 2021.

California Energy Commission. 2021c. Energy Almanac: California Gasoline Data, Facts, and Statistics. Available at <https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-gasoline-data-facts-and-statistics>. Accessed on August 3, 2021.

GEOLOGY AND SOILS (SECTION 3.9)

Area West Environmental, Inc. 2020. *Natural Environment Study for the Moss Canyon Bridge on Incline Road Replacement Project (Br. No. 40C0064)*. Prepared for the County of Mariposa and Caltrans District 10. Orangevale, CA

GREENHOUSE GAS EMISSIONS (SECTION 3.10)

California Air Resources Board. 2017. The 2017 Climate Change Scoping Plan Update: The Proposed Strategy For Achieving California's 2030 Greenhouse Gas Target, January 20 2017.

HAZARDS AND HAZARDOUS MATERIALS (SECTION 3.11)

Kleinfelder, Inc. 2015. *Initial Site Assessment for the Moss Canyon Bridge (Br. No. 40C0064)*. Prepared for the County of Mariposa and Caltrans District 10. Merced, CA

HYDROLOGY AND WATER QUALITY (SECTION 3.12)

Area West Environmental, Inc. 2020. *Water Quality Assessment Report for the Moss Canyon Bridge on Incline Road Bridge Replacement Project, Bridge Number 40C0064*. Prepared for the County of Mariposa and Caltrans District 10. Orangevale, CA.

California Department of Water Resources. 2016. California's Groundwater: Working Towards Sustainability. Bulletin 118: Interim Update 2016.

Central Valley Regional Water Quality Control Board. 2016. Water Quality Control Plan for the Central Valley Region Fourth Edition.

Federal Emergency Management Agency Flood Map Service Center. 2017. Available: <<https://msc.fema.gov/portal>>. Accessed: August 2018.

Watershed Boundary Dataset for HUC#180400080307, California. 2018. Available: <http://datagateway.nrcs.usda.gov>. Accessed May 8, 2018.

WRECO. 2019. *Location Hydraulic Study Report for the Incline Road at Moss Canyon Bridge Replacement Project*. Prepared for the County of Mariposa and Caltrans District 10. Roseville, CA.

Western Regional Climate Center. 2018. Sonora, California (048353): Period of Record Monthly Climate Summary. Available: <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca8353>. Accessed August 2018.

LAND USE AND PLANNING (SECTION 3.13)

County of Mariposa. 2006. *The County of Mariposa General Plan, Volume I Countywide General Plan*, Mariposa, CA.

U.S. Census Bureau. Mariposa County, California QuickFacts. Available: <https://www.census.gov/quickfacts/fact/table/mariposacountycalifornia/PST045216>. Accessed April 26, 2018.

NOISE (SECTION 3.15)

California Department of Transportation. 2013. *Transportation and Construction Vibration Guidance Manual, September 2013* Available at: <https://dot.ca.gov/programs/environmental-analysis/noise-vibration/guidance-manuals>

RECREATION (SECTION 3.18)

United States Forest Service. (2018). Recreation. Sierra National Forest. Available online: <https://www.fs.usda.gov/recmain/sierra/recreation>. Accessed May 2018.

Appendix A. Biological Resources

As more fully described in **Section 3.6 “Biological Resources”**, this Appendix includes the following background information from the Natural Environment Study prepared for the proposed project:

- A complete list of special-status plants and animals that are known to occur or have potential to occur in the project region, which includes the listing status, preferred habitat, and potential for occurrence in the BSA for each species.
- A table and figure that lists all inventoried trees (including a description of tree health and dbh or Diameter at breast height).

Species List

Table 3-4. Special-status Plant Species with the Potential to Occur in the Vicinity of the Project

Common and Scientific Name	Legal Status ¹		Distribution	Habitat Association	Identification Period	Species Present/Absent	Rationale
	Federal /USFS	State/ CNPS					
Jepson's onion <i>Allium jepsonii</i>	--/FSS	--/1B.2	Butte, El Dorado, Placer, and Tuolumne counties.	Serpentine or volcanic soils in chaparral, cismontane woodland, and lower montane coniferous forests. 990 - 4,330 feet amsl.	April - August	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are no CNDDDB records within a 10-mile radius of the BSA.
Three-bracted onion <i>Allium tribracteatum</i>	--/FSS	--/1B.2	Alpine, Amador, Calaveras, El Dorado, and Tuolumne counties.	Volcanic slopes in chaparral, lower montane coniferous forest, and upper montane coniferous forests. 3,600 - 9,840 feet amsl.	April - August	Absent	The BSA is below this species' elevational range. This species was not observed during protocol-level surveys conducted within the species' identification period. There are no CNDDDB records within a 10-mile radius of the BSA.
Yosemite onion <i>Allium yosemitense</i>	--/FSS	SR/ 1B.3	Mariposa and Tuolumne counties.	Rocky, metamorphic or granite soils in chaparral, cismontane woodland, and lower montane coniferous forests. 1,760 - 7,220 feet amsl.	April - July	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are 12 CNDDDB records within a 10-mile radius of the BSA, the nearest located approximately 0.5 miles northeast of the BSA.
Nissenan manzanita <i>Arctostaphylos nissenana</i>	--/FSS	--/1B.2	El Dorado and Tuolumne counties.	Rocky soils in chaparral and woodland areas. 1,480 - 3,600 feet amsl.	February - March	Absent	This species was not observed during protocol-level surveys. While surveys were conducted outside of this identification (blooming) period, this is a perennial shrub and would have been identifiable year round. There are no CNDDDB records within a 10-mile radius of the BSA.
Big-scale balsamroot <i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>	--/FSS	--/1B.2	Alameda, Amador, Butte, Colusa, El Dorado, Lake, Mariposa, Napa, Placer, Santa Clara, Solano, Sonoma, Tehama, and Tuolumne counties.	Chaparral, cismontane woodland, valley and foothill grasslands; sometimes on serpentine soils. 140 - 5,100 feet amsl.	March - June	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There is one CNDDDB record within a 10-mile radius of the BSA, the nearest located approximately 4 miles northeast of the BSA.

Common and Scientific Name	Legal Status ¹		Distribution	Habitat Association	Identification Period	Species Present/Absent	Rationale
	Federal /USFS	State/ CNPS					
Hidden rockcress <i>Boechea evadens</i>	--/FSS	--/1B.3	Tulare County.	Rocky areas in upper montane coniferous forest 8,400 - 9,350 feet amsl.	May - August	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. The BSA is below this species' elevational range. There are no CNDDDB records within a 10-mile radius of the BSA.
Tulare rockcress <i>Boechea tularensis</i>	--/--	1B.3	El Dorado, Fresno, Inyo, Madera, Mono, Mariposa, and Tulare counties.	Rocky slopes, sometimes roadsides, in subalpine coniferous forests and upper montane coniferous forests. 5,990 – 10,990 feet amsl.	May - August	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. The BSA is below this species' elevational range. There is one CNDDDB record within a 10-mile radius of the BSA, the nearest located approximately 6.4 miles northeast of the BSA.
Upswept moonwort <i>Botrychium ascendens</i>	--/FSS	--/2B.3	Alpine, Butte, El Dorado, Fresno, Lassen, Mono, Modoc, Nevada, Placer, Plumas, Shasta, Tehama, Tulare, and Tuolumne counties.	Mesic soils (e.g. meadows and seeps) in lower montane coniferous forests. 3,660 - 10,500 feet amsl.	July - August	Absent	The BSA does not contain mesic soils. Although protocol-level surveys were conducted outside the species' identification period, this species was not observed within the BSA. The BSA is below this species' elevational range. There are no CNDDDB records within a 10-mile radius of the BSA.
Scalloped moonwort <i>Botrychium crenulatum</i>	--/FSS	--/2B.2	Alpine, Amador, Butte, Calaveras, Colusa, El Dorado, Fresno, Inyo, Lake, Lassen, Los Angeles, Mono, Modoc, Nevada, Placer, Plumas, San Bernardino, Shasta, Sierra, Siskiyou, Tehama, Trinity, Tulare, and Tuolumne counties.	Bogs, fens, meadows, and seeps in lower and upper montane coniferous forests. 4,160 - 10,760 feet amsl.	June - September	Absent	The BSA does not contain bogs, fens, meadows or seeps. Although protocol-level surveys were conducted outside the species' identification period, this species was not observed within the BSA. The BSA is below this species' elevational range. There are no CNDDDB records within a 10-mile radius of the BSA.



Common and Scientific Name	Legal Status ¹		Distribution	Habitat Association	Identification Period	Species Present/Absent	Rationale
	Federal /USFS	State/ CNPS					
Slender moonwort <i>Botrychium lineare</i>	--/FSS	--/1B.3	Fresno, Mono, Tulare, and Tuolumne counties.	Meadows and seeps in upper montane and subalpine coniferous forests; often in disturbed areas. 8,400 – 8,530 feet amsl.	Year-round	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. The BSA is below this species' elevational range. There are no CNDDDB records within a 10-mile radius of the BSA.
Common moonwort <i>Botrychium lunaria</i>	--/FSS	--/2B.3	Mono, Modoc, Nevada, Sierra, Tulare, and Tuolumne counties.	Meadows and seeps in upper montane and subalpine coniferous forests. 6,500 - 11,160 feet amsl.	August	Absent	The BSA does not contain meadows or seeps. Although protocol-level surveys were conducted outside the species' identification period, this species was not observed within the BSA. The BSA is below this species' elevational range. There are no CNDDDB records within a 10-mile radius of the BSA.
Mingan moonwort <i>Botrychium minganense</i>	--/FSS	--/2B.2	Amador, Butte, Calaveras, El Dorado, Fresno, Lassen, Modoc, Nevada, Placer, Plumas, San Bernardino, Shasta, Sierra, Siskiyou, Tehama, Trinity, Tulare, and Tuolumne counties.	Bogs, fens, meadows, and seeps in lower and upper montane coniferous forests with mesic soils. 4,780 – 7,150 feet amsl.	July - September	Absent	The BSA does not contain bogs, fens, meadows, or seeps. Although protocol-level surveys were conducted outside the species' identification period, this species was not observed within the BSA. The BSA is below this species' elevational range. There are no CNDDDB records within a 10-mile radius of the BSA.
Western goblin <i>Botrychium montanum</i>	--/FSS	--/2B.1	Amador, Butte, El Dorado, Fresno, Lassen, Modoc, Plumas, Shasta, Sierra, Tehama, and Tuolumne counties.	Meadows and seeps in lower and upper montane coniferous forests with mesic soils. 4,800 - 7,150 feet amsl.	July - September	Absent	The BSA does not contain meadows or seeps. Although protocol-level surveys were conducted outside the species' identification period, this species was not observed within the BSA. The BSA is below this species' elevational range. There are no CNDDDB records within a 10-mile radius of the BSA.

Common and Scientific Name	Legal Status ¹		Distribution	Habitat Association	Identification Period	Species Present/Absent	Rationale
	Federal /USFS	State/ CNPS					
Stalked moonwort <i>Botrychium pedunculatum</i>	--/FSS	--/2B.1	Tuolumne County. Known only from Stanislaus National Forest.	Meadows and seeps in upper montane coniferous forests with granite, volcanic, or andesitic soils. 6,053 feet amsl.	August	Absent	The BSA does not contain meadows or seeps. Although protocol-level surveys were conducted outside the species' identification period, this species was not observed within the BSA. The BSA is outside this species' geographic range and below its elevational range. There are no CNDDDB records within a 10-mile radius of the BSA.
Northwestern moonwort <i>Botrychium pinnatum</i>	--/FSS	--/2B.3	Lassen, Modoc, Plumas, Shasta, and Siskiyou counties.	Meadows and seeps in lower and upper montane coniferous forests with mesic soils. 5,810 – 6,700 feet amsl.	July - October	Absent	The BSA does not contain meadows or seeps. Although protocol-level surveys were conducted outside the species' identification period, this species was not observed within the BSA. The BSA is outside this species' geographic range and below its elevational range. There are no CNDDDB records within a 10-mile radius of the BSA.
Moosewort <i>Botrychium tumex</i>	--/FSS	--/2B.1	Mariposa County. Known only from Mt. Hoffman in Yosemite National Park.	Alpine boulder and rock fields with calcareous soils. 11,820 feet amsl.	August - September	Absent	The BSA does not contain calcareous soils. Although protocol-level surveys were conducted outside the species' identification period, this species was not observed within the BSA. The BSA is outside this species' geographic range and below its elevational range. There are no CNDDDB records within a 10-mile radius of the BSA.

Common and Scientific Name	Legal Status ¹		Distribution	Habitat Association	Identification Period	Species Present/Absent	Rationale
	Federal /USFS	State/ CNPS					
Giant moonwort <i>Botrychium yaaxudakeit</i>	--/FSS	--/2B.1	Tuolumne County. Known only from Virginia Canyon in Yosemite National Park.	Alpine boulder and rock field with limestone and marble soils. 10,500 feet amsl.	August	Absent	The BSA does not contain limestone and marble soils. Although protocol-level surveys were conducted outside the species' identification period, this species was not observed within the BSA. The BSA is outside this species' geographic range and below its elevational range. There are no CNDDDB records within a 10-mile radius of the BSA.
Bolander's bruchia moss <i>Bruchia bolanderi</i>	--/FSS	--/4.2	El Dorado, Fresno, Madera, Modoc, Mariposa, Nevada, Plumas, Sierra, Tehama, Tulare, and Tuolumne counties.	Damp soils in lower and upper montane coniferous forests, meadows and seeps, and upper montane coniferous forests. 5,580 - 9,190 feet amsl.	Year-round (Moss)	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. The BSA is below this species' elevational range. There are no CNDDDB records within a 10-mile radius of the BSA.
Pleasant Valley mariposa lily <i>Calochortus clavatus</i> var. <i>avicus</i>	--/FSS	--/1B.2	Amador, Calaveras, El Dorado, Mariposa, and Placer counties.	Josephine silt loam and volcanic soils in lower montane coniferous forests. 1,000 - 5,910 feet amsl.	May - July	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are no CNDDDB records within a 10-mile radius of the BSA.
Northern clustered sedge <i>Carex arcta</i>	--/--	--/2B.2	Del Norte, Humboldt, Mendocino, Mariposa, and Tulare counties.	Bogs and fens and North Coast coniferous forests with mesic soils. 195 - 4,590 feet amsl.	June - September	Absent	The BSA does not contain bogs, fens, or mesic soils. Although surveys were conducted outside the species' identification period, this species was not observed within the BSA. There are no CNDDDB records within a 10-mile radius of the BSA.

Common and Scientific Name	Legal Status ¹		Distribution	Habitat Association	Identification Period	Species Present/Absent	Rationale
	Federal /USFS	State/ CNPS					
Mud sedge <i>Carex limosa</i>	--/--	--/2B.2	Alpine, Butte, El Dorado, Fresno, Lassen, Modoc, Mariposa, Nevada, Plumas, Shasta, Sierra, Siskiyou, Tehama, and Tuolumne counties.	Bogs, fens, meadows, seeps, marshes, and swamps in lower and upper montane coniferous forests. 3,930 – 8,850 feet amsl.	June - August	Absent	The BSA does not contain bogs, fens, meadows, seeps, marshes, or swamps. Although protocol-level surveys were conducted outside the species' identification period, this species was not observed within the BSA. The BSA is below this species' elevational range. There is one CNDDDB record within a 10-mile radius of the BSA, the nearest located approximately 7.2 miles northeast of the BSA.
Tompkin's sedge <i>Carex tompkinsii</i>	--/--	SR/4.3	Fresno, Mariposa, and Tuolumne counties.	Sometime granitic soils in chaparral, cismontane woodlands, lower montane coniferous forests, and upper montane coniferous forest. 1,375 – 6,000 feet amsl.	May - July	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are two CNDDDB records within a 10-mile radius of the BSA, the nearest located approximately 6.3 miles northeast of the BSA.
Bolander's woodreed <i>Cinna bolanderi</i>	--/--	--/1B.2	Fresno, Madera, Mariposa, and Tulare counties.	Mesic soils and streamside in meadows, seep, and upper montane coniferous forests. 5,480 – 8,000 feet amsl.	July - September	Absent	The BSA does not contain meadows, seeps, or upper montane coniferous forests. Although protocol-level surveys were conducted outside the species' identification period, this species was not observed within the BSA. The BSA is below this species' elevational range. There are four CNDDDB records within a 10-mile radius of the BSA, the nearest located approximately 6.4 miles northeast of the BSA.

Common and Scientific Name	Legal Status ¹		Distribution	Habitat Association	Identification Period	Species Present/Absent	Rationale
	Federal /USFS	State/ CNPS					
Small's southern clarkia <i>Clarkia australis</i>	--/FSS	--/1B.2	Calaveras, Madera, Mariposa, and Tuolumne counties.	Cismontane woodlands and lower montane coniferous forests. 2,630 - 6,810 feet amsl.	May - August	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are four CNDDDB records within a 10-mile radius of the BSA, the nearest located approximately 2.5 miles northwest of the BSA.
Mariposa clarkia <i>Clarkia biloba</i> ssp. <i>australis</i>	--/FSS	--/1B.2	Mariposa and Tuolumne counties.	Serpentine soils in chaparral and cismontane woodlands. 990 - 4,790 feet amsl.	April - July	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are eight CNDDDB records within a 10-mile radius of the BSA, the nearest located approximately 4.4 miles west of the BSA.
Merced clarkia <i>Clarkia lingulata</i>	--/FSS	--/1B.1	Mariposa County. Known from only two occurrences along the Merced River.	Chaparral and cismontane woodlands. 1,320 - 1,500 feet amsl.	May - June	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are two CNDDDB records within a 10-mile radius of the BSA, the nearest located approximately 3.8 miles west of the BSA.
Mariposa cryptantha <i>Cryptantha mariposae</i>	--/--	--/1B.3	El Dorado, Mariposa and Tuolumne counties.	Serpentine and rocky soils in chaparral. 820 - 2,130 feet amsl.	April - June	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are no CNDDDB records within a 10-mile radius of the BSA.

Common and Scientific Name	Legal Status ¹		Distribution	Habitat Association	Identification Period	Species Present/Absent	Rationale
	Federal /USFS	State/ CNPS					
Jepson's dodder <i>Cuscuta jepsonii</i>	--/--	--/1B.1	Lake, Mariposa, Siskiyou, Trinity, and Tulare counties.	Streambanks in North Coast coniferous forests. Occurs on <i>Ceanothus diversifolius</i> and <i>Ceanothus prostratus</i> . 3,940 – 7,550 feet amsl.	July - September	Absent	The BSA does not contain the host plants <i>Ceanothus diversifolius</i> or <i>Ceanothus prostratus</i> . Although protocol-level surveys were conducted outside the species' identification period, this species was not observed within the BSA. The BSA is below this species' elevational range. There are no CNDDDB records within a 10-mile radius of the BSA.
Mountain lady's-slipper <i>Cypripedium montanum</i>	--/FSS	--/4.2	Del Norte, Glenn, Humboldt, Madera, Mendocino, Modoc, Mariposa, Plumas, Santa Cruz, Shasta, Sierra, Siskiyou, San Mateo, Sonoma, Tehama, Trinity, and Tuolumne counties.	Broadleafed upland forests, cismontane woodlands, lower montane coniferous forests, and North Coast coniferous forests. 610 - 7,300 feet amsl.	March - August	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are no CNDDDB records within a 10-mile radius of the BSA.
Branched collybia <i>Dendrocollybia racemosa</i>	--/FSS	--/--	Distribution is restricted to the Pacific Northwest, with only 33 occurrences documented in California, Oregon, and Washington (NatureServe Explorer 2018).	It usually grows on the decaying fruit bodies of other agarics (gilled mushrooms). Elevational requirements unknown.	Summer - Fall (Mushroom)	Absent	This species was not observed during protocol-level surveys. The BSA is outside this species' known geographic range. There are no CNDDDB records within a 10-mile radius of the BSA.
Yellow-lip pansy monkeyflower <i>Diplacus pulchellus</i>	--/--	--/1B.2	Calaveras, Mariposa, and Tuolumne counties.	Vernally mesic soils, often disturbed or clay, in lower montane coniferous forests, meadows, and seeps. 1,970 – 6,560 feet amsl.	April - July	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are three CNDDDB records within a 10-mile radius of the BSA, the nearest located approximately 4.3 miles northeast of the BSA.

Common and Scientific Name	Legal Status ¹		Distribution	Habitat Association	Identification Period	Species Present/Absent	Rationale
	Federal /USFS	State/ CNPS					
Tahoe draba <i>Draba asterophora</i> var. <i>asterophora</i>	--/FSS	--/1B.2	Alpine, El Dorado, Mono, and Tuolumne counties.	Alpine boulder and rock fields and subalpine coniferous forests. 8,200 - 11,500 feet amsl.	July - September	Absent	The BSA does not contain alpine boulder and rock fields or subalpine coniferous forests. Although protocol-level surveys were conducted outside the species' identification period, this species was not observed within the BSA. The BSA is below this species' elevational range. There are no CNDDDB records within a 10-mile radius of the BSA.
Cup Lake draba <i>Draba asterophora</i> var. <i>macrocarpa</i>	--/FSS	--/1B.1	El Dorado County. Known only near Cup Lake and Saucer Lake below Ralston Peak.	Rocky, subalpine coniferous forests. 8,200 - 9,230 feet amsl.	July - September	Absent	The BSA does not contain subalpine coniferous forests. Although protocol-level surveys were conducted outside the species' identification period, this species was not observed within the BSA. The BSA is outside this species' known geographic range and below its elevational range. There are no CNDDDB records within a 10-mile radius of the BSA.
Koch's cord moss <i>Entosthodon kochii</i>	--/--	--/1B.3	Mendocino, Mariposa, Marin, and San Luis Obispo counties.	Cismontane woodlands. 590 - 3,280 feet amsl.	Year-round (Moss)	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There is one CNDDDB record within a 10-mile radius of the BSA, the nearest located approximately 9 miles southwest of the BSA.
Hall's daisy <i>Erigeron</i> <i>aequifolius</i>	--/--	--/1B.3	Fresno, Kern, and Tulare counties.	Rocky and granitic soils in broadleaf upland forest, lower montane coniferous forests, pinyon and juniper woodlands, and upper montane coniferous forests. 4,920 - 8,000 feet amsl.	June - August	Absent	Although protocol-level surveys were conducted outside the species' identification period, this species was not observed within the BSA. The BSA is below this species' elevational range. There are no CNDDDB records within a 10-mile radius of the BSA.

Common and Scientific Name	Legal Status ¹		Distribution	Habitat Association	Identification Period	Species Present/Absent	Rationale
	Federal /USFS	State/ CNPS					
Jack's wild buckwheat <i>Eriogonum luteolum</i> var. <i>saltuarium</i>	--/FSS	--/1B.2	Alpine and Tuolumne counties.	Sandy and granitic soils in Great Basin scrub and upper montane conifer woodlands. 5,580 - 7,870 feet amsl.	July - September	Absent	The BSA does not contain Great Basin scrub or upper montane conifer woodlands. Although protocol-level surveys were conducted outside the species' identification period, this species was not observed within the BSA. The BSA is below this species' elevational range. There are no CNDDDB records within a 10-mile radius of the BSA.
Congdon's woolly sunflower <i>Eriophyllum congdonii</i>	--/FSS	SR/ 1B.2	Mariposa County. Restricted to Merced River drainage.	Rocky and metamorphic soils in chaparral, cismontane woodlands, and lower montane coniferous forests. 1,640 - 6,230 feet amsl.	April - June	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are 20 CNDDDB records within a 10-mile radius of the BSA, the nearest located approximately 0.2 miles east of the BSA.
Yosemite woolly-sunflower <i>Eriophyllum nubigenum</i>	--/FSS	--/1B.3	Madera, Mariposa, and Tuolumne counties.	Gravelly, granitic soil in chaparral and upper and lower montane coniferous forest. 5,000 - 9,020 feet amsl.	May - August	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. The BSA is below this species' elevational range. There is one CNDDDB record within a 10-mile radius of the BSA, the nearest located approximately 8.9 miles northwest of the BSA.
Slender-stemmed monkeyflower <i>Erythranthe filicaulis</i>	--/--	--/1B.2	Mariposa and Tuolumne counties.	Vernally mesic soils in cismontane woodlands, lower montane coniferous forests, meadows and seeps, and upper montane coniferous forests. 2,950 - 5,740 feet amsl.	April - August	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. The BSA is below this species' elevational range. There are ten CNDDDB records within a 10-mile radius of the BSA, the nearest located approximately 3.5 miles northeast of the BSA.

Common and Scientific Name	Legal Status ¹		Distribution	Habitat Association	Identification Period	Species Present/Absent	Rationale
	Federal /USFS	State/ CNPS					
Slender-stalked monkeyflower <i>Erythranthe gracilipes</i>	--/--	--/1B.2	Fresno, Madera, and Mariposa counties.	Decomposed granitic soils, often in a bun or disturbed area, in chaparral, cismontane woodlands, and lower montane coniferous forests. 1,640 – 4,260 feet amsl.	April - June	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are no CNDDDB records within a 10-mile radius of the BSA.
Pilot Ridge fawn lily <i>Erythronium taylorii</i>	--/FSS	--/1B.2	Mariposa and Tuolumne counties.	Metamorphic or rocky cliffs in lower montane coniferous forests. 4,400 – 4,600 feet amsl.	April - May	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. The BSA is below this species' elevational range. There are no CNDDDB records within a 10-mile radius of the BSA.
Tuolumne fawn lily <i>Erythronium tuolummense</i>	--/FSS	--/1B.2	Tuolumne County.	Broadleaved upland forests, chaparral, cismontane woodlands, and lower montane coniferous forests. 1,680 - 4,480 feet amsl.	March - June	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are no CNDDDB records within a 10-mile radius of the BSA.
Brook pocket moss <i>Fissidens aphelotaxifolius</i>	--/FSS	--/2B.2	Madera and Siskiyou counties.	Rocks, stream channels, and waterfalls in lower and upper montane coniferous forests. 6,560 - 7,220 feet amsl.	Year-round (Moss)	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. The BSA is below this species' elevational range. There are no CNDDDB records within a 10-mile radius of the BSA.
Blandow's bog moss <i>Helodium blandowii</i>	--/--	--/2B.3	El Dorado, Fresno, Mono, Siskiyou, Tulare, and Tuolumne counties.	Wet meadows, fens, and seeps in subalpine coniferous forests. 6,100 – 8,850 feet amsl.	Year-round (Moss)	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. The BSA is below this species' elevational range. There are no CNDDDB records within a 10-mile radius of the BSA.

Common and Scientific Name	Legal Status ¹		Distribution	Habitat Association	Identification Period	Species Present/Absent	Rationale
	Federal /USFS	State/ CNPS					
Parry's horkelia <i>Horkelia parryi</i>	--/FSS	--/1B.2	Amador, Calaveras, El Dorado, Mariposa, and Tuolumne counties.	Ione formation and other soils in chaparral and cismontane woodland. 260- 3,510 feet amsl.	April - September	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are three CNDDDB records within a 10-mile radius of the BSA, the nearest located approximately 4.2 miles west of the BSA.
Short-leaved hulsea <i>Hulsea brevifolia</i>	--/FSS	--/1B.2	El Dorado, Fresno, Madera, Mariposa, Tulare, and Tuolumne counties.	Granitic, volcanic, gravelly, or sandy soils in lower and upper montane coniferous forests. 4,920 - 10,500 feet amsl.	May - August	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. The BSA is below this species' elevational range. There are eight CNDDDB records within a 10-mile radius of the BSA, the nearest located approximately 6.8 miles north of the BSA.
Tuolumne iris <i>Iris hartwegii</i> ssp. <i>columbiana</i>	--/FSS	--/1B.2	Calaveras and Tuolumne counties.	Cismontane woodlands and lower montane coniferous forests. 1,400 - 4,600 feet amsl.	May - June	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. The BSA is below this species' elevational range. There are no CNDDDB records within a 10-mile radius of the BSA.
Congdon's lewisia <i>Lewisia congdonii</i>	--/FSS	SR/ 1B.3	Fresno and Mariposa counties. Known only from the Merced and Kings River watersheds.	Granitic, metamorphic, or rocky areas with mesic soils in chaparral, cismontane woodlands, lower montane coniferous forests, and upper montane coniferous forests. 0 - 9,185 feet amsl.	April - June	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are six CNDDDB records within a 10-mile radius of the BSA, the nearest located approximately 0.6 miles southeast of the BSA.

Common and Scientific Name	Legal Status ¹		Distribution	Habitat Association	Identification Period	Species Present/Absent	Rationale
	Federal /USFS	State/ CNPS					
Yosemite lewisia <i>Lewisia disepala</i>	--/--	--/1B.2	Fresno, Kern, Madera, Mariposa, Tulare, and Tuolumne counties.	Granitic, sandy soils in lower montane coniferous forests, pinyon and juniper woodlands, and upper montane coniferous forests. 3,400 – 11,480 feet amsl.	March - June	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. The BSA is below this species' elevational range. There is one CNDDDB record within a 10-mile radius of the BSA, the nearest located approximately 6.8 miles northeast of the BSA.
Hutchison's lewisia <i>Lewisia kelloggii</i> ssp. <i>hutchisonii</i>	--/FSS	--/3.2	Alpine, Amador, Butte, El Dorado, Humboldt, Madera, Placer, Plumas, Shasta, Sierra, Siskiyou, and Tuolumne counties.	Openings, ridgetops, often in slate and sometimes in rhyolite tuff soils in upper montane coniferous forests. 2,510 - 7,760 feet amsl.	April - August	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. The BSA is below this species' elevational range. There are no CNDDDB records within a 10-mile radius of the BSA.
Kellogg's lewisia <i>Lewisia kelloggii</i> ssp. <i>kelloggii</i>	--/FSS	--/3.2	Alpine, Amador, Butte, El Dorado, Humboldt, Madera, Placer, Plumas, Shasta, Sierra, Siskiyou, and Tuolumne counties.	Openings, ridgetops, often in slate and sometimes in rhyolite tuff soils in upper montane coniferous forests. 4,800 - 7,760 feet amsl.	April - June	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. The BSA is below this species' elevational range. There are no CNDDDB records within a 10-mile radius of the BSA.
Stebbins' lomatium <i>Lomatium stebbinsii</i>	--/FSS	--/1B.1	Calaveras and Tuolumne counties.	Gravelly, volcanic clay soils in lower montane coniferous forests and chaparral. 4,080 - 7,800 feet amsl.	March - May	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. The BSA is below this species' elevational range. There are no CNDDDB records within a 10-mile radius of the BSA.
Shaggyhair lupine <i>Lupinus spectabilis</i>	--/--	--/1B.2	Mariposa and Tuolumne counties.	Serpentine soils in chaparral and cismontane woodlands. 850 – 2,700 feet amsl.	April - May	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are no CNDDDB records within a 10-mile radius of the BSA.

Common and Scientific Name	Legal Status ¹		Distribution	Habitat Association	Identification Period	Species Present/Absent	Rationale
	Federal /USFS	State/ CNPS					
Broad-nerved hump moss <i>Meesia uliginosa</i>	--/--	--/2B.2	El Dorado, Fresno, Lassen, Madera, Modoc, Nevada, Plumas, Riverside, Shasta, Sierra, Siskiyou, Tehama, and Tulare counties.	Mesic soil in bogs and fens, meadows and seeps, subalpine coniferous forests, and upper montane coniferous forests. 3,970 - 9,200 feet amsl.	July - October (Moss)	Absent	The BSA does not contain mesic soils. Although protocol-level surveys were conducted outside the species' identification period, this species was not observed within the BSA. The BSA is below this species' elevational range. There are no CNDDDB records within a 10-mile radius of the BSA.
Elongate copper moss <i>Mielichhoferia elongata</i>	--/FSS	--/4.3	Fresno, Humboldt, Inyo, Lake, Monterey, Mariposa, Marin, Nevada, Placer, Plumas, Santa Clara, Santa Cruz, Siskiyou, San Mateo, Trinity, Tulare, and Tuolumne counties.	Metamorphic rock, usually acidic, usually vernal mesic, often roadsides, sometimes carbonate; within broadleaved upland forests, chaparral, cismontane woodlands, coastal scrub, lower montane coniferous forests, meadows and seeps, and subalpine coniferous forests. 0 - 6,430 feet amsl.	Year-round (Moss)	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are four CNDDDB records within a 10-mile radius of the BSA, the nearest located approximately 0.7 miles southeast of the BSA.
Shevock's copper moss <i>Mielichhoferia shevockii</i>	--/FSS	--/1B.2	Fresno, Mariposa, Riverside, and Tulare counties.	Metamorphic, rock, and mesic soils in cismontane woodlands. 2,460 - 4,600 feet amsl.	Year-round (Moss)	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. The BSA is below this species' elevational range. There is one CNDDDB record within a 10-mile radius of the BSA, the nearest located approximately 6.6 miles southwest of the BSA.
Slender-stemmed monkeyflower <i>Mimulus filicaulis</i>	--/FSS	--/1B.2	Mariposa and Tuolumne counties.	Vernal mesic soils in cismontane woodlands, meadows and seeps, upper and lower montane coniferous forests. 2,950 - 5,750 feet amsl.	April - August	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. The BSA is below this species' elevational range. There are no CNDDDB records within a 10-mile radius of the BSA.

Common and Scientific Name	Legal Status ¹		Distribution	Habitat Association	Identification Period	Species Present/Absent	Rationale
	Federal /USFS	State/ CNPS					
Yellow-lip pansy monkeyflower <i>Mimulus (Diplacus) pulchellus</i>	--/FSS	--/1B.2	Calaveras, Mariposa, and Tuolumne counties.	Vernally mesic, clay soils, often in disturbed area; within lower montane coniferous forests and meadows and seeps. 1,970 - 6,560 feet amsl.	April - July	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are no CNDDDB records within a 10-mile radius of the BSA.
Holzinger's orthotrichum moss <i>Orthotrichum holzingeri</i>	--/--	--/1B.3	Amador, Calaveras, Modoc, Siskiyou, Tulare, and Tuolumne counties.	Usually on rocks in or along stream, rarely on tree limbs, in cismontane woodlands, lower montane coniferous forests, pinyon and juniper woodlands, and upper montane coniferous forests. 2,340 – 5,900 feet amsl.	Year-round (Moss)	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are no CNDDDB records within a 10-mile radius of the BSA.
Veined water lichen <i>Peltigera gowardii</i>	--/FSS	--/4.2	El Dorado, Fresno, Madera, Mono, Plumas, Sierra, Tulare, Tuolumne, and Yuba counties.	On rocks in cold water creeks with little or no sediment or disturbance in riparian forests. 3,500 - 8,600 feet amsl.	Year-round (Lichen)	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are no CNDDDB records within a 10-mile radius of the BSA.
Whitebark pine <i>Pinus albicaulis</i>	--/FSS	--/--	High elevation sites at all counties within the Sierra Nevada and Cascade mountain ranges.	Subalpine red fir and lodgepole pine forests. Above 6,500 feet amsl.	Year-round (Tree)	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are no CNDDDB records within a 10-mile radius of the BSA.
Yosemite popcornflower <i>Plagiobothrys torreyi</i> var. <i>torreyi</i>	--/--	--/1B.2	Fresno, Mariposa, and Tuolumne counties. Currently known only from Yosemite Valley (CNPS 2018b).	Lower montane coniferous forests, meadows, and seeps. 3,930 – 4,490 feet amsl.	April - June	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are three CNDDDB records within a 10-mile radius of the BSA, the nearest located approximately 4.2 miles northeast of the BSA.

Common and Scientific Name	Legal Status ¹		Distribution	Habitat Association	Identification Period	Species Present/Absent	Rationale
	Federal /USFS	State/ CNPS					
Yosemite bog orchid <i>Platanthera yosemitensis</i>	--/--	--/1B.2	Fresno and Mariposa counties.	Mesic, montane, or granitic soils in meadows and seeps. 6,890 – 7,490 feet amsl.	July - August	Absent	The BSA does not contain meadows or seeps. Although protocol-level surveys were conducted outside the species' identification period, this species was not observed within the BSA. There are five CNDDDB records within a 10-mile radius of the BSA, the locations of these records are suppressed by the CNDDDB.
Nuttall's ribbon-leaved pondweed <i>Potamogeton epihydrus</i>	--/--	--/2B.3	El Dorado, Madera, Mendocino, Modoc, Mariposa, Placer, Plumas, Shasta, and Tuolumne counties.	Marshes and swamps with assorted shallow freshwater. 1,210 – 7,120 feet amsl.	June - September	Absent	The BSA does not contain marshes or swamps. Although protocol-level surveys were conducted outside the species' identification period, this species was not observed within the BSA. There is one CNDDDB record within a 10-mile radius of the BSA, the nearest located approximately 7.2 miles northeast of the BSA.
Robbins' pondweed <i>Potamogeton robbinsii</i>	--/--	--/2B.3	Alpine, El Dorado, Fresno, Inyo, Lassen, Madera, Mariposa, Nevada, Modoc, Plumas, Sierra, Siskiyou, and Tuolumne counties.	Deep freshwater marshes and swamps. 5,020 - 10,828 feet amsl.	July - August	Absent	The BSA does not contain marshes or swamps. Although protocol-level surveys were conducted outside the species' identification period, this species was not observed within the BSA. The BSA is below this species' elevational range. There is one CNDDDB record within a 10-mile radius of the BSA, the nearest located approximately 9.9 miles east of the BSA.

Common and Scientific Name	Legal Status ¹		Distribution	Habitat Association	Identification Period	Species Present/Absent	Rationale
	Federal /USFS	State/ CNPS					
White beaked-rush <i>Rhynchospora alba</i>	--/--	--/2B.2	Inyo, Mendocino, Mariposa, Nevada, Plumas, Sonoma, and Trinity counties.	Bogs and fens, meadows and seeps, and marshes and freshwater swamps. 190 – 6,690 feet amsl.	June - August	Absent	The BSA does not contain bogs, fens, meadows, seeps, marshes, or swamps. Although protocol-level surveys were conducted outside the species' identification period, this species was not observed within the BSA. There is one CNDDDB record within a 10-mile radius of the BSA, the nearest located approximately 8.2 miles northeast of the BSA.
California beaked-rush <i>Rhynchospora californica</i>	--/--	--/1B.2	Butte, Marin, Napa, and Sonoma counties.	Bogs and fens, lower montane coniferous forests, meadows and seeps, and marshes and freshwater swamps. 140 – 3,310 feet amsl.	May - July	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are no CNDDDB records within a 10-mile radius of the BSA.
Slender-leaved pondweed <i>Stuckenia filiformis</i> ssp. <i>alpina</i>	--/--	--/2B.2	Alameda, Butte, Contra Costa, El Dorado, Lassen, Merced, Mono, Modoc, Mariposa, Nevada, Placer, Santa Clara, Shasta, Sierra, San Mateo, Solano, and Sonoma counties.	Marshes and swamps with assorted shallow freshwater. 980 – 7,050 feet amsl.	May - July	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There is one CNDDDB record within a 10-mile radius of the BSA, the nearest located approximately 9.8 miles east of the BSA.
Bolander's clover <i>Trifolium bolanderi</i>	--/--	--/1B.2	Fresno, Madera, and Mariposa counties.	Mesic soils in lower montane coniferous forests, meadows and seeps, and upper montane coniferous forests. 6,690 – 8,530 feet amsl.	June - August	Absent	The BSA does not contain mesic soils. Although protocol-level surveys were conducted outside the species' identification period, this species was not observed within the BSA. The BSA is below this species' elevational range. There is one CNDDDB record within a 10-mile radius of the BSA, the nearest located approximately 8.9 miles east of the BSA.

Common and Scientific Name	Legal Status ¹		Distribution	Habitat Association	Identification Period	Species Present/Absent	Rationale
	Federal /USFS	State/ CNPS					
Oval-leaved viburnum <i>Viburnum ellipticum</i>	--/--	--/2B.3	Alameda, Contra Costa, El Dorado, Fresno, Glenn, Humboldt, Lake, Mendocino, Mariposa, Napa, Placer, Shasta, Solano, Sonoma, and Tehama counties.	Chaparral, cismontane woodlands, and lower montane coniferous forests. 670 – 4,590 feet amsl.	May - June	Absent	This species was not observed during protocol-level surveys conducted within the species' identification period. There are no CNDDB records within a 10-mile radius of the BSA.

¹Status explanations:

-- = no listing.

Federal

FSS = USFS Region 5 Sensitive Plant Species List for the Stanislaus National Forest (2013).

State

SR = listed as rare under the CESA

California Native Plant Society Rare Plant Rank (formerly known as CNPS lists)

1B = Rank 1B species: rare, threatened, or endangered in California and elsewhere.

2B = Rank 2B species: rare, threatened, or endangered in California but more common elsewhere.

3. = Rank 3 species: Review List: Plants about which more information is needed.

4. = Rank 4 species: Watch List: Plants of limited distribution.

0.1 = Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat).

0.2 = Moderately threatened in California (20%-80% occurrences threatened/moderate degree and immediacy of threat).

0.3 = Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known).

Source: CNPS 2020; CNDDB 2020; USFWS 2020, USFS 2013b, and Calflora 2018.

Table 3-5. Special-status Wildlife with the Potential to Occur in the Vicinity of the Project

Common Name Scientific Name	Legal Status ¹		Distribution	Habitat Requirements	Habitat Present/ Absent ²	Rationale ³
	Federal/ USFS	State				
Amphibians						
Yosemite toad <i>Anaxyrus canorus</i>	FT/FSS	SSC	Occurs in the central and southern Sierra Nevada from El Dorado County to Fresno County from 6,400-11,320 feet amsl.	Wet meadows and seasonal snowmelt ponds, shallow lake margins in montane wet meadows, lodgepole pine, and subalpine conifer habitats. Adults may use mammal burrows or other features with moist microclimates for cover. Seasonal movements are approximately 0.78 mile from aquatic habitat (81 FR 59045-59119).	Absent	No suitable habitat for this species is present within the BSA. This species was not observed during surveys. The BSA is below the elevational range of this species. There are six CNDDDB records within a 10-mile radius of the BSA, the nearest located approximately 6.4 miles east of the BSA. <i>No effect</i>
Limestone salamander <i>Hydromantes brunus</i>	--/FSS	ST, FP	Limited to areas along the Merced River and its tributaries in Mariposa County from 836-2,624 feet amsl.	Occurs in mixed chaparral habitats, sometimes in limestone rock outcrops on north and east facing slopes. Active on the surface from November–March. May seek refuge under logs, rocks and other surface objects. May also use limestone caverns, talus, or large rock fissures outside of the surface activity pattern.	Habitat Present	Suitable habitat is present for this species within the BSA in Moss Canyon along the creek where exposed moss-covered rocky outcrops are present. This species was not observed during surveys. There are 16 CNDDDB records within a 10-mile radius of the BSA, the locations of these records are suppressed by the CNDDDB.
Foothill yellow-legged frog <i>Rana boylei</i>	--/FSS	SCT, SSC	Throughout North and South Coast Ranges south to the Transverse Range, across northern California to the west slope of the Cascade Range, and south through the foothills of the Sierra Nevada to Tehachapi Creek, Kern County, up to 6,370 feet amsl.	Forest streams and rivers with sunny, sandy, and rocky banks, deep pools, and shallow riffles. Spends most of its time along streams, but may move up to 165 feet from the edge of aquatic habitat.	Habitat Present	Suitable habitat is present for this species within the BSA in Moss Creek and the Merced River in rocky pools (Otto 2019). This species was not observed during surveys. There are 15 CNDDDB records within a 10-mile radius of the BSA, the nearest is a historical 1953 occurrence located approximately 0.4 miles west of the BSA.

Common Name Scientific Name	Legal Status ¹		Distribution	Habitat Requirements	Habitat Present/ Absent ²	Rationale ³
	Federal/ USFS	State				
California red-legged frog <i>Rana draytonii</i>	FT/--	SSC	Along the coast and coastal mountain ranges of California from Marin County to San Diego County and in the Sierra Nevada from Tehama County to Fresno County. Usually occurs below 4,000 feet amsl.	Permanent and semi-permanent aquatic habitats, such as creeks and cold water ponds, with emergent and submergent vegetation; may aestivate in rodent burrows or cracks during dry periods. This species has been known to move overland without regard for topography or vegetation corridors up to a distance of 2 miles (USFWS 2002).	Absent	The BSA is outside the current range of the species (Barry and Fellers 2013) and has not been observed in Moss Creek during day and night surveys conducted by the USFS in 2005 (Otto 2019). Current distribution in Mariposa County is in the western portion of the county near Coulterville and Lake McClure (Barry and Fellers 2013). This species was not observed during surveys. There are no CNDDDB records within a 10-mile radius of the BSA. <i>No effect</i>
Sierra Nevada yellow-legged frog <i>Rana sierrae</i>	FE/FSS	ST	Occurs in the Sierra Nevada from Plumas County to Fresno County from 4,500-12,000 feet amsl.	Streams, lakes, ponds in montane riparian, lodgepole pine, subalpine conifer and wet meadow habitats. Tadpoles may require two overwintering periods to complete aquatic development which requires overwintering bodies of water that will not freeze during the winter (not less than 5.6 feet). Adults typically do not move more than 82 feet from aquatic habitat, but may move up to 984 feet between lakes in high alpine landscapes (81 FR 59045-59119).	Absent	No suitable habitat for this species is present within the BSA. The BSA is below this species' elevational range (Otto 2019). This species could occur near the BSA at higher elevations where slow and deep water habitat is present. This species was not observed during surveys. There are 12 CNDDDB records within a 10-mile radius of the BSA, the nearest is a historical 1931 occurrence located approximately 0.9 miles east of the BSA. <i>No effect</i>
Reptiles						
Western pond turtle <i>Actinemys marmorata</i>	--/FSS	SSC	Populations extend throughout the coast and central valley of California.	Thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation, below 6,000 feet in elevation. Require soil up to 4 inches deep for egg-laying. Females will travel overland up to approximately 325 feet to lay eggs.	Habitat Present	Suitable habitat is present for this species within the BSA. This species was not observed during surveys. There are four CNDDDB records within a 10-mile radius of the BSA, the nearest located approximately 4.4 miles south of the BSA.

Common Name Scientific Name	Legal Status ¹		Distribution	Habitat Requirements	Habitat Present/ Absent ²	Rationale ³
	Federal/ USFS	State				
Birds						
Northern goshawk <i>Accipiter gentilis</i>	--/FSS	SSC	Permanent resident on the Klamath and Cascade Ranges, on the north Coast Ranges from Del Norte County to Mendocino County, and in the Sierra Nevada south to Kern County; winters in Modoc, Lassen, Mono, and northern Inyo counties; rare in southern California.	Nests and roosts in older stands of red fir, Jeffrey pine, and lodgepole pine forests; hunts in forests and in forest clearings and meadows.	Absent	No suitable habitat for this species is present within the BSA. This species was not observed during surveys. There are two CNDDDB records within a 10-mile radius of the BSA, the nearest located approximately 8.3 miles northeast of the BSA.
Willow flycatcher <i>Empidonax traillii</i>	--/FSS	SE	Rare to locally uncommon summer resident in wet meadows and montane riparian habitats from 2,000–8,000 feet amsl and a common spring (mid-May to early June) and fall (mid-August to early September) migrant at lower elevations, primarily in riparian habitats, exclusive of the North coast.	Breeding habitat is typically moist meadows with perennial streams; lowland riparian woodlands dominated by willows, primarily in tree form, and cottonwoods; or smaller spring-fed or boggy areas with willow or alders.	Habitat Present	Suitable habitat is present for this species within the BSA in willow thickets along the Merced River. Large scattered riparian trees in the BSA do not form complete canopy cover. This species was not observed during surveys. There are two CNDDDB records within a 10-mile radius of the BSA, the nearest located approximately 8.7 miles north of the BSA.
American peregrine falcon <i>Falco peregrinus anatum</i>	FD/--	SD, FP	Permanent resident on the north and south Coast Ranges; may summer on the Cascade and Klamath Ranges south through the Sierra Nevada to Madera County; winters in the Central Valley south through the Transverse and Peninsular Ranges and the plains east of the Cascade Range.	Nests and roosts on protected ledges of high cliffs, usually adjacent to lakes, rivers, or marshes that support large populations of other bird species.	Habitat Present	No suitable nesting habitat for this species is present within the BSA. However, this species could use steep cliff faces adjacent to the BSA for nesting, within the range of potential noise disturbance. The BSA may provide suitable foraging habitat for this species. This species was not observed during surveys. There is one CNDDDB record within a 10-mile radius of the BSA, the location of this record is suppressed by the CNDDDB.

Common Name Scientific Name	Legal Status ¹		Distribution	Habitat Requirements	Habitat Present/ Absent ²	Rationale ³
	Federal/ USFS	State				
Golden eagle <i>Aquila chrysaetos</i>	--/--	FP	Foothills and mountains through-out California; uncommon nonbreeding visitor to lowlands such as the Central Valley. Concentrated in the Central Valley and coastal valleys.	Cliffs and escarpments or tall trees for nesting; annual grasslands, chaparral, and oak wood-lands with plentiful medium and large-sized mammals for prey. Uses rolling foothills and mountain terrain, including steep terrain in stream cut canyons and slopes.	Habitat Present	No suitable nesting habitat for this species is present within the BSA. However, this species could use steep cliff faces adjacent to the BSA for nesting, within the range of potential noise disturbance. The BSA may provide suitable foraging habitat for this species. This species was not observed during surveys. There are no CNDDDB records within a 10-mile radius of the BSA.
Bald eagle <i>Haliaeetus leucocephalus</i>	FD/FSS	SE, FP	Nests in Siskiyou, Modoc, Trinity, Shasta, Lassen, Plumas, Butte, Tehama, Lake, and Mendocino counties and the Lake Tahoe Basin. Winter range includes the rest of California, except the southeastern deserts, very high altitudes in the Sierra Nevada, and east of the Sierra Nevada south of Mono County.	In western North America, nests and roosts in coniferous forests within 1 mile of a lake, reservoir, stream, or the ocean. Prefers ponderosa pine with open branch work in stands with less than 40% canopy.	Habitat Present	Suitable habitat for this species is present within the BSA on tall pine trees. Other pine trees with commanding views of the landscape are located outside of the BSA, but within 1 mile of the BSA. This species was not observed during surveys. There are no CNDDDB records within a 10-mile radius of the BSA.
Great gray owl <i>Strix nebulosa</i>	--/FSS	SE	Permanent resident in the Sierra Nevada in portions of Tuolumne, Mariposa, Madera, and Fresno counties from 4,500-7,500 feet amsl.	Associated with old-growth coniferous forests usually associated with meadows: red fir, Jeffrey pine, and lodge pole pine dominates. Nesting typically occurs in broken top snags of dead trees including oak trees, usually 24 inch diameter at breast height for nesting. Does not build nests, but may use old hawk or eagle nests. Forages in meadows.	Absent	No suitable habitat for this species is present within the BSA. This species was not observed during surveys. There are six CNDDDB records within a 10-mile radius of the BSA, the nearest located approximately 4.6 miles northwest of the BSA.
California spotted owl <i>Strix occidentalis occidentalis</i>	--/FSS	SSC	Sierra Nevada from Lassen County south to northern Kern County; occurs in localized areas of the Transverse and Peninsular Ranges of southern California.	Mature forest with permanent water and suitable nesting trees and snags; in southern California, nearly always associated with oak and oak-conifer habitats.	Absent	No suitable habitat for this species is present within the BSA. This species was not observed during surveys. There are no CNDDDB records within a 10-mile radius of the BSA.

Common Name Scientific Name	Legal Status ¹		Distribution	Habitat Requirements	Habitat Present/ Absent ²	Rationale ³
	Federal/ USFS	State				
Mammals						
Pallid bat <i>Antrozous pallidus</i>	--/FSS	SSC	Occurs throughout California except for the high Sierra Nevada.	Deserts, grasslands, shrubland, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting, may also roost in bridges.	Habitat Present	No suitable roosting habitat for this species is present within the BSA, but this species is likely to occur foraging over the BSA at night. Rocky areas for roosting are located near, but outside, the BSA. The bridge does not contain crevices or areas for roosting bats. This species was not observed during surveys. There are five CNDDDB records within a 10-mile radius of the BSA, the nearest located approximately 5.5 miles north of the BSA.
Sierra Nevada mountain beaver <i>Aplodontia rufa californica</i>	--/--	SSC	Occurs in the Sierra Nevada mountain range in scattered populations. Locally uncommon.	Typically occurs in dense montane riparian habitat and rarely ventures greater than 80 feet from nests. Requires friable soil for burrowing and a cool and moist microclimate near water. Prefers areas with a dense understory of vegetation for cover on north and east facing slopes.	Absent	No suitable habitat for this species is present within the BSA. Suitable habitat is present outside the BSA, but this species is unlikely to wander into the BSA due to its small home range. This species was not observed during surveys. There are four CNDDDB records within a 10-mile radius of the BSA, the nearest located approximately 6.1 miles north of the BSA.
Ringtail <i>Bassariscus astutus</i>	--/--	FP	Sierra Nevada, Coast Ranges, and the Central Valley; upper and middle portions of the Sacramento River, Feather River, and Bobelaine Sanctuary.	Riparian forests, chaparral, scrub, oak woodlands, and rocky hillsides with crevices and tree hollows 3 inches in diameter or greater. Avoids open space and moves from tree to tree or along structures. Omnivorous and will feed on berries such as toyon or mistletoe leaves and berries and will vary depending on the seasons and food availability.	Habitat Present	Suitable habitat for this species is present within the BSA in montane hardwood and riparian vegetation communities. Cavities in oak trees and rocky areas provide refuge sites for this species. This species was not observed during surveys. There are no CNDDDB records within a 10-mile radius of the BSA.

Common Name Scientific Name	Legal Status ¹		Distribution	Habitat Requirements	Habitat Present/ Absent ²	Rationale ³
	Federal/ USFS	State				
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	--/FSS	SSC	Klamath Mountains, Cascades, Sierra Nevada, Central Valley, Transverse and Peninsular Ranges, Great Basin, and the Mojave and Sonora Deserts.	May roost in caves, mines, tunnels, or other man-made structures. Mesic habitats; gleans insects from brush or trees and feeds along habitat edges. This species is extremely sensitive to disturbance, and a single visit may result in abandonment of the roost.	Absent	No suitable habitat for this species is present within the BSA. The BSA experiences regular disturbance from people walking along the road and vehicle traffic over the bridge. This species was not observed during surveys. There are five CNDDDB records within a 10-mile radius of the BSA, the nearest located approximately 0.6 miles east of the BSA.
Spotted bat <i>Euderma maculatum</i>	--/--	SSC	Occurs throughout eastern and southern California, the central Sierra Nevada, and the Sierra Nevada foothills bordering the San Joaquin Valley.	Roosts in rock cracks and crevices, usually found in cliffs, but also uses caves, and buildings. Females may favor ponderosa pine forests during reproduction. Usually a solitary rooster. One of the rarest mammals in North America.	Habitat Present	No suitable roosting habitat for this species is present within the BSA, but this species is likely to occur foraging over the BSA at night. This species was not observed during surveys. There are seven CNDDDB records within a 10-mile radius of the BSA, the nearest located approximately 5.3 miles north of the BSA.
Western mastiff bat <i>Eumops perotis californicus</i>	--/--	SSC	Occurs along the eastern San Joaquin Valley from El Dorado County, through Kern County; also found along the south Coast, Peninsular, and Transverse Ranges, from San Francisco to the Mexico border	Roosts and breeds in deep, narrow rock crevices; may also use crevices in trees, buildings, and tunnels; forages in a variety of semiarid to arid habitats	Habitat Present	No suitable roosting habitat for this species is present within the BSA, but this species is likely to occur foraging over the BSA at night. This species was not observed during surveys. There are seven CNDDDB records within a 10-mile radius of the BSA, the nearest located approximately 0.6 miles east of the BSA.
North American wolverine <i>Gulo gulo luscus</i>	FPT/FSS	ST, FP	A scarce resident of the North Coast mountain ranges and the Sierra Nevada. Sightings are known from Del Norte, Trinity counties and east to Siskiyou and Shasta counties and south to Tulare counties.	Habitat is poorly known for wolverine. In the Sierra Nevada, wolverine is associated with mixed conifer, red fir, and lodgepole habitats from 4,300 – 7,300 feet amsl in the northern Sierra Nevada and 6,400 – 10,800 feet amsl in the southern Sierra Nevada. May use subalpine conifer, alpine dwarf-shrub, wet meadow, and montane riparian habitats. Dens in caves, cliffs, hollow logs, cavities in the ground, under rocks. May dig dens in the snow and use old beaver lodges.	Absent	No suitable habitat for this species is present within the BSA. This species was not observed during surveys. There is one CNDDDB record within a 10-mile radius of the BSA, the nearest located approximately 8.3 miles northeast of the BSA.

Common Name Scientific Name	Legal Status ¹		Distribution	Habitat Requirements	Habitat Present/ Absent ²	Rationale ³
	Federal/ USFS	State				
American badger <i>Taxidea taxus</i>	--/--	SSC	Occurs throughout California where habitat is present, except in northwestern California.	Permanent resident of most open stage shrub, forest and herbaceous habitats with friable soils for digging burrows. Badgers feed primarily on fossorial species, such as burrowing mammals like pocket gophers and ground squirrels.	Habitat Present	Suitable habitat for this species is present within the BSA. Friable soil is present and California ground squirrels (<i>Otospermophilus beecheyi</i>) and their burrows are present. American badger burrows were not observed in the BSA. There are no CNDDDB records within a 10-mile radius of the BSA.
Sierra Nevada red fox <i>Vulpes vulpes necator</i>	FC/FSS	ST	Historic range throughout high elevations of the Sierra Nevada from Tulare County northward to Sierra County, and from Mount Shasta and Lassen Peak westward to the Trinity Mountains. Current distribution believed to be restricted to small populations in the vicinity of Lassen Peak and Sonora Pass. Elevational range is generally between 4,000-12,000 feet amsl.	High elevation barren, conifer, and shrub habitats; montane meadows; subalpine woodlands and fell-fields. May hunt in forest openings, meadows, and barren rocky areas. Dens are likely to be in talus slopes and rock slides; may use earthen dens, or boulder piles.	Absent	No suitable habitat for this species is present within the BSA. The BSA is located outside of this species known range. This species was not observed during surveys. There are four CNDDDB records within a 10-mile radius of the BSA, the nearest located approximately 3.6 miles northeast of the BSA.
Fish						
Hardhead <i>Mylopharodon conocephalus</i>	--/FSS	SSC	Occurs in low to mid elevation streams in the Sacramento-San Joaquin and Russian River drainages.	Found in streams and reservoirs with high water quality that run clear and cool. Prefer streams with deep (greater than 2.6 feet) pools and runs. Absent from streams occupied by alien species and heavily altered waterways. Maybe absent from streams with barriers, even if a fish ladder is present.	Absent	No suitable habitat for this species is present within the BSA. The BSA is outside of this species known range. This species was not observed during surveys. There are no CNDDDB records within a 10-mile radius of the BSA.
Delta smelt <i>Hypomesus transpacificus</i>	FT/--	SE	Sacramento River–San Joaquin River Delta.	Euryhaline (fresh and brackish water) estuary channels; spawning habitats consist of side channels and sloughs in the middle reaches of the Delta.	Absent	No suitable habitat for this species is present within the BSA. The BSA is outside of this species known range. This species was not observed during surveys. There are no CNDDDB records within a 10-mile radius of the BSA. <i>No effect</i>

Common Name Scientific Name	Legal Status ¹		Distribution	Habitat Requirements	Habitat Present/ Absent ²	Rationale ³
	Federal/ USFS	State				
Western red bat <i>Lasiurus blossevillii</i>	--/--	SSC	Breeding range extends from Shasta County to the Mexican border, west of the Sierra Nevada/Cascade crest and deserts. Winter range includes western lowlands and coastal regions south of San Francisco Bay.	Roosts in foliage at tops of trees in forests and woodlands, from sea level up through mixed conifer forests. Roosts primarily in trees, but occasionally in shrubs often in habitats adjacent to streams or meadows.	Habitat Present	Suitable habitat for this species is present within the BSA in montane hardwood and riparian vegetation communities. This species was not observed during surveys. There is one CNDDDB record within a 10-mile radius of the BSA, the nearest located approximately 9.5 miles north of the BSA.
Pacific marten <i>Martes caurina</i>	--/FSS	--	Permanent resident of the North Coast regions, Sierra Nevada, Klamath, and Cascade mountains. Occurs in evergreen mixed coniferous forests.	Occurs in evergreen mixed coniferous forests with crown closure of 40% or greater. Uses cavities, tree snags, log, burrows, crevices in rocky areas for denning. Rarely uses manmade structures for denning. Forages in clearings, meadows, and riparian areas. Travel along ridgetops and rarely move across large areas outside of the tree canopy. May forage up to 15 miles in one night.	Absent	No suitable habitat for this species is present within the BSA. This species was not observed during surveys. There are no CNDDDB records within a 10-mile radius of the BSA.
Fringed myotis <i>Myotis thysanodes</i>	--/FSS	--	Widespread resident of California from mean sea level to 9,350 feet amsl.	Roosts in caves, mines, buildings, and crevices. May use separate day and night roosts. Optimal habitat includes pinyon-juniper, valley hardwood, and hardwood-conifer forests between 4,000 – 7,000 feet amsl. Very sensitive to human disturbance.	Absent	No suitable habitat for this species is present within the BSA. This species was not observed during surveys. There are two CNDDDB records within a 10-mile radius of the BSA, the nearest located approximately 6.7 miles northeast of the BSA.
Fisher (West Coast DPS) <i>Pekania pennanti</i>	FPT/FSS	SCT, SSC	Occurs in the Sierra Nevada, Cascade Mountains and the Klamath Mountains. It is uncommon where it occurs.	Occurs in large tree stages of coniferous forests and deciduous riparian forests with dense canopy closure. Use cavities in large trees, snags, brush piles and rocky areas.	Absent	No suitable habitat for this species is present within the BSA. This species was not observed during surveys. There are nine CNDDDB records within a 10-mile radius of the BSA, the nearest located approximately 3.6 miles northeast of the BSA. <i>No effect.</i>

¹ Status explanations:

-- = no listing.

FD, SD = removed from federal or California Endangered Species Act list.

Federal

FC = federal candidate for listing under the federal Endangered Species Act.

FE = listed as endangered under the federal Endangered Species Act.

FPT = federal proposed threatened under the federal Endangered Species Act.

FSS = USFS Region 5 Sensitive Wildlife Species List for the Stanislaus National Forest (2013).

FT = listed as threatened under the federal Endangered Species Act.

State

FP = listed as fully protected by the state of California.

SC = state candidate for listing under the California Endangered Species Act.

SCE = state candidate for listing as endangered under the California Endangered Species Act.

SCT = state candidate for listing as threatened under the California Endangered Species Act.

SE = listed as endangered under the California Endangered Species Act.

SSC = state species of special concern

ST = listed as threatened under the California Endangered Species Act.

² A = absent; HP = habitat present; P = present (observed during biological surveys)

³ Rationale includes an effects determination under the FESA for all federally listed species.

Sources: CNDDB 2020; USFWS 2020, USFS 2013a

Barry, J. S., and Fellers, M. G. 2013. History and Status of the California Red-Legged Frog (*Rana Draytonii*) in the Sierra Nevada, California, USA. Herpetological Conservation and Biology.

USFWS. 2002. Recovery Plan for the California Red-legged Frog (*Rana aurora draytonii*). U.S. Fish and Wildlife Service, Portland, Oregon.

Tree Survey

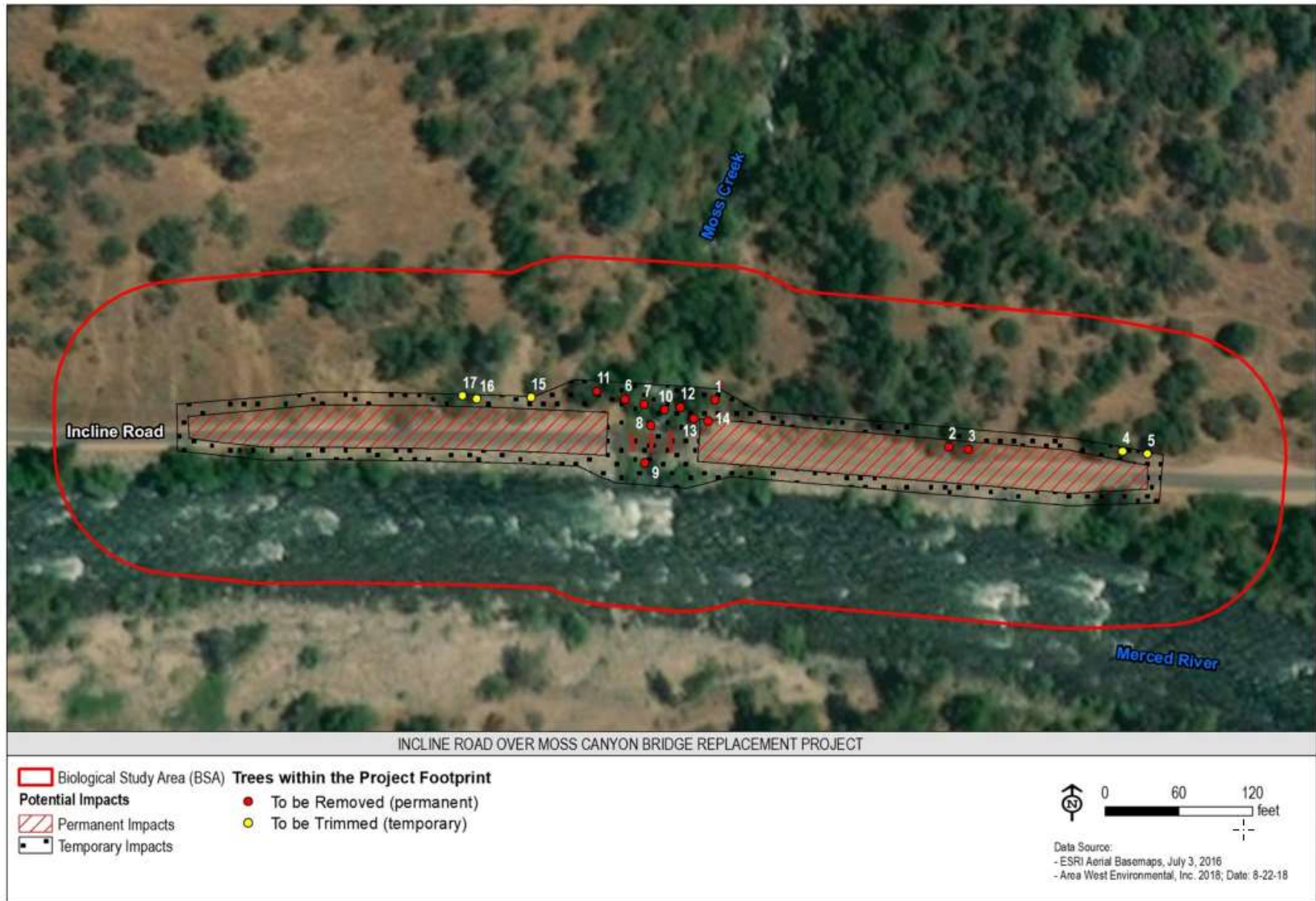
Tree Survey Data Sheet

Project: Moss Canyon Bridge			Surveyor(s): Patrick Martin and Callen Keller			Date: 5/08/2018
Weather: Sunny, 70 degrees, slight breeze			Location: El Portal, CA			Time: 0800 to 1630
Tree #	Tree Species	DBH (inches)¹	Riparian Yes/No	Impact Removed/Trimmed	Tree Notes: Trunk (Single or Multi-trunk)	Notes (Include tree health and nests or cavities for wildlife)
1	Canyon live oak (<i>Quercus chrysolepis</i>)	13	Y	Removed	Single	Healthy.
2	Interior live oak (<i>Quercus wislizeni</i>)	4,3,3,2,1,1,1,1	N	Removed	Multi-trunk	Healthy.
3	Interior live oak (<i>Quercus wislizeni</i>)	1,3,2,2,2,2,2,2,2,2	N	Removed	Multi-trunk	Healthy.
4	Interior live oak (<i>Quercus wislizeni</i>)	13,8,10,5,3,4,4,2,2,1	N	Trimmed	Multi-trunk	Tree has been cut at base in the past. Possible termite and fungus rot.
5	Interior live oak (<i>Quercus wislizeni</i>)	3,3,3,3,3,2,2,2	N	Trimmed	Multi-trunk	Healthy.
6	Canyon live oak (<i>Quercus chrysolepis</i>)	50	N	Removed	Single	Tree has been cut at base in the past.
7	Canyon live oak (<i>Quercus chrysolepis</i>)	6	Y	Removed	Single	Healthy, rooted in creek bank.
8	White alder (<i>Alnus rhombifolia</i>)	2,1	Y	Removed	Multi-trunk	Healthy, rooted in creek bank.
9	Arroyo willow (<i>Salix lasiolepis</i>)	2,2	Y	Removed	Multi-trunk	Healthy, rooted in creek bank.
10	Oregon ash (<i>Fraxinus latifolia</i>)	2,4,3,1,3,2	Y	Removed	Multi-trunk	Healthy, rooted in creek bank.
11	Canyon live oak (<i>Quercus chrysolepis</i>)	12	N	Removed	Single	Healthy.
12	Oregon ash (<i>Fraxinus latifolia</i>)	9	Y	Removed	Single	Healthy, rooted in creek bank.
13	Oregon ash (<i>Fraxinus latifolia</i>)	2,2,2,2	N	Removed	Multi-trunk	Healthy, rooted at edge of creek bank.
14	Oregon ash (<i>Fraxinus latifolia</i>)	3,3,3	N	Removed	Multi-trunk	Healthy, rooted at edge of creek bank.
15	Interior live oak (<i>Quercus wislizeni</i>)	3,3,34,4,2,2	N	Trimmed	Multi-trunk	Healthy.
16	Interior live oak (<i>Quercus wislizeni</i>)	4,5	N	Trimmed	Multi-trunk	Healthy.
17	Gray pine (<i>Pinus sabiniana</i>)	6	N	Trimmed	Single	Healthy.

¹ dbh for each stem of multi-stemmed trees are provided

Moss Canyon Bridge on Incline Road Replacement Project (Br. No. 40C0064)
Natural Environment Study

D-1



Moss Canyon Bridge on Incline Road Replacement Project (Br. No. 40C0064)
Natural Environment Study

D-2



Moss Canyon Bridge along Incline Road marks the confluence where Moss Creek (located north [left] of the bridge) connects to the Merced River (located south [right] of the bridge) (photo facing east).



Moss Creek north of the Moss Canyon Bridge within montane riparian vegetation community (photo facing northwest).



Small check-dam in Moss Creek north of the Moss Canyon Bridge in the approximate location of the temporary detour route (photo facing northeast)



Montane hardwood vegetation community located above the banks of Moss Creek (photo facing north).



View of Moss Creek channel underneath Moss Canyon Bridge, below the OHWM (photo facing northeast). Note the concrete in the active channel underneath the bridge.



View underneath Moss Canyon Bridge. The bridge may provide nesting opportunities for migratory birds, but gaps in timber decking are too wide to provide refuge for roosting bats. (photo facing west)



The bank of the Merced River. Photo shows riprap banks of the river and montane riparian trees and shrubs growing within the active channel of the river (photo facing southeast).



Looking east along Incline Road towards the Moss Canyon Bridge from the western boundary of the Survey Area showing steep south-facing slope of annual grassland vegetation community (photo facing east).