Italian Bar Road Bridge Replacement Project
Initial Study / Mitigated Negative Declaration
Fresno County, California

Prepared for:

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List of Acronyms

ACM	asbestos-containing material
ADT	Average Daily Traffic
APE	Area of Potential Effects
AWE	Area West Environmental, Inc.
BMP	Best Management Practices
BSA	Biological Study Area
CAL FIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CDFW	California Department of Fish and Wildlife
CFGC	California Fish and Game Code
CEQA	California Environmental Quality Act
CIDH	Cast-in-drilled hole
CO	carbon monoxide
CO_2	carbon dioxide
Corps	U.S. Army Corps of Engineers
County	County of Fresno
CWA	Clean Water Act
dBA	A-weighted decibels
DPM	diesel-exhaust particulate matter
DOC	California Department of Conservation
DTSC	Department of Toxic Substances Control
Far Western	Far Western Anthropological Research Group, Inc.
FCOG	Fresno Council of Governments
FMMP	Farmland Mapping and Monitoring Program
FTIP	Federal Transportation Improvement Program
GHG	greenhouse gas
HPSR	Historic Property Survey Report
ISA	Initial Site Assessment
IS/MND	Initial Study/Mitigated Negative Declaration
K	erosivity factor
L_{eq}	energy-equivalent sound level
L_{max}	Maximum Sound Level
msl	mean sea level
$MTCO_2e$	million metric tons of carbon dioxide

NAVD	North American Vertical Datum
NES/MI	Natural Environment Study, Minimal Impacts
NOx	oxides of nitrogen
NPDES	National Pollution Discharge Elimination System
NRCS	Natural Resources Conservation Service
PM	particulate matter
ppv	peak particle velocity
Project	Italian Bar Road Bridge Replacement Project
ROG	Reactive Organic Gases
RTP	Regional Transportation Plan
RUSLE	Revised Universal Soil Equation
RWQCB	Regional Water Quality Control Board
SCE	Southern California Edison
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TACs	toxic air contaminants
TWW	treated wood waste
USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geological Survey
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
WPCP	Water Pollution Control Plan
WSE	water surface elevation

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CHAPTER 1 INTRODUCTION

This Initial Study/Mitigated Negative Declaration (IS/MND) evaluates the impacts of implementing the Italian Bar Road Bridge Replacement Project (Project) in compliance with the California Environmental Quality Act (CEQA). The County of Fresno (County), in cooperation with the County of Madera and the California Department of Transportation (Caltrans), is proposing to replace the existing one-lane, 5-span steel girder and steel truss structure (Bridge No. 42C-0261) over the San Joaquin River/Redinger Lake. The Project's primary objective is to improve public safety and increase load carrying capacity on the bridge.

1.1 Lead Agency

The County is the Lead Agency for the Project. Pursuant to the CEQA, the County has prepared an IS/MND to identify, evaluate, and mitigate environmental impacts that may be associated with implementation of the Project. The IS/MND is a public document that analyzes the potential environmental effects of the Project and describes ways to avoid or reduce potential impacts. The IS/MND has been prepared in accordance with the provisions of CEQA and the State CEQA Guidelines.

This IS/MND will be circulated for a 30-day public review and comment period pursuant to the requirements of CEQA. The County as the Lead Agency will consider the IS/MND, along with any comments received during the public review process, prior to taking action on the Project.

1.2 Organization of the Initial Study and Mitigated Negative Declaration

This IS/MND is organized into the following chapters:

Chapter 1 – Project Overview and Background: provides summary information about the Proposed Project, describes the public review process for the IS/MND, and includes the CEQA determination for the proposed Project.

Chapter 2 – Project Description: contains a detailed description of the proposed Project.

Chapter 3 – Environmental Checklist: provides an assessment of proposed Project impacts by resource topic. The Environmental Checklist form, from Appendix G of the State CEQA Guidelines, is used to make one of the following conclusions for impacts from the proposed Project:

- A conclusion of ***no impact*** is used when it is determined that the proposed project would have no impact on the resource area under evaluation.
- A conclusion of ***less than significant impact*** is used when it is determined that the proposed project's adverse impacts to a resource area would not exceed established thresholds of significance.

- A conclusion of ***less than significant impact with mitigation*** is used when it is determined that mitigation measures would be required to reduce the proposed project's adverse impacts below established thresholds of significance.
- A conclusion of ***potentially significant impact*** is used when it is determined that the proposed project's adverse impacts to a resource area potentially cannot be mitigated to a level that is less than significant.

Mitigation measures, if necessary, are noted following each impact discussion. A draft Mitigation Monitoring and Reporting Program is included as Appendix A.

Chapter 4 – References Cited: identifies the information sources used in preparing this document.

1.3 Environmental Factors Potentially Affected

Impacts to the environmental factors below are evaluated using the checklist included in Chapter 3. The County determined that the environmental factors checked below would be less than significant with implementation of mitigation measures. It was determined that the unchecked factors would have a less-than-significant impact or no impact.

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

DETERMINATION: 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 proposed project have been made by or agreed to by the proposed project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature	Date
Printed Name	County of Fresno Lead Agency

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CHAPTER 2 PROJECT DESCRIPTION

2.1 Project Location

The proposed Project site includes two distinct locations (Figure 2-1): 1) the Italian Bar Bridge and 2) the Whiskey Creek Tributary Bridge. The Italian Bar Bridge is located on Italian Bar Road, a rural recreational road, 55 miles northeast of Fresno, California in Township 9 South, Range 23 East, Section 12 of the Cascadel Point U.S. Geological Survey (USGS) quadrangle (Figures 2-2 and 2-3). Italian Bar Bridge is approximately 10 miles southeast of the unincorporated community of North Fork, and approximately 16 miles northeast of the unincorporated community of Auberry. The Italian Bar Bridge spans the San Joaquin River and crosses the Madera/Fresno County line within the Sierra National Forest in central California (Figures 2-2 and 2-3). At this location, the San Joaquin River is also known as Redinger Lake, an impoundment created by Southern California Edison (SCE)'s Big Creek Number 4 Hydroelectric Project. The area is largely undeveloped and consists primarily of federal land with scattered private inholdings. At this location, large rock outcrops and oak woodlands dominate the steep canyon slopes. Existing land uses in the Italian Bar Bridge vicinity consist of recreation, power generation, open space, residential, and agricultural uses. Recreational uses at Redinger Lake include camping, picnicking, boating, waterskiing, fishing, and hiking. Lands within the Sierra National Forest in the Italian Bar Bridge vicinity are managed primarily for recreation and open space uses. Nearby private lands support rural residential homes and grazing lands. SCE manages nearby property to support their hydroelectric facilities. This location includes the current and proposed Italian Bar Bridge and seven potential staging areas (Figures 2-2 and 2-3).

Italian Bar Road is a narrow, mountainous, rural local road, which results in constraints to site access and delivery of construction materials, equipment, and components. Since access to the Italian Bar Bridge from the south (Fresno County) includes many sharp turns with small radius curves, it is likely that construction cranes and other large construction equipment would use the northern access approach through Madera County. In order to transport construction material to the Italian Bar Bridge, heavily loaded trucks must cross the bridge over Indian Creek, a tributary to Whiskey Creek (Bridge No. 41C-0318), which has posted load limit of 17 tons per vehicle. This bridge must be improved to safely support the passage of larger vehicles transporting materials to the Italian Bar Bridge over San Joaquin River/Redinger Lake. In order to ensure the safe passage of heavy loaded trucks across the Whiskey Creek Tributary Bridge, a timber stringer bridge, Fresno and Madera Counties propose to reinforce the bridge by installing welded trench plates and temporary timber supports to increase the load capacity of Bridge No. 41C-0318 for the duration of the Italian Bar Bridge replacement.

The Whiskey Creek Tributary Bridge (No. 41C-0138) is located along Italian Bar Road southeast of North Fork, California, in Madera County (Figures 2-1 and 2-4). The bridge spans Indian Creek, which is a tributary to Whiskey Creek. The bridge is located on the Cascadel Point U.S. Geological Survey (USGS) 7.5-minute quadrangle map and within Township 8 South and Range 23 East, Section 33 (Figures 2-4). The Whiskey Creek Tributary Bridge site is at approximate elevation of 2,520 to 2,560 feet above mean sea level (msl).

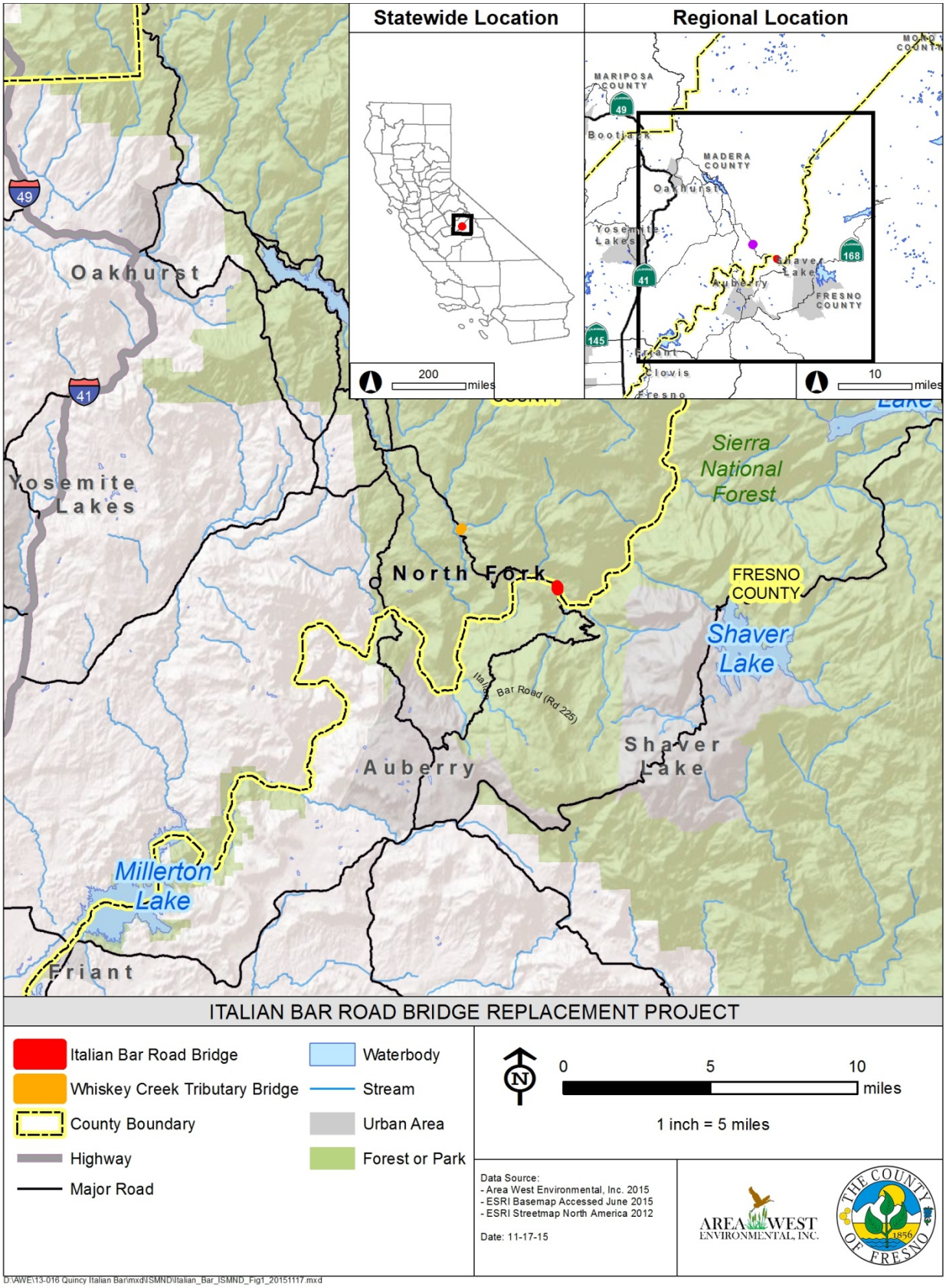

Figure 2-1. Project Location

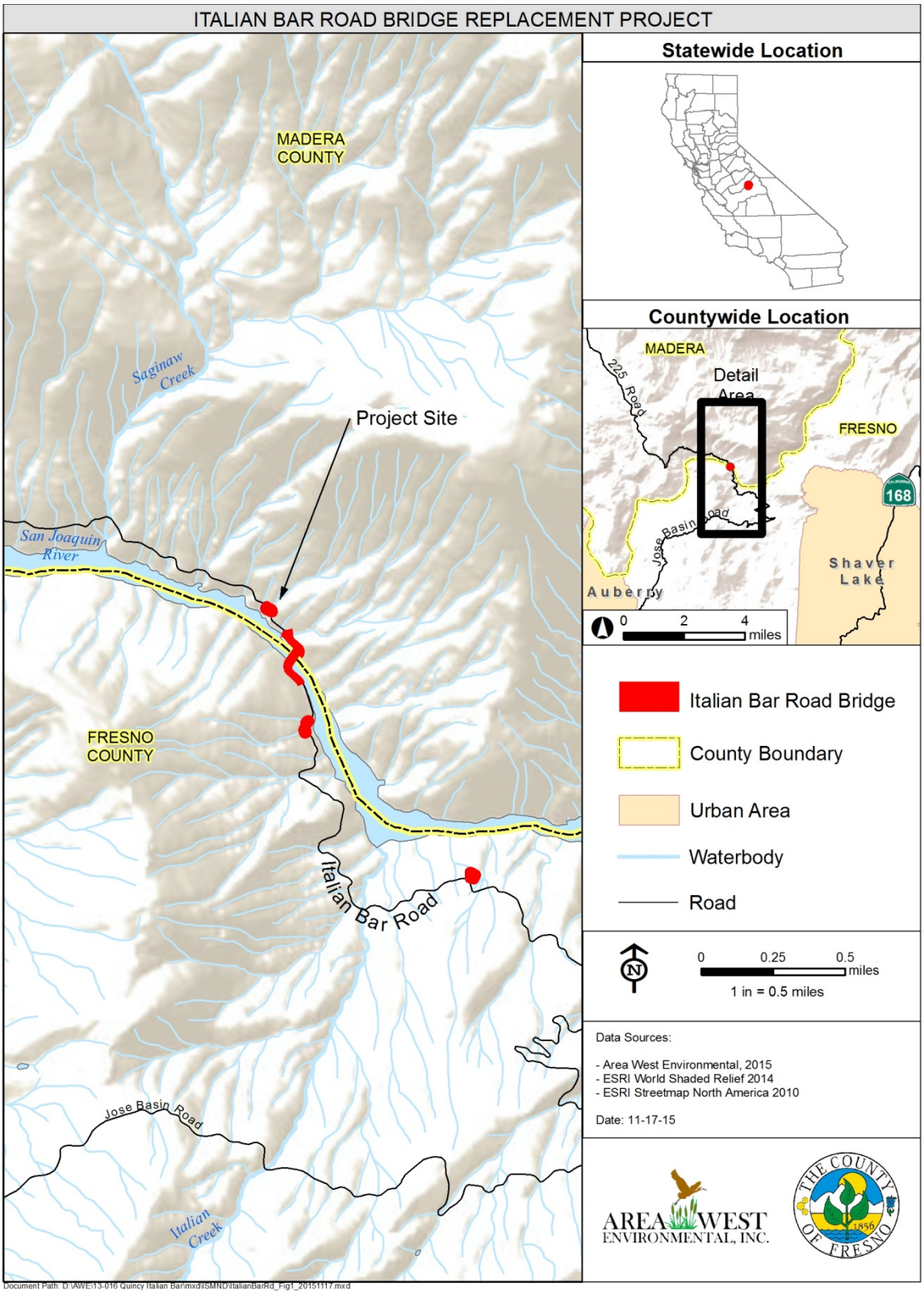

Figure 2-2. Regional Location of Italian Bar Bridge and Proposed Staging Areas

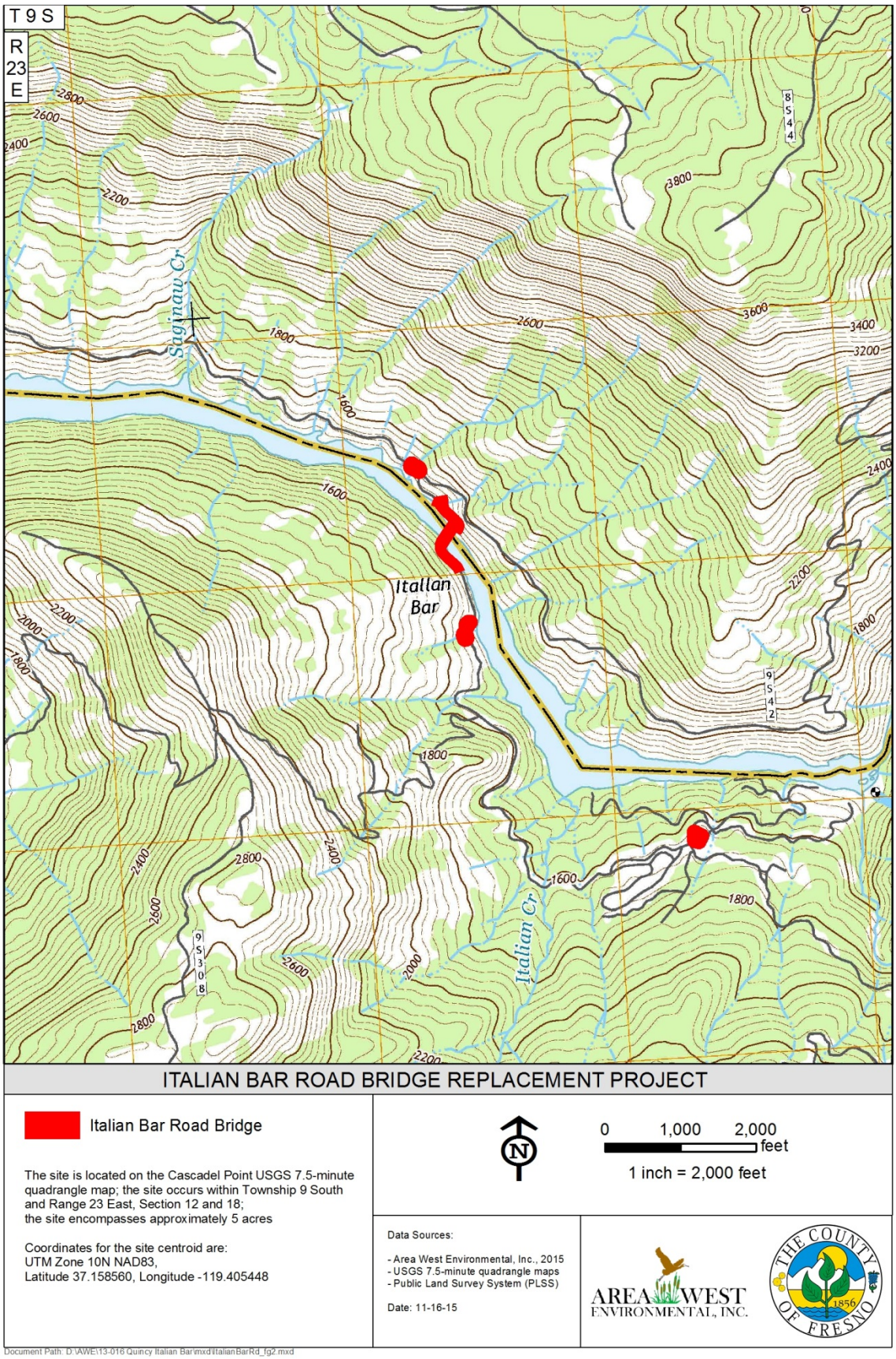

Figure 2-3. Italian Bar Bridge and Proposed Staging Areas

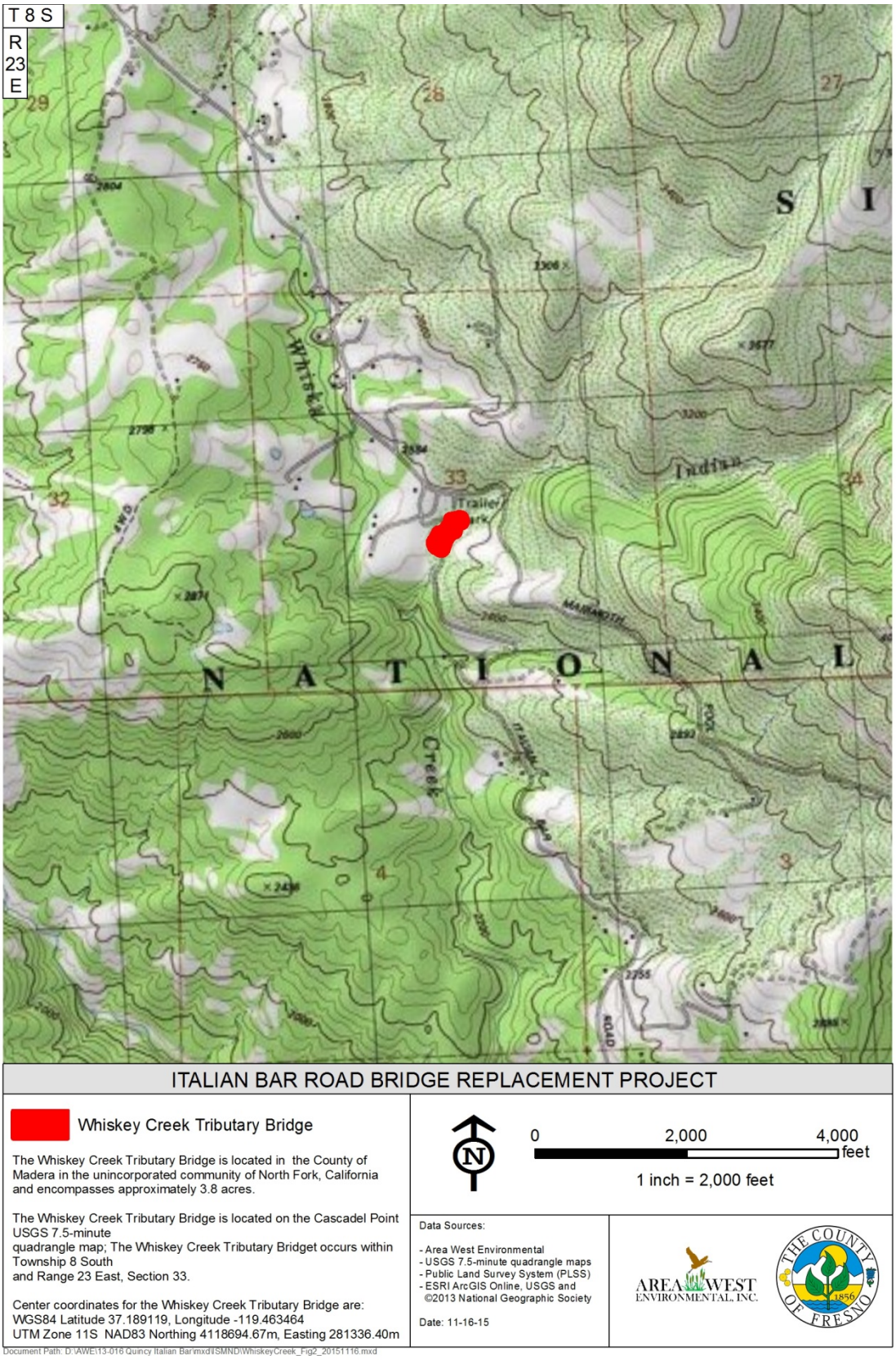

Figure 2-4. Whiskey Creek Tributary Bridge Location

2.2 Project History

The original Italian Bar Bridge crossing the San Joaquin River / Redinger Lake was constructed in 1925 as a 3-span structure consisting of a 98-foot steel truss and two 27.5-foot steel girder spans. The steel truss segment was used to span the deep low-flow portion of the river. In 1951, these three spans were relocated approximately 25 feet downstream to form most of the existing 5-span structure present today. In 2008, the bridge was temporarily closed to replace two floor beams in span 4 and all the timber members in span 5. Italian Bar Road within the proposed Project is classified as a rural recreational road and has an Average Daily Traffic (ADT) of 109 (Quincy Engineering 2015).

2.3 Project Purpose and Need

The primary objective of the Project is to replace the structurally deficient Italian Bar Bridge structure to improve public safety and increase the load carrying capacity along the route. The existing steel truss is structurally deficient, with a 2013 sufficiency rating of 22.9 out of 100, and the bridge has load carrying capacity restrictions. Because the existing bridge cannot be widened to current standards and has reached the end of its lifespan, a repair or rehabilitation would represent a questionable investment of limited long-term value to the County. Therefore, a replacement is required.

Photo 1. Italian Bar Bridge over Redinger Lake

2.4 Proposed Bridge

The Project would consist of the following elements:

- construction of a new two-lane approximately 205-foot long two-span Italian Bar Bridge;
- improvements to approach roads at the Italian Bar Bridge, including excavation of rock;
- removal of the existing Italian Bar Bridge after the new bridge is complete; and
- temporary strengthening of the Whiskey Creek Tributary Bridge.

The proposed Italian Bar Bridge replacement is a two-lane bridge located along a new alignment downstream of the existing bridge. The centerline of the proposed bridge is approximately 27 feet northwest of the existing bridge centerline (Figure 2-5).

The proposed Italian Bar Bridge is a two-span, 205-foot-long structural steel I-girder bridge (Figure 2-6). The long span is approximately 150 feet and the short span is approximately 55 feet. The bridge will have a width of 22 feet between the inside face of the barrier rails. Bridge abutments would be supported by conventional spread footings founded on bedrock, which is estimated to have a high bearing capacity. Footings would penetrate into the granitic rock a depth of about 0.5 foot. At the pier location, a cast-in-drilled hole (CIDH) concrete pile rock-socket will be used to place the single 60-inch diameter column bent, founded on a larger (84-inch) diameter concrete shaft into bedrock.

The preferred Italian Bar Bridge design includes aesthetic treatments to complement the beauty of the natural setting. The exposed steel I girders and portions of the bridge railings may be fabricated using weathering steel which creates a self-protecting layer of oxidation on its surface, giving the steel an aged and rustic look. Additionally, slatted barrier railings would be used, and concrete portions of the structure would be modified to create a natural appearance that can blend with the adjacent exposed rock. Final design may include coloring admixtures to change the concrete hue to better match existing rocks, and form liners and concrete stain may be applied to side faces of the abutment/retaining walls. (Quincy Engineering 2015)

The proposed Italian Bar Bridge will increase freeboard to 12 feet to provide improved hydraulic function of Redinger Lake and safer passage for boaters. The U.S. Forest Service (USFS) Sierra National Forest specifies that the bridge clear the 100-year water surface elevation (WSE-100). In addition, SCE has specified that Redinger Lake has a maximum water elevation of 1,400 feet[1], which is controlled by the Redinger Dam approximately 3.67 miles downstream of the Italian Bar Bridge. Since small boating and canoe traffic is possible during high water events, 12 feet of

[1] The maximum water elevation is consistent with the top of tainter gate elevation provided by Southern California Edison. All elevations are based on North American Vertical Datum of 1988 (NAVD 88)

freeboard is preferred to allow for their passage. As a result, the minimum bridge vertical clearance is specified as the maximum of either WSE-100 or 1,400 feet plus 12 feet. By replacing the 5-span existing Italian Bar Bridge with a 2-span bridge with higher freeboard, the proposed bridge would provide improved hydraulic function of Redinger Lake/ San Joaquin River and provide more open water and safer conditions for boaters.

The Project will reconfigure the Italian Bar Bridge approach roads (Figure 2-5). To accommodate the new Italian Bar Bridge structure and meet design standards, the bridge approach roads will be widened for a proposed 2-lane approach road traveled-way width of 18 feet total, including shoulders. Given the mountainous terrain and narrow approach roads, the design speed at the Italian Bar Bridge is 20 miles per hour. The Italian Bar Bridge approach conform extends 200 feet on the north side of the river and 300 feet on the south side of the river.

Large boulders and rock outcrops border the Italian Bar Bridge in this steep river canyon. When evaluating whether to place the new Italian Bar Bridge upstream or downstream of the existing location, the volume and complexity of rock excavation was a deciding factor. The rock outcrop on the north, upstream, side of the bridge is up to 50 feet taller than the outcrop on the south, downstream, side. As a result, the new bridge is being located on the downstream side to minimize the amount of rock excavation. Nevertheless, to relocate the road on the south side, a large amount of rock (up to 3,000 cubic yards) will still need to be excavated. This granitic rock is relatively massive and it is anticipated that blasting or hydraulic splitting will be required to excavate the road approach slopes and footings. An overhead utility pole will need to be relocated to complete the excavation (Figure 2-5). No excavation is required on the north side, but fill material (up to 1,000 cubic yards) may be used to extend the roadway toward the waterway, thereby shortening the required bridge length. Remaining rock and soil materials would become property of the contractor and hauled off-site and disposed of in a manner consistent with all federal, state, regional and local regulations.

After the new Italian Bar Bridge has been completed, traffic will be routed onto the new bridge and demolition of the existing bridge would occur. There will be a short time period in which traffic handling and staged approach work are required until all traffic is diverted to the new structure. Demolition would include removal of the roadway and bridge deck, as well as bridge foundations. After the old Italian Bar Bridge has been removed, the County will work with the USFS to restore the previous roadway areas to a natural vegetated condition.

Figure 2-5. Italian Bar Bridge Alignment

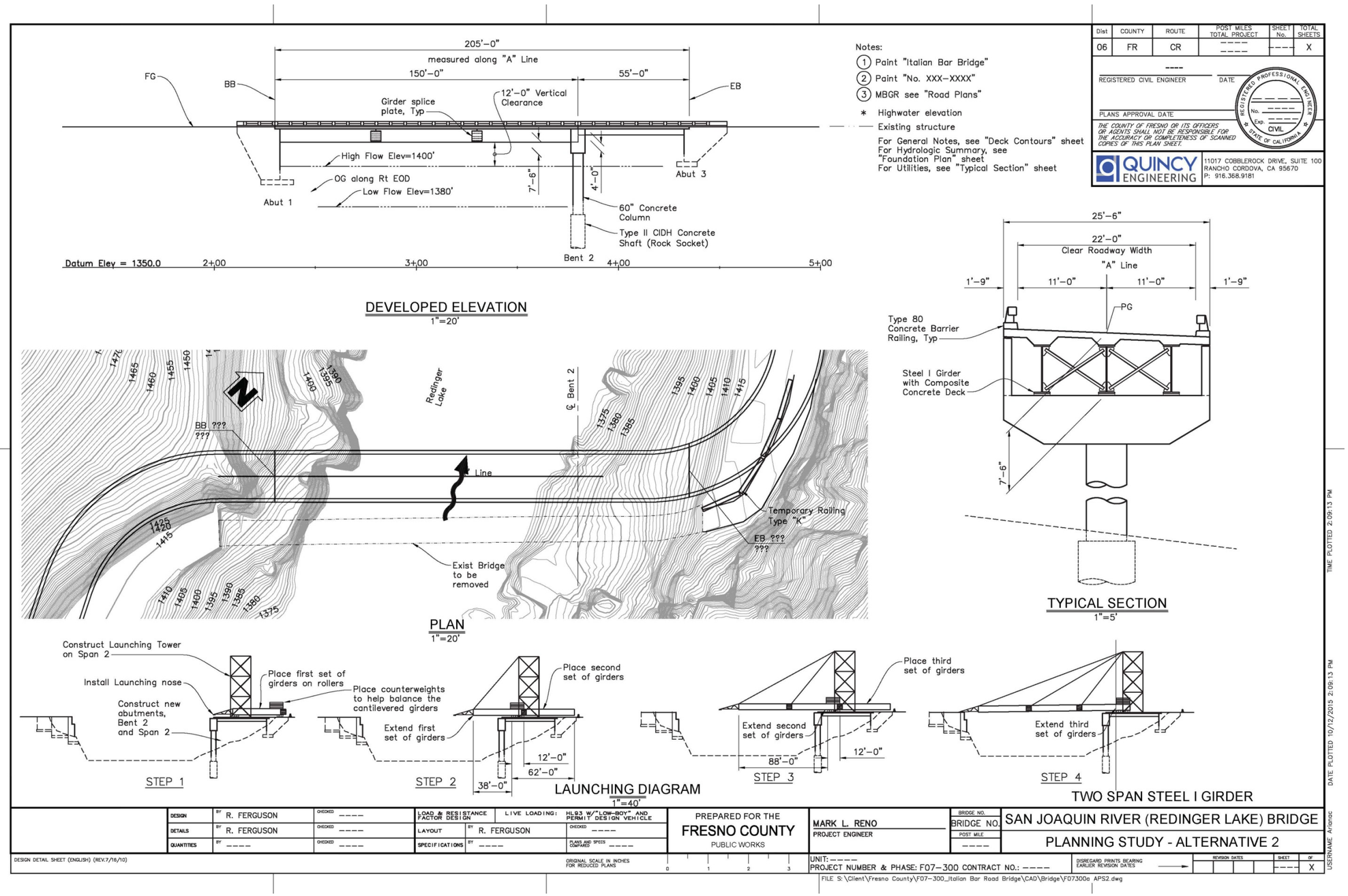

Figure 2-6. Italian Bar Bridge Plan and Profile

In order to reinforce the construction access road over the Whiskey Creek Tributary Bridge, welded trench plates will be placed across the road surface, and a main temporary support consisting of timber framing with temporary foundations will be installed to improve load carrying capacity. In order to install the main temporary support, a discarded concrete block foundation under the bridge would be removed; this block is likely a remnant of an earlier bridge. At the west side of the Whiskey Creek Tributary Bridge, the primary timber beams will likely require more support consisting of beam strengthening and additional timber framing supports near the abutments. All proposed improvements would be left in place for the duration of the Italian Bar Bridge construction. Upon completion of the Italian Bar Bridge, the welded trench plates and the main temporary supports beneath the bridge would be removed. The additional supports and beam strengthening at the west side of the Whiskey Creek Bridge could remain in place pending a decision from Madera County Maintenance. Figure 2-7 provides details for the temporary support system. Figure 2-8 shows the proposed work areas needed to complete the improvements.

2.5 Right of Way

Fresno and Madera Counties operate and maintain Italian Bar Road through a special use permit from the USFS Sierra National Forest. Fresno County and Madera County will apply for a new or revised special use permit for the revised road and bridge alignment. No permanent right of way acquisition would be needed for the Project.

2.6 Staging Areas

Italian Bar Road within the vicinity of the Project is a narrow rural road with tight turn radii and limited shoulder areas. As a result, much of the staging for construction equipment and materials would occur offsite. Project engineers identified potential staging areas, taking into consideration site constraints such as overhead utility lines, driveway access for private residents, and adequate turn-around length for larger vehicles. The largest proposed staging area at the Italian Bar Bridge is a parking area at the Chawanakee School, approximately 1.6 miles from the Italian Bar Bridge. The school is no longer open but is used periodically by the San Joaquin River Intertribal Heritage Education Corporation as a learning center. The paved school parking area would be used for equipment storage, maintenance, and fueling as well as materials storage. Alternatively or in addition, paved areas in the now-unoccupied former SCE-employee housing complex on Upper Redinger Road (immediately west of the Chawanakee School site) may be utilized for staging and storage. The staging areas closer to the Italian Bar Bridge site would provide materials storage and short-term vehicle parking.

Two staging areas; one north and one south of the Whiskey Creek Tributary Bridge may be used to stage equipment and for access to the supports for this bridge (Figure 2-8).

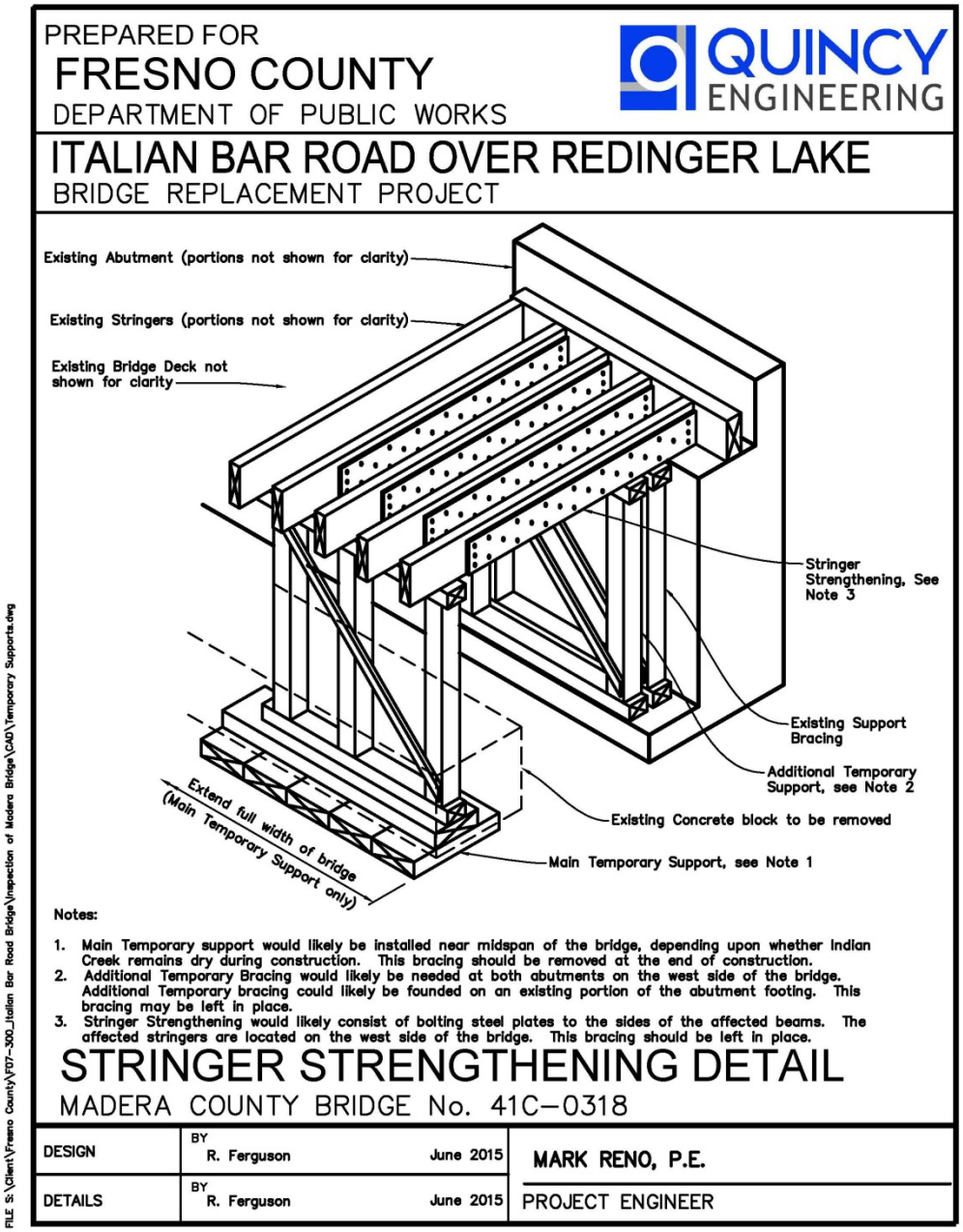

Figure 2-7. Temporary Supports for the Whiskey Creek Tributary Bridge

PREPARED FOR THE ITALIAN BAR BRIDGE REPLACEMENT PROJECT FOR FRESNO COUNTY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT
06	Mad	225	

QUINCY ENGINEERING

11017 COBBLEROCK DRIVE, SUITE 100
RANCHO CORDOVA, CA 95670
P: 916.368.9181

Italian Bar Rd

MAMMOTH SLA LLC
060-390-014-000

100'-0"

Potential Staging Area #2
Approx. 3,000 sq. ft.

Existing Bridge No. 41C-0138 to remain. See Note 2

LAPSLEY ROBERT AND BETTY
060-390-016-000

SCHEWE
060-390-005-000

Whiskey Creek Tributary

Existing Concrete Block (Discarded) to be removed. See Note 1

11'-11½"

86'-1½"

43'-11½"

12'-0"

29'-0½"

Anticipated Temporary Work Zone
Approx Area = 1,010 sq. ft

Anticipated Permanent Disturbance
Approx Area = 420 sq. ft

GAMMELL BARBARA J
060-390-028-000

Potential Staging Area #1
Approx. 13,500 sq. ft.

County Road 225

CIBULSKIS
060-390-027-000

91'-7½"

221'-2½"

PLAN

N

LEGEND

- Potential Temporary Staging Area
- Potential Temporary Access Area
- Anticipated Temporary Work Zone
- Anticipated Permanent Disturbance
- Property Line

NOTES

1. A discarded foundation rests in the creek bed under the center span of the bridge.
   Approx dimensions: 3'x3'x18'

   This concrete block will need to be removed for construction related activities.

2. The existing Whiskey Creek Tributary Bridge on County Road 225 is to undergo temporary sthrengthening for carrying heavy truck loads on for the anticipated bridge replacement over the San Joaquin River (Redinger Lake) bridge located further along Road 225.

   It is likely that steel trench plates will be placed over the wearing surface and stitch welded together. These plates would be removed when the likelyhood of heavy trucks is reduced.

   It is likely that timber framing with temporary foundations would be placed to improve the load carrying capabilities for temporary needs. Some of this framing would likely need to remain in place for improving damaged sections of the bridge superstructure.

DESIGN OVERSIGHT

SIGN OFF DATE

DESIGN DETAIL SHEET (ENGLISH) (REV:7/16/10)

DESIGNED BY	NA	DATE	
DRAWN BY	R. Ferguson	DATE	April 2015
CHECKED BY		DATE	
APPROVED		DATE	

R. Ferguson
PROJECT ENGINEER

WHISKEY CREEK TRIBUTARY BRIDGE
SITE PLAN - STAGING AND ACCESS

BRIDGE NO. 41C-0138	UNIT:
SCALE: As Shown	PROJECT NUMBER & PHASE:

FILE S:\Client\Fresno County\F07-300_Italian Bar Road Bridge\Inspection of Madera Bridge\CAD\Plan View after Inspection.dwg

DATE PLOTTED 5/7/2015 6:01:18 PM
TIME PLOTTED 6:01:18 PM
USERNAME Robertf

Figure 2-8. Proposed Work Areas for the Whiskey Creek Tributary Bridge

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2.7 Construction Schedule and Equipment

Construction is anticipated to begin in the fall of 2017 and be completed in early 2020.

During construction, Italian Bar Road will remain open to vehicular traffic across the existing bridges. Closing the Italian Bar Bridge for construction would require a 35-mile, approximately 1.5 hour, detour over the Big Creek #7 104-022 Dam Bridge to the west. To avoid a lengthy detour, the proposed Italian Bar Bridge would be replaced on a new alignment, allowing the existing bridge to remain open during the construction phase. Construction activities at the Italian Bar Bridge will be separated from traffic using temporary concrete railing.

Bridge foundation and pier construction at the Italian Bar Bridge is proposed for 2 months in each of 2 years, but may extend into a third year. SCE owns and operates the downstream Redinger Dam as well as upstream dams. SCE representatives have indicated that in a typical water year there would be an approximately 2 month expected window of low water elevation (an approximate water surface elevation of 1,370 feet). Although there is no guarantee of low water elevation in any given year, SCE reports that the lowest flow period at Redinger Lake typically occurs from October to November. All in-water construction and temporary falsework is anticipated during seasonal periods of low water elevation. The abutments and pier have been located to take advantage of the low flow condition in the lake. As shown on Figure 2-6, both abutments and the bent are above the low water elevation (1,380 feet), thereby minimizing in-water work.

At the Whiskey Creek Tributary Bridge, initial installation of temporary supports and welded trench plates would take approximately 3-4 weeks. The supports and plates would remain in place during the anticipated 2 to 3-year construction period for the Italian Bar Bridge. Removal of the temporary reinforcements at the Whiskey Creek Tributary Bridge is anticipated to happen over a 2 week period. During both installation and removal of supports and plates, Italian Bar Road would remain open but traffic control may result in temporary delays across the Whiskey Creek Tributary Bridge. All work at the Whiskey Creek Tributary Bridge would be scheduled during the dry season (typically May through October).

Equipment that may be required to construct the proposed Project is listed below (Table 2-1).

Table 2-1. Proposed Construction Equipment

Equipment	Construction Purpose
Asphalt Concrete Paver	Paving roadways
Backhoe	Soil manipulation and drainage work
Bobcat	Fill distribution
Bulldozer/Loader	Earthwork construction, cleaning and grubbing
Crane	Placement of bridge precast girders, placing of forms, and rebar
Drill Rig	Drilling platform mounted on crane to drill and construct rock socket foundation.

Equipment	Construction Purpose
Air Track Drill/Rock Drilling Equipment	Drilling equipment to facilitate blasting for rock excavation for roadway approaches to the bridge.
Dump Truck	Fill material delivery/surplus removal
Excavator	Soil manipulation
Forklift	Materials movement
Front –end Loader	Dirt or gravel manipulation
Generator/Ganset	Generate electricity
Grader	Ground leveling
Haul Truck	Earthwork construction; clearing and grubbing
Paver	Roadway paving
Roller / Compactor	Earthwork construction
Rubber-tired loader	Earthwork construction
Scraper	Earthwork construction; clearing and grubbing
Truck with Seed Sprayer	Landscaping
Water Truck	Earthwork construction; clearing and grubbing

2.8 Required Permits and Approvals

Based on the current Project description, existing site conditions, and biological resources present in the Project work limits, this IS/MND report concludes that the following permits are required for the proposed Project:

- Section 404 Nationwide Permit from the U.S. Army Corps of Engineers (Corps)
- Section 401 Water Quality Certification from the Regional Water Quality Control Board (RWQCB)
- Clean Water Act (CWA) Section 402 National Pollutant Discharge Elimination System Permit (NPDES)
- Streambed Alteration Agreement (Section 1602 of the California Fish and Game Code [CFGC]) from California Department of Fish and Wildlife (CDFW)

CHAPTER 3 INITIAL STUDY

Applicant: Fresno County Design Division

Application Number: Italian Bar Road Bridge Replacement Project BRLO-5942(214)

Description: The County of Fresno (County), in cooperation with the County of Madera and the California Department of Transportation (Caltrans), is proposing to replace the existing one-lane, 5-span steel girder and steel truss structure (Bridge No. 42C-0261) over the San Joaquin River/Redinger Lake. The Project's primary objective is to improve public safety and increase load carrying capacity on the Italian Bar Bridge. The existing Italian Bar Bridge has reached a structural condition that warrants replacement. Caltrans has given the Italian Bar Bridge a structural deficiency rating of 22.9 out of 100, and its single lane width makes it functionally obsolete.

Location: The Italian Bar Bridge is located 55 miles northeast of Fresno, California in Township 9 South, Range 23 East, Section 12 (Figures 2-1, 2-2, and 2-3). The Italian Bar Bridge is approximately 10 miles southeast of the unincorporated community of North Fork, California and approximately 16 miles northeast of the unincorporated community of Auberry, California. The Whiskey Creek Tributary Bridge, an access bridge for the Italian Bar Bridge, is located along Italian Bar Road southeast of North Fork, California, in Madera County (Figures 2-1 and 2-4). The proposed work at both locations constitutes the Project.

3.1 Aesthetics

	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
1. Aesthetics				
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) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

3.1.1 Environmental Setting

The landform of the Italian Bar Bridge vicinity is steep and rugged river canyon with indistinct rock outcrops along the ridgetops. Rounded light-colored boulders line the fluctuating shoreline of Redinger Lake. Foothill oak woodland blankets the steep hillsides and its appearance shifts through the seasons highlighting different plant species.

The Sierra National Forest has designated scenic byways and scenic corridors (USFS 1991 and 2015a). USFS-designated scenic corridors are popular paved driving routes, which connect people from lowlands to high elevation areas in the Sierra National Forest (USFS 2015a). For example, the USFS designates Mineret Road, also known as the Sierra Vista Scenic Route, which heads northeast from North Fork, California into the high county, as a scenic corridor. However, the USFS identifies Italian Bar Road as a "transitional area". Transitional areas occur at lower elevations and are front-country, forest-urban transition landscapes. The Project is not located along a designated Scenic Highway (Caltrans 2015), and no designated scenic resources are identified near the Italian Bar Bridge or the Whiskey Creek Tributary Bridge (Fresno County 2000, Madera County 1995, USFS 2004).

Photo 2. The overall landscape setting of the Italian Bar Bridge vicinity as viewed in summer. The Italian Bar Bridge is in the distant background.

3.1.2 Analysis

A. Would the Project have a substantial adverse effect on a scenic vista;

Finding: Less Than Significant Impact

The Italian Bar Bridge vicinity is currently used for the existing bridge, and a new bridge will be constructed approximately 27 feet northwest of the existing centerline of bridge. The area surrounding the Italian Bar Bridge is USFS land and Redinger Lake, both which are used for recreation. No designated scenic vistas were identified near the Italian Bar Bridge or Whiskey Creek Bridge (Fresno County 2000, Madera County 1995, USFS 1991). Although Italian Bar Road is not considered a scenic byway, the Sierra Vista Scenic Byway has a designated scenic overlook of Redinger Lake approximately 2 miles from the Italian Bar Bridge. It is unclear whether the Italian Bar Bridge is visible from this location, but from 2 miles it would be a distant view. Replacement of the existing bridge with a new bridge would slightly alter the visual character of the area by changing the bridge type, but this change would not substantially degrade the existing visual character of the Project area, nor greatly alter the quality of the view of Redinger Lake from the scenic overlook. Temporary modifications to the Whiskey Creek Tributary Bridge may require some vegetation clearing to access the bridge, but the temporary improvements would not change the visual character of the area. Therefore, the Project would have a ***less than significant impact*** to scenic vistas.

B. Would the Project substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?

Finding: No Impact

The Project is not located along a designated Scenic Highway (Caltrans 2015). The nearest designated Scenic Highway is State Route 168 near Shaver Lake in Fresno County.

C. Would the Project substantially degrade the existing visual character or quality of the site and its surroundings?

Finding: Less Than Significant Impact

Visual impacts are determined by assessing changes to the visual resources and predicting viewer response to those changes. The proposed Project would result in:

- temporary construction impacts at the Italian Bar Bridge site, smaller staging areas, and Whiskey Creek Tributary Bridge site;
- permanent impact to the natural rock outcrop and surrounding hillside on the Fresno County (downstream) side, including loss of trees and other vegetation growing in the cracks of this shady north-facing rock wall; and
- a modest impact to the rural setting by removing the existing old steel truss bridge and replacing it with a modern concrete and steel I-girder style bridge.

During construction, heavy machinery and construction equipment will temporary be visible to both recreation users and travelers at Redinger Lake. Given the low ADT on the road and the anticipated length of construction, this temporary impact to the visual setting is less than

significant. No adverse effects to visual resources would occur as a result of the temporary reinforcement of the Whiskey Creek Tributary Bridge.

Construction of the southern approach road at Italian Bar Bridge will require excavation of the approximately 30-foot-high rock wall. This will change the configuration of exposed rock along the approach road but is consistent with the existing character of the area.

Removal of the existing white steel truss bridge and replacing it with a modern steel I-girder bridge will change the visual character of the Project area. However, aesthetic treatments have been proposed to blend the new bridge into the existing environment. The new bridge incorporates concrete coloring, open barrier railings, and colored textured abutments. These design enhancements help this modern style bridge blend into the existing landscape. In order to provide a visual depiction of what the new bridge would look like to Redinger Lake recreation users, a photo simulation of the Italian Bar Bridge was prepared. In Figure 3-1, pre- and post-project conditions are depicted. The Project would have a ***less than significant*** impact on the existing visual character or quality of the site and its surroundings.

D. Would the Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Finding: Less than Significant Impact

The Project would not require or create new sources of substantial light or glare. No new lighting is proposed as part of the new Italian Bar Bridge. During construction, temporary lighting may be used at the Italian Bar Bridge site but would be infrequent and of short duration. The Project would have a ***less than significant*** on light or glare.

Figure 3-1. Pre- and Post-Project Photo Simulation looking Upstream

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3.2 Agricultural and Forestry Resources

	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
2. 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) 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 Range Assessment Project and 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 uses?	☐	☐	☐	☒
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 Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
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?	☐	☐	☐	☒

3.2.1 Environmental Setting

According to the California Department of Conservation (DOC) Farmland Mapping and Monitoring Program's (FMMP) 2012 Fresno County Map and 2014 Madera County Map, the Project work limits are outside the DOC's survey area for both Fresno and Madera County (DOC 2015a). The Project area supports rural residential properties and areas used as grazing land.

According the USFS Forest Planning and Monitoring Datasets (USFS 2015b), the Italian Bar Bridge work limits are designated as the following:

- Mechanical 20-inch diameter limit (20 percent canopy reduction). Commercial Thinning. The objective of this prescription is to reduce forest fuels while sustaining canopy cover, existing forest structure, and habitat elements within the range of the California spotted owl. As a byproduct of this prescription there will be some wood production; and

- Mechanical 30-inch diameter limit. Defense Zone Fuel Treatment. The objective of this prescription is a high level of fire hazard reduction and to provide a relative safe zone to initiate fire suppression efforts. It is used in defense zones and fuel breaks around urban intermix areas within the forest. As a byproduct of this prescription there will be some wood production.

The Italian Bar Bridge area supports grazing uses and limited timber use. The Whiskey Creek Tributary Bridge are supports rural residential properties.

3.2.2 Analysis

A. Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use; or

B. Would the Project conflict with existing agricultural zoning or Williamson Act Contracts?

Finding: No Impact

None of the parcels in the Project work limits or surrounding vicinity are considered Prime Farmland, Farmland of Statewide Importance, or Unique Farmland (DOC 2015a). Additionally, none of the parcels in the Project vicinity are under Williamson Act contracts (DOC 2015b). Therefore, the Project would not conflict with any existing zoning for agricultural use or a Williamson Act contract. ***No impacts*** would occur

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

D. Would the Project result in the loss of forest land or conversion of forest land to non-forest use?

Finding: No Impact

The Project would not conflict with, or result in the rezoning of, forest land or timberland. The Italian Bar Bridge would occur within forest land managed by the USFS that currently supports the bridge over Redinger Lake. The new bridge will be constructed to replace the existing Italian Bar Bridge and construction and operation of the bridge would not affect existing forest management. Implementing the proposed Project would be consistent with the USFS current

management of forest land surrounding Redinger Lake. Therefore there would be ***no impact*** to the forest land.

E. Would the Project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural uses or conversion of forest land to non-forest use?

Finding: No Impact

The Project would not involve changes in the environment which could result in conversion of farmland, or convert forest land to non-forest use. Therefore there would be ***no impact*** to agricultural and forest resources.

3.3 Air Quality

	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
3. Air Quality				
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

3.3.1 Environmental Setting

The Project is located within the Counties of Fresno and Madera, which are within the San Joaquin Valley Air Basin (SJVAB). The SJVAB is within the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD). The SJVAB is currently designated as a nonattainment area with respect to the state particulate matter less than 10 μm (PM_{10}) standard,

ozone, and particulate matter less than 2.5 μm ($PM_{2.5}$) standards. The SJVAB is designated nonattainment for the national 8-hour ozone and $PM_{2.5}$ standards. On September 25, 2008, the U.S. Environmental Protection Agency (USEPA) designated the San Joaquin Valley to attainment for the PM_{10} National Ambient Air Quality Standards and approved the PM_{10} Maintenance Plan.

Sensitive land uses located in the Italian Bar Bridge vicinity consist largely of rural residential dwellings, the nearest of which are located approximately 1.5 mile northwest of the Italian Bar Bridge in Madera County. In addition, the USFS's Redinger Campground is located near the Redinger Lake Dam, approximately 3.5 miles west of the Italian Bar Bridge. Rural residences are located immediately adjacent to the Whiskey Creek Tributary Bridge.

3.3.2 Analysis

A. Would the Project conflict with or obstruct implementation of the applicable Air Quality Plan?

Finding: No Impact

The Project is consistent with the applicable Air Quality Plan. Implementation of the proposed Project would not result in long-term increases of mobile-source emissions, nor would short-term construction-generated emissions be projected to exceed applicable thresholds of significance. Furthermore, it is important to note that the proposed Project is included in the regional emissions analysis conducted by the Fresno Council of Governments (FCOG) for the conforming *2014 Regional Transportation Plan (RTP), and the 2014 Federal Transportation Improvement Program (FTIP).* The proposed Project is listed in the 2014 RTP/FTIP air quality conformity determination as project identification numbers FRE111376 and is identified as a "non-regionally significant" project with regard to air quality. The proposed Project's design concept and scope have not changed significantly from what was analyzed in the 2014 RTP/FTIP. For these reasons, implementation of the proposed Project would not conflict with nor obstruct implementation of applicable air quality plans. ***No impact*** would occur.

B. Would the Project violate any air quality standard or contribute substantially to an existing or projected air quality violation; or

C. Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Finding: Less Than Significant Impact

Implementation of the proposed Project would not result in changes in vehicle miles traveled, changes in vehicle speeds, or increases in vehicle delay within the Project area. As a result, implementation of the proposed Project would not result in long-term changes in emissions that would exceed applicable air quality standards or contribute to existing or projected non-attainment conditions.

Implementation of the proposed Project would, however, result in short-term increases in emissions. Construction-generated emissions are of temporary duration, lasting only as long as construction activities occur, but have the potential to represent a significant air quality impact. The construction of the Italian Bar Bridge would result in the temporary generation of emissions associated with site grading and excavation, paving, motor vehicle exhaust associated with construction equipment and worker trips, as well as the movement of construction equipment on unpaved surfaces. Short-term construction emissions would result in increased emissions of ozone-precursor pollutants (i.e., Reactive Organic Gases [ROG] and Oxides of Nitrogen [$NO_{X]}$) and emissions of PM. Emissions of ozone-precursors would result from the operation of on-road and off-road motorized vehicles and equipment. Emissions of airborne PM are largely dependent on the amount of ground disturbance associated with site preparation activities and can result in increased concentrations of PM that can adversely affect nearby sensitive land uses. Construction-generated emissions of ozone-precursor pollutants and PM are discussed in more detail below.

Short-term construction emissions of criteria air pollutants attributable to the Italian Bar Bridge were estimated using Sacramento Metropolitan Air Quality Management District's Road Construction Emissions Model, version 7.1.5.1. Emissions modeling included estimated daily emissions associated with major construction activities, as well as, annual emissions for both uncontrolled and controlled conditions. Activities at the Whiskey Creek Tributary Bridge are of such short duration and limited scope that they are not included in the quantitative emissions estimate. Estimated construction-generated emissions are summarized in Table 3-1. (Ambient Air Quality and Noise Consulting 2015a)

Table 3-1. Short-term Construction-Generated Emissions

Construction Year	Emissions				
	ROG	**CO**	**NOX**	**PM_{10}**	**$PM_{2.5}$**
Daily Emissions					
Grubbing/Land Clearing	3.1	17.3	28.5	9.5	3.1
Grading/Excavation	3.5	21.3	31.0	9.7	3.1
New Bridge Construction	3.2	17.4	25.3	9.6	3.1
Paving & Existing Bridge Demolition	3.4	20.5	28.6	1.7	1.5
Highest Uncontrolled Emissions:	3.5	21.3	31.0	9.7	3.1
Total Controlled Emissions 1:	3.5	21.3	31.0	5.7	2.3
Annual Emissions					
Total Uncontrolled Emissions:	0.5	2.8	4.1	1.3	0.4
Total Controlled Emissions[1]:	0.5	2.8	4.1	0.8	0.3
SJVAPCD Significance Thresholds:	10	None	10	15	None
Annual Emissions Exceed SJVAPCD	No	NA	No	No	NA

Construction Year	Emissions				
	ROG	CO	NOX	PM_{10}	$PM_{2.5}$
Thresholds/Significant Impact?					
Emissions were quantified using Sacramento Metropolitan Air Quality Management District's Road Construction Emissions Model, version 7.1.5.1. Totals may not sum due to rounding. 1. Controlled emissions assume watering to reduce fugitive dust emissions.					
ROG = Reactive organic gases CO = Carbon monoxide NO_X = oxides of nitrogen PM_{10} = Particulate Matter less than 10 μm $PM_{2.5}$ = Particulate Matter less than 2.5 μm					

Source: Ambient Air Quality and Noise Consulting 2015a

Based on the modeling conducted, the Project would generate maximum uncontrolled annual emissions of approximately 0.5 tons/year of ROG, 4.1 tons/year of NOx, 2.8 tons/year of CO, 9.7 tons/year of PM_{10}, and 3.1 tons/year of $PM_{2.5}$. Estimated construction-generated emissions would not exceed the SJVAPCD's significance thresholds of 10 tons/year of ROG, 10 tons/year of NOx, or 15 tons/year PM_{10}.

It is important to note that the proposed Project would be required to comply with SJVAPCD Regulation VIII (Fugitive PM_{10} Prohibitions). This regulation is a series of rules designed to reduce particulate emissions generated by human activity, including construction and demolition activities, carryout and trackout, paved and unpaved roads, bulk material handling and storage, and vehicle travel on unpaved surfaces. Mandatory compliance with SJVAPCD Regulation VIII would further reduce emissions of fugitive dust from the Project work limits, and minimize the Project's potential to adversely affect nearby sensitive receptors to localized PM impacts. With compliance with SJVAPCD Regulation VIII, maximum annual emissions of PM would be reduced to approximately 0.8 tons/year of PM_{10} and 0.3 tons/year of $PM_{2.5}$.

Given that the proposed Project would be required to comply with SJVAPCD Regulation VIII and that Project generated emissions would not exceed applicable SJVAPCD significance thresholds, construction-generated emissions of ozone-precursor pollutants (i.e., ROG and NO_X) and PM would be considered ***less than significant***.

D. Would the Project expose sensitive receptors to substantial pollutant concentrations?

Finding: Less Than Significant Impact

Implementation of the proposed Project would not result in the long-term operation of any major onsite stationary sources of toxic air contaminants (TACs), nor would Project implementation result in an increase in vehicle trips along area roadways. For these reasons, implementation of the proposed Project would not result in long-term increases in exposure of sensitive receptors to TACs. However, short-term construction activities may result in temporary increases of TACs. Short-term increases of TACs potentially associated with construction activities are discussed below.

Naturally Occurring Asbestos

Naturally-occurring asbestos, which was identified by California Air Resources Board as a Toxic Air Contaminant in 1986, is located in many parts of California and is commonly associated with ultramafic rock. The Project work limits are not located near any areas that are likely to contain ultramafic rock (DOC 2000). As a result, risk of exposure to asbestos during the construction process would be considered ***less than significant***.

Diesel-Exhaust Emissions

Implementation of the proposed Project would result in emissions of diesel-exhaust particulate matter (DPM) during construction associated with the use of off-road diesel equipment for site grading and excavation, paving and other construction activities. Health-related risks associated with diesel-exhaust emissions are primarily associated with long-term exposure and associated risk of contracting cancer. As such, the calculation of cancer risk associated with exposure of to TACs are typically calculated based on a long-term (e.g., 70-year) period of exposure. The use of diesel-powered construction equipment, however, would be temporary and episodic and would occur over a relatively large area. Project-related construction activities would constitute less than one percent of the typical 70-year exposure period. In addition, the nearest sensitive land uses would be located approximately 1.5 miles, or more, from the active construction area for the Italian Bar Bridge. As a result, exposure to construction-generated DPM would not be anticipated to exceed applicable thresholds (i.e., incremental increase in cancer risk of 10 in one million). Therefore, this impact is ***less than significant***.

E. Create objectionable odors affecting a substantial number of people?

Finding: Less Than Significant Impact

Implementation of the proposed Project would not result in long-term emissions of odors. However, construction of the proposed Project would involve the use of a variety of gasoline or diesel-powered equipment that would emit exhaust fumes. Exhaust fumes, particularly diesel-exhaust, may be considered objectionable by some people. In addition pavement coatings used during Italian Bar Bridge construction would also emit temporary odors. However, construction-generated emissions would occur intermittently throughout the workday and would dissipate rapidly within increasing distance from the source. As a result, short-term construction activities would not expose a substantial number of people to frequent odorous emissions. For these reasons, potential short-term exposure of sensitive receptors to odorous emissions would be considered ***less than significant***.

3.4 Biological Resources

		Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
4. 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 CDFW or USFWS?	☐	☒	☐	☐
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS?	☐	☒	☐	☐
c)	Have a substantial adverse effect on federally-protected wetlands as defined by Section 404 of the federal Clean Water Act (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 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?	☐	☐	☐	☒

3.4.1 Environmental Setting

A Natural Environment Study, Minimal Impacts (NES/MI) report was prepared for the Italian Bar Bridge Replacement Project and a Biological Technical Memorandum was prepared for the Whiskey Creek Tributary Bridge in Madera County in July 2015 (Area West Environmental, Inc. [AWE] 2015a, AWE 2015b). Natural resources were identified through a review of existing information and biological field surveys. These reports document sensitive biological resources in the Project area and recommend avoidance, minimization, and mitigation measures to reduce potential impacts to less-than-significant levels. These reports are available for review at County

offices and are hereby incorporated by reference. A summary of the biological environment and conclusions from the technical documents are presented in this IS/MND.

Italian Bar Road traverses a thinly vegetated rural setting. The Italian Bar Bridge Biological Study Area (BSA) primarily consists of paved roadway and disturbed right-of-way and is sparsely vegetated with shrubs and oaks. The BSA is located at an elevation of approximately 1,400 feet above mean sea level (msl). Within the BSA, there are steep hill slopes, narrow valley bottoms, limited soil development, and sediment deposition. The onsite drainage features flow into Redinger Lake. At the Whiskey Creek Bridge, a riparian woodland corridor borders Indian Creek, a seasonal stream, and the work limits include areas of mixed hardwood conifer forest and a large disturbed (ruderal) area proposed for staging. Figure 3-2 shows habitat types in the BSA for the Italian Bar Bridge, and Figure 3-3 shows habitat types near the Whiskey Creek Tributary Bridge.

3.4.2 Analysis

A. Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Finding: Less Than Significant Impact with Mitigation Incorporated

Special-status plants were not observed during protocol-level plant surveys conducted at the Italian Bar Bridge and Whiskey Creek Tributary Bridge (AWE 2015a and AWE 2015b). Therefore, the proposed Project would not affect special-status plants.

The Italian Bar Bridge and Whiskey Creek Tributary Bridge areas support potential habitat for the following special-status wildlife and other protected wildlife species.

- Western pond turtle (*Emys marmorata*), a California species of special concern and USFS Forest Service Sensitive species: Although western pond turtle was not observed, Redinger Lake provides potential dispersal and nesting habitat for this species. Suitable habitat is absent at Whiskey Creek Tributary Bridge.
- Ringtail (*Bassariscus astutus*), a California fully protected species: Although ringtail were not observed, potential foraging and den habitat for ringtail occurs within boulder and outcrop habitat and valley and foothill willow scrub habitat in the Italian Bar Bridge BSA. Suitable habitat is absent at Whiskey Creek Tributary Bridge.
- Bat species, including California species of special concern and USFS Forest Service Sensitive species: The BSA supports potential roosting habitat for bats underneath the Italian Bar Bridge and Whiskey Creek Tributary Bridge, and in rock outcrops and large trees throughout the BSA for both sites. In addition to roosting, these species may also use Redinger Lake for foraging, drinking, and as a flight corridor. A bat survey was conducted at the Italian Bar Bridge; refer to the NES/MI report (AWE 2015a).

- Migratory birds and raptors: Suitable nesting habitat for migratory birds and raptors is present at the Italian Bar Bridge and Whiskey Creek Tributary Bridge area. No potential raptor nests were identified within the Project work limits during wildlife surveys. However, representatives of CDFW and USFS have reported high concentration of wintering bald eagle (*Haliaeetus leucocephalus*) occurrences in the Redinger Lake area (SCE 2003), and the Italian Bar Bridge BSA has the potential to support foraging habitat for bald eagle and golden eagles (*Aquila chrysaetos*). Large trees in the riparian corridor and surrounding forest at the Whiskey Creek Tributary Bridge provides suitable habitat for nesting birds and raptors, including golden eagles and yellow warblers (*Setophaga petechia*), a state species of special concern.
- Mule deer (*Odocoileus hemionus*), a USFS Management Indicator Species: There is potential foraging and dispersal habitat for mule deer.

The proposed reinforcement work on the Whiskey Creek Tributary Bridge (No. 41C-41C-0138) is temporary and limited in scope, so impacts on biological resources, including sensitive habitats and species, are similarly temporary and limited in their scope and duration. As noted above, the BSA for the Whiskey Creek Tributary Bridge supports potential habitat for bat species, including California species of special concern and USFS Forest Service Sensitive species, and migratory birds and raptors.

With the implementation of the mitigation measures listed below, the impacts on special-status wildlife and other protected wildlife species for the Project are considered ***less than significant with mitigation incorporated.***

Mitigation Measure BIO-1: Conduct Environmental Awareness Training

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

Mitigation Measure BIO-2: Install Temporary Fencing around Environmentally Sensitive Habitat

Before any ground-disturbing activity occurs within the Project work limits, 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 (i.e., waters of the U.S. and state, special-status species habitat, active bird/raptor nests to be avoided), as appropriate. Construction personnel shall avoid these areas. The exact location of the fencing and/or flagging shall be determined by the resident engineer coordinating with a qualified biologist. 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

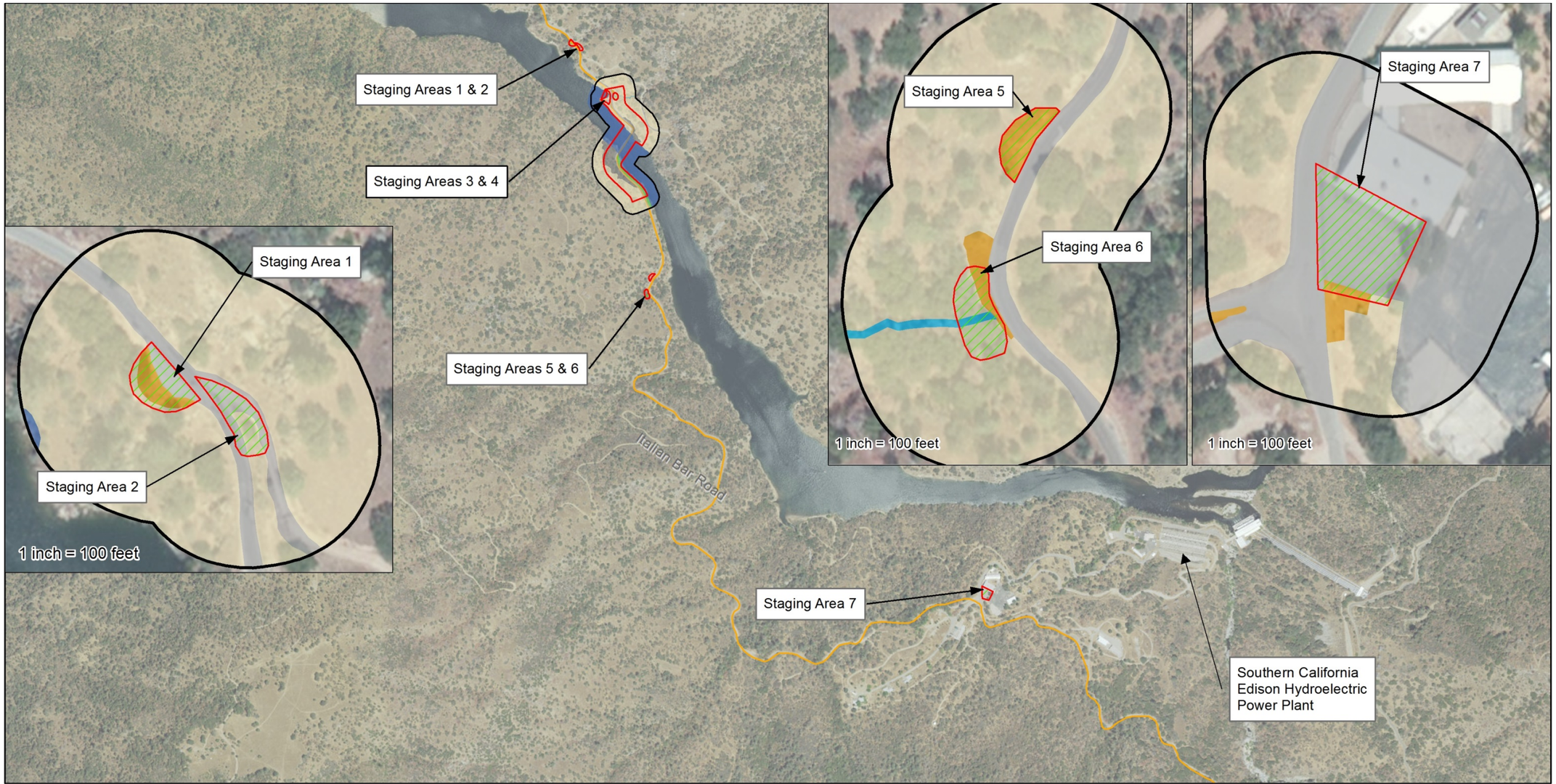
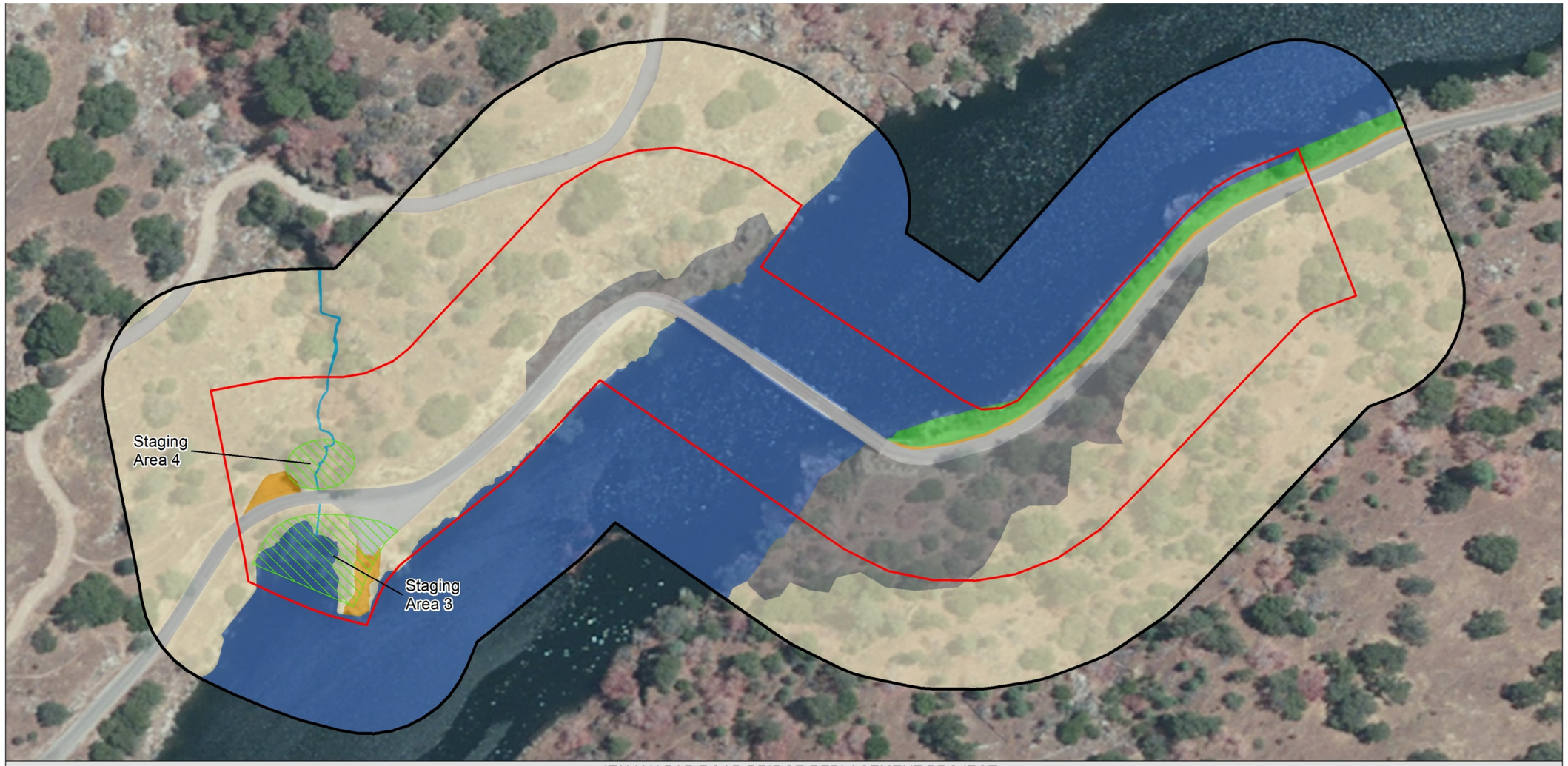


Figure 3-2a. Habitats within the Italian Bar Bridge BSA for Staging Areas 1, 2, 5, 6, and 7



ITALIAN BAR ROAD BRIDGE REPLACEMENT PROJECT

Work Limits

Biological Study Area (BSA)

Staging Area Locations

Habitat Type

Boulder & Rock Outcrop

Canyon Live Oak Forest

Developed

Ephemeral Drainage

Open Water / Perennial Stream

Ruderal

Valley and Foothill Willow Scrub

Habitat Type	Work Limits Acreage*	BSA Acreage*
Boulder & Rock Outcrop	0.799	0.922
Canyon Live Oak Forest	3.143	10.172
Developed	0.937	2.164
Ephemeral Drainage	0.012	0.032
Open Water	1.033	4.045
Ruderal	0.154	0.206
Valley and Foothill Willow Scrub	0.177	0.223

*Includes staging areas 1,2,5,6,7

0 100 200 feet

1 inch = 100 Feet

Data Sources:
- Area West Environmental, Inc. 2014
- ESRI Aerial Imagery, 2014

Date: 11-17-15

AREA WEST ENVIRONMENTAL, INC.

THE COUNTY OF FRESNO 1856

Document Path: D:\AWE\13-016 Quincy Italian Bar\mxd\ISMND\ItalianBarRd_Habitats_11x17_20151116.mxd

Figure 3-2b. Habitats within the Italian Bar Bridge BSA (Bridge Site and Staging Areas 3 and 4)

Figure 3-3. Habitats within the BSA for the Whiskey Creek Tributary Bridge Work

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sediment fencing and a note reflecting this condition shall be shown on the final construction documents.

Mitigation Measure BIO-3: Conduct Weekly Monitoring Visits

A representative of the County will make weekly monitoring visits to active construction areas occurring in or adjacent to environmentally sensitive habitat areas, (i.e., waters of the U.S. and state, special-status species habitat, active bird/raptor nests). The representative of the County will be responsible for ensuring that the contractor maintains the fencing/flagging protecting sensitive biological resources. Additionally, the County will retain a qualified biologist on-call to assist the County and the construction crew in complying with all Project implementation restrictions and guidelines as needed.

Mitigation Measure BIO-4: Return Temporarily Disturbed Areas to Pre-Project Conditions

All temporarily disturbed areas will be returned to pre-Project conditions upon completion of construction. These areas will be properly protected from washout and erosion using appropriate erosion control devices including coir netting, hydroseeding, and revegetation. After demolition of the old bridge, hydroseeding will be used on abandoned approach roads to revegetate those areas. In sloped areas additional erosion control measures would be applied including erosion control blankets and biodegradable fiber rolls. If woody species (i.e., trees and large shrubs) are removed, these areas would be replanted with comparable native vegetation.

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

Before any ground-disturbing activities, the County shall prepare and implement a Stormwater Pollution Prevention Plan [SWPPP] (as required under the State Water Quality Control Board [SWRCB]'s General Construction Permit Order 2009-0009-DWQ [and as amended by most current order(s)]) or a Water Pollution Control Plan (WPCP), as applicable, that includes erosion control measures and construction waste containment measures to ensure that waters of the state are protected during and after Project construction. The Plan (a SWPPP or WPCP) shall include site design to minimize offsite storm water runoff that might otherwise affect adjacent lake or stream habitat.

The Plan (a SWPPP or WPCP) shall be prepared with the following objectives: (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 Best Management Practices (BMPs) to reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges from the 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 SWPPP shall require that the construction contractor implement the following or similar BMPs to protect water quality within Redinger Lake.

- Install sediment fencing, fiber rolls, or other equivalent erosion and sediment control measures between the designated work area and Redinger Lake, as necessary, to ensure that construction debris and sediment does not inadvertently enter the waterway. Tightly woven fiber netting (no monofilament netting) or similar material shall be used for erosion control or other purposes within the Project work limits to ensure that wildlife are not trapped. This limitation will be communicated to the contractor through the special provisions included in the bid solicitation package. Coconut coir matting and burlap contained fiber rolls are an example of acceptable erosion control materials. The County will also cover or otherwise stabilize all exposed soil 48 hours prior to potential precipitation events of greater than 0.5 inch.
- 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.
- 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.
- If dewatering is necessary, the contractor will prepare a dewatering plan describing the methods, materials, quantities and locations of dewatering activities. All discharge from dewatering operations will adhere to requirements in the General Waste Discharge Requirements/NPDES Permit for Dewatering and Other Low Threat Discharges to Surface Waters (Order No. R5-2013-0074/NPDES Permit No. CAG995001).
- During bridge demolition, BMPs will be used to minimize or prevent debris from entering the lake.

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 6 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 wildlife at the beginning of each workday. Any species observed shall be allowed to voluntarily move outside of the work area on its own.

Mitigation Measure BIO-7: Conduct a Preconstruction Survey for Western Pond Turtle

A qualified biologist shall conduct a preconstruction clearance survey for western pond turtles within 48 hours prior to any ground disturbance within Redinger Lake and within the Italian Bar Bridge work limits, up to 1,300 feet from the channel in undeveloped upland habitats where access permits. Any western pond turtles found within the construction work area shall be allowed to voluntarily move out of this area or shall be captured and held by a qualified biologist for the minimum amount of time necessary to release them into suitable aquatic habitat outside the construction work area. If a western pond turtle nest containing eggs or young is identified within the construction work area, CDFW shall be consulted to determine an appropriate no-disturbance buffer to ensure avoidance of the nest.

Mitigation Measure BIO-8: Conduct Preconstruction Den Surveys for Ringtail and Establish Buffers

Before the start of ground-disturbing activities at Italian Bar Bridge, a qualified biologist will conduct preconstruction surveys for den sites within suitable habitats in the construction footprint. These surveys will be conducted no more than 30 days before the start of ground-disturbing activities.

If an occupied den is found, the qualified biologist will establish a 50-foot buffer around the den. If a maternity den is found, the qualified biologist will establish a 100-foot buffer around the maternity den through the pup-rearing season (May 1 through June 15). Adjustments to the buffer(s) will require prior approval by CDFW as coordinated by the qualified biologist.

Mitigation Measure BIO-9: Avoid Disturbance to Bat Roosting Sites at the Italian Bar Bridge

The diamond plate metal strips that run the length of the Italian Bar Bridge contribute to the appropriate microhabitat for roosting bats under the bridge and, if feasible, should be removed between late October and early March, prior to construction. The panels can be replaced by expanded metal panels that would support vehicle traffic and protect the wooden sub-structure of the bridge, while creating airflow throughout the area currently used by free-tailed bats to roost. This increased airflow would greatly reduce or eliminate the use of the bridge by bats. The feasibility of removing the diamond metal strips must be reviewed and approved by County representatives and a structural engineer. Alternatively, the underside of the Italian Bar Bridge could be netted with tightly strung netting that has less than half-inch mesh, and that has no opening greater than half-inch within any seams, transitions, or connection points with the bridge. Netting should be checked weekly and repairs made immediately. Completely and effectively covering the underside of the Italian Bar Bridge with netting may prove difficult, due to the structure of the bridge and height above water, but netting professionals will be consulted for expert advice. Demolition and removal of the existing bridge should be initiated only after the bridge has been determined to be bat free (after installation of netting or during the months from late October through early March).

Rock outcrops associated with the area around the bridge likely support bats. Since every crack, crevice, and rock outcrop overhang cannot be checked with 100 percent certainty, some rock crevices may support one or more species or individuals. If feasible, bedrock removal or

alteration should occur when most or all bat species and individuals have migrated downslope or to southern destinations during fall and winter months (typically late October through early March). Some bat species or individuals may still remain in the area during winter months and intermittently become active, which could escape detection with acoustic devices. Because of the relatively high level of uncertainty of bat presence in the bedrock and rock outcrops, the site should be flagged and marked where rock removal or bedrock alteration will occur, and a bat biologist should survey the area for appropriate bat roosting micro-habitat. Any crevices that are detected should be chinked (filled) with burlap, allowing for only small areas to be open where plastic flaps could be installed as one-way doors for bat escapes. In the case of large cracks and gaps that may lead to obscured roosting micro-habitat, bat biologist should cover the rock cracks with 1 to 3 mil plastic, which is also covered and secured, weighted, or otherwise immobilized with netting. Plastic and netting coverings should include escape flaps for bats that may not have been detected. Plastic covering and chinking should be conducted 2 to 3 weeks or more prior to construction and be made of durable materials that can last through the Project life. The netted areas should be occasionally monitored and repaired immediately in order to maintain the security of the system and to keep bats from roosting in or adjacent to the Project work limits.

If bats are found roosting in the Project work limits and adjacent areas during the construction period, consultation with CDFW and a qualified biologist should commence as soon as bats are reported or observed. No bats should be removed, handled, killed, hazed, or otherwise engaged without direction from CDFW and/or a qualified biologist.

Mitigation Measure BIO-10: Conduct a Preconstruction Survey and Install Exclusionary Netting for Bats at the Whiskey Creek Tributary Bridge

During April–September before vegetation clearing, grubbing, or trimming begins, a qualified biologist will survey trees within the Whiskey Creek Tributary Bridge work limits 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, vegetation clearing may proceed. If snags, hollow trees, or other trees with suitable cavities are found, they will be examined for roosting bats. If bats are not found and there is no evidence of use by bats, vegetation clearing or trimming may proceed. If bats are found or evidence of use by bats is present, the qualified biologist will work with the County and CDFW to implement measures to avoid or minimize disturbance to the colony. Additional measures may include excluding bats from the tree before their hibernation period (mid-October to mid-March) and before construction begins.

For the Whiskey Creek Tributary Bridge, exclusionary netting will be used to exclude bats from the bridge prior to installation of the temporary timber supports. The site should be netted with a taught net of a mesh that is less than 0.5 inch. Netting should be erected during the months of late October through early March. Netting should be made of materials that will last the life of the project. The netted areas should be occasionally monitored and repaired immediately in order to maintain the security of the system and to keep bats from roosting in or adjacent to the Whiskey Creek Tributary Bridge. If bats are found to be roosting on the bridge during the construction period, consultation with the CDFW and a bat biologist should commence as soon as bats are reported or observed.

Mitigation Measure BIO-11: Conduct a Preconstruction Nesting Migratory Bird and Raptor Survey and Establish Buffers

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 Project work limits. Surveys for raptors' nests should extend 1.0 mile from the Project work limits to ensure that nesting raptors are not affected by construction disturbances. For raptor surveys outside the Project work limits where property access has not been granted or is not accessible (e.g., due to steep terrain or lack of access roads and trails), the surveying biologist shall use binoculars to scan any suitable nesting substrate for potential raptor nests. 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 1.0 mile 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 (coordinating with the CDFW) 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 topographical or artificial barriers. In addition to the establishment of buffers, other avoidance measures (determined during CDFW coordination) 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.

Mitigation Measure BIO-12: Conduct a Preconstruction Nesting Migratory Bird and Raptor Survey and Establish Buffers at the Whiskey Creek Tributary Bridge

If vegetation removal will occur during the breeding season for migratory birds and raptors (generally March through August), the County shall retain a qualified biologist to conduct a pre-construction nesting bird and raptor survey prior to the start of vegetation clearing or trimming activities. The preconstruction nesting bird and raptor surveys shall be conducted between February 1 and August 31 within suitable habitat within the designated Project work limits. The preconstruction survey shall be conducted no more than 14 days before the initiation of project activities. If an active bird or raptor nest is identified within the 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 (coordinating with appropriate resource agencies) 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 topographical or artificial barriers. In addition to the establishment of buffers, other avoidance measures may include monitoring of the nest during Project 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.

B. Would the Project have a substantial adverse effect on any riparian or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or U.S. Fish and Wildlife Service (USFWS); or

C. Would the Project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Finding: Less Than Significant Impact with Mitigation Incorporated

The BSA supports two aquatic habitats at Italian Bar Bridge (open water [Redinger Lake] and ephemeral drainages), and one aquatic habitat at the Whiskey Creek Tributary Bridge (Indian Creek – seasonal stream) that could qualify as waters of the U.S. and state, which would be regulated by the Corps and RWQCB under Sections 404 and 401 of the CWA, respectively, and by the CDFW under Section 1602 of the CFGC. Additionally, the BSA supports valley and foothill willow scrub habitat along Redinger Lake and riparian woodland along Indian Creek, which may be evaluated as part of a Streambed Alteration Agreement by CDFW under Section 1602 of CFGC.

The proposed Project would result in permanent and temporary impacts on aquatic and upland habitat. The Project will permanently affect 0.001 acre and temporarily affect 0.779 acre of Redinger Lake (open water), permanently affect 0.001 acre and temporarily affect 0.022 acre of Indian Creek (seasonal stream), and temporarily affect 0.012 acre of ephemeral drainages, which are considered Corps jurisdictional waters of the U.S. and state. Removal of the current Italian Bar Bridge is anticipated to offset permanent impacts on Redinger Lake open water from placement of the new bridge. Replacing the existing 5-span bridge with the proposed 2-span bridge would remove between 200 to 250 square feet of bridge piers within the open water of Redinger Lake. Placement of the new bridge will add approximately 20 square feet of bridge column (Bent 2) within the open water resulting in a net gain of approximately 200 square feet of jurisdictional waters of the U.S. and state from Project activities. Also, based on the preliminary Project design, the Project would permanently affect less than 0.001 acre of Indian Creek at the Whiskey Creek Tributary Bridge and less than 0.001 acre of ephemeral drainage in staging areas at the Italian Bar Bridge. Vegetation clearing or trimming that is required to provide construction crews and equipment access to Indian Creek and the Whiskey Creek Tributary Bridge would result in temporary impacts to 0.024 acre of riparian woodland habitat and would be minimized by restoring the area to pre-project conditions. Implementation of avoidance and minimization measures identified above would ensure that the proposed Project minimizes disturbance to waters of the U.S. and state and restores temporarily affected areas to pre-Project conditions.

With the implementation of the Mitigation Measures, described above, impacts on sensitive natural communities are considered ***less than significant with mitigation incorporated.***

Mitigation Measure BIO-4: Return Temporarily Disturbed Areas to Pre-Project Conditions

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

D. Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Finding: Less Than Significant Impact

The Friant Dam on the San Joaquin River downstream of the BSA is a barrier to movement of anadromous fish, so there are no anadromous fish in Redinger Lake or Indian Creek. No native wildlife nursery sites were identified during wildlife surveys within the Project BSA.

The canyon live oak woodland, riparian woodland, and valley and foothill willow scrub habitats represent potential foraging and dispersal habitats for mule deer. Construction activities and related noise may cause short-term, temporary disturbance to mule deer that may forage in the BSA. However, the proposed Project is not anticipated to cause any long-term changes to existing migration habits or corridors in the Project vicinity. Potential effects on wildlife movement would be ***less than significant.***

E. Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Finding: Less Than Significant Impact

The proposed Project is consistent with the Fresno County General Plan Open Space and Conservation Elements (Fresno County 2000), the Fresno County Oak Woodland Management Guidelines (Fresno County 1998), the Madera County General Plan natural resource goals (Madera County 1995), and the USFS Forest Land and Resource Management Plan (USFS 1991). Therefore, this impact would ***be less than significant.***

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

Finding: No Impact

There are no adopted habitat conservation plans, natural community conservation plans, or other approved local, regional, or state habitat conservation plans within the vicinity of the Project. Therefore, the Project will not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. ***No impact*** would occur.

3.5 Cultural Resources

	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
5. Cultural Resources				
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	☐	☒	☐	☐
c) Cause a substantial adverse change in the significance of a tribal cultural resource?	☐	☒	☐	☐
d) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
e) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

3.5.1 Environmental Setting

A Historic Property Survey Report (HPSR) and Archaeological Survey Report were prepared for the Italian Bar Bridge (Whitaker 2014), and a supplemental HPSR prepared for the Whiskey Creek Tributary Bridge (Whitaker and Hildebrand 2015). Adrian Whitaker of Far Western Anthropological Research Group, Inc. (Far Western) completed archival records searches with the Southern San Joaquin Information Center and the Native American Heritage Commission, and contacted potentially interested Native American individuals or parties. These searches revealed that there are no previously recorded resources in the area of potential effect (APE) surrounding the Italian Bar Bridge or the Whiskey Creek Tributary Bridge. One resource, a bedrock milling station, is recorded within one-quarter mile of the Italian Bar Bridge APE but is under the reservoir and will not be affected by the Project. At the Whiskey Creek Tributary Bridge, a sparse lithic scatter is recorded within the quarter-mile record search area; however the site is located on an elevated terrace that will not be affected by the work on the Whiskey Creek Tributary Bridge. A buried site sensitivity study indicates that there is a very low probability of identifying buried archaeological sites in the Project vicinity. A pedestrian survey of the entire APE failed to identify previously unrecorded resources.

The original bridge crossing the San Joaquin River along Italian Bar Road was constructed in 1925 as a three-span structure consisting of one 98-foot steel truss and two 27.5-foot steel girder spans. The steel truss segment was used to span the deep, low-flow portion of the river. In 1951,

these three spans were relocated approximately 25 feet downstream to form most of the existing five-span structure present today. According to the Caltrans "Historical Significance-Local Agency Bridges" list, the Italian Bar Bridge (42C261) over the San Joaquin River is ineligible for listing on the National Register of Historic Places (National Register). The Italian Bar Bridge was also determined to be ineligible as a historical resource under CEQA. The Whiskey Creek Tributary Bridge has not been evaluated for the National Register or as a historic resource under CEQA (Whitaker and Hildebrandt 2015).

3.5.2 Analysis

A. Would the Project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5; or

B. Would the Project cause a substantial adverse change in the significance of an archeological resource pursuant to Section 15064.5; or

C. Would the Project cause a substantial adverse change in the significance of a tribal cultural resource?

Finding: Less Than Significant Impact with Mitigation Incorporated

Based on the findings of the pedestrian survey and archival research, it appears that the Project will not affect historical, archaeological, or tribal cultural resources. In the unlikely event that previously unidentified resources are encountered during construction, it is recommended that work stop in that area until a qualified archaeologist can evaluate the nature and significance of the find.

Although research/investigation concluded that no significant historical or archeological resources are located within the vicinity of the Italian Bar Bridge or Whiskey Creek Tributary Bridge, potential impacts to previously undiscovered historic and/or archaeological resources are considered ***less than significant with mitigation incorporated*** and would be avoided through implementation of Mitigation Measures CUL-1 and CUL-2.

Mitigation Measure CUL-1: Conduct Worker Environmental Awareness Training.

Prior to any excavation or other substantial subsurface disturbance activities, any individuals conducting the work should be given a cultural resource awareness training session and advised to watch for cultural resource materials during construction activities. This training can be included in or coincide with the training identified in Mitigation Measure BIO-1.

Mitigation Measure CUL-2: Protect Discovered Prehistoric or Historic Subsurface Resources.

If any evidence of prehistoric cultural resources (freshwater shells, beads, bone tool remnants or an assortment of bones, soil changes including subsurface ash lens or soil darker in color than surrounding soil, lithic materials such as flakes, tools or grinding rocks, etc.), historical cultural resources (adobe foundations or walls, structures and remains with square nails, refuse deposits or bottle dumps, often associated with wells or old privies), or paleontological resources (e.g.,

fossilized remains, imprints, and traces of plants and animals preserved in rocks and sediments) are observed during ground disturbing activities, all work must immediately cease within 50 feet of the find, and a qualified archaeologist must be consulted to assess the significance of the cultural materials. If the find is determined to be potentially significant, the archaeologist, in consultation with the County and, if the find is prehistoric or Native American in nature, appropriate Native American group(s) should develop and implement a treatment plan with an emphasis toward preservation in place. If the find is paleontological, the County will consult with a qualified paleontologist to develop and implement a treatment plan.

D. Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature;

Neither archival research nor the field survey resulted in the identification of unique paleontological resources or geological features within the APE at the Italian Bar Bridge or Whiskey Creek Tributary Bridge. While unlikely, ground disturbing activities associated with construction of the proposed Project could uncover paleontological resource features below surface that could be damaged or destroyed prior to assessing their importance. To address this potential impact, Mitigation Measure CULT-2 (above) will be implemented. With implementation of this measure, potential impacts to paleontological resources are considered ***less than significant with mitigation incorporated***.

E. Would the Project disturb any human remains, including those interred outside of formal cemeteries?

No human remains have been previously encountered in the vicinity of the Italian Bar Bridge or the Whiskey Creek Tributary Bridge. However, this does not preclude the potential for discovering buried human remains during ground disturbance associated with construction. In the event that human remains are discovered during Project construction, Mitigation Measure CUL-3 shall be implemented. With implementation of Mitigation Measure CUL-3, potential impacts resulting from disturbance of human remains as a result of the proposed Project would be considered ***less than significant with mitigation incorporated***.

Mitigation Measure CUL-3: Protect Discovered Human Remains

If, during the course of construction, human remains are discovered, work shall be halted immediately within 50 feet of the discovery. County staff shall be notified, and the County Coroner shall be notified according to Section 5097.98 of the State PRC and Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, and the procedures outlined in CEQA Section 15064.5(d) and (e) shall be followed. The County will also comply with the current USFS Native American Graves Protection and Repatriation Action Plan of Action (USFS 2015c).

3.6 Geology and Soils

	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
6. Geology and Soils				
Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated in the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines & Geology 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 soils, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternate wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

3.6.1 Environmental Setting

At the Italian Bar Bridge site, the San Joaquin River is situated within a small gorge with sides comprised of granitic bedrock. Based on 1950 topography, a narrow box canyon (about 75-foot wide) existed prior to construction of Redinger Lake. This feature is now in-filled with more than 20 feet of sediment. The preliminary geologic review of the site indicated a pattern of low angle exfoliation jointing and steep near vertical jointing. This basic geologic structure can be readily observed in the "stair-step" features along the southwest bank of the river. (Kleinfelder 2015a)

At the Whiskey Creek Tributary Bridge site, elevations range from 2,520 to 2,560 above msl. Some adjacent parcels have been graded to support rural residential development, and surrounding lands slope toward Indian Creek, a seasonal stream tributary to Whiskey Creek, which flows into Willow Creek. Willow Creek drains into the San Joaquin River downstream of Redinger Lake just below the Big Creek No. 7 Dam.

Soils within and surrounding the Italian Bar Bridge are mapped as Ahwahnee family, 35 to 65 percent slopes and Auberry-Ahwahnee families association, 5 to 35 percent slopes (Natural Resources Conservation Service [NRCS] 2015). Soils within and surrounding the Whiskey Creek Tributary Bridge are mapped as Auberry-Ahwahnee families association, 5 to 35 percent slopes (NRCS 2015). The erosion potential of these soils can be classified as moderate to high. As noted in Table 3-2, drainage in the Ahwahnee soil is rapid. The Revised Universal Soil Loss Equation (RUSLE) erosivity factor (K) was determined to be 0.20, where the range is 0.02-0.69, with higher values equating to increased erosion potential (NRCS 2015). Erosional features along Italian Bar Road are visible in several locations.

Table 3-2. Soils within the Italian Bar Bridge and Whiskey Creek Tributary Bridge BSA

Soil Map Unit Symbol and Name	Parent Material	Soil Profile	Depth to Restrictive Layer (inches)	Drainage Class	Hydric or Hydric Inclusion
102 Ahwahnee family, 35 to 65 percent slopes	Residuum weathered from granodiorite	0 to 17 inches: coarse sandy loam 17 to 29 inches: sandy loam 29 to 60 inches: Weathered bedrock 62 to 79 inches: N/A	29 to 33 inches to paralithic bedrock	Well drained	No
107 Auberry-Ahwahnee families association, 5 to 35 percent slopes	Residuum weathered from granodiorite	0 to 17 inches: Coarse sandy loam 17 to 29 inches: Clay loam 29 to 60 inches: Coarse sandy loam 62 to 79 inches: Weathered bedrock	62 to 66 inches to paralithic bedrock	Well drained	No

Source:NRCS 2015

3.6.2 Analysis

A. Would the Project expose people or structures to potential substantial adverse effects including risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (Refer to Division of Mines and Geology Special Publication); or strong seismic ground shaking; or seismic-related ground failure, including liquefaction; or landslides?

Finding: No Impact

The Project work limits do not overlie any known faults and is not within or near an Alquist-Priolo special-studies zone; therefore it is unlikely that the proposed Project would expose

people or structures to potential substantial adverse effects from the rupture of a known earthquake fault (California Geological Survey 2007). The site geology, liquefaction, seismically induced settlement or lateral spread do not constitute any hazard in the Project vicinity (Kleinfelder 2015a). Therefore, there would be ***no impact*** associated with exposing people or structures to potential substantial adverse effects from rupture of a known fault, strong seismic ground shaking, or seismic-related ground failure.

B. Would the Project result in substantial soil erosion or the loss of topsoil?

Finding: Less Than Significant Impact with Mitigation Incorporation

Construction of the Italian Bar Bridge would involve site grading and earthmoving activities, which could result in soil erosion. Soil erosion and topsoil loss would be limited by implementing Mitigation Measures BIO-4 and BIO-5, described above, which includes erosion control measure BMPs. Also, as noted in the Air Quality section, the proposed Project would be required to comply with SJVAPCD Regulation VIII (Fugitive PM_{10} Prohibitions), which include measures that limit soil erosion. Because erosion control measures would be implemented during construction, the Project has limited potential to result in substantial soil erosion or loss of topsoil. This impact would be considered ***less than significant with mitigation incorporated.***

Mitigation Measure BIO-4: Return Temporarily Disturbed Areas to Pre-Project Conditions

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

C. Would the Project 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 spread, subsidence, liquefaction or collapse?

Finding: No Impact

As discussed above under Question A, the Project work limits are not located in or adjacent to an active fault zone or in an area of substantial seismic hazard. The Project is not located on a geologic unit or soil that is unstable or that would become unstable as a result of the Project. The Project is committed to implementing all of the recommended County standard practices and standard engineering practices to minimize the risk of liquefaction, lateral spreading, subsidence, or collapse. The Project would have ***no impact.***

D. Would the Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Finding: No Impact

Soils in the Project area are classified by the NRCS as Ahwahnee family, 35 to 65 percent slopes and Auberry-Ahwahnee families association, 5 to 35 percent slopes (NRCS 2015). Because expansive soils are typically clay soils that are prone to large volume changes related to changes in water content, soils in the Project work limits are not considered expansive and would not create substantial risks to life and property. The Project would have ***no impact***.

E. Would the Project 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?

Finding: No Impact

The Project does not include the use of septic tanks or alternative waste water disposal systems, and therefore there would be ***no impact*** on these resources.

3.7 Greenhouse Gas Emissions

	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
7. Greenhouse Gas Emissions				
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant effect on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

3.7.1 Environmental Setting

The earth's climate has been warming for the past century. It is believed that this warming trend is related to the release of certain gases into the atmosphere. Greenhouse gases (GHG) absorb infrared energy that would otherwise escape from the earth. As the infrared energy is absorbed, the air surrounding the earth is heated. An overall warming trend has been recorded since the late 19th century, with the most rapid warming occurring over the past two decades. The 10 warmest years of the last century all occurred within the last 15 years. It appears that the decade of the 1990s was the warmest in human history (National Oceanic and Atmosphere Administration [NOAA] 2010). Human activities have been attributed to an increase in the atmospheric abundance of greenhouse gases. The following is a brief description of the most commonly recognized GHGs.

Commonly identified GHG emissions and sources include the following: carbon dioxide (CO_2), methane (CH_4), nitrous oxide, water vapor, ozone, aerosols, hydrofluorocarbons (HFCs), chlorofluorocarbons (CFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).

3.7.2 Analysis

A. Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? or

B. Would the Project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Finding: Less than Significant Impact

Implementation of the proposed Project is not projected to result in a change in traffic volumes or vehicle travel speeds within the Project vicinity. As a result, the proposed Project is not anticipated to result in long-term increases of GHG emissions. Construction of the proposed Project, however, would result in short-term increases of GHG emissions. Construction-generated GHG emissions are summarized in Table 3-3.

Table 3-3. Short-term Construction-Generated Greenhouse Gas Emissions

Construction Year	Daily CO_2 Emissions[1]
Daily Emissions (lbs)	
Grubbing/Land Clearing	3,401.7
Grading/Excavation	4,706.9
New Bridge Construction	3,386.5
Paving & Existing Bridge Demolition	3,718.8
Maximum Daily Emissions (pounds):	4,706.9
Annual Emissions Million metric tons of carbon dioxide ($MTCO_2e$):	543.5
Emissions were quantified using Sacramento Air Quality Management District's Road Construction Emissions Model, version 7.1.5.1. Includes emission associated with the use of a water truck.	

Based on the modeling conducted, annual emissions of GHG associated with construction of the proposed Project would total approximately 543.5 million metric tons of carbon dioxide ($MTCO_2e$). A majority of the emission generated during the construction process would occur during initial grading and excavation of the Project vicinity, associated primarily with the use of off-road equipment. There would also be a small amount of GHG emissions from waste generated during construction; however, this amount is speculative. Actual emissions will likely vary, depending on the final construction schedules, equipment required, and activities conducted.

Given the relatively low GHG emissions generated during construction of the proposed Project and given that emissions would be short-term, increases in GHG emissions attributable to the proposed Project would not result in a significant impact on the environment. Furthermore, it is important to note that the proposed Project is consistent with regional transportation plans and, as such, would not conflict with regional air quality planning efforts. For these reasons,

implementation of the proposed Project would not conflict with regional air quality planning efforts, including efforts to reduce greenhouse gas emissions. This impact would be considered ***less than significant***.

3.8 Hazards and Hazardous Materials

		Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
8. 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 ¼ 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 §65962.5 and, as a result, would it create a significant hazard to the public or to 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 a public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g)	Would the Project impair implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h)	Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

3.8.1 Environmental Setting

Kleinfelder, Inc. conducted an Initial Site Assessment (ISA) for the Italian Bar Bridge site (Kleinfelder 2014) and the Whiskey Creek Tributary Bridge site (Kleinfelder 2015b), which identified possible hazards and hazardous materials in the Project area.

Based on a review of historical documents, both sites were predominately vacant land in the foothills of the Sierra Nevada Mountains from at least 1904 through the present. Roads were depicted on a 1904 topographic map approaching the San Joaquin River on both sides of the river, but it is not apparent if a bridge was present during that year. The bridge structure appears to be present in a 1948 aerial photograph. According to Fresno County staff, a bridge across the San Joaquin River was constructed in 1925 and replaced by the existing structure in 1948 (Kleinfelder 2014).

Databases published by federal, state and local regulatory agencies were reviewed to identify businesses and properties that handle hazardous materials or hazardous waste, or are the known location of a release of hazardous substances to soil and/or groundwater. In addition, local regulatory agencies were contacted for reasonably ascertainable and practically reviewable information regarding environmental conditions present at facilities in the in the Project vicinity. Based on the database and local regulatory agency records reviewed, there are no off-site facilities that are considered to have the potential to affect environmental conditions at the Italian Bar Bridge or Whiskey Creek Tributary Bridge (Kleinfelder 2014 and 2015b).

The existing Italian Bar Bridge is constructed of steel and wood timbers that appear to have been treated with some sort of chemical. It is possible that creosote was used as a preservative on the wood timbers. At the Whiskey Creek Tributary Bridge, the bridge structure is constructed of wooden timbers with concrete abutments, and it is possible that the timbers were treated with a wood preserving chemical. Treated wood waste (TWW) has been pre-determined by the State of California, Department of Toxic Substances Control (DTSC) to fall within a specialized category for removal or replacement activities. According to the DTSC Assembly Bill 1353 Implication Report dated June 2011, TWW is considered a low-risk hazardous waste. As such, sampling is not required and it may be disposed of in either a hazardous waste landfill or in a composite-lined portion of a solid waste landfill approved by the RWQCB to accept TWW (Kleinfelder 2014 and 2015b).

3.8.2 Analysis

A. Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; or

B. Would the Project 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?

Finding: Less Than Significant Impact with Mitigation Incorporated

Construction activities associated with the proposed Project would involve storage, transport, and handling of hazardous materials, primarily fuel and lubricants. The potential for accidental releases of hazardous materials, including equipment fuel leaks, fuel spills, and other events,

could result from construction activities. Construction of the Project is unlikely to pose a risk to public safety from exposure to any accidental releases of fuel or lubricants. However, an accidental release of a hazardous material, if allowed to drain offsite, could have a significant impact on the environment, particularly to Redinger Lake, Indian Creek, ephemeral drainages, and downstream waterbodies that are present within the Project vicinity.

It is possible that asbestos-containing materials (ACMs) and lead-based paint (LBP) were used in the construction of the Italian Bar Bridge (Kleinfelder 2014). Demolition of the existing bridge may pose a risk to workers from release of these materials.

Construction activities would also generate waste that requires off-site disposal. Non-hazardous waste generated during construction, such as common household trash, cardboard, wood pallets, scrap metal, erosion control materials (such as straw bales and silt fencing), and packaging materials for equipment and parts, would be collected in trash bins and picked up/disposed of by the contractor. Any hazardous material generated during construction (e.g., diesel fuel, oil, solvents, etc.) would be disposed of or recycled off-site in accordance with all applicable laws pertaining to the handling and disposal of hazardous waste.

The potential for hazard to the public or the environment through the release or disposal of hazardous materials is considered a ***less-than-significant impact with mitigation incorporated***.

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

As described in the Biological Resources section, the construction contractor for the Project would be required to prepare and implement a SWPPP. The SWPPP will include BMPs to limit the refueling, servicing and storage of construction equipment to protect off-site transport of hazardous materials and to provide for immediate cleanup of any leaks and spills of potentially hazardous materials consistent with applicable local, state, and federal regulations.

Mitigation Measure HAZ-1. Conduct testing for asbestos-containing materials, lead-based paint, and wood-preserving chemicals, and implement safe handling and disposal measures.

It is possible that ACMs and LBP were used during construction of the existing Italian Bar Bridge. Prior to bridge demolition activities, suspect ACMs should be tested in accordance with USEPA, National Emission Standards for Hazardous Air Pollutants (NESHAP) and SJVAPCD regulations. In addition, painted surfaces should be tested for the presence of LBP in accordance with California Department of Public Health and California Division of Occupational Safety and Health regulations. TWW should be handled consistent with Caltrans' SSP 14-11.09.

Mitigation Measure HAZ-2. Procedures for Discovery of Unknown Hazardous Materials

Although not anticipated, should impacted soil (as evidenced by staining and/or odors) be encountered during construction activities, it is recommended that the Caltrans Unknown Hazard Procedures be implemented during construction activities. The resident engineer overseeing construction should have available field monitoring equipment (e.g., photoionization detector) to facilitate timely detection of potentially hazardous conditions in the field.

C. Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Findings: No Impact

The Chawanakee School is located approximately 1.6 miles from the Italian Bar Bridge. The school is no longer open but is used periodically by the San Joaquin Intertribal Heritage Education Corporation as a learning center. The paved school parking area may be used for equipment storage, maintenance, and fueling as well as materials storage. Since the Chawanakee School is no longer an active school and there are no other schools or proposed schools within one-quarter mile of the Project work limits, there would be ***no impact*** to an existing school**.**

D. Would the Project 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?

Finding: No Impact

Information gathered and activities performed by Kleinfelder, Inc. for the ISA were consistent with those required to address Caltrans' ISA checklist for Hazardous Waste. As described in the environmental setting, there are no off-site facilities that are considered to have the potential to affect environmental conditions at the Italian Bar Bridge or Whiskey Creek Tributary Bridge. ***No impact*** would occur.

E. Would the Project be located within an airport land use plan or, where such a plan has not been adopted, and/or within two miles of a public airport or public use airport, and if so, would the Project result in a safety hazard for people residing or working in the Project area; or

F. Would the Project be within the vicinity of a private airstrip, and if so would the Project result in a safety hazard for people residing or working in the Project area?

Finding: No Impact

The Project is not located within an airport land use plan or within two miles of a public airport. The Project is also not located within the vicinity of a private air strip. Therefore the Project would not result in a safety hazards for people residing or living in the Project vicinity. ***No impact*** would occur.

G. Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Finding: No Impact

Implementation of the Project would have no effect on emergency evacuation plans for the surrounding area. The surrounding area is primarily rural and USFS land and is not critical to local emergency response evacuations (e.g., for Auberry and North Fork). In addition, the current Italian Bar Bridge will remain open during the construction of the Project, so emergency responders will be able to use the bridge during construction. Operation of the new Italian Bar Bridge would not affect emergency access to or through the Project area, and the new two-lane bridge with improved load capabilities could benefit emergency access through the area. ***No impact*** would occur.

H. Would the Project expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Finding: Less Than Significant Impact

The risk of wildland fires in the vicinity of the proposed Project is moderate because of the presence of vast open land. The new Italian Bar Bridge does not change land use designation or introduce people or vehicle in to new areas of significant wildland fire risk. However, there are risks associated with some construction activities (e.g., the use of internal combustion engines or sparking equipment in grass-covered areas at the proposed Project site or staging areas). To reduce wildland fire risk during construction, the contractor will be required to adhere to USFS and California Department of Forestry and Fire Protection (CAL FIRE) regulations and local ordinances. These requirements may include, but are not limited to, the following measures:

- Fire-suppression materials and equipment shall be kept adjacent to all areas of work and in staging areas, and shall be clearly marked.
- All construction and maintenance vehicles entering the project site, including welding trucks or rigs, hall be equipped with minimal fire suppression equipment (e.g., ax, bucket, 5-pound fire extinguisher, shovels, etc.);
- All equipment, gasoline-powered hand tools, and construction and maintenance vehicles shall be equipped with spark arresters.

Implementation of the proposed Project would not expose people or structures to increased risk of wildland fire, so this impact is less than significant.

3.9 Hydrology and Water Quality

	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
9. Hydrology and Water Quality				
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☒	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐

	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of a site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
e) 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?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☒	☐	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☒	☐
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

3.9.1 Environmental Setting

The proposed Project is located in the Upper San Joaquin River Watershed (HUC 1804000610), which drains a 1,600-square mile area between the Sierra Nevada crest to the east and the Central Valley foothills to the west (Figure 3-4). The San Joaquin River headwaters are in the John Muir Wilderness at elevations greater than 14,000 feet msl, and the river flows in a general southwesterly direction through the Sierra Nevada and foothills to the Central Valley region. Precipitation occurs mostly during the late fall, winter and early spring and is mostly in the form of snow above elevation 5,000 feet msl. Average yearly precipitation varies greatly with elevation with about 50 inches at 5,000 feet msl. Stream flow normally peaks during the late spring and/or early summer from snowmelt runoff.

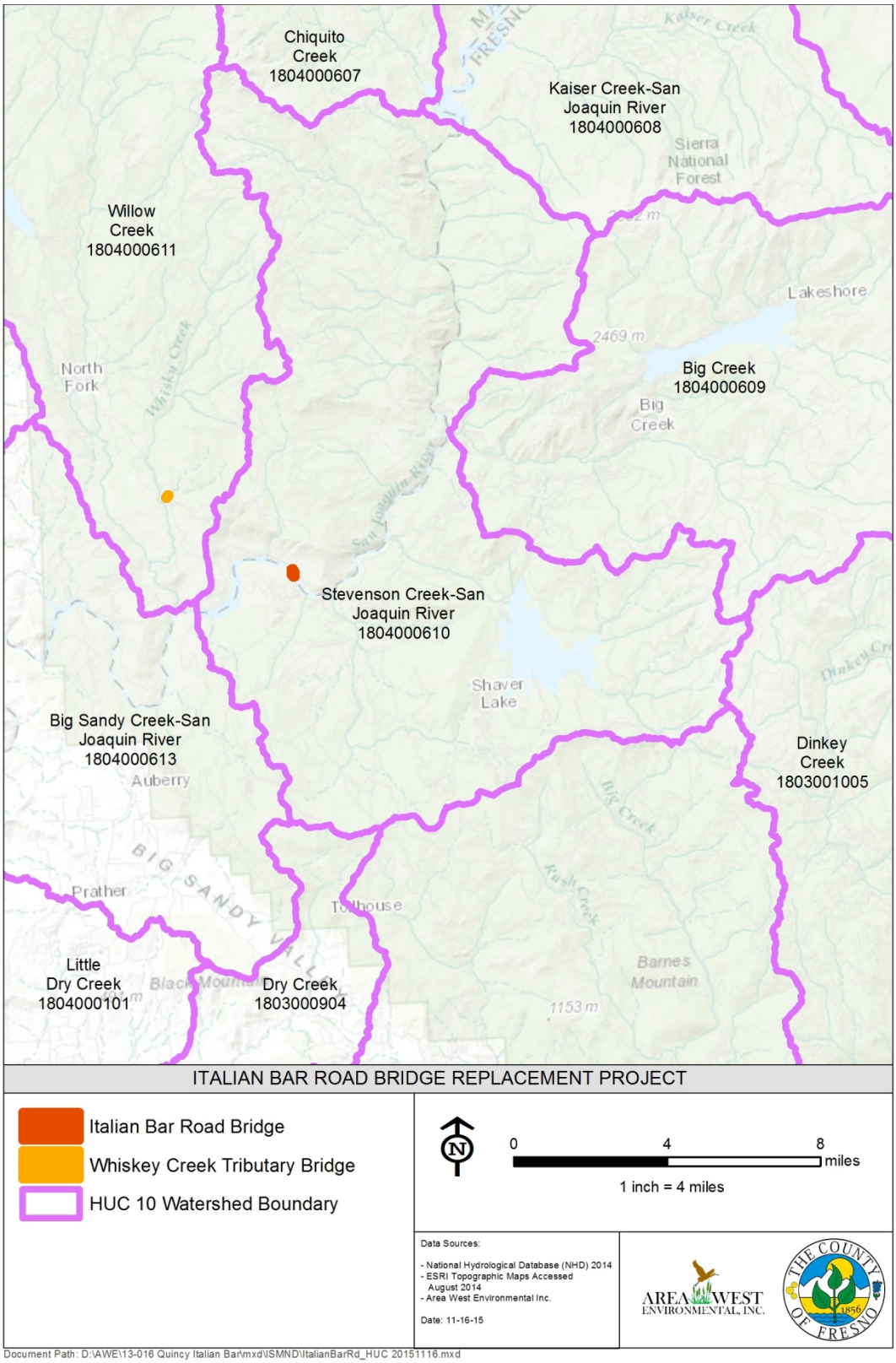

Figure 3-4. Watershed Boundary

Low flows within this watershed typically occur in late summer or early fall, after the snowmelt and before the runoff from the fall storms moving in from the Pacific Ocean. (Federal Energy Regulatory Commission [FERC] 2009)

Redinger Lake collects water from a drainage area of approximately 1,292 square miles and has a normal water surface area of 465 acres and a maximum capacity of 35,000 acre-feet (Central Valley Regional Water Quality Control Board 2011). Downstream of Redinger Lake, the San Joaquin River flows to Kerckhoff Reservoir with 4,140 acre-feet of storage operated by the Pacific Gas and Electric Company. Millerton Lake, operated by the U.S. Bureau of Reclamation, has more than 500,000 acre-feet of storage and is located downstream of Kerckhoff Reservoir (FERC 2009). The nearest navigable waterway is the San Joaquin River 7 miles southwest of Highway 99 (Figure 3-5).

The Italian Bar Bridge crosses Redinger Lake (San Joaquin River) approximately 3.5 miles upstream of the Big Creek No. 7 Dam. The Whiskey Creek Tributary Bridge crosses Indian Creek approximately ¼ mile upstream from its confluence with Whiskey Creek, which flows into Willow Creek. Willow Creek drains into the San Joaquin River downstream of Redinger Lake just below the Big Creek No. 7 Dam.

A Water Quality Technical Memorandum and a Location Hydraulic Study and Floodplain Evaluation Report was completed for the proposed Project (AWE 2015c, WRECO 2015). Results of those analyses are summarized in this section.

3.9.2 Analysis

A. Would the Project violate any water quality standards or waste discharge requirements?

Finding: Less Than Significant Impact with Mitigation Incorporated

Implementation of the Project would not permanently alter the configuration of Redinger Lake or Indian Creek or substantially modify sources of water pollutants. Grazing, recreation, and vehicles traveling on Italian Bar Road would remain the primary sources of water pollutants at the Project area. The Project is not expected to significantly alter the number of vehicles traveling on Italian Bar Road or other nearby land uses in the watershed. Therefore, there would not be an increase in the load of pollutants.

Construction activities for the Project would result in temporary disturbance within and adjacent to Redinger Lake (San Joaquin River) and Indian Creek (tributary to Whiskey Creek). During the Italian Bar Bridge construction, direct effects on Redinger Lake would include excavation and fill to construct the new bridge abutments and pier, temporary fill to create Staging Area 3, and potential debris and dust during demolition of the existing bridge. Use of Staging Areas 4 and 6 would also result in temporary disturbance of a small segment of two ephemeral drainages (Figure 3-2). At the Whiskey Creek Tributary Bridge, temporary impacts to Indian Creek could occur during placement and removal of the temporary supports, but because that work is planned when the stream is dry, short-term effects on water quality in Indian Creek would be minimal.

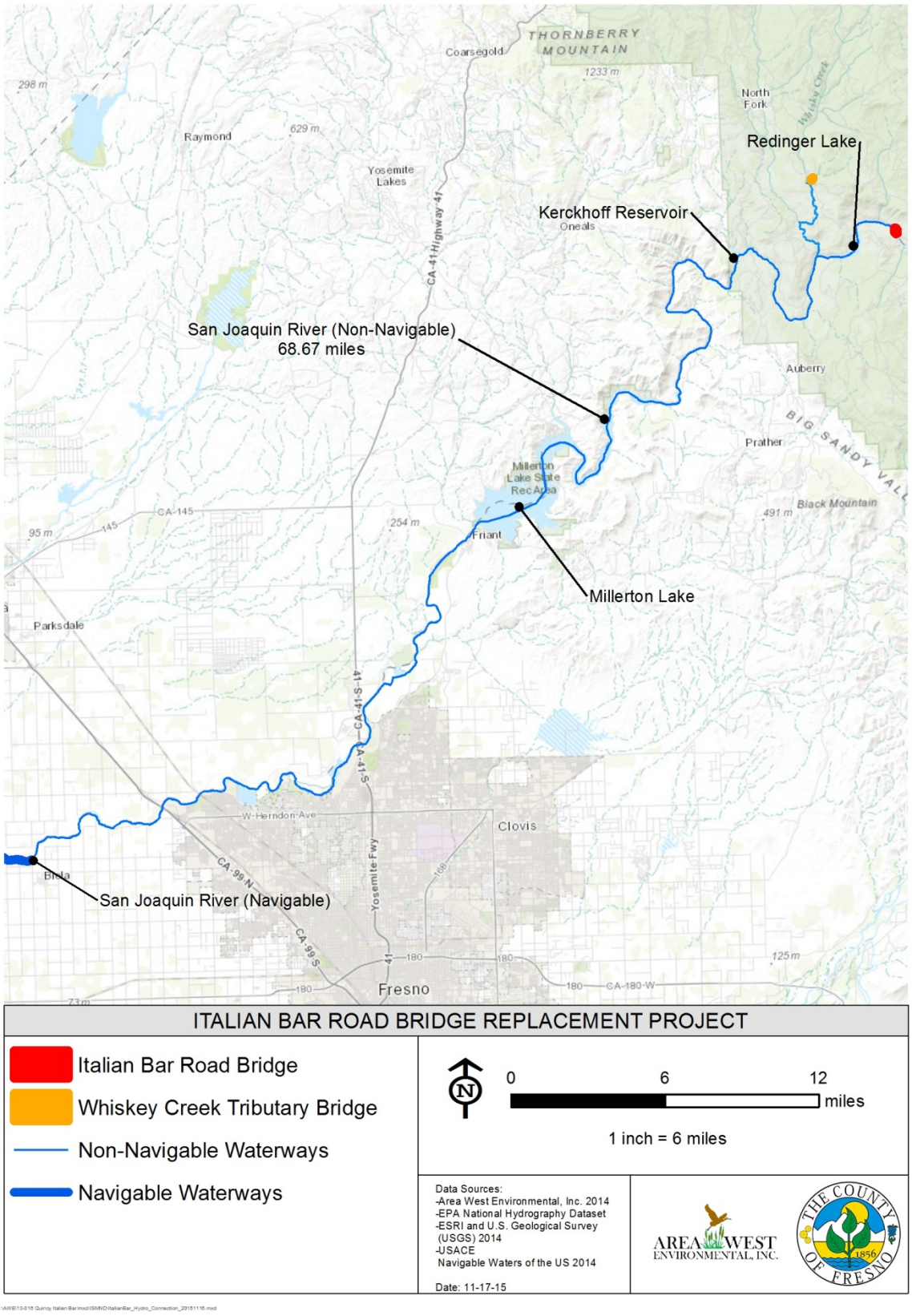

Figure 3-5. Water Connection from the Project to the Nearest Traditional Navigable Waterway

Earthmoving, excavation, placement of rock and fill, pile drilling, and blasting needed to construct the new Italian Bar Bridge and the new approach roads could result in a temporary increase in sediment loads, turbidity, and siltation in Redinger Lake. Lakebed disturbance during construction of the bridge pier and abutments could result in temporary increase in turbidity. Bridge demolition could potentially cause debris and dust to fall into the lake, degrading water quality. The bridge demolition would be phased in segments and BMPs utilized to minimize debris and dust from entering the water body.

The use of construction equipment and other vehicles could result in accidental spills of oil, grease, gasoline, brake fluid, antifreeze, or other vehicle-related pollutants. Improper handling, storage, or disposal of fuels, materials, and waste or improper cleaning of machinery could cause surface water and groundwater quality degradation.

Implementation of Mitigation Measure BIO-5 would ensure that the proposed Project does not violate any water quality standards or waste discharge requirements. Therefore, the proposed Project would have a ***less than significant impact with mitigation.***

Mitigation Measure BIO-4: Return Temporarily Disturbed Areas to Pre-Project Conditions

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

B. Would the Project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Finding: Less Than Significant Impact

The proposed Project would have no long-term impact on groundwater resources. Based on information obtained from the California Department of Water Resources website, there is no groundwater data within the Project work limits. However, the anticipated groundwater could possibly be encountered at the approximate level of the surface water in Redinger Lake (San Joaquin River). General groundwater depth may be influenced by local pumping and rainfall. If groundwater is encountered during construction/excavation activities and dewatering become necessary, regulatory compliance and permitting consistent with the RWQCB and NPDES requirements should be adhered to, and groundwater sampling should be conducted. Therefore, the proposed Project would have a ***less than significant impact.***

C. Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site; or

D. Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; or

E. Would the Project 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?

Finding: Less Than Significant Impact

Construction of the new Italian Bar Bridge would slightly increase the amount of impervious surface in the Project area. The new bridge and approach roads will be wider than the existing bridge. Once the new bridge is constructed, the old bridge will be demolished and segments of the old approach roads will be removed and restored to a natural vegetated condition, eliminating some impervious surface area. The net change in impervious surface area would be minor. By building a wider but shorter bridge, there would be additional impervious area; however, the total impervious area would be minimal compared to the watershed area of San Joaquin River, and would therefore have insignificant impacts on watershed runoff and the floodplain (WRECO 2015). In addition, because minimal additional roadway will be constructed, it is anticipated that the existing drainage system will be used and no change to current drainage patterns or volumes would occur.

The Project will not adversely affect floodplain conditions along Redinger Lake. By reducing the number of spans and the overall length of the Italian Bar Bridge structure, the proposed Project would improve flow conditions over the existing condition. Replacing the existing 5-span bridge with the proposed 2-span bridge would remove between 200 to 250 square feet of bridge piers within jurisdictional waters of Redinger Lake. Placement of the new bridge will add approximately 20 square feet of bridge column (Bent 2) within jurisdictional waters, resulting in a net gain of approximately 200 square feet of jurisdictional waters of the U.S. and state from Project activities. Hydraulic modeling conducted for the Location Hydraulic Study completed for the Project (WRECO 2015) compared water surface elevation upstream of the bridge, soffit elevation, and available freeboard for the existing bridge and Proposed bridge during a design discharge (Table 3-4). Based on the modeling results, the proposed Project would decrease water surface elevation upstream of the Italian Bar Bridge and increase available freeboard compared to existing conditions, thereby improving flow conditions.

Table 3-4. Water Surface Elevations and Available Freeboard at Existing and Proposed Italian Bar Bridges

Bridge	Soffit Elevation (ft)	Water Surface Elevation (ft)	Available Freeboard (ft)
Existing	1,410.4	1,409.0	1.4
Proposed Project	1,411.5	1,404.1	7.4

Source: WRECO 2015

The modifications at the Whiskey Creek Tributary Bridge would not involve adverse permanent modifications to Indian Creek. The main temporary support would be installed near the midspan of the bridge but would be removed at the end of construction on Italian Bar Road Bridge over San Joaquin River/Redinger Lake. Bracing along the west side of both the north and south abutments may be left in place. However, the bracing would be founded on the existing abutment footing and would have a negligible effect on the stream's capacity. Additionally, removal of the concrete block that is currently in the waterway would result in a permanent beneficial change to the creek, restoring flow capacity in the channel.

F. Would the Project otherwise substantially degrade water quality?

Finding: Less Than Significant Impact with Mitigation Incorporated

As noted in question A above, potential water quality effects from Project-related construction activities can be minimized and reduced through implementation of BMPs and compliance with existing regulatory requirements. Based on this analysis and the implementation of mitigation measures specified below, the proposed Project would have a ***less than significant impact with mitigation incorporated*** on water quality within the Project vicinity.

Mitigation Measure BIO-4: Return Temporarily Disturbed Areas to Pre-Project Conditions

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

G. Would the Project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map; or

H. Would the Project place within a 100-year flood hazard area structures which would impede or redirect flood flows; or

I. Would the Project expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?

Finding: No Impact

Water levels within the Project are controlled by dams located up and downstream of the Project. The Project crosses Redinger Lake approximately 3.5 miles upstream of the Big Creek No. 7 Dam on the South Fork of the San Joaquin River and downstream of Big Creek No. 3 Powerhouse. Therefore, hydraulic control structures exist both upstream and downstream of the Project and water flow and surface elevation are primarily related to the design and operation of SCE's Big Creek Hydroelectric System.

The proposed Project is within the boundary of the 100-year floodplain for Redinger Lake. 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. As noted in Questions C, D, and E, the Project will not adversely affect floodplain conditions along Redinger Lake. By reducing the number of spans and the overall length of the bridge structure, the proposed Project would improve flow conditions over the existing condition. Also, the Project does not include the construction of housing in the floodplain. Therefore there will be ***less than significant impacts*** pertaining to flood hazards for the proposed Project.

J. Would the Project be at risk of inundation by seiche, tsunami, or mudflow?

Finding: No Impact

It is unlikely that people, structures, or land in the proposed Project vicinity would be exposed to a seiche, tsunami, or mudflow. The Project site lies approximately 140 miles from the California coastline. As such, the Project would not be subject to a tsunami. The Project work limits do not overlie any known faults and is not within or near an Alquist-Priolo special-studies zone; therefore it is unlikely that a seiche on Redinger Lake within the proposed Project would occur (California Geological Survey 2007). The proposed project would have ***no impact***.

3.10 Land Use and Planning

	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
10. Land Use and Planning				
Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

3.10.1 Environmental Setting

The proposed Project is located in Fresno and Madera Counties, and on Sierra National Forest land managed by the USFS. The principal land use guidance documents applicable to the proposed Project include the Fresno County General Plan (Fresno County 2000), Madera County General Plan (Madera County 1995), and the USFS Sierra National Forest Land and Resource Management Plan (USFS 1991, as amended 2004). The land use designations within and adjacent to the Project are Public Lands and Open Space (Fresno County 2000) and Open Space and Public Open Space (Madera County 1995). Land uses near the Whiskey Creek Tributary Bridge include Residential Rural and Agricultural (Madera County 1995). As noted in the Agricultural and Forestry Resources section of this IS/MND, the USFS Forest Planning and Monitoring Datasets (USFS 2015b) designates the Project area for commercial thinning and defense zone fuel management. The goals of these forest designations are to reduce fire hazard and improve forest structure for habitat; wood production is a byproduct of these prescriptions. USFS manages Redinger Lake and surrounding areas for recreation use.

Existing land uses in the Project vicinity consist of recreation, power generation, open space, residential, and agricultural uses. Recreational uses at Redinger Lake include camping, picnicking, boating, waterskiing, fishing, and hiking. Lands within the Sierra National Forest in the Project vicinity are managed primarily for recreation and open space uses. Nearby private lands support rural residential homes and grazing lands. SCE manages nearby property to support their hydroelectric facilities.

3.10.2 Analysis

A. Would the Project physically divide an established community?

Findings: No Impact

The proposed Project would not physically divide an established community. The proposed Project involves replacement of the existing Italian Bar Bridge in a rural area and would not introduce a new linear built element in an established community. Also, the current Italian Bar Bridge at Redinger Lake will remain open during the construction of the Project, and no detours will need to be taken. Construction at the Whiskey Creek Tributary Bridge would result in temporary lane closures, but access to over the bridge will be maintained throughout the construction process. Therefore, there will be ***no impact***.

B. Would the Project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Finding: No Impact

The proposed Project does not conflict with policies or goals from the County of Fresno General Plan, County of Madera General Plan, or the USFS Sierra Forest Plan (Fresno County 2000, Madera County 1995, USFS 1991). The Project will obtain a special-use permit to modify the road and bridge alignment on USFS land. An assessment of the Project's consistency with USFS and County goals and policies is provided in Table 3-5.

Table 3-5. Consistency with Fresno County, Madera County, and USFS Goals and Policies

Plan, Goal, or Policy Name	General Plan Policy	Project Consistency
Fresno County General Plan		
GOAL LU-C	To preserve and enhance the value of the river environment as a multiple use, open space resource; maintain the environmental and aesthetic qualities of the area; protect the quality and quantity of the surface and groundwater resources; provide for long-term preservation of productive agricultural land; conserve and enhance natural wildlife habitat; and maintain the flood-carrying capacity of the channel at a level equal to the one (1) percent flood event (100-year flood).	Consistent. The Project includes design features and mitigation measures to preserve the San Joaquin River/Redinger Lake's environmental and aesthetic qualities.
Goal OS-B	To maintain healthy, sustainable forests in Fresno County, conserve forest resources, enhance the quality and diversity of forest ecosystems, reduce conflicts between forestry and other uses, encourage a sustained yield of forest products, protect and conserve lands identified as suitable for commercial timber production within the county, and conserve forest lands that have other resource values including recreation, grazing, watershed, and wildlife habitats.	Consistent. The Project would not affect forest resources and would preserve and enhance long-term recreational value at Italian Bar Bridge.
Goal OS-D	To conserve the function and values of wetland communities and related riparian areas throughout Fresno	Consistent. The Project includes measures to avoid and

Plan, Goal, or Policy Name	General Plan Policy	Project Consistency
	County while allowing compatible uses where appropriate. Protection of these resource functions will positively affect aesthetics, water quality, floodplain management, ecological function, and recreation/tourism.	minimize impacts on wetland and riparian resources.
Goal OS-H	To designate land for and promote the development and expansion of public and private recreational facilities to serve the needs of residents and visitors.	Consistent. The Project would preserve and enhance long-term recreational values at Italian Bar Bridge
Goal OS-L	To conserve, protect, and maintain the scenic quality of land and landscape adjacent to scenic roads in Fresno County	Consistent. The Project includes design features to protect visual character at Italian Bar Bridge.
Policy TR-A.16	The County shall require that plans for County road improvement projects consider the preservation of unique existing landscaping to the extent that it will be consistent with user safety.	Consistent. The Project would minimize impacts on vegetation and restore the area to pre-project conditions.
Madera County General Plan		
Goal 2A **Roadway Design Policies (2.A.6)**	The County shall require that plans for road improvements give maximum consideration to the preservation of existing landscaping to the extent that it will be consistent with road system safety.	Consistent. The Project would minimize impacts on vegetation and restore the area to pre-project conditions.
Goal 5.B	To conserve Madera County's forest resources, enhance the quality and diversity of forest ecosystems, reduce conflicts between forestry and other uses, and encourage a sustained yield of forest products	Consistent. The Project would not affect forest resources.
Goal 1I **Scenic Routes (1.I.3)**	The County shall protect and enhance scenic corridors through such means as design review, sign control, undergrounding utilities, scenic setbacks, density limitations, planned unit developments, grading and tree removal standards, open space easements, and land conservation contracts	Consistent. The Project includes design features to protect visual character at Italian Bar Bridge.
Policy 5 H.1	The County shall support the preservation and enhancement of natural land forms, natural vegetation, and natural resources as open space. To the extent feasible, the County shall permanently protect as open space areas of natural resource value, including wetlands preserves, riparian corridors, woodlands, and floodplains.	Consistent. The Project includes measures to avoid and minimize impacts on wetland and riparian resources.
Sierra Forest Management Plan		
4.320 **Transportation and Facilities**	The present arterial system is adequate in terms of current location. However, some upgrading of road standards, such as paving or safety Improvements, are requrred.	Consistent. The purpose of the Project is to improve public safety on Italian Bar Bridge.
Forestwide Goal and Objective #1	Provide a broad spectrum of dispersed and developed recreational opportunities in accord with identified needs and demands and meet ROS class objectives shown on ROS element maps.	Consistent. The Project would preserve and enhance long-term recreational values at Italian Bar Bridge and Redinger Lake
Forestwide Goal and Objective	Manage Wilderness to meet recreational, scenic, educational, conservational and historic uses, as well as	Consistent. The Project includes features and mitigation

Plan, Goal, or Policy Name	General Plan Policy	Project Consistency
#2	preserving wilderness character.	measures to preserve the San Joaquin River/Redinger Lake's recreational, aesthetic, and historical resources.
Forestwide Goal and Objective #25	Manage existing transportation facilities to facilitate resource management, protect wildlife, meet water quality objectives and provide recreational access.	Consistent. The Project includes measures to protect wildlife and water quality, and the new Italian bar Bridge will provide continued and improved recreational access.

Based on this assessment, the Project is consistent with applicable land use plans and policies. Therefore, there will be ***no impact***.

C. Would the Project conflict with any applicable habitat conservation plan or natural community conservation plan or natural community conservation plan?

Findings: No Impact

The Project vicinity is not located within the boundaries of an applicable habitat conservation plan. Therefore, ***no impact*** would occur.

3.11 Mineral Resources

	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
11. Mineral Resources				
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of future 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?	☐	☐	☐	☒

3.11.1 Environmental Setting

Italian Bar Bridge and the Whiskey Creek Tributary Bridge are not located within or near an oil or gas producing region, and there are no mapped geothermal resources within or near the Project area (DOC Division of Oil, Gas, and Geothermal Resources 2000). According to the Surface Mining and Reclamation Act Land Classification Project, aggregate materials are known to occur throughout Fresno and Madera Counties (DOC Division of Mines and Geology 2013).

3.11.2 Analysis

A. Would the Project 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; or

B. Would the Project 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?

Finding: No Impact

There are no known mineral resources in the Project area. The Project does not involve any mining activities, and replacement of the Italian Bar Road Bridge and temporary improvements to Whiskey Creek Tributary Bridge would not preclude or otherwise influence the availability of mineral resources. Therefore, there would be ***no impacts*** related to mineral resources.

3.12 Noise

		Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
12. Noise					
Would the project:					
a)	Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b)	Exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c)	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
d)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing in or working in the project area to excessive noise levels?	☐	☐	☐	☒
f)	For a project within the vicinity of a private airstrip, would the project expose people residing in or working in the project area to excessive noise levels?	☐	☐	☐	☒

3.12.1 Environmental Setting

Noise-sensitive land uses located in the vicinity of the Italian Bar Bridge consist largely of rural residential dwellings, the nearest of which are located approximately 1.5 miles northwest of the Italian Bar Bridge along Italian Bar Road in Madera County. In addition, the USFS's Redinger Campground is located near the Redinger Lake Dam, approximately 3.5 miles west of the Italian

Bar Bridge. At the Whiskey Creek Tributary Bridge, sensitive residential dwellings are located within 100 feet of the Whiskey Creek Tributary Bridge (Figure 2-8).

To document existing ambient noise levels at the Italian Bar Bridge, short-term noise measurements were conducted on April 25th, 2014. Measured noise levels are summarized in Table 3-6. Based on the measurements conducted, average-hourly noise levels (in Leq[2]) in the general vicinity of the Italian Bar Bridge are relatively low, ranging from the mid to upper 30's. Noise levels were influenced primarily by birds and occasional vehicle traffic.

Table 3-6. Summary of Short-term Noise Measurement Surveys

Location	Monitoring Period	Noise Levels (dBA)	
		L_{eq}	L_{max}
Approximately 20 feet from centerline of Italian Bar Road, approximately 285 feet west of Italian Bar Bridge over Redinger Lake.	12:02-12:22 14:08-14:18	36.3 38.2	48.7 51.4
Approximately 50 feet from centerline of Italian Bar Road, approximately 130 feet west of Upper Redinger Road.	13:15-13:25	38.8	50.2
dBA = A-weighted decibels Ambient noise measurements were conducted using a Larson Davis Laboratories, Type I, Model 820 integrating sound-level meter on April 25, 2014. Source: Ambient Air Quality and Noise Consulting 2015b			

3.12.2 Analysis

A. Would the Project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Finding: Less Than Significant Impact with Mitigation Incorporated

Implementation of the proposed Project would not result in a significant long-term noise impact to nearby noise-sensitive land uses. However, short-term construction related noise levels could potentially adversely affect nearby noise-sensitive land uses. The closest sensitive land use to Italian Bar Bridge is over 1.5 mile from the Project site in mountainous terrain. At the Whiskey Creek Tributary Bridge, residences are very close (within 100 feet) of the small bridge. For these residential land uses, activities occurring during the more noise-sensitive nighttime hours would be of particular concern given the potential for increased levels of sleep disruption to occupants of nearby residential dwellings. See also analysis results in Question D below. With the implementation of the mitigation measure listed below, noise impacts on sensitive receptors near

[2] The energy-equivalent noise level, Leq, is a measure of the average energy content (intensity) of noise over any given period.

the Italian Bar Bridge and the Whiskey Creek Tributary Bridge are considered ***less than significant with mitigation incorporated.***

Mitigation Measure NOI-1: Implement Noise-Reduction Recommendations

The following measures shall be implemented to reduce construction-generated noise levels:

a) To the extent possible, noise-generating construction activities should be limited to between the hours of 6:00 a.m. and 9:00 p.m., Monday through Friday, and between 7:00 a.m. and 5:00 p.m. on Saturday and Sunday. These working hour restrictions will apply to all activities at the Whiskey Creek Tributary Bridge.
b) Prior to construction, Redinger Lake Campground and residential dwellings located within 1,000 feet of construction areas shall be notified of anticipated construction activities. The notice shall include a description of anticipated construction activities, construction schedules, and hours during which the activities are anticipated to occur. The name and contact information of a designated construction liaison(s) responsible for addressing potential noise-related concerns shall be included in the notice. In the event that a noise complaint is received, the designated construction liaison(s) shall be responsible for ensuring that appropriate and available noise-control measures are implemented to minimize construction activity noise levels of concern. Such measures may include, but are not limited to, adjusted activity schedules, or the use of quieter construction equipment, equipment enclosures, or shielding.
c) Construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturers' recommendations. Equipment engine shrouds shall be closed during equipment operation.

B. Would the Project result in exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?

Finding: Less Than Significant Impact

The proposed Project would involve various activities, including excavation, blasting, pile driving, paving, and demolition. Ground-borne vibration levels would be primarily associated with blasting, pile driving, and off-road equipment operations. Vibration levels associated with these activities and potential impacts are discussed below.

Blasting

Blasting events would be categorized as a transient vibration event. For transient sources, a threshold of 0.5 inch per second peak particle velocity (ppv) would represent the level at which structural damage could potentially occur to older or more fragile structures. However, it is important to note that a structural-damage threshold of 2.0 inches per second ppv is often applied specific to blasting activities. This threshold is based on extensive monitoring under varying conditions and reflects the level which most structures would be considered "safe" from any vibration-induced damage (Caltrans 2002). However, human response to vibrations can be considered disturbing at levels that are well below the structural safety levels. With regard to human perception, vibration levels would begin to become distinctly perceptible at levels of 0.25 inch per second ppv.

Based on measurement data obtained at various blast sites, the distance at which vibration-induced damage to most structures, excluding fragile or historic structures, could occur would not extend beyond approximately 115 feet from the blast location. A conservative distance of 328 feet would be sufficient to protect against damage for all structures. Based on these same measurements, perceptible increases in ground vibration from blasting have been noted at distances up to approximately 900 feet with a majority of the complaints received occurring at distances of up to 500 feet from the blast location (Caltrans 2001).

Pile Driving

Pile driving is considered a continuous/frequent intermittent source of vibration. The potential for impacts related to ground-borne vibration are typically limited to locations in relatively close proximity to the activity. For instance, based on measurement data obtained from various locations, pile driving levels often exceed 0.2 inch per second ppv at distances of 50 feet and 0.5 inch per second ppv at 25 feet. A threshold level of 0.3 inch per second ppv is typical for the prevention of structural damage for most older structures, excluding fragile and historic structures. For newer structures the acceptable threshold increases to 0.5 inch per second ppv (Caltrans 2002, 2004).

For typical pile driving activities conducted in hard soil and rock conditions, groundborne vibration levels would be approximately 0.04 inch per second ppv at roughly 400 feet. A threshold of 0.04 inch per second ppv is commonly considered the level at which ground-borne vibration levels associated with pile driving would become distinctly perceptible.

Off-road Equipment

Construction activities would also require the use of various off-road equipment, such as tractors, concrete mixers, and haul trucks. Groundborne vibration levels associated with representative construction equipment are summarized in Table 3-7. Based on the vibration levels presented in Table 3.12-1, ground vibration generated by construction equipment would be approximately 0.2 inch per second ppv, or less, at 25 feet. The highest levels would decrease to approximately 0.04 inch per second ppv at 125 feet.

Table 3-7. Representative Vibration Source Levels for Construction Equipment

Equipment	Peak Particle Velocity at 25 Feet (inch per second)
Vibratory Roller	0.210
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Trucks	0.076
Jackhammer	0.035
Small Bulldozers	0.003
Source: Federal Transit Administration 2006, Caltrans 2004	

Impact Summary

Sensitive land uses located in the Project vicinity consist largely of rural residential dwellings, the nearest of which are located approximately 1.5 miles northwest of the Italian Bar Bridge and within 100 feet of the Whiskey Creek Tributary Bridge. In addition, the USFS's Redinger Campground is located near the Redinger Lake Dam, approximately 3.5 miles west of the Italian Bar Bridge. No structures have been identified within the Italian Bar Bridge vicinity that could be adversely affected by ground-borne vibration levels. As a result, construction-generated ground-borne vibration levels would not exceed the recommended criteria for structural damage or human annoyance at these nearest structures. Additionally, although structures are within 100 feet of the Whiskey Creek Tributary Bridge, the nature of the work at that site is not anticipated to result in vibrational impacts to surrounding homes. There is no pile driving or blasting associated with the temporary strengthening of the Whiskey Creek Tributary Bridge. Therefore, this impact would be considered ***less than significant.***

C. Would the Project result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?

Finding: No Impact

The proposed Project is a bridge replacement project. The proposed Project would not result in a redistribution of vehicle traffic on area roadways, nor would the Project result in changes in roadway capacity or vehicle speed limits along area roadways. As a result, there would be ***no impacts*** to long-term changes in ambient noise levels.

D. Would the Project result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?

Finding: Less Than Significant with Mitigation Incorporated

The proposed Project would involve various noise-generating activities during construction, including excavation, blasting, pile driving, paving, and demolition. Noise levels typically generated by construction activities and equipment are summarized in Table 3-8.

As depicted in Table 3-8, instantaneous noise levels generated during construction would range from approximately 73 dBA to 101 dBA at 50 feet (Federal Transit Administration 2006). The highest noise levels anticipated to occur would be associated with blasting and pile driving activities, which would generate noise levels of approximately 94 to 101 dBA L_{max} at 50 feet. Based on the maximum instantaneous noise levels identified above and typical usage rates, average-hourly noise levels for blasting and pile driving activities would range from approximately 74 to 94 dBA energy-equivalent sound level (L_{eq}) at 50 feet. Predicted average-hourly noise levels for other construction activities, such as excavation, paving, and demolition activities, would be approximately 78 dBA L_{eq}, or less, at 50 feet. Short-term increases in vehicle traffic, including worker commute trips and haul truck trips may also result in temporary increases in ambient noise levels.

Table 3-8. Typical Construction Activity and Equipment Noise Levels

Equipment	Typical Noise Level (A-weighted decibels [dBA] Maximum Sound Level [L_{max}]) 50 feet from Source
Air Compressor	81
Backhoe	80
Blasting	94
Compactor	82
Concrete Mixer	85
Concrete Vibrator	76
Crane, Mobile	83
Dozer	85
Generator	81
Grader	85
Impact Wrench	85
Jack Hammer	88
Loader	85
Truck	88
Paver	89
Pile Driver	101
Pneumatic Tool	85
Rock Drill	85
Roller	74
Welder/Torch	73
Saw	76

Sources: Federal Transit Administration 2006

Noise-sensitive land uses located in the project vicinity consist largely of rural residential dwellings, the nearest of which are located approximately 1.5 miles northwest of the Italian Bar Bridge and within 100 feet of the Whiskey Creek Tributary Bridge.. In addition, the USFS's Redinger Campground is located near the Redinger Lake Dam, approximately 3.5 miles west of the Italian Bar Bridge. Based on the construction noise levels discussed above, predicted noise

levels at the nearest residential dwellings to the Italian Bar Bridge would be approximately 36 dBA L_{eq} or less. Predicted noise levels at the Redinger Campground would be approximately 30 dBA, or less. Additionally, although structures are within 100 feet of the Whiskey Creek Tributary Bridge, the duration and nature of the work at that site is not anticipated to result in significant increases in ambient noise levels at surrounding homes.

During the daytime hours, construction activities would not be anticipated to result in significant increases in ambient noise levels at nearby noise-sensitive land uses. However, for occupants of nearby residences, as well as nearby campground patrons, noise-generating construction activities occurring during the more noise-sensitive nighttime hours would be of particular concern given the potential for increased levels of sleep disruption and annoyance. Increases in daytime noise levels may also be detectable to nearby recreation users (e.g., hikers, motorboat users on the lake, etc.). However, because these users are typically transient and access near the construction area may be restricted during some construction activities (see Recreation section), exposure to construction noise would be short-term and intermittent and limited to the daytime hours.

As noted earlier in this report, pile driving and blasting would likely occur on weekdays over an approximate two-week period between the hours of 9:00 a.m. and 4:00 p.m. However, the proposed Project does not identify hourly restrictions for other construction activities.

Implementation of Mitigation Measure NOI-1 would limit most construction activities to the less noise-sensitive periods of the day, consistent with requirements typically imposed for noise-generating construction activities by the County. In addition, the use of mufflers would reduce individual equipment noise levels by approximately 10 dBA. With implementation of Mitigation Measure NOI-1 (described above), this impact would be considered ***less than significant with mitigation incorporated***.

Mitigation Measure NOI-1: Implement Noise-Reduction Recommendations

E. Would the Project be 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; and if so would the project expose people residing or working in the Project area to excessive noise levels; or

F. Would the Project be located within the vicinity of a private airstrip, would the Project expose people residing or working in the Project area to excessive noise levels?

Finding: No Impact

No private or public airports are located within two miles of the Project work limits. As a result, the proposed Project would not subject construction workers to high levels of aircraft noise. In addition, implementation of the proposed Project would not result in the construction or relocation of any noise-sensitive land uses, nor would Project implementation interfere with airport operations. ***No impac***t would occur.

3.13 Population and Housing

	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
13. Population and Housing				
Would the project:				
a) Induce substantial population growth in an area either directly (*e.g.*, by proposing new homes and businesses) or indirectly (*e.g.*, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

3.13.1 Environmental Setting

As noted in the Land Use and Planning section, the Project area does not support housing or a large number of people or structures. Scattered rural residences are located in Madera County approximately 1.5 miles northwest of the Italian Bar Bridge. At the Whiskey Creek Tributary Bridge, residences are adjacent to the bridge, but activities at this site will be temporary and short-term.

3.13.2 Analysis

A. Would the Project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (For example, through extension of roads or other infrastructure)?

Finding: No Impact

The Project does not include the construction of new homes or businesses. While implementation of the Project would result in the need of workers for construction, these employees would only be hired for the duration of the construction phase of the Project, and are expected to be current Madera or Fresno county residents. Replacing the existing single-lane Italian Bar Bridge with a two-lane bridge will improve capacity at the site but would not induce more traffic in the area. Therefore, the Project would not induce substantial population growth, either directly or indirectly. ***No impact*** would occur.

B. Would the Project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; or

C. Would the Project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

Finding: No Impact

While a residential community is located at the Tributary to Whiskey Creek, and a few rural residential houses are located along Italian Bar Road, the Project would not displace any people or housing. ***No impact*** would occur.

3.14 Public Services

	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
14. Public Services				
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service rations, response times or other performance objectives for any of the public services:				
a) Fire protection?	☐	☐	☒	☐
b) Police protection?	☐	☐	☒	☐
c) Schools?	☐	☐	☐	☒
d) Parks?	☐	☐	☐	☒
e) Other public facilities?	☐	☐	☐	☒

3.14.1 Environmental Setting

The Project area does not support public service facilities. Italian Bar Road may be used by emergency service providers (e.g., USFS, CAL FIRE, local volunteer fire services, ambulance). Italian Bar Road is designated as an emergency supply, evacuation route, and an emergency vehicle access route; it is neither a school bus route nor a mail route (Quincy Engineering 2015).

3.14.2 Analysis

A. Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or

other performance objectives for any of the public services: fire protection, police protection, schools, parks or other public facilities?

Finding: Less Than Significant Impact

No component of the Project will require construction of new or altered government facilities. The Project would not induce population growth, so would not increase demand on existing public services (i.e., fire, police, schools, parks). The Project will not adversely affect the ability of CAL FIRE, the local volunteer fire department, USFS rangers and fire personnel, and county sheriffs to maintain current levels of service.

During construction, the County will implement fire protection measures to reduce the potential for fire during Project construction activities (see also Hazards and Hazardous section, Question H). These measures include keeping fire-suppression materials and equipment on site and storing flammable liquids and gases appropriately. In addition, the construction contractor hired to implement the Project will be required to provide adequate security to ensure that work site safety and security requirements are enforced and to protect materials, tools, and vehicles.

During construction, Italian Bar Road will remain open to vehicular traffic across the existing Italian Bar Bridge. However, traffic delays are anticipated due to the presence of construction crews and equipment along Italian Bar Road, which is a narrow, rural road with tight turn radii and limited shoulder areas. Temporary road closures will be necessary during some construction stages (e.g., blasting). The contractor will notify the USFS and local public service providers about potential closures at the onset of construction. Therefore, the Project would not alter current levels of acceptable service ratios or significantly affect response times, resulting in a ***less than significant impact***.

3.15 Recreation

		Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
15. 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?	☐	☐	☐	☒
a)	Be inconsistent with adopter recreation policies or adversely affect existing or planned recreational facilities and uses?	☐	☒	☐	☐

	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact

3.15.1 Environmental Setting

Redinger Lake is popular with recreationists for motor boating and waterskiing, limited non-motorized boat use like kayaking and canoeing, fishing, and camping (FERC 2002). SCE conducted a recreation study that included the Redinger Reservoir User Activity Survey. The survey revealed that the informal camping area near the dam receives substantial use, with the majority of use (between 80 percent and 100 percent capacity, or 20 to 25 vehicles) occurring on holiday weekends (FERC 2002). Recreational facilities at the campgrounds include fishing, swimming, boating, and hiking (Madera County 1995). Approximately 60 to 100 boaters use Redinger Reservoir on summer weekend days (Madera County 1995). The USFS campground at Redinger Lake is a no reservation (first-come, first-served) campground accessed via a paved road with one designated camp area only. The campground and boat launch are approximately 3.5 miles downstream of the Italian Bar Bridge.

The San Joaquin River Trail is a 150-mile long trail from Millerton Lake State Recreation Area near Friant Dam to Devils Postpile National Monument and eventually the Pacific Crest Trail (Geotourism MapGuide 2015). The Italian Bar Bridge is proposed as a river crossing for the San Joaquin Trail, linking trail reach 4 and 5 (Figure 3-6).

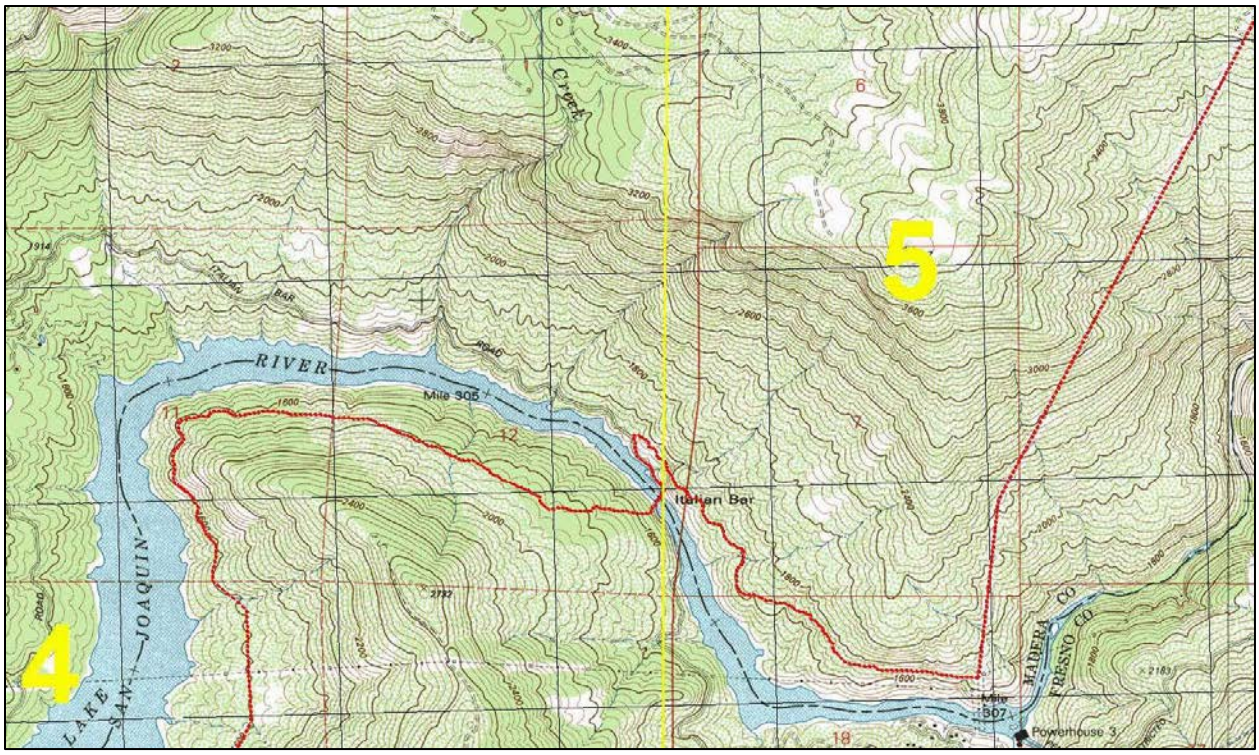

Figure 3-6. San Joaquin River Trail at Italian Bar Bridge

3.15.2 Analysis

A. Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or

B. **Would the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?**

Finding: No Impact

Following completion of the construction process, roadway operations would improve for recreational users; the existing one-lane Italian Bar Bridge would be replaced with a two-lane bridge increasing the efficiency and safety of traffic flow in this area. Implementation of the Project would improve safety conditions for hikers and cyclists using the Italian Bar Bridge. While the vertical profile of the Italian Bar Bridge would not differ greatly from the current bridge profile, it will provide more clearance for boaters (approximately 12 feet of clearance) than the existing Italian Bar Bridge. The new Italian Bar Bridge will also reduce the number of piers in the water, thus providing for more open waterway as compared to the current bridge. Furthermore, replacement of the existing Italian Bar Bridge, which was built in 1951, would not result in the loss of a character-defining feature of the Sierra National Forest, the San Joaquin River, or the surrounding area. Therefore, the Project would not permanently alter the nature of the property's use.

Given the improvements to vehicle, pedestrian, and boater access that would occur following completion of the proposed Italian Bar Bridge, the Project would result in a beneficial impact to recreational users. There would be ***no impact*** that would cause substantial physical deterioration of recreational facilities to occur or be accelerated or would require expansion of new recreational facilities.

C. **Would the Project be inconsistent with adopter recreation policies or adversely affect existing or planned recreational facilities and uses?**

Finding: Less than Significant Impact with Mitigation Incorporated

As noted above, the Project would result in a beneficial impact to recreational users and is consistent with the recreational goals of the USFS, Madera County, and Fresno County. However, during construction, use of Redinger Lake/San Joaquin River by recreationalists (e.g., swimmers, kayak/canoe users, motor boat users and water skiers) will be restricted near the Italian Bar Bridge during certain periods while the bridge is under construction, or other excavation activities (e.g., rock blasting) are underway. Similarly, use of the lake will also be restricted in this area while the current Italian Bar Bridge is demolished, which will be done following completion of the new bridge. A small, informal parking area on the northwest side of the existing Italian Bar Bridge will be used for equipment staging and will be unavailable during project construction. This area is used by trail users and non-motorized boaters.

As discussed in the Transportation section, Italian Bar Road will remain open to vehicular traffic across the existing Italian Bar Bridge. However, traffic delays are anticipated due to the presence of construction crews and equipment along Italian Bar Road. Delays and partial road closures on Italian Bar Road could result in inconveniences for recreationists traveling through the area during the construction period.

These impacts would be temporary and isolated to a single area on Redinger Lake/San Joaquin River. Motorists traveling north or south on Italian Bar Road will still be able to reach destinations in the Sierra National Forest and other regional lands via this road during construction. Similarly, recreationalists will still be able to access upstream and downstream portions of the San Joaquin River or Redinger Lake during the construction process, and normal use of these facilities and features would resume following completion of the Project. Therefore, temporary impacts to recreation users are considered ***less than significant with mitigation incorporated***.

Mitigation Measure REC-1: Notify Recreation Users of Construction Activities and Implement Safety Measures during Construction

Consistent with recommendations from the USFS, the following measures are recommended to help alleviate conflicts with recreationists during and after Project construction.

a) The County (or County's contractor) shall notify USFS and SCE of the construction schedule and any road and boating restrictions.

b) The County (or County's contractor) shall post road and boating restrictions at USFS Ranger offices and at the Redinger Lake campground and boat launch.

c) The County (or County's contractor) shall use warning buoys both up and downstream from the Italian Bar Bridge.

d) No lake and road closures shall occur during holiday weekends in peak recreational use season (Memorial Day, Fourth of July, Labor Day).

e) Informal parking areas used for staging equipment during construction shall be restored to pre-project or improved conditions.

3.16 Transportation/Traffic

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

3.16.1 Environmental Setting

Italian Bar Road is a rural recreational road with an ADT count of 109. Italian Bar Road is designated as an emergency supply, evacuation route, and an emergency vehicle access route; it

is neither a school bus route nor a mail route (Quincy Engineering 2015). Vehicular travelers using Italian Bar Road include commuters, particularly those working at SCE facilities, USFS staff, local residents, and recreational travelers. As noted in the Air Quality section, the proposed Project is included in the FCOG's 2014 Regional Transportation Plan.

3.16.2 Analysis

A. Would the Project conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation systems, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit; or

B. Would the Project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Finding: Less Than Significant Impact

The proposed Project does not conflict with the transportation elements of the County of Fresno General Plan, County of Madera General Plan, and the USFS Forest Land and Resource Management Plan for the Sierra National Forest (Fresno County 2000, Madera County 1995, USFS 1991). Completion of the proposed Project will improve vehicular circulation and pedestrian safety at the Italian Bar Bridge by replacing a one-lane, functionally obsolete bridge with a two-lane bridge with a clear width of 22 feet. The Project would not result in a redistribution of vehicle traffic on area roadways, nor would the project result in changes in roadway capacity or vehicle speed limits along area roadways. No increases in traffic volumes or circulation patterns are anticipated as a result of the Project. Therefore, the Project will have a long-term beneficial impact on circulation.

During construction, Italian Bar Road will remain open to vehicular traffic across the existing bridges. However, traffic delays are anticipated due to the presence of construction crews and equipment along Italian Bar Road. Vehicular traffic from construction workers and equipment will increase local traffic. During some construction stages, temporary road closures will be necessary. These delays and partial closures would adversely affect traffic circulation on Italian Bar Road and associated access routes during the construction period. To help plan for such delays and closures, the County (or County's contractor) will post road and boating restrictions at USFS Ranger offices and at the Redinger Lake campground and boat launch (see Mitigation Measure REC-1). The County will also notify SCE of construction schedule and any temporary road closures. Therefore, the Project will have a ***less-than-significant impact*** on traffic.

C. Would the Project result in a change in air traffic patterns including either an increase in traffic levels or a change in the location that results in substantial safety risks?

Finding: No Impact

The proposed Project would not involve any use of helicopters or airplanes and is not located near any airports or runways. Therefore, the Project would not result in change in air traffic patterns and ***no impact*** would occur.

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

Finding: No Impact

The proposed Project would improve public safety and increase the load carrying capacity on the Italian Bar Bridge. The Project has been designed to reduce existing hazards at this location. ***No impact*** would occur.

E. Would the Project result in inadequate emergency access?

Finding: Less Than Significant Impact

Once completed, the proposed Project would improve public safety and increase the load carrying capacity on the Italian Bar Bridge. Therefore, the Project would have a beneficial impact on existing emergency access. During construction, delays and partial closures could adversely affect traffic circulation on Italian Bar Road. As discussed in the Public Services section, the contractor will notify local public service providers about potential closures at the onset of construction. Impacts on emergency access would be ***less than significant***.

F. Would the Project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Finding: No Impact

The proposed Project would not conflict with adopted plans for pedestrian and bicycle use in the Project area. As discussed in the Recreation section, the Project would improve conditions for trail users and other non-vehicular traffic across Italian Bar Bridge, resulting in a benefit. ***No impact*** would occur.

3.17 Utilities and Service Systems

	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
17. Utilities and Service Systems				
Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental impacts?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant	☐	☐	☐	☒

		Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
	environmental impacts?				
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e)	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?	☐	☐	☐	☒
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g)	Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

3.17.1 Environmental Setting

The proposed Project is located in a rural open space area with few existing utilities and services. The Project area supports overhead electrical and communication transmission lines. One overhead electrical utility pole would be relocated on the south side (see Figure 2-5).

3.17.2 Analysis

A. Would the Project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Finding: No Impact

The proposed Project would not require or support any wastewater treatment services, and would not increase the demand for such facilities. Therefore the Project would have ***no impact*** related to wastewater treatment requirements.

B. Would the Project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Finding: No Impact

The Project would not generate the need for utilities beyond those already existing. There are no existing utilities on the Italian Bar Bridge. The Project will not utilize individual water and sewer systems and would not exceed wastewater treatment requirements or require construction of new water or wastewater treatment facilities. ***No impact*** would occur.

C. Would the Project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Finding: No Impact

The Project does not require construction of new storm water drainage facilities or expansion of existing facilities. Because minimal additional roadway will be constructed, it is anticipated that the existing drainage system will be used and no change to current drainage patterns or volumes would occur (WRECO 2015). Therefore, there would be ***no impact***.

D. Would the Project have sufficient water supplies available to serve the Project from existing entitlements and resource, or are new or expanded entitlements needed?

Finding: No Impact

No new or expanded entitlements to water supplies are necessary for the Project. ***No impact*** would occur.

E. Would the Project result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?

Finding: No Impact

No additional wastewater treatment services are required for the proposed Project. Therefore, the Project would have ***no impact*** to wastewater treatment services.

F. Would the Project be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?; or

G. Would the Project comply with federal, state, and local statues and regulations related to solid waste?

Finding: Less Than Significant Impact

The proposed Project would not cause an increased demand for landfill services. Construction activities would generate waste that may require off-site disposal. Non-hazardous waste generated during construction would include common household trash, cardboard, scrap metal, erosion control materials, and packaging materials. Debris from excavation, grading, bridge and pier removal, and removal of vegetation would also be generated. All solid waste generated during construction of the proposed Project would be collected by the contractor and disposed of in accordance with applicable local, state and federal regulations. No hazardous waste is expected to be generated during construction; however, construction equipment uses various hazardous materials (diesel fuel, oil, solvents, etc.) and these materials would be disposed of off-site in accordance with all applicable laws pertaining to the handling and disposal of hazardous waste. Therefore, construction-related impacts on solid waste services are considered ***less than significant.***

3.18 Mandatory Findings of Significance

	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
18. Mandatory Findings of Significance				
Would the project:				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)	☐	☐	☒	☐
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

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

Finding: Less Than Significant Impact with Mitigation Incorporated

Potential impacts of the proposed Project on biological resources are presented in Section 3.4 of this document. These potential impacts are primarily related to construction of the new Italian Bar Bridge, demolition of the old Italian Bar Bridge, the rock blasting required for the Italian Bar Bridge road approach widening, and potential vegetation removal at the Whiskey Creek Tributary Bridge. Implementation of mitigation measures identified in Section 3.4 Biological Resources, would ensure that Project implementation would not substantially reduce the habitat of wildlife species, cause wildlife populations to drop below self-sustaining levels, threaten to eliminate a plant or animal communities, or reduce the number or restrict the range of rare or endangered plants or animals.

Furthermore, with respect to cultural resources, the Project vicinity does not contain known sensitive cultural resources. Mitigation measures identified in Section 3.5 Cultural Resources would ensure that unanticipated discoveries of cultural resources are addressed and important examples of the major periods of California history or prehistory are not adversely affected.

Therefore, the overall potential of the proposed Project to degrade the environment is considered ***less than significant with mitigation incorporated***.

B. Does the Project have impacts that are individually limited, but cumulatively considerable ("Cumulatively considerable" means that the incremental effects of a Project are considerable when viewed in connection with the effects of past project, the effects of other current projects, and the effects of probable future project)?

Finding: Less Than Significant Impact

There are no concurrent projects within the vicinity of the Project that would also contribute to impacts to Redinger Lake or Indian Creek. Relevant nearby past, current, and future projects include SCE's Big Creek Number 4 Project and the San Joaquin River Trail, Reach 4 construction in Fresno County.

SCE's Big Creek Number 4 Hydroelectric Project created Redinger Lake. Big Creek Number 4 is the most downstream project in SCE's Big Creek System. SCE's Big Creek Number 4 is regulated by FERC, and per the Final Environmental Impact Report issued in 2002, SCE implements numerous avoidance and minimization measures to minimize impacts on the environment (FERC 2002). Because the road and bridge are County facilities, they are not subject to FERC regulation. However, SCE must notify FERC of any short-term effects on recreation use in Redinger Lake, so the County will coordinate with SCE on any short-term impacts to lake use (see Section 3.15 Recreation).

The San Joaquin River Trail crosses the Italian Bar Bridge. As discussed in Section 3.15 Recreation, the proposed Italian Bar Road Bridge replacement project is consistent with the trail plan and would improve conditions for trail users at the Italian Bar Bridge. Fresno County approved an IS/MND for the San Joaquin River Trail through the Project vicinity on December 16, 2008 (County of Fresno 2008). Similar to the proposed Project, potential impacts associated with the trail project are anticipated to be largely construction related. The IS/MND adopted for the trail project included mitigation measures to offset any potential impacts of the trail construction. Although the trail work will likely be completed ahead of the proposed Italian Bar Bridge replacement, no cumulative environmental impacts would be anticipated if the projects are constructed concurrently.

Although not anticipated, any future projects in the Project vicinity would be subject to state and federal environmental compliance and permits and would be required to implement mitigation measures to avoid or minimize impacts on the natural or cultural environment.

Potential impacts associated with the proposed Project are primarily short-term (construction-related), and shall be mitigated to less-than-significant levels. Potential short-term, cumulative impacts would only occur if construction of the proposed Project occurred simultaneously with other projects in the vicinity, which is not anticipated. Given that implementation of the proposed Project would largely result in short-term impacts that would be mitigated to less-than-significant levels, when considered in conjunction with other past, present, or future projects

within the vicinity of the Project, the proposed Project's contribution to any cumulative impacts would be ***less than significant***.

C. Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Finding: No Impact

Construction activities associated with the Project will not have a substantial adverse effect on human beings. Project-incorporated measures for potential impacts from construction-related recreation and noise impacts would reduce potential direct or indirect impacts to humans to less-than-significant levels. There will be no substantial adverse effects to human beings, directly or indirectly, as described in this Initial Study. ***No impact*** would occur.

CHAPTER 4 LIST OF PREPARERS

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Appendix A. Mitigation Monitoring and Reporting Program

Appendix A – Mitigation Monitoring and Reporting Program

INTRODUCTION

This mitigation monitoring and reporting program summarizes identified mitigation measures, implementation schedule, and responsible parties for the Italian Bar Road Bridge Replacement Project (Project). The County of Fresno (County), in cooperation with the County of Madera and the California Department of Transportation (Caltrans), will use this mitigation monitoring and reporting program to ensure that identified mitigation measures, adopted as a condition of Project approval, are implemented appropriately. This monitoring program meets the requirements of CEQA Guidelines Section 14074(d), which mandates preparation of monitoring provisions for the implementation of mitigation assigned as part of project approval or adoption.

Mitigation Implementation and Monitoring

The County will be responsible for monitoring the implementation of mitigation measures designed to minimize impacts associated with the Project. While the County has ultimate responsibility for ensuring implementation, others may be assigned the responsibility of actually implementing the mitigation. The County will retain the primary responsibility for ensuring that the Project meets the requirements of this mitigation plan and other permit conditions imposed by participating regulatory agencies.

The County will designate specific personnel who will be responsible for monitoring implementation of the mitigation that will occur during Project construction. The designated personnel will be responsible for submitting documentation and reports to the County on a schedule consistent with the mitigation measures and in a manner necessary for demonstrating compliance with mitigation requirements. The County will ensure that the designated personnel have authority to require implementation of mitigation requirements and will be capable of terminating construction activities found to be inconsistent with mitigation objectives or Project approval conditions.

The County and its appointed contractor will also be responsible for ensuring that its construction personnel understand their responsibilities for adhering to the performance requirements of the mitigation plan and other contractual requirements related to the implementation of mitigation as part of Project construction. In addition to the prescribed mitigation measures, the following table lists each environmental resource area being affected, the party responsible for ensuring implementation of the mitigation measure, and the corresponding monitoring and reporting requirement.

Mitigation Enforcement

The County will be responsible for enforcing mitigation measures. If alternative measures are identified that would be equally effective in mitigating the identified impacts, implementation of these alternative measures will not occur until agreed upon by the County.

Draft Mitigation Monitoring and Reporting Program				
Impact Area	**Mitigation Measure**	**Responsible Party**	**Implementation Timing**	**Monitoring Activity**
Biological Resources	*Mitigation Measure BIO-1: Conduct Environmental Awareness Training* Before any work occurs in the proposed Project work limits, including grading and equipment staging, all construction personnel shall participate in an environmental awareness training regarding special-status species and sensitive habitats. If new construction personnel are added to the proposed Project, they must receive the mandatory training before starting work. As part of the training, an environmental awareness handout will be provided to all personnel that describes and illustrates sensitive resources (i.e., waters of the U.S. and state, riparian habitat, special-status species and habitat, roosting bats, nesting birds/raptors) to be avoided during proposed Project construction and lists applicable permit conditions identified by state and federal agencies to protect these resources.	Contractor	Prior to Construction	Contractor will submit WEAT sign-in sheets to the County. County of Fresno will confirm completion of WEAT at the onset of construction activities.
	Mitigation Measure BIO-2: Install Temporary Fencing around Environmentally Sensitive Habitat Before any ground-disturbing activity occurs within the Project work limits, 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 (i.e., waters of the U.S. and state, special-status species habitat, active bird/raptor nests to be avoided), as appropriate. Construction personnel shall avoid these areas. The exact location of the fencing and/or flagging shall be determined by the resident engineer coordinating with a qualified biologist. 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.	Qualified Biologist, in coordination with Resident Engineer	Prior to Construction	A County representative will check fencing/flagging during weekly monitoring visits (See BIO-3).

Draft Mitigation Monitoring and Reporting Program				
Impact Area	**Mitigation Measure**	**Responsible Party**	**Implementation Timing**	**Monitoring Activity**
	Mitigation Measure BIO-3: Conduct Weekly Monitoring Visits A representative of the County will make weekly monitoring visits to active construction areas occurring in or adjacent to environmentally sensitive habitat areas, (i.e., waters of the U.S. and state, special-status species habitat, active bird/raptor nests). The representative of the County will be responsible for ensuring that the contractor maintains the fencing/flagging protecting sensitive biological resources. Additionally, the County will retain a qualified biologist on-call to assist the County and the construction crew in complying with all Project implementation restrictions and guidelines as needed.	County	During Construction	County representative will make weekly monitoring visits and will document any corrective actions needed.
	Mitigation Measure BIO-4: Return Temporarily Disturbed Areas to Pre-Project Conditions All temporarily disturbed areas will be returned to pre-Project conditions upon completion of construction. These areas will be properly protected from washout and erosion using appropriate erosion control devices including coir netting, hydroseeding, and revegetation. After demolition of the old bridge, hydroseeding will be used on abandoned approach roads to revegetate those areas. In sloped areas additional erosion control measures would be applied including erosion control blankets and biodegradable fiber rolls. If woody species (i.e., trees and large shrubs) are removed, these areas would be replanted with comparable native vegetation.	Contractor and County	Following Construction Completion	County representative will complete a post-construction review.
	Mitigation Measure BIO-5: Implement Water Quality Best Management Practices Before any ground-disturbing activities, the County shall prepare and implement a Stormwater Pollution Prevention Plan [SWPPP] (as required under the State Water Quality Control Board [SWRCB]'s General Construction Permit Order 2009-0009-DWQ [and as amended by most current order(s)]) or a Water Pollution Control Plan (WPCP), as	Contractor and County	Prior to and During Construction	County representative will monitor construction activities and adherence to SWPPP.

Draft Mitigation Monitoring and Reporting Program				
Impact Area	**Mitigation Measure**	**Responsible Party**	**Implementation Timing**	**Monitoring Activity**
	applicable, that includes erosion control measures and construction waste containment measures to ensure that waters of the state are protected during and after Project construction. The Plan (a SWPPP or WPCP) shall include site design to minimize offsite storm water runoff that might otherwise affect adjacent lake or stream habitat. The Plan (a SWPPP or WPCP) shall be prepared with the following objectives: (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 Best Management Practices (BMPs) to reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges from the 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.			
	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 6 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 wildlife at the beginning of each workday. Any species observed shall be allowed to voluntarily move outside of the work area on its own.	Contractor	During Construction	Trenches will be monitored at the beginning of each work day.

Draft Mitigation Monitoring and Reporting Program				
Impact Area	**Mitigation Measure**	**Responsible Party**	**Implementation Timing**	**Monitoring Activity**
	Mitigation Measure BIO-7: Conduct a Preconstruction Survey for Western Pond Turtle A qualified biologist shall conduct a preconstruction clearance survey for western pond turtles within 48 hours prior to any ground disturbance within Redinger Lake and within the Italian Bar Bridge work limits, up to 1,300 feet from the channel in undeveloped upland habitats where access permits. Any western pond turtles found within the construction work area shall be allowed to voluntarily move out of this area or shall be captured and held by a qualified biologist for the minimum amount of time necessary to release them into suitable aquatic habitat outside the construction work area. If a western pond turtle nest containing eggs or young is identified within the construction work area, CDFW shall be consulted to determine an appropriate no-disturbance buffer to ensure avoidance of the nest.	Qualified Biologist	Within 48 hours prior to construction at Italian Bar Bridge	The County will submit results of surveys to Caltrans and coordinate with California Department of Fish and Wildlife (CDFW) on appropriate buffers if turtles are located during surveys.
	Mitigation Measure BIO-8: Conduct Preconstruction Den Surveys for Ringtail and Establish Buffers Before the start of ground-disturbing activities at Italian Bar Bridge, a qualified biologist will conduct preconstruction surveys for den sites within suitable habitats in the construction footprint. These surveys will be conducted no more than 30 days before the start of ground-disturbing activities. If an occupied den is found, the qualified biologist will establish a 50-foot buffer around the den. If a maternity den is found, the qualified biologist will establish a 100-foot buffer around the maternity den through the pup-rearing season (May 1 through June 15). Adjustments to the buffer(s) will require prior approval by CDFW as coordinated by the qualified biologist.	Qualified Biologist	Prior to Construction at Italian Bar Bridge	The County will submit results of surveys to Caltrans and the CDFW.
	Mitigation Measure BIO-9: Avoid Disturbance to Bat Roosting Sites at the Italian Bar Bridge The diamond plate metal strips that run the length of the	Qualified Biologist/Netting Professional, in	Prior to Construction at Italian Bar Bridge	If netting is used, it will be checked weekly by County representative.

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	Italian Bar Bridge contribute to the appropriate microhabitat for roosting bats under the bridge and, if feasible, should be removed between late October and early March, prior to construction. The panels can be replaced by expanded metal panels that would support vehicle traffic and protect the wooden sub-structure of the bridge, while creating airflow throughout the area currently used by free-tailed bats to roost. This increased airflow would greatly reduce or eliminate the use of the bridge by bats. The feasibility of removing the diamond metal strips must be reviewed and approved by County representatives and a structural engineer. Alternatively, the underside of the Italian Bar Bridge could be netted with tightly strung netting that has less than half-inch mesh, and that has no opening greater than half-inch within any seams, transitions, or connection points with the bridge. Netting should be checked weekly and repairs made immediately. Completely and effectively covering the underside of the Italian Bar Bridge with netting may prove difficult, due to the structure of the bridge and height above water, but netting professionals will be consulted for expert advice. Demolition and removal of the existing bridge should be initiated only after the bridge has been determined to be bat free (after installation of netting or during the months from late October through early March). Rock outcrops associated with the area around the bridge likely support bats. Since every crack, crevice, and rock outcrop overhang cannot be checked with 100 percent certainty, some rock crevices may support one or more species or individuals. If feasible, bedrock removal or alteration should occur when most or all bat species and individuals have migrated downslope or to southern destinations during fall and winter months (typically late October through early March). Some bat species or individuals may still remain in the area during winter	coordination with Contractor		If bats are found roosting in the Project work limits and adjacent areas during the construction period, the County will report conditions and initiate correspondence with consultation with CDFW.

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	months and intermittently become active, which could escape detection with acoustic devices. Because of the relatively high level of uncertainty of bat presence in the bedrock and rock outcrops, the site should be flagged and marked where rock removal or bedrock alteration will occur, and a bat biologist should survey the area for appropriate bat roosting micro-habitat. Any crevices that are detected should be chinked (filled) with burlap, allowing for only small areas to be open where plastic flaps could be installed as one-way doors for bat escapes. In the case of large cracks and gaps that may lead to obscured roosting micro-habitat, bat biologist should cover the rock cracks with 1 to 3 mil plastic, which is also covered and secured, weighted, or otherwise immobilized with netting. Plastic and netting coverings should include escape flaps for bats that may not have been detected. Plastic covering and chinking should be conducted 2 to 3 weeks or more prior to construction and be made of durable materials that can last through the Project life. The netted areas should be occasionally monitored and repaired immediately in order to maintain the security of the system and to keep bats from roosting in or adjacent to the Project work limits. If bats are found roosting in the Project work limits and adjacent areas during the construction period, consultation with CDFW and a qualified biologist should commence as soon as bats are reported or observed. No bats should be removed, handled, killed, hazed, or otherwise engaged without direction from CDFW and/or a qualified biologist.			
	Mitigation Measure BIO-10: Conduct a Preconstruction Survey and Install Exclusionary Netting for Bats at the Whiskey Creek Tributary Bridge During April–September before vegetation clearing, grubbing, or trimming begins, a qualified biologist will	Qualified Biologist/Netting Professional	Prior to Construction at Whiskey Creek Tributary Bridge	Exclusionary netting will be occasionally monitored and repaired immediately, as needed, by Contractor of

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	survey trees within the Whiskey Creek Tributary Bridge work limits 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, vegetation clearing may proceed. If snags, hollow trees, or other trees with suitable cavities are found, they will be examined for roosting bats. If bats are not found and there is no evidence of use by bats, vegetation clearing or trimming may proceed. If bats are found or evidence of use by bats is present, the qualified biologist will work with the County and CDFW to implement measures to avoid or minimize disturbance to the colony. Additional measures may include excluding bats from the tree before their hibernation period (mid-October to mid-March) and before construction begins. For the Whiskey Creek Tributary Bridge, exclusionary netting will be used to exclude bats from the bridge prior to installation of the temporary timber supports. The site should be netted with a taught net of a mesh that is less than 0.5 inch. Netting should be erected during the months of late October through early March. Netting should be made of materials that will last the life of the project. The netted areas should be occasionally monitored and repaired immediately in order to maintain the security of the system and to keep bats from roosting in or adjacent to the Whiskey Creek Tributary Bridge. If bats are found to be roosting on the bridge during the construction period, consultation with the CDFW and a bat biologist should commence as soon as bats are reported or observed.			Netting Professional. The County will submit results of surveys to Caltrans and the CDFW.
	Mitigation Measure BIO-11: Conduct a Preconstruction Nesting Migratory Bird and Raptor Survey and Establish Buffers 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	Prior to Construction at Italian Bar Bridge	If nest(s) are found during surveys, Qualified Biologist will monitor the nest during construction, as required. The County

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Impact Area	**Mitigation Measure**	**Responsible Party**	**Implementation Timing**	**Monitoring Activity**
	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 Project work limits. Surveys for raptors' nests should extend 1.0 mile from the Project work limits to ensure that nesting raptors are not affected by construction disturbances. For raptor surveys outside the Project work limits where property access has not been granted or is not accessible (e.g., due to steep terrain or lack of access roads and trails), the surveying biologist shall use binoculars to scan any suitable nesting substrate for potential raptor nests. 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 1.0 mile 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 (coordinating with the CDFW) 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 topographical or artificial barriers. In addition to the establishment of buffers, other avoidance measures (determined during CDFW coordination) 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.			will submit results of surveys to Caltrans and the CDFW.

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	Mitigation Measure BIO-12: Conduct a Preconstruction Nesting Migratory Bird and Raptor Survey and Establish Buffers at the Whiskey Creek Tributary Bridge If vegetation removal will occur during the breeding season for migratory birds and raptors (generally March through August), the County shall retain a qualified biologist to conduct a pre-construction nesting bird and raptor survey prior to the start of vegetation clearing or trimming activities. The preconstruction nesting bird and raptor surveys shall be conducted between February 1 and August 31 within suitable habitat within the designated Project work limits. The preconstruction survey shall be conducted no more than 14 days before the initiation of project activities. If an active bird or raptor nest is identified within the 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 (coordinating with appropriate resource agencies) 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 topographical or artificial barriers. In addition to the establishment of buffers, other avoidance measures may include monitoring of the nest during Project 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.	Qualified Biologist	Prior to vegetation removal at the Whiskey Creek Tributary Bridge	If nest(s) are found during surveys, Qualified Biologist will monitor the nest during construction, as required. The County will submit results of surveys to Caltrans and the CDFW.
Cultural Resources	*Mitigation Measure CUL-1: Conduct Worker Environmental Awareness Training.* Prior to any excavation or other substantial subsurface	Contractor and County	Prior to Construction	Contractor will submit WEAT sign-in sheets to the County.

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	disturbance activities, any individuals conducting the work should be given a cultural resource awareness training session and advised to watch for cultural resource materials during construction activities. This training can be included in or coincide with the training identified in Mitigation Measure BIO-1.			County of Fresno will confirm completion of WEAT at the onset of construction activities.
	Mitigation Measure CUL-2: Protect Discovered Prehistoric or Historic Subsurface Resources. If any evidence of prehistoric cultural resources (freshwater shells, beads, bone tool remnants or an assortment of bones, soil changes including subsurface ash lens or soil darker in color than surrounding soil, lithic materials such as flakes, tools or grinding rocks, etc.), historical cultural resources (adobe foundations or walls, structures and remains with square nails, refuse deposits or bottle dumps, often associated with wells or old privies), or paleontological resources (e.g., fossilized remains, imprints, and traces of plants and animals preserved in rocks and sediments) are observed during ground disturbing activities, all work must immediately cease within 50 feet of the find, and a qualified archaeologist must be consulted to assess the significance of the cultural materials. If the find is determined to be potentially significant, the archaeologist, in consultation with the County and, if the find is prehistoric or Native American in nature, appropriate Native American group(s) should develop and implement a treatment plan with an emphasis toward preservation in place. If the find is paleontological, the County will consult with a qualified paleontologist to develop and implement a treatment plan.	Contractor and County	During Construction. Upon discovery, if applicable	Contractor will report and document any discovered subsurface resources to County. Qualified Archaeologist will report findings of assessment to Caltrans.
	Mitigation Measure CUL-3: Protect Discovered Human Remains If, during the course of construction, human remains are	Contractor and County	During Construction. Upon discovery, if	County will notify the Coroner, Caltrans, and if applicable, NAHC.

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	discovered, work shall be halted immediately within 50 feet of the discovery. County staff shall be notified, and the County Coroner shall be notified according to Section 5097.98 of the State PRC and Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, and the procedures outlined in CEQA Section 15064.5(d) and (e) shall be followed. The County will also comply with the current USFS Native American Graves Protection and Repatriation Action Plan of Action (USFS 2015c).		applicable	
Hazards and Hazardous Materials	*Mitigation Measure HAZ-1. Conduct testing for asbestos-containing materials, lead-based paint, and wood-preserving chemicals, and implement safe handling and disposal measures.* It is possible that ACMs and LBP were used during construction of the existing Italian Bar Bridge. Prior to bridge demolition activities, suspect ACMs should be tested in accordance with USEPA, National Emission Standards for Hazardous Air Pollutants (NESHAP) and SJVAPCD regulations. In addition, painted surfaces should be tested for the presence of LBP in accordance with California Department of Public Health and California Division of Occupational Safety and Health regulations. TWW should be handled consistent with Caltrans' SSP 14-11.09.	Contractor	Prior to demolition of Italian Bar Bridge	The County representative will monitor for adherence to HAZ-1.
	Mitigation Measure HAZ-2. Procedures for Discovery of Unknown Hazardous Materials Although not anticipated, should impacted soil (as evidenced by staining and/or odors) be encountered during construction activities, it is recommended that the Caltrans Unknown Hazard Procedures be implemented during construction activities. The resident engineer overseeing construction should have available field monitoring	Contractor	During Construction	County will be notified, and potentially hazardous conditions will be monitored by the Resident Engineer.

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	equipment (e.g., photoionization detector) to facilitate timely detection of potentially hazardous conditions in the field.			
Noise	*Mitigation Measure NOI-1: Implement Noise-Reduction Recommendations* The following measures shall be implemented to reduce construction-generated noise levels: a) To the extent possible, noise-generating construction activities should be limited to between the hours of 6:00 a.m. and 9:00 p.m., Monday through Friday, and between 7:00 a.m. and 5:00 p.m. on Saturday and Sunday. These working hour restrictions will apply to all activities at the Whiskey Creek Tributary Bridge. b) Prior to construction, Redinger Lake Campground and residential dwellings located within 1,000 feet of construction areas shall be notified of anticipated construction activities. The notice shall include a description of anticipated construction activities, construction schedules, and hours during which the activities are anticipated to occur. The name and contact information of a designated construction liaison(s) responsible for addressing potential noise-related concerns shall be included in the notice. In the event that a noise complaint is received, the designated construction liaison(s) shall be responsible for ensuring that appropriate and available noise-control measures are implemented to minimize construction activity noise levels of concern. Such measures may include, but are not limited to, adjusted activity schedules, or the use of quieter construction equipment, equipment enclosures, or shielding. c) Construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturers' recommendations. Equipment engine	Contractor	During Construction	County representative will monitor construction activities and adherence to noise mitigation.

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	shrouds shall be closed during equipment operation.			
Recreation	*Mitigation Measure REC-1: Notify Recreation Users of Construction Activities and Implement Safety Measures during Construction* Consistent with recommendations from the USFS, the following measures are recommended to help alleviate conflicts with recreationists during and after Project construction. a) The County (or County's contractor) shall notify USFS and SCE of the construction schedule and any road and boating restrictions. b) The County (or County's contractor) shall post road and boating restrictions at USFS Ranger offices and at the Redinger Lake campground and boat launch. c) The County (or County's contractor) shall use warning buoys both up and downstream from the Italian Bar Bridge. d) No lake and road closures shall occur during holiday weekends in peak recreational use season (Memorial Day, Fourth of July, Labor Day). e) Informal parking areas used for staging equipment during construction shall be restored to pre-project or improved conditions.	County and/or Contractor	Prior to and During Construction	None required.