



Mitigated Negative Declaration

Sonoma County Permit and Resource Management Department

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Pursuant to Section 15071 of the State CEQA Guidelines, this proposed Negative Declaration and the attached Initial Study, constitute the environmental review conducted by the County of Sonoma as lead agency for the proposed project described below.

Project Title: Geysers Road over Frasier Creek Bridge Replacement Project

Lead Agency: Sonoma County

Project Applicant/Operator: Sonoma County Department of Transportation and Public Works

Project Location/Address: Geysers Road over Frasier Creek

Decision Making Body: County of Sonoma Board of Supervisors

Project Description: See Item III, below

Environmental Finding: The Sonoma County Environmental Review Committee has determined, on the basis of the attached Initial Study, the project described below would not have a substantial adverse impact on the environment, provided that the mitigation measures identified in the Initial Study are included in the project.

Initial Study: See attached. For more information please contact Jackson Ford, Senior Environmental Specialist, at (707) 565-8356.

Mitigation Measures: Included in attached Initial Study. The project applicant has agreed to implement all mitigation measures.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” or “Less than Significant with Mitigation” as indicated in the attached Initial Study and in the summary table below.

Table 1. Summary of Topic Areas

Topic Area	Abbreviation*	Yes	No
Aesthetics	VIS	X	
Agriculture & Forestry Resources	AG		X
Air Quality	AIR	X	X
Biological Resources	BIO	X	
Cultural Resources	CUL	X	
Energy	ENERGY		X
Geology and Soils	GEO		X
Greenhouse Gas Emission	GHG		X
Hazards and Hazardous Materials	HAZ	X	
Hydrology and Water Quality	HYDRO	X	
Land Use and Planning	LU		X
Mineral Resources	MIN		X
Noise	NOISE		X
Population and Housing	POP		X
Public Services	PS	X	
Recreation	REC		X
Transportation	TRANS	X	
Tribal Cultural Resources	TCR	X	
Utilities and Service Systems	UTL		X
Wildfire	FIRE	X	
Mandatory Findings of Significance	MFS		X

*Throughout the document use these abbreviations to consecutively number, within each topical area, mitigation measures and mitigation monitoring actions.

RESPONSIBLE AND TRUSTEE AGENCIES

The following lists other public agencies whose approval is required for the project, or who have jurisdiction over resources potentially affected by the project.

Table 2 List the agencies and other permits that will be required to construct the project.

Table 2. Agency	Activity	Authorization
U. S. Army Corps of Engineers	Work in navigable waters	Rivers and Harbors Act, Section 106
Regional Water Quality Control Board (North Coast or San Francisco Bay)	Discharge or potential discharge to waters of the state	California Clean Water Act (Porter Cologne) – Waste Discharge requirements, general permit or waiver

State Water Resources Control Board	Generating stormwater (construction, industrial, or municipal)	National Pollutant Discharge Elimination System (NPDES) requires submittal of NOI
California Department of Fish and Wildlife	Lake or streambed alteration	Fish and Game Code, Section 1600
The Sonoma County Permit and Resource Management Department (PRMD)	3836R Streambed Roiling Permit	Section VIII of Ordinance No. 3836R
Northern Sonoma County Air Pollution Control District (NSCAPCD)	Stationary air emissions	
NOAA Fisheries/ National Marine Fisheries Service (NMFS)	Incidental take permit for listed plant and animal species	Endangered Species Act
Native American Heritage Commission	Cultural Resources and Tribal Cultural Resources Records	
State Historic Preservation Office	Cultural Resources and Tribal Cultural Resources Oversight	

ENVIRONMENTAL FINDING:

Based on the evaluation in the attached Expanded Initial Study, I find that the project described above will not have a significant adverse impact on the environment, provided that the mitigation measures identified in the Initial Study are included as conditions of approval for the project and a Mitigated Negative Declaration is proposed. The applicant has agreed in writing to incorporate identified mitigation measure into the project plans.

Jackson Ford
Prepared by:

April 01, 2022
Date

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INTRODUCTION:

The Sonoma County Department of Transportation and Public Works proposes to replace the Geysers Road Bridge over Frasier Creek with a new bridge located in approximately the same alignment as the existing bridge. A referral letter was sent to the appropriate local, state and federal agencies and interest groups who may wish to comment on the project.

This report is the Initial Study required by the California Environmental Quality Act (CEQA). The report was prepared by Jackson Ford, Senior Environmental Specialist, with the Sonoma County Permit and Resource Management Department, Natural Resources Division. Information was provided by Sonoma County Department of Transportation and Public Works. Additional information was provided by various consultants as identified in this Initial Study. Technical studies referred to in this document are available for review at the Permit and Resource Management Department (Permit Sonoma).

Please contact Jackson Ford, Sr. Environmental Specialist, at (707) 565-8356, for more information.

Project Purpose and Need

The existing two-span, 42-foot by 24-foot Bridge on Geysers Road over Frasier Creek was built in 1941. The bridge consists of a reinforced concrete (RC) slab approach span on solid wall pier and end diaphragm winged abutments. As a part of its ongoing bridge inspection program, the California Department of Transportation (Caltrans) inspects and assigns a rating of sufficiency to each bridge within the County. Caltrans inspected this bridge on July 10, 2019. The Bridge Inspection Report (BIR) indicates the apron along the footing of the downstream wingwall has failed and the apron has been undermined by two feet horizontally along the entire length. Also, the footing for the wingwall has minor undermining (up to seven inches horizontally and vertically). Caltrans has recommended this bridge for replacement.

Project Description

Geysers Road is a local rural road located within the northeastern portion of Sonoma County. This portion of Geysers Road has a westerly terminus at the Sonoma-Mendocino County line and traverses easterly over approximately 15.5 miles where it terminates at the intersection with Geysers Resort Road.

The existing bridge is a narrow two-lane bridge located on Geysers Road over Frasier Creek about 6.6 miles east of River Road. The existing bridge is over 70 years old, has a history of scour at the bridge supports and does not meet current seismic standards. The project consists of placing a new, two lane bridge constructed on the existing alignment.

The current Bridge Inspection Report (7/10/2019) shows a sufficiency rating of 60.7 out of a possible 100, and a status of structurally deficient. Caltrans listed and approved funding for this bridge under the seismic replacement program.

Recent traffic counts indicate that the bridge carries a daily traffic volume of under 400 ADT (average daily traffic). The available detour is excessively long, so a temporary bridge is necessary to maintain traffic flow. A temporary one-lane bridge will be constructed upstream of the existing bridge to maintain traffic flow through the site during construction.

Existing Bridge

The existing bridge is a two-span reinforced concrete slab supported on a reinforced concrete pier wall and tall reinforced concrete abutments. Each span is about 20 feet long. The foundations are reinforced concrete, but their support is unknown. As-built plans are not available so the amount of reinforcement in the concrete pier and abutments is unknown as well as not knowing if the foundations are supported by piles or are spread footings. All three supports show signs of scour, but Abutment 1 and Pier 2 are more extensive. No undermining of the foundations has taken place, but "slope protection (grouted rock and concrete) is in place at the exposed footings and within the stream channel.

Proposed Project

Current minimum American Association of State Highway and Transportation Officials (AASHTO) highway design standards (AASHTO Geometric Design of Highways and Streets 2011, tables 5-5 & 5-6) require that a new bridge carrying an ADT of less than 40 shall have minimum of 9 foot lanes with 2 foot shoulders. This requirement would call for a clear roadway width of 22 feet. However, this road is a primary access to the Geysers Geothermal field and power plants therefore 11 foot lanes and 3 foot shoulders are proposed and have been approved for this project.

The Sonoma County Department of Transportation and Public Works (DTPW) proposes to construct a new bridge on the existing alignment of Geysers Road over Frasier Creek. Traffic on Geysers Road will be conveyed over a one-lane temporary bridge that will be constructed on the upstream alignment. The temporary bridge will be 18 feet wide by a minimum of 55 feet long to clear the low flow channel. The temporary bridge will require temporary reinforced concrete spread footings. The hillside where the temporary bridge will be constructed has a steep slope. In order to retain this hillside, a temporary shoring wall is required along the northwest side approximately 120 feet in length. After demolition of the existing bridge and construction of the new bridge is complete, the temporary bridge including the abutments and shoring walls will be removed and the adjacent hillside will be graded back to a stabilized slope.

The new bridge will be 80 feet long, the new abutments will be located further up the creek bank from the existing abutments. A single span bridge is proposed, consisting of a cast-in-place reinforced concrete box girder type approximately 32 feet wide, with two 11 foot travel lanes and two 3 foot shoulders with no bikes lanes or sidewalks.

The abutment supports will be 24 inch CIDH piles. The elevation for the new bridge deck would be approximately 745 feet providing about 2.9 feet of freeboard for the 50-year flood level of Frasier Creek and passing the 100-year flood level with about 1.7 feet of freeboard.

Work in Frasier Creek is required to remove the existing superstructure, pier wall, abutments, sacked concrete, slope protection (grouted rock) and their respective foundations. If encountered piles will need to be removed to a minimum of three feet below original ground. Likewise, placement and later removal of bridge falsework will also take place at the edge of the creek channel. After traffic is switched to the new bridge from the temporary, removal of the temporary bridge will be required which includes also temporary abutments and shoring wall.

Vertically, the approach roadways would need to conform to the new bridge by placing a small amount of fill to meet the new required bridge grade. Approximately 160 feet of approach work is required on the southwest end and approximately 285 feet on the northeast end. The approach would also be widened with two 11 foot lanes, two 3 foot shoulders. Midwest guardrail systems will be installed along all four corners of the bridge approximately 75 feet in advance of the new bridge abutments.

There are existing roadside ditches that are located on the north side of Geysers Road which carry existing roadside drainage and hillside drainage to Frasier Creek. The roadside ditch that is located on the north side of Geysers Road about 100' east of the existing bridge abutment drains to an existing ditch, which drains to the existing cattle guard catch basin and outfalls directly into Big Sulphur Creek. With the proposed temporary alignment, the existing ditches will be temporarily filled and temporary drainage measures will need to be implemented. Along the west approach, a temporary ditch will need to be graded from the high point located behind the shoring wall to intercept hillside drainage to a temporary drainage inlet and culvert located approximately 100' west of the existing bridge approach. This culvert would be placed under Geysers Road which outfalls to Big Sulphur Creek. Also, on the west approach, another temporary ditch would be graded from the high point behind the temporary shoring wall to Frasier Creek. The ditch would be shallow approximately 1.0 feet deep with 2:1 side slopes for a total width of 4 feet. On the east approach, a similar drainage ditch would be graded to intercept hillside flow and would drain to Frasier Creek. The proposed roadway outside shoulder is located approximately 4 feet to 8 feet from the designated archaeological cultural boundary that was staked in the field. It is recommended to grade the unpaved area to conform to the existing ground and the roadside drainage would drain into the existing ditch. A new ditch or shoulder dike would be constructed east of the existing cattle guard area,

outside of the archaeological cultural boundary, which would carry drainage to a new drainage inlet and culvert that outfalls to Big Sulphur Creek.

Retaining walls or engineered fill at a 1:1 fill slope, would be required on the southwest side of the bridge in order to minimize the impacts to Big Sulphur Creek.

Right of Way

The project would require right-of-way (ROW) acquisition or permanent easements from one adjacent parcel.

Construction

Construction of the project is expected to take one construction season, with work in the wetted channel occurring between June 15 and October 15. The heavy construction events that are anticipated in order to complete the contract, including the material to be used, and the equipment to be deployed, can be presumed to be as follows:

Staging Areas and Construction Access

A pullout area and road shoulder located at the southeast end of the bridge would be used for construction staging activities, including equipment and materials storage. To construct the temporary bridge equipment will be staged from the roadway and no work will be done below the top of bank. To construct the new bridge, equipment will also be staged from the road shoulder and pullout on the southeast side. For the demolition of the existing bridge, the Contractor will also grade a temporary access road on the southeast end of the bridge on the downstream (south) side of the existing bridge.

Construction Phasing and Methods

The following describes the likely construction scenario, though materials, equipment or sequencing could vary depending on the contractor selected to construct the project.

DTPW will construct the project over one construction season, with work in the wetted channel permitted to occur between June 15 and October 15. Vegetation removal will occur during the winter preceding construction, to avoid the bird-nesting season. Vegetation removal includes removal and pruning of shrubby riparian vegetation along the bridge alignment, and approximately 10 trees of various species. Tree removal has been minimized to the fewest necessary in order to maximize the amount of out of creek space used for construction, staging, and debris removal. There are several trees that will need to be topped in the area under the temporary bridge and on the south side of the existing bridge in order to clear the area for site visibility of the temporary alignment during construction. Pruning of some willow and alder species is necessary for construction activities and will be kept to the minimum necessary to construct the project.

Temporary Creek Diversion System

Construction access to the worksite at Frasier Creek requires temporary dewatering. A temporary creek diversion system will be constructed to divert creek flow through the worksite during the proposed construction season. After June 15th, block nets would first be installed at the upstream end of the pad by a qualified fisheries biologist. Fish would then be herded downstream out of the project area to the extent feasible. A downstream block net would then be installed to create an isolated work area. Next flexible 24-inch polyethylene culvert(s) with temporary cofferdams located at the upstream and downstream ends will be installed.

Culvert(s) will be placed on the stream bed to bypass the stream flow through the work pad. Prior to placing the culverts, any low spots within the culvert alignment would be leveled by placing small amounts of clean river run gravel on the stream bed. Culvert placement would be done with the bucket portion of a small excavator operating from the creek bank. Cofferdams will be constructed across the existing creek

channel with sand bags wrapped in impermeable plastic sheeting. A cut-off trench will be provided at both the upstream and downstream cofferdams to reduce seepage into the construction work area. A jackhammer and excavator will be used to remove excess grouted rock from the creek bed before the platform is installed. The flexible tubing will be moved from one side to the other to facilitate keeping the stream diverted. After the creek bed has been excavated the platforms for construction will be constructed.

Platforms will be installed to provide a construction work area over the creek bed. The temporary creek diversion system and associated platforms will be removed at the end of construction. Culvert(s) will be installed in such a manner to not back up water upstream of the work pad, and to not substantially increase velocities over the existing stream flow at the outlet of the culverts. A short bridge (constructed of K-rail and steel plates) could be used as an alternative to culverts, however it would also have to be sized so as not to increase stream velocity.

Once the diversion culvert(s) is in place, a dam of imported clean river-run gravel would be constructed at the head of the culverts to direct the water into the pipes by an excavator working from the dry side of the channel. The diversion dam would be lined with impermeable plastic and would be located 45 feet upstream of the proposed bridge alignment. A filter dam, lined with filter fabric, will be constructed at the downstream end of the work pad. Material to construct the downstream dam would be lowered into the channel by an excavator working from the existing gravel bar.

Once the upstream and downstream dams are in place, the work pad will be completed by filling in the confined pool between the dams with imported clean river-run gravel and a top layer of crushed rock to create a surface suitable for operation of large equipment. A fabric layer could be placed between river-run gravel and base rock layer to ease removal following construction. Gravel will be placed at such a rate that displaced water does not overtop either dam. This will be accomplished by either pumping out the trapped water while depositing the clean river-run gravel or by adding the gravel slowly enough for the filter dam to sieve the water through its mesh. If water is pumped out it will be pumped up into a holding tank for storage and disposal or to an upland location where it will not drain along the ground surface back into the creek. The layer of compactable aggregate (crushed rock) to be placed on top of the river run gravel would not exceed the minimum amount needed to provide sufficient support for the safe and efficient operation of heavy equipment. Loss of compactable aggregate over the edges of the work pad would be avoided by maintaining a minimum 3 foot buffer of uncovered river-run gravel at the ends of the work pad. The block nets would be removed once the pad was complete and the gravel will be left in the stream channel where the excess grouted rock and concrete has been excavated.

Additional temporary dewatering may be required where subsurface excavation is performed below the ground water table. Dewatering and discharging activities will be conducted per permit requirements.
Temporary Bridge

The temporary bridge will be about 55 feet long by 18 feet wide clear span concrete bridge over Frasier Creek. All work on the temporary bridge will be performed from the top of the roadway and outside of the Frasier Creek stream channel. Temporary shoring walls or new engineered fills are required to grade a new temporary road into the steep side slopes north of the existing alignment. A 120 foot temporary shoring wall will be constructed on the northwest approach and a 40 foot on the northeast. Engineered fills would be used in lieu of retaining walls where feasible. Temporary K-rails would be placed across Geyser Road on both the west and east ends of the existing bridge in order to guide vehicles along the temporary alignment as well as provide a construction zone for safety. Temporary striping and stop signs will be used to direct one-way traffic around the bridge construction.

Roadway Approach Construction for Permanent and Temporary Approaches

The alignment for the temporary approaches to the temporary bridge will be designed using a 15 mph design speed using horizontal curves ranging from a 60-foot radius to 100-foot radius. The west approach of the alignment begins approximately 110 feet west of the existing bridge and the east approach ties back into the existing alignment approximately 110 feet east of the existing bridge. The temporary road approach will fill on top of the existing ground and will not impact the archaeological cultural area.

The approach roadway embankment will be constructed using new engineered fills, conventional fills, and/or retaining walls. In order to minimize traffic disruptions and stockpiling of earth, the contractor may excavate and then put engineered fill in segments proceeding from the approach roadway towards the new bridge abutment locations. Temporary K-rails would be placed between traffic and the construction zone for safety.

The fill will be compacted in lifts of 18 to 24 inches and reinforced with geotextile fabric for strength. Geotextile fabric will be placed on the face of the completed 1:1 slope for stability. The face of the slope will then be hydro-seeded with local grasses and ground cover plant seed mix.

After the engineered fill for the 1:1 slopes is complete the temporary K-rails will be removed and the approach embankment work is completed up to the area to be excavated for the new abutment. Embankment fill can extend as far as the edges of the existing roadway initially, so as to not impact traffic until tie-in work is completed. The new approach embankments may be used as staging areas for construction of the new bridge.

The existing corrugated metal culvert below the roadway east of the bridge would be removed and replaced with high-density polyethylene (HDPE) or corrugated metal pipe of the same size. The extraction of the old culvert will require trenching and a temporary short duration roadway closure for jacking. Signage, flagmen, and steel plate trench covers would be utilized to minimize these closures or allow emergency vehicles to pass with only a short delay (five minutes or less to place the trench cover plates). The existing cattle guards located east of the existing bridge, will be removed and reconstructed to accommodate both the temporary and permanent roadway approach. The proposed cattle guard will be placed approximately 90 feet east of the existing one. In lieu of replacing a cattle guard structure, resembling the existing one, a painted cattle guard may be used as an alternate measure.

The new bridge abutment back walls and the along northwestern edge of the new approach will be graded. In addition, the north edge of the new roadway will be graded at an angle so that the toe stops at the southern edge of the existing roadway.

The reinforced concrete approach slabs will be formed and casted-in-place. After the concrete dries, metal beam guard rails will be installed along both edges of the new approaches. Exposed side slopes of the new approach embankments will be hydro-seeded.

Construction Completion

The existing asphalt will be removed and a new road base and asphalt surface will be placed while maintaining traffic on the road. Signage and flagmen will be used to facilitate temporary roadway closures (15 minutes or less).

Signage, barriers, and temporary striping would be added in preparation of moving traffic to the new bridge. Flagmen will be used as needed to close the existing approach roadways and switch one-lane traffic onto the new two-lane bridge.

After construction of the final approach work and new bridge construction, the temporary bridge paving and shoring walls will be removed and the slopes re-graded with placement of permanent erosion control to re-establish the side slopes.

Work Pad Removal

Following completion of in-channel work, and prior to October 15, the work pad would be removed as described below. Immediately prior to work pad removal, block nets, or another suitable method identified by a fisheries biologist, will be installed upstream of the work pad to prevent fish from entering the culvert(s). The culvert(s) will be lifted out of the channel, starting upstream and draining downstream. A qualified biologist would be on-site during culvert removal. The biologist would inspect any areas of ponded water created by the removal of each section of culvert to ensure they are clear of fish. Then workers using hand shovels or the bucket of the excavator would smooth out the gravel to re-establish

normal flow through the channel created where the culvert was removed. The remaining river-run gravel would be left in the channel to be transported downstream with winter flows. After the pad has been smoothed and the re-established channel has stabilized, all equipment will be removed from below top of the bank, along with all surplus materials and debris. The block nets will be removed and fish will be allowed to return to the site.

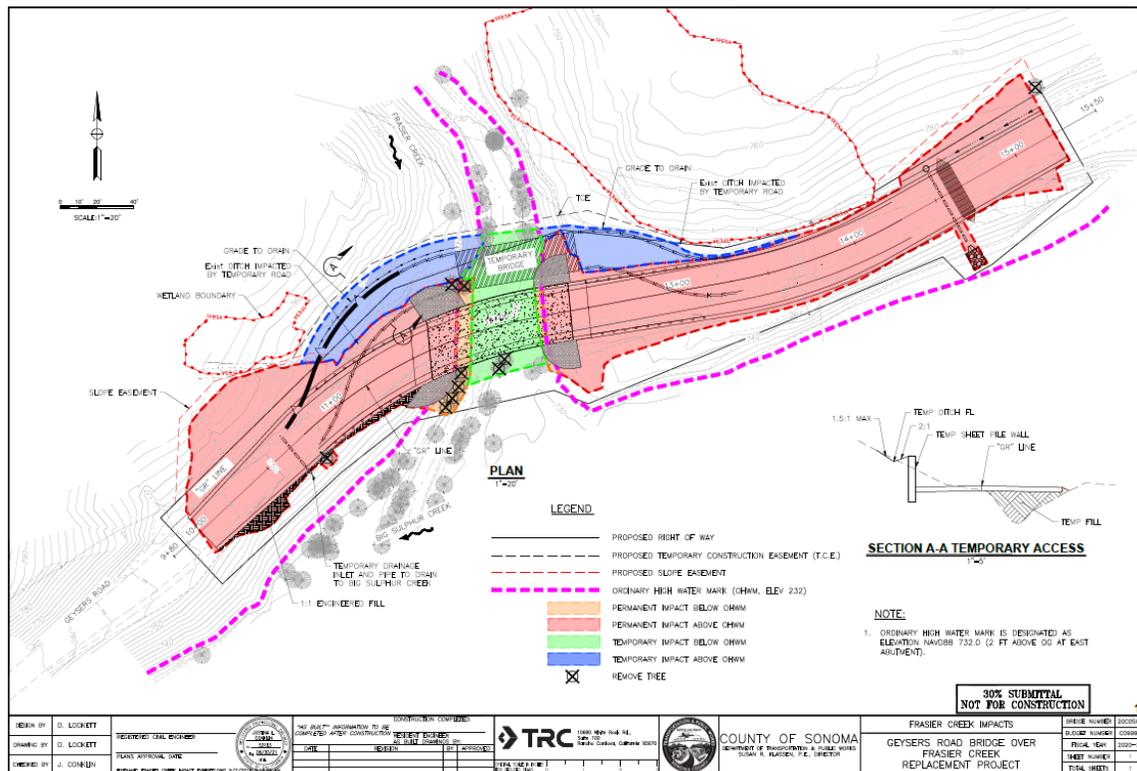
Temporary disturbance areas above the top-of-bank (excluding pre-existing disturbed areas such as the road shoulder, pullout, and existing access) would be seeded with an erosion control mix.
Project Completion

The new bridge approach will be asphalt paved. The temporary approach roadways will be planted per the landscaping plans. New roadside ditches will be graded to replace the existing ditches that were filled by the temporary road approaches. Permanent barricades and standard ranch fence will be erected along the edges of the new bridge approach to prevent access to the temporary approach roadway.

Figure 1: Location Map



Figure 2: Project Impact Area



Issues Raised by the Public or Agencies

A referral packet was drafted and circulated to inform and solicit comments from selected relevant local, state and federal agencies; and to special interest groups that were anticipated to take interest in the project.

Sonoma County Bicycle and Pedestrian Advisory Committee (SCBPAC) requested that the project include 'Pass Bikes Three-Foot Minimum' signs at the approaches to the bridge as well as install railings that are 42-inches above the deck of the bridge. Sonoma County Department of Transportation and Public Works Engineer, Chet Jamgochian spoke with Mr. Schmitz via telephone to confirm the request would be accommodated in final design.

Other Related Projects

Geysers Road Bridge over Big Sulphur Creek is located about 3 miles from the project location. The existing bridge is a one lane bridge that does not meet current seismic standards. The bridge will be replaced with a two-lane bridge on a slightly downstream alignment.

Evaluation of Environmental Impacts

This section analyzes the potential environmental impacts of this project based on the criteria set forth in the State CEQA Guidelines and the County's implementing ordinances and guidelines. For each item, one of four responses is given:

No Impact: The project would not have the impact described. The project may have a beneficial effect, but there is no potential for the project to create or add increment to the impact described.

Less Than Significant Impact: The project would have the impact described, but the impact would not be significant. Mitigation is not required, although the project applicant may choose to modify the project to avoid the impacts.

Potentially Significant Unless Mitigated: The project would have the impact described, and the impact could be significant. One or more mitigation measures have been identified that will reduce the impact to a less than significant level.

Potentially Significant Impact: The project would have the impact described, and the impact could be significant. The impact cannot be reduced to less than significant by incorporating mitigation measures. An environmental impact report must be prepared for this project.

Each question was answered by evaluating the project as proposed, that is, without considering the effect of any added mitigation measures. The Initial Study includes a discussion of the potential impacts and identifies mitigation measures to substantially reduce those impacts to a level of insignificance where feasible. All references and sources used in this Initial Study are listed in the Reference section at the end of this report and are incorporated herein by reference.

The Sonoma County Department of Transportation and Public Works has agreed to accept all mitigation measures listed in this Initial Study as conditions of approval for the proposed project, and to obtain all necessary permits, notify all contractors, agents and employees involved in project implementation and any new owners should the property be transferred to ensure compliance with the mitigation measures.

1. AESTHETICS:

Except as provided in Public Resources Code Section 21099, would the project:

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

Comment:

The PRMD Visual Assessment (VA) Guidelines have been applied to the visual characteristics of the proposed bridge replacement project. While the analysis of visual impacts involves qualitative judgments, this procedure is intended to define a methodology that utilizes, to the extent practicable, objective standards that can be described and utilized in a consistent manner. Project impacts have been analyzed by considering public viewing points. Public viewing points include public roads, public trails, and public parks. Viewing points from private properties are not used when applying the VA Guidelines.

Viewer sensitivity is defined both as the viewers' concern for scenic quality and the viewers' response to change in the visual resources that make up the view. Local values and goals may confer visual significance on landscape components and areas that would otherwise appear unexceptional in a visual resource analysis. Even when the existing appearance of a project site is uninspiring, a community may still object to projects that fall short of its visual goals.

The project is not likely to be controversial with the community as a whole. The project is located in a remote part of the County that is rural in nature, as there are very few residents in the area, and the roadway has very low traffic volumes (83 vehicles per day) resulting in relatively few viewers. Geysers Road is primarily used by private power corporations within the Geysers geothermal fields.

The existing structure is a single lane concrete flat slab structure built in 1941. The replacement will be a two lane concrete box girder that will meet current seismic design standards. The change to the vista within the immediate vicinity will be minimal. Therefore, impacts to viewer sensitivity would be less than significant.

Viewer exposure is typically assessed by measuring the number of viewers exposed to the resource change, type of viewer activity, duration of their view, speed at which the viewer moves, and position of the viewer. High viewer exposure heightens the importance of early consideration of design, art, and architecture and their roles in managing the visual resource effects of a project.

There are no parks or trails from which the bridge can be viewed, and based on a site survey as well as review of topography and aerials, the bridge cannot be viewed from any residences, with the closest residence is approximately 1,100 feet away and is currently not inhabited. Exposure is low as daily use of Geysers Road is low with an average daily traffic count at 83 vehicles per day (Sonoma County, 2018). The roadway is primarily used by power plant staff coming from Highway 101 in Sonoma County. Viewers familiar with the roadway as it is now would likely have a low sensitivity to changes that result from modifications to its setting.

Visual impacts are determined by assessing changes to the visual resources and predicting viewer response to those changes. As described in the above sections, changes to the existing project corridor will be minimized to the extent possible. The combination of a limited viewshed, a design that is compatible with the existing visual character and only temporary impacts to visual quality results in the visual impacts determined to be low. These impacts include the new structure, new asphalt at the approaches, and bank stabilization to protect the new structure. Over time these new elements will blend in with the existing roadway.

Permanent Impacts

The new bridge will be on the same road alignment as the existing bridge. This structure will be wider than the existing bridge to meet current AASHTO safety standards. The project site would require the clearing of approximately 10 alder trees.

Temporary Impacts

Temporary visual impacts will be high during the construction due to the presence of large equipment and removal of vegetation. Building a bridge in the exact same place as the existing requires the construction of a temporary one-lane bridge structure to allow the road to remain open during construction. The equipment staging will occur at the project site in an existing turn out. Construction signage will notify travelers of the roadwork. Disturbed areas will be regraded to meet pre-project grades at the end of construction. These areas will be revegetated and monitored to ensure the success of the replacement plantings. (1, 29)

Significance Level:

Less than Significant with Mitigation Incorporated

Mitigation:

The County will or has incorporated the following measures to avoid or minimize visual impacts:

- Minimize vegetation removal to the extent possible, and trim trees rather than remove where possible. Replace any vegetation removed for construction activities. Native species will be replaced in kind and any invasive plants within the project area will be removed and replaced with native.
- Protect existing vegetation to remain, which is outside of clearing and grubbing limits, from the contractors operations, equipment and materials storage. Environmentally Sensitive Areas (ESA) are identified on the project plans to limit contractor action areas.

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

Comment:

Geysers Road is not a designated state scenic highway. The alignment chosen will not affect heritage trees, unique geological features or any other historic buildings within a state scenic highway. (1)

Significance Level:

No Impact

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

Comment:

The project is located within a non-urbanized area. The project site occurs on a rural stretch of Geysers Road where trees, non-native grasses, and rocky outcroppings dominate the scenery. Frasier Creek is not visible from the windshield viewpoint because it occurs under the roadway, but staging and some grading work will be on or near the roadway and will be noticeable to bicyclists and drivers from a distance. There are no structures of historic character, and a significant amount of trees and vegetation will not be removed from the site. Some trees that are immediately adjacent the bridge and in the creek channel will be removed, trees will be replanted per the permitting agencies specifications upon completion of construction. As users travel along Geysers road, several concrete creek crossing exist. Construction of the proposed project would not substantially change the viewshed or the visual character or quality of public views of the site and its surrounds within the corridor. (1)

Significance Level:

Less than Significant Impact

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

Comment:

No new structures will introduce new sources of light and glare. Geysers Road and the immediate vicinity of the project site do not contain any street lighting or residential lighting. The only existing source of nighttime lighting in the immediate vicinity of the project site is from motor vehicle headlights. Two guardrail reflectors are provided at each approach of the existing bridge. With the exception of motor vehicle windshields and to a lesser extent water in Frasier and Big Sulphur Creeks, there are no existing sources of glare in the project area.

No new lighting is proposed for the replacement bridge or Geysers Road as a part of the project. The new bridge would include new guardrail reflectors at each approach but it would not increase the motor vehicle carrying capacity compared to the existing bridge. The replacement bridge would not include new sources of substantial glare. (1)

Significance Level:

No Impact

2. AGRICULTURE AND FOREST RESOURCES:

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997)

prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:

- a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?**

Comment:

There is no farmland present within the project's boundaries and the project would not convert any farmland to non-agricultural use. Surrounding areas are mapped as "Grazing Land" on the Sonoma County Important Farmland Map. There are no Prime, Unique, Statewide or Locally Important farmlands in the area. Therefore, no impacts would occur with implementation of the project. (1, 2)

Significance Level:

No Impact

- b) Conflict with existing zoning for agricultural use, or Williamson Act Contract?**

Comment:

The project site is in a resource and rural development zoning district, which allows agriculture (wine growing and production), geothermal development, and manufacturing, and is not included in a Williamson Act contract. (1, 2)

Significance Level:

No Impact

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

Comment:

The project site is zoned "Resources and Rural Development." The project would not conflict with the existing zoning of the site or necessitate rezoning of the site. The proposed project is an allowable use under its current zoning of timberland production. Therefore, no impact would occur with implementation of the project. (1, 12)

Significance Level:

No Impact

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

Comment:

The proposed project will not result in the loss of forest land nor will it convert forest land to non-forest use. Individual trees removed would be replaced via mitigation plantings. (1)

Significance Level:

No Impact

- 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?**

Comment:

The project does not involve other changes in the environment that could result in conversion of farmland to non-agricultural use or forest land to non-forest use. (1,2)

Significance Level:

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?**

Comment:

The project is within the jurisdiction of the Northern Sonoma County Air Pollution Control District (NSCAPCD). The NSCAPCD does not have an adopted air quality plan because it is in attainment for all federal and state criteria pollutants. (1, 5)

Significance Level:

No Impact

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

Comment:

The project is located in the NSCAPCD jurisdiction, a region that is in attainment for criteria pollutants under applicable state and federal ambient air quality standards, however, PM₁₀ is a criteria pollutant that is closely monitored in the NSCAPCD. Readings in the district have exceeded state standards on several occasions in the last few years. The high PM₁₀ readings occurred in the winter and are attributed to the seasonal use of wood burning stoves. The project will have no long-term effect on PM₁₀, because all surfaces will be paved, gravel, landscaped or otherwise treated to stabilize bare soils, and operational dust generation will be insignificant. However, there could be a significant short-term emission of dust (which would include PM_{2.5} and PM₁₀) during construction. While these emissions could be significant at the project level, site BMPs and mitigation measures for controlling dust will lower construction related airborne particulates to a less than significant amount. (1, 5)

Significance Level:

Less than Significant with Mitigation Incorporated

Mitigation:

This potentially significant impact can be reduced to a less-than-significant level by implementing the following mitigation measure during construction:

Mitigation Measure AIR-1 Air Quality/ Fugitive Dust Control.

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

- Water inactive construction sites and exposed stockpile sites at least twice daily, including during non-work days, or until soils are stable.
- Pursuant to the California Vehicle Code (State of California 2009), all trucks hauling soil and other loose material to and from the construction site shall be covered or shall maintain at least 6 in. of freeboard (i.e., minimum vertical distance between top of load and the trailer).
- Any topsoil that is removed for the construction operation shall be stored on-site in piles not to exceed 4 ft. in height to allow development of microorganisms prior to resoiling of the construction area. These topsoil piles shall be clearly marked and flagged. Topsoil piles that will not be immediately returned to use shall be revegetated with a non-persistent erosion control mixture.
- Soil piles for backfill shall be marked and flagged separately from native topsoil stockpiles. These soil piles shall also be surrounded by silt fencing, straw wattles, or other sediment barriers or covered unless they are to be immediately used.
- Equipment or manual watering shall be conducted on all stockpiles, dirt/ gravel roads, and exposed or disturbed soil surfaces, as necessary, to reduce airborne dust.

c) Expose sensitive receptors to substantial pollutant concentrations?

Comment:

Sensitive receptors include hospitals, schools, convalescent facilities, and residential areas. State the type and location of the nearest sensitive receptor. No such receptors are located near the proposed project site. (1)

Significance Level:

No Impact

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

Comment:

Construction equipment may generate odors during project construction. The impact would be less than significant as it would affect a very low number of people due to the rural setting and would be a short-term impact that ceases upon completion of the project.(1)

Significance Level:

Less than Significant Impact

4. BIOLOGICAL RESOURCES:

The Geysers Road Bridge over Frasier Creek Project has been surveyed for biotic resources several times by County Environmental Specialist staff. General site surveys have been conducted by Richard Stabler and Jackson Ford, Senior Environmental Specialists with the Sonoma County Permit and Resource Management Department (PRMD) Natural Resources Division. Richard Stabler has a Master of Science Degree in Biology with an emphasis on plant ecology at Sonoma State University and has 20 years of experience performing wildlife, plant, and wetland surveys for the County. Jackson Ford has a Master of Science in Environmental Policy and Planning from California State Polytechnic University,

Pomona and has 10 years of experience performing wildlife surveys for construction projects. Previous site visits conducted by PRMD and resource agency staff are described below.

- May 14, 2019 PRMD Sr. Environmental Specialists Richard Stabler and Jackson Ford surveyed site, delineated wetland identified that partially encroaches into the project study area, but outside the areas of direct impact via construction activities.
- April 13 and 18, 2018: PRMD Sr. Environmental Specialists Richard Stabler and Jackson Ford completed biological surveys of the site.
- On February 3, 2016 PRMD Environmental Review Staff Mary Nicholl and Laura Peltz met with DTPW staff Cindy Rader, David Dammuller, and Michelle Fajardo for site visit to review the project description, biological sensitive area mapping, and potential mitigation opportunities.
- The November 13, 2015 site visit was completed by PRMD biologists Mary Nicholl, Laura Peltz, and Rich Stabler.

Additionally, County biologists coordinated a resources agency meeting on February 15, 2018. Representatives from California Department of Fish and Wildlife, North Coast Regional Water Quality Control Board, National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries), and the U.S. Department of Army Corps of Engineers. The purpose of this meeting was to review recent project design elements and construction methods in efforts to identify site impacts and potential avoidance, minimizations and mitigations for environmental impacts. The information was then used to develop a project Natural Environment Study (NES) in effort to satisfy requirements of the National Environmental Policy Act (NEPA). The report was submitted to Caltrans Local Assistance who represents the Federal Highway Administration (FHWA), the NEPA lead agency for the project. The NES was approved on March 12, 2021.

A project Biological Assessment was written, and Caltrans staff submitted that document to NOAA Fisheries to initiate Section 7 consultation of the Federal Endangered Species Act consultation. NOAA Fisheries issued a project Biological Opinion on November 19, 2021 to cover the potential impacts FESA listed fish species.

The following analysis has been summarized from the project's NES and BA/BO documentation.

Regulatory Framework

The following discussion identifies federal, state and local environmental regulations that serve to protect sensitive biological resources relevant to the California Environmental Quality Act (CEQA) review process.

Federal

Federal Endangered Species Act (FESA)

FESA establishes a broad public and federal interest in identifying, protecting, and providing for the recovery of threatened or endangered species. The Secretary of Interior and the Secretary of Commerce are designated in FESA as responsible for identifying endangered and threatened species and their designated critical habitat, carrying out programs for the conservation of these species, and rendering opinions regarding the impact of proposed federal actions on listed species. The USFWS and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries) are charged with implementing and enforcing the FESA. USFWS has authority over terrestrial and continental aquatic species, and NOAA Fisheries has authority over species that spend all or part of their life cycle at sea, such as salmonids.

Section 9 of FESA prohibits the unlawful "take" of any listed fish or wildlife species. Take, as defined by FESA, means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to

engage in any such action.” USFWS’s regulations define harm to mean “an act which actually kills or injures wildlife.” Such an act “may include “significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering” (50 CFR § 17.3). Take can be permitted under FESA pursuant to sections 7 and 10. Section 7 provides a process for take permits for federal projects or projects subject to a federal permit, and Section 10 provides a process for incidental take permits for projects without a federal nexus. FESA does not extend the take prohibition to federally listed plants on private land, other than prohibiting the removal, damage, or destruction of such species in violation of state law.

The Migratory Bird Treaty Act of 1918 (MBTA)

The U.S. MBTA (16 USC §§ 703 et seq., Title 50 Code of Federal Regulations [CFR] Part 10) states it is “unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill; attempt to take, capture or kill; possess, offer for sale, sell, offer to barter, barter, offer to purchase, purchase, deliver for shipment, ship, export, import, cause to be shipped, exported, or imported, deliver for transportation, transport or cause to be transported, carry or cause to be carried, or receive for shipment, transportation, carriage, or export any migratory bird, any part, nest, or egg of any such bird, or any product, whether or not manufactured, which consists, or is composed in whole or in part, of any such bird or any part, nest or egg thereof...” In short, under MBTA it is illegal to disturb a nest that is in active use, since this could result in killing a bird, destroying a nest, or destroying an egg. The USFWS enforces MBTA. The MBTA does not protect some birds that are non-native or human-introduced or that belong to families that are not covered by any of the conventions implemented by MBTA. In 2017, the USFWS issued a memorandum stating that the MBTA does not prohibit incidental take; therefore, the MBTA is currently limited to purposeful actions, such as directly and knowingly removing a nest to construct a project, hunting, and poaching.

The Clean Water Act (CWA)

The CWA is the primary federal law regulating water quality. The implementation of the CWA is the responsibility of the U.S. Environmental Protection Agency (EPA). However, the EPA depends on other agencies, such as the individual states and the U.S. Army Corps of Engineers (USACE), to assist in implementing the CWA. The objective of the CWA is to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” Section 404 and 401 of the CWA apply to activities that would impact waters of the U.S. The USACE enforces Section 404 of the CWA and the California State Water Resources Control Board enforces Section 401.

Section 404

As part of its mandate under Section 404 of the CWA, the EPA regulates the discharge of dredged or fill material into “waters of the U.S.”. “Waters of the U.S.: include territorial seas, tidal waters, and non-tidal waters in addition to wetlands and drainages that support wetland vegetation, exhibit ponding or scouring, show obvious signs of channeling, or have discernible banks and high-water marks. Wetlands are defined as those areas “that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR 328.3(b)). The discharge of dredged or fill material into waters of the U.S. is prohibited under the CWA except when it is in compliance with Section 404 of the CWA. Enforcement authority for Section 404 was given to the USACE, which it accomplishes under its regulatory branch. The EPA has veto authority over the USACE’s administration of the Section 404 program and may override a USACE decision with respect to permitting. Substantial impacts to waters of the U.S. may require an Individual Permit’s Projects that only minimally affect waters of the U.S. may meet the conditions of one of the existing Nationwide Permits, provided that such permit’s other respective conditions are satisfied. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions (see below).

Section 401

Any applicant for a federal permit to impact waters of the U.S. under Section 404 of the CWA, including Nationwide Permits where pre-construction notification is required, must also provide to the USACE a

certification or waiver from the State of California. The “401 Certification” is provided by the State Water Resources Control Board through the local Regional Water Quality Control Board (RWQCB). The RWQCB issues and enforces permits for discharge of treated water, landfills, storm-water runoff, filling of any surface waters or wetlands, dredging, agricultural activities and wastewater recycling. The RWQCB recommends the “401 Certification” application be made at the same time that any applications are provided to other agencies, such as the USACE, USFWS, or NOAA Fisheries. The application is not final until completion of environmental review under the CEQA. The application to the RWQCB is similar to the pre-construction notification that is required by the USACE. It must include a description of the habitat that is being impacted, a description of how the impact is proposed to be minimized and proposed mitigation measures with goals, schedules, and performance standards. Mitigation must include a replacement of functions and values, and replacement of wetland at a minimum ratio of 2:1, or twice as many acres of wetlands provided as are removed. The RWQCB looks for mitigation that is on site and in-kind, with functions and values as good as or better than the water-based habitat that is being removed.

State

California Endangered Species Act (CESA)

Provisions of CESA protect state-listed threatened and endangered species. The CDFW is charged with establishing a list of endangered and threatened species. CDFW regulates activities that may result in “take” of individuals (i.e., “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill”). Habitat degradation or modification is not expressly included in the definition of “take” under the California Fish and Game Code (CFGC), but CDFW has interpreted “take” to include the killing of a member of a species which is the proximate result of habitat modification.

Fish and Game Code 1600-1602

Sections 1600-1607 of the CFGC require that a Notification of Lake or Streambed Alteration Agreement (LSAA) application be submitted to CDFW for “any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake.” CDFW reviews the proposed actions in the application and, if necessary, prepares a LSAA that includes measures to protect affected fish and wildlife resources, including mitigation for impacts to bats and bat habitat.

Nesting Birds

Nesting birds, including raptors, are protected under CFGC Section 3503, which reads, “It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto.” In addition, under CFGC Section 3503.5, “it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto”. Passerines and non-passerine land birds are further protected under CFGC 3513. As such, CDFW typically recommends surveys for nesting birds that could potentially be directly (e.g., actual removal of trees/vegetation) or indirectly (e.g., noise disturbance) impacted by project-related activities. Disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered “take” by CDFW.

Non-Game Mammals

Sections 4150-4155 of the CFGC protects non-game mammals, including bats. Section 4150 states “A mammal occurring naturally in California that is not a game mammal, fully protected mammal, or fur-bearing mammal is a nongame mammal. A non-game mammal may not be taken or possessed except as provided in this code or in accordance with regulations adopted by the commission”. The non-game mammals that may be taken or possessed are primarily those that cause crop or property damage. Bats are classified as a non-game mammal and are protected under the CFGC.

California Fully Protected Species and Species of Special Concern

The classification of “fully protected” was the CDFW’s initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibians and reptiles, birds, and mammals. Most of the species on these lists have subsequently been listed under CESA and/or FESA. The Fish and Game Code sections (fish at §5515, amphibians and reptiles at §5050, birds at §3503 and §3511, and mammals at §4150 and §4700) dealing with “fully protected” species state that these species “...may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected species,” although take may be authorized for necessary scientific research. This language makes the “fully protected” designation the strongest and most restrictive regarding the “take” of these species. In 2003, the code sections dealing with “fully protected” species were amended to allow the CDFW to authorize take resulting from recovery activities for state-listed species.

California Species of Special Concern (CSC) are broadly defined as animals not listed under the FESA or CESA, but which are nonetheless of concern to the CDFW because they are declining at a rate that could result in listing or because they historically occurred in low numbers and known threats to their persistence currently exist. This designation is intended to result in special consideration for these animals by the CDFW, land managers, consulting biologists, and others, and is intended to focus attention on the species to help avert the need for costly listing under FESA and CESA and cumbersome recovery efforts that might ultimately be required. This designation also is intended to stimulate collection of additional information on the biology, distribution, and status of poorly known at-risk species, and focus research and management attention on them. Although these species generally have no special legal status, they are given special consideration under the CEQA during project review.

Porter-Cologne Water Quality Control Act

The intent of the Porter-Cologne Water Quality Control Act (Porter-Cologne) is to protect water quality and the beneficial uses of water, and it applies to both surface and ground water. Under this law, the State Water Resources Control Board develops statewide water quality plans, and the RWQCBs develop basin plans that identify beneficial uses, water quality objectives, and implementation plans. The RWQCBs have the primary responsibility to implement the provisions of both statewide and basin plans. Waters regulated under Porter-Cologne, referred to as “waters of the State,” include isolated waters that are not regulated by the USACE. Projects that require a USACE permit, or fall under other federal jurisdiction, and have the potential to impact waters of the State are required to comply with the terms of the Water Quality Certification Program. If a proposed project does not require a federal license or permit, any person discharging, or proposing to discharge, waste (e.g., dirt) to waters of the State must file a Report of Waste Discharge and receive either waste discharge requirements (WDRs) or a waiver to WDRs before beginning the discharge.

Local

Sonoma County General Plan

The *Sonoma County General Plan 2020* Land Use Element and Open Space & Resource Conservation Element both contain policies to protect natural resource lands including, but not limited to, watershed, fish and wildlife habitat, biotic areas, and habitat connectivity corridors.

Riparian Corridor Ordinance

The RC combining zone is established to protect biotic resource communities, including critical habitat areas within and along riparian corridors, for their habitat and environmental value, and to implement the provisions of the General Plan Open Space and Resource Conservation and Water Resources Elements. These provisions are intended to protect and enhance riparian corridors and functions along designated streams, balancing the need for agricultural production, urban development, timber and mining operations and other land uses with the preservation of riparian vegetation, protection of water resources, floodplain management, wildlife habitat and movement, stream shade, fisheries, water quality, channel stability,

groundwater recharge, opportunities for recreation, education and aesthetic appreciation and other riparian functions and values.

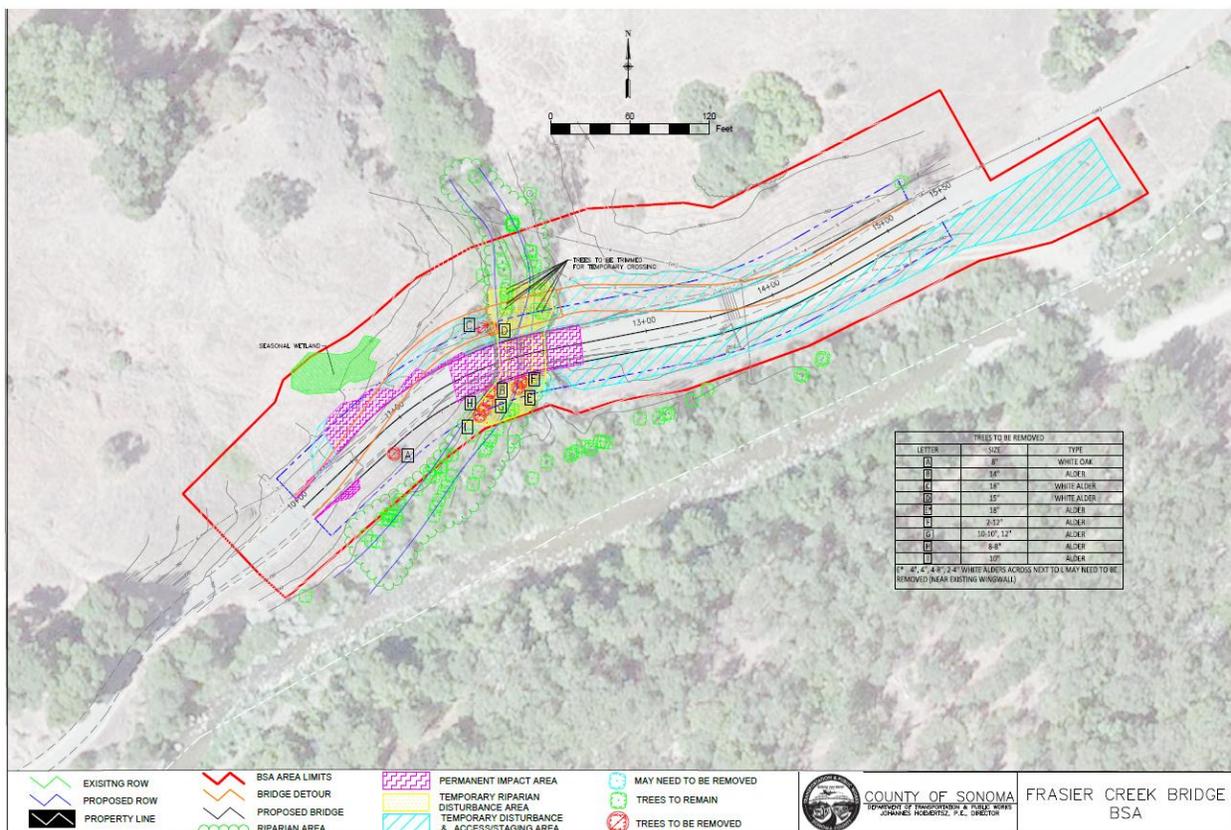
Environmental Setting

Study Area

The BSA covers the entire area of the existing, temporary, and proposed bridge, and the area of construction for the temporary bridge approaches, including construction staging and access areas. The BSA is located on Geysers Road at Frasier Creek. Approximately 10 miles from the northwesterly terminus of Geysers Road at Highway 101 near Cloverdale, California. Geysers Road is a local rural road located in within the Northwest portion of Sonoma County. The road has southerly terminus at Highway 128 approximately 28.5 miles from Frasier Creek. Oak woodland dominates the watershed. The watershed is owned exclusively by private landowners and Wilderness Unlimited and primary land uses include grazing and hunting (CDFW 2006).

Site elevations range from 744 feet to 753 feet. Surrounding land uses are primarily open space (forested land) with limited rural residential in the vicinity. The bridge is located on the Asti USGS (1977) 7.5-minute quadrangle map in Section 6, Township 11 North, and Range 9 West.

Figure 3: Biological Study Area and Project Impact Area



Plant Communities and Habitat Types in the BSA

Vegetation Communities

Four natural communities occur in the BSA: riparian scrub, non-native annual grassland, perennial stream, and developed. As well as federal-designated critical habitat for one species. These communities are discussed below.

Riparian Scrub

Riparian vegetation is dominant within the BSA along Frasier Creek. This community can be classified as White Alder Riparian Forest (Holland 1988). Dominant species include White Alder (*Alnus rhombifolia*), Valley Oak (*Quercus lobata*), and Arroyo Willow (*Salix lasiolepis*). Stands of the White Alder are relatively young, indicating an early-seral state, and regular disturbance events in the form of mudflows and landslides. Riparian scrub is considered a sensitive natural community by CDFW.

Annual grassland

The slopes to the east and west of the bridge contain annual grassland, dominated by non-native species. Scattered live oaks are found within the grassland habitat. There are no sensitive plants listed within the Frasier Creek drainage in the CNPS Inventory or Department of Fish and Wildlife's Natural Diversity Database.

Perennial Stream

The reach of Frasier Creek in the BSA is confined within a steep canyon leading to the existing bridge where it is further constrained by concrete lining the channel bottom and the box girder walls.

Developed/Disturbed

Developed and disturbed areas within the BSA include the existing Geysers Road Bridge and associated footings and pilings, and the existing Geysers Road Bridge and associated turnouts and road shoulders. Limited vegetation adapted to disturbance grows on the margins of these areas, including non-native annual grasses and herbs. Access to Frasier Creek will be from the eastbound shoulder down to the top of the bank, this area is partially developed and partially vegetated with riparian scrub. (1,30)

Would the project:

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

Comment:

Special-Status Species

Special-status species include those plant and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA). These acts afford protection to both listed and proposed species. In addition, California Department of Fish and Wildlife (CDFW) Species of Special Concern, which are species that face extirpation in California if current population and habitat trends continue, U.S. Fish and Wildlife Service (The Service) Birds of Conservation Concern, and CDFW special-status invertebrates, are all considered special-status species. Although CDFW Species of Special Concern generally have no special legal status, they are given special consideration under the California Environmental Quality Act (CEQA). In addition to regulations for special-status species, most birds in the United States, including non-status species,

are protected by the Migratory Bird Treaty Act of 1918. Plant species on California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants with California Rare Plant Ranks (Rank) of 1 and 2 are also considered special-status plant species and must be considered under CEQA. Bat species designated as "High Priority" by the Western Bat Working Group (WBWG) qualify for legal protection under Section 15380(d) of the CEQA Guidelines. Species designated "High Priority" are defined as "imperiled or are at high risk of imperilment based on available information on distribution, status, ecology and known threats.

Endangered Species Act

The Endangered Species Act (ESA) of 1973, as amended (16 USC 1531 *et seq.*) was enacted to provide a means to identify and protect endangered and threatened species. Under the Section 9 of the ESA, it is unlawful to take any listed species. "Take" is defined as harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting a listed species. "Harass" is defined as an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering. "Harm" is defined as an act which actually kills or injures fish or wildlife and may include significant habitat modification or degradation which actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding, or sheltering. Actions that may result in "take" of a federal-listed species are subject to The Service or National Marine Fisheries Service (NOAA Fisheries) permit issuance and monitoring. Section 7 of ESA requires federal agencies to ensure that any action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat for such species. Any action authorized, funded, or carried out by a federal agency or designated proxy (e.g., Army Corps of Engineers) which has potential to affect listed species requires consultation with The Service or NOAA Fisheries under Section 7 of the ESA.

Critical Habitat

Critical habitat is a term defined in the ESA as a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. The ESA requires federal agencies to consult with the USFWS to conserve listed species on their lands and to ensure that any activities or projects they fund, authorize, or carry out will not jeopardize the survival of a threatened or endangered species. In consultation for those species with critical habitat, federal agencies must also ensure that their activities or projects do not adversely modify critical habitat to the point that it will no longer aid in the species' recovery. In many cases, this level of protection is similar to that already provided to species by the ESA jeopardy standard. However, areas that are currently unoccupied by the species but which are needed for the species' recovery are protected by the prohibition against adverse modification of critical habitat.

Essential Fish Habitat

Essential Fish Habitat (EFH) is regulated through the NMFS, a division of the National Oceanic and Atmospheric Administration (NOAA). Protection of Essential Fish Habitat is mandated through changes implemented in 1996 to the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) to protect the loss of habitat necessary to maintain sustainable fisheries in the United States. The Magnuson-Stevens Act defines Essential Fish Habitat as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity" [16 USC 1802(10)]. NMFS further defines essential fish habitat as areas that "contain habitat essential to the long-term survival and health of our nation's fisheries" Essential Fish Habitat can include the water column, certain bottom types such as sandy or rocky bottoms, vegetation such as eelgrass or kelp, or structurally complex coral or oyster reefs. Under regulatory guidelines issued by NMFS, any federal agency that authorizes, funds, or undertakes action that may affect EFH is required to consult with NMFS (50 CFR 600.920).

Discussion of Special Status Plants

A list of regionally occurring special-status plant species was compiled based on a review of pertinent literature, the results of the field surveys, and the review of the USFWS species list, and CNDDDB and CNPS database records. For each species, habitat requirements were assessed and compared to the habitats within the BSA and immediate vicinity in order to determine their potential to be affected by the proposed project. Based on this review of habitat requirements and the results of the field assessment, no special-status plant species were determined to have suitable habitat within the BSA.

Discussions of Special Status Animals

A list of regionally occurring special-status animal species was compiled based on a review of pertinent literature, the results of the field surveys, and the review of the USFWS species list, CNDDDB database records, and a query of the California Wildlife Habitat Relationships (CWHHR) system (California Department of Fish and Game 2008a). The CWHHR system was used to help determine wildlife species that potentially occur in the vegetation habitats within the BSA. The CWHHR is a predictive database system based on scientific information concerning wildlife species and their habitat relationships. Fish and invertebrates are not included in the CWHHR system.

For each species, general habitat requirements were assessed and compared to the habitats within the BSA and immediate vicinity in order to determine their potential to be affected by the proposed project. Based on this review of general habitat requirements presented in, and the results of the field assessment, nine special-status species were determined to have the potential to be present within the proposed project area.

These special-status animal species potentially affected by the project include: Central California Coast Coho salmon (*Oncorhynchus kisutch*), Central Coast California District Population Segment (DPS) steelhead (*Oncorhynchus mykiss irideus*) California coastal chinook salmon (*Oncorhynchus tshawytscha*), foothill yellow legged frog (*Rana boylei*), red bellied newt (*Taricha rivularis*), western pond turtle (*Actinemys marmorata*), pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), and western red bat (*Lasiurus blossevillii*). Potential impacts and recommended mitigation measures for the species listed above are addressed in this document.

Critical Habitat and Essential Fish Habitat

The project is within designated Essential Fish Habitat (EFH) for central coastal chinook salmon and central California Coast coho salmon. The Magnuson-Stevens Act requires consultation for all federal agency actions that may adversely affect EFH. EFH consultation with NOAA FISHERIES is required by federal agencies undertaking, permitting, or funding activities that may adversely affect EFH. Because localized short-term impacts to designated critical habitat, the County determined the project may have an effect to EFH. Conservation measures to avoid, minimize, mitigate, or otherwise offset adverse effects to EFH have been included in the project design to reduce these impacts to negligible and temporary. A Biological Assessment/Essential Fish Habitat Assessment (BA/EFHA) was submitted to the NOAA Fisheries for review under Section 7 of the Endangered Species Act (ESA) to address potential impacts to EFH. NOAA Fisheries issued a Biological Opinion on May 22, 2020, stating that with the conservation measures proposed, the project would not adversely affect EFH. Mitigation measures BIO-1 (erosion and sediment control), BIO-2 (accidental spills), BIO-3 (riparian habitat), BIO-4 (invasive species) and BIO-5 (salmonids) will be incorporated into the project to minimize potential effects on federally listed species and biological resources, including critical habitat and EFH.

Central California Coast ESU Coho

Central California Coast Coho (also sometimes called silver salmon) are anadromous, salmonids that have historically been distributed throughout the north Pacific coastal waters. Coho spend 1-2 years in their natal streams before moving downstream to sea, and return after spending 1-2 years in the

ocean. The spawning migrations begin in the late-fall or winter after heavy rains have occurred, and generally peak between December and January. Spawning nests (or redds) are generally in the heads of riffles or pools, with loose, coarse gravel, and nearby cover. Both males and females die after spawning, although females may guard their nests from predators for up to two weeks.

The listed range of the Central California coast coho salmon ESU includes the Russian River watershed, which includes Frasier Creek. There have been no reported occurrences of coho in either Frasier or Big Sulphur Creek (Bob Coey, NOAA Fisheries Biologist, personal communication, CDFW 2006). Coho salmon have not been detected on Frasier Creek. The Reach within the project action area is designated critical habitat and there are no substantial barriers to upstream mitigation from the Russian River and therefore take may be possible but highly unlikely.

Central California Coast DPS Steelhead

The Central California Coast Steelhead Distinct Population Segment was federally listed as threatened in 1997, with the threatened status reaffirmed on January 5, 2006. The DPS includes all naturally spawned populations of steelhead in California streams from the Russian River to Aptos Creek, and the drainages of San Francisco, San Pablo and Suisun Bays eastward to Chipps Island. Steelhead are not State listed on Frasier Creek.

Steelhead are anadromous rainbow trout. The steelhead on Russian River and its tributaries are "winter-run," meaning that fish return to their freshwater spawning grounds from late fall to April (NMFS 2001). Some steelhead survive to return to the ocean then spawn again in subsequent years. Steelhead construct nests called redds in spawning gravel, generally prefer gravel sized 0.5 to 6 inches dominated by 2- to 3-inch gravel (Flosi, et al 1998), and need gravel that is free from excessive sediment that can smother eggs. Egg development is temperature dependent, varying from about 19 days at 60 degrees F to about 80 days at 42 degrees F (NMFS 2001). Steelhead hatch as "alevins" (a larval life stage dependent on food stored in a yolk sac), and emerge from the gravel as "fry." In their first summer, fry generally rear in shallow habitats such as pool tailouts, shallow riffles, and edgewater habitats. In winter, they are often found under large boulders in shallow riffles and quiet backwater and edge areas. (Flosi, et al 1998). Cover in the form of boulders, root wads and woody debris provides important summer and winter habitat. Later as they grow, juveniles move into the deeper water of riffles and pools. Steelhead prefer rearing water temperatures between 53 to 58 degrees F, and have an upper lethal limit around 75 degrees F (NMFS 2001). Pools provide a cool water refuge for higher summer temperatures. Juvenile steelhead remain in fresh water 1-3 years, migrate to the ocean as "smolts" (typically between March and June) and then spend 2-3 years in the ocean before returning to spawn in their natal stream.

The habitat in the BSA may support multiple steelhead life stages, though only juvenile steelhead were have been observed during the site surveys. The BSA is known to serve as a migratory corridor for steelhead traveling to spawning grounds in the upper watershed. Juvenile steelhead have been seen during several of the site visits, suitable habitat such as large boulders, aquatic vegetation, and large woody debris are present within Frasier Creek.

Juvenile steelhead have been seen during several of the site visits, suitable habitat such as large boulders, aquatic vegetation, and large woody debris are present within Frasier Creek.

California Coast ESU Chinook

The California coastal chinook are anadromous, semelparous, and are the largest of the Pacific salmon species. Chinook salmon prefer rivers with deep, cold, fast-moving water, and gravel substrates. During the freshwater portion of their life history, chinook does not feed. Both males and females die after spawning. After eggs are deposited, it takes 3-4 months for them to hatch.

Chinook salmon are known to occur in the main stem of the Russian River, but are not known to use either Frasier Creek or Big Sulphur Creek. In various surveys by CDFW from 1957-2000, chinook salmon have not been observed (CDFG 2006). Personal communication with Bob Coey of NOAA

Fisheries stated that chinook salmon have not been detected in either Frasier or Big Sulphur Creeks. The reach within the project action area is designated critical habitat and there are no substantial barriers to upstream mitigation from The Russian River and therefore take may be possible but highly unlikely.

CC chinook have not been observed at the site. Personal communication with Bob Coey of NOAA Fisheries stated that chinook salmon have not been detected in Frasier Creek.

Potential Impacts to Salmonids from the Project

There will likely be some direct impacts to steelhead due to the construction of the work pad which will require some work in the flowing water of the creek. A stream diversion system will be put into place to isolate the work area from flow of Frasier Creek. The construction of the work pad could be lethal to some steelhead that might become trapped in the rock. Fish capture and relocation using block nets, seines, e-fishers, and buckets will be needed prior to the construction of the work pad. Impacts to fish would be to less than significant with the implementation of measures included in BIO-5- Mitigation for salmonids, listed below.

Removal of riparian vegetation in the temporary disturbance areas could potentially affect steelhead indirectly through loss of shade. However, this impact would be temporary with incorporation of mitigation measure BIO-3 (replacement of lost riparian habitat) will fully mitigate for any loss of riparian habitat. Additionally, the replacement bridge will actually increase shading to the creek, offsetting any temporary loss of shade from vegetation removal. Continuous riparian vegetation is also present upstream and downstream of the BSA to provide shade to any steelhead in the project area during construction. Increased turbidity within Frasier Creek due to construction activities may also have an adverse effect on fish. However mitigation measure BIO-1 (erosion and sediment control) will ensure that disturbed areas are stabilized and appropriate erosion control measures (i.e., silt fencing) have been implemented during, as well as immediately following, construction to minimize and/or prevent erosion and sedimentation effects. Additional measures included in BIO-5 (salmonids) will ensure impacts to salmonids are less than significant.

Foothill Yellow Legged Frog

The foothill yellow-legged frog (FYLF) is a State species of special concern and has no Federal status. The Feather River and Northeast/Northern Sierra clades are listed as threatened; the East/Southern Sierra, West/Central Coast and Southwest/South Coast clades are listed as endangered. The only clade not listed under CESA is the North Coast Clade; this clade is not subject to CESA protections but is still a CDFW Species of Special Concern. FYLF is found in or near rocky streams in a variety of habitats, including valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral, and wet meadows. Adults often bask on exposed rock surfaces near streams. When disturbed, they dive into the water and take refuge under submerged rocks or sediments. During periods of inactivity, especially during cold weather, individuals seek cover under rocks in the streams or on shore within a few meters of water. Unlike most other ranid frogs in California, this species is rarely encountered (even on rainy nights) far from permanent water.

In California, mating and egg-laying usually occur after the end of spring flooding and may commence anytime from mid-March to May, depending on local water conditions (CDFG 2008). Clusters of eggs are attached to the downstream side of submerged rocks. Tadpoles transform in about 15 weeks. Tadpoles require water for at least three or four months while completing their aquatic development. This frog has disappeared from much of its range in California (possibly up to 45 percent) (CaliforniaHerps 2018)

The rocky, low-flow channel of Frasier Creek within the BSA provides suitable habitat for foothill yellow-legged frog. Biotic surveys within the project BSA found several Adult, juvenile, and larvae. There are multiple CNDDDB occurrences of foothill yellow-legged frog within and in adjacent areas of the project BSA.

Red Bellied Newt

The red bellied newt (*Taricha rivularis*) is a State species of special concern and has no Federal status. The red bellied newts have the most limited geographical distribution among the tree species of the genus *Taricha*. They occur in coastal California north of San Francisco Bay in Sonoma, Mendocino and Humboldt Counties, at elevations between 150-450m (amphibiaweb.org). Adult red bellied newts are 5 ½ - 7 ½ inches long in total length. They are considered medium sized salamander with grainy skin that is brownish black on top with a tomato red under belly.

Adults are terrestrial, becoming aquatic when breeding. Breeding migration begins as early as January with adult males entering waters as early as February. These adults will leave waters during heavy rain events returning to water after high flows recede. Typically breeding takes place from February to May, in clean rocky streams with moderate to fast flow. The females lay egg masses that are one layer thick with clutch size of about 10 eggs. Many egg masses can be found under a single rock. Temperatures determine the how long eggs take to hatch with known ranges of 16-34 days. The larvae stage last approximately 4-6 months with metamorphosis typically occurring in late summer and early fall.

Red bellied newts have been observed throughout the projects BSA. The site conditions are ideal for all life stages of red bellied newts.

Potential Impacts to Amphibians from the Project

The Project could adversely affect foothill yellow-legged frogs, and red bellied newts if individuals were present in the Project area during construction. Potential direct effects include harassment, injury, and mortality of individuals due to equipment and vehicle traffic. The species may also be affected if construction activities result in degradation of aquatic habitat and water quality due to erosion and sedimentation, accidental fuel leaks, and spills. In addition, loss of riverine and riparian habitat may have a negative impact on this species.

The proposed project has the potential to result in adverse impacts on foothill yellow-legged frogs and red bellied newts as identified below:

- Although unlikely, construction related impacts, especially in-channel work, could result in an adverse effect via direct loss (e.g., due to operation of equipment in or adjacent to the creek channel when flowing or standing water is present). The potential for direct loss only occurs during project construction. Implementation of the avoidance and minimization measures will minimize the potential for direct take.
- Activities related to the construction of the new bridge and roadway approaches would result in some localized loss of vegetation and general disturbance to the soil. Removal of vegetation and soil can accelerate erosion processes in the BSA and increase the potential for sediment to enter Frasier Creek. Excessive sedimentation into the stream channel has the potential to reduce habitat quality for these species (e.g. decreasing availability of potential food items including aquatic invertebrates). Implementation of Conservation Measure #4 (Replacement of Lost Riparian Habitat) will fully mitigate for any loss of riparian habitat and implementation of Conservation Measure #1 (Erosion and Sediment Control) will ensure that disturbed areas are stabilized and appropriate erosion control measures (i.e., silt fencing) have been implemented during, as well as immediately following, construction to minimize and/or prevent erosion and sedimentation effects.
- Construction activities typically include the refueling of construction equipment on location. As a result, minor fuel and oil spills may occur, with a risk of larger releases. Without rapid containment and clean up, these materials could be potentially toxic depending on the location of the spill in proximity to surface water features, including Frasier Creek. Implementation of Conservation Measure #2 (Prevention of Accidental Spills) will limit the potential for this impact.

Western pond turtles

The western pond turtle (*Emys marmorata*) is a State species of special concern and has no Federal status. Western pond turtles are approximately 3.5–7.5 inches in length and drab brown or olive-colored, lacking prominent markings on their carapace. The name “pond” turtle is somewhat misleading as they are often associated with the quiet waters of rivers and streams. Within their aquatic habitat, they are associated with areas that contain underwater refugia such as rocks, submerged vegetation, or holes along a bank (Hays et al. 1999). They also require basking sites, such as partially submerged logs, rocks, mats of floating vegetation, and open mud banks. In colder areas, the turtles may hibernate underwater in bottom mud or in upland sites that are near water and have deep layers of duff. Overwintering and aestivation sites often occur in upland areas with deep layers of duff or leaf litter. The western pond turtle is a dietary generalist, often foraging on the bottom of water features for aquatic invertebrates.

Western pond turtles are long-lived, the maximum life-span is 50-70 years, and require approximately 10 years to reach sexual maturity (Hays et al. 1999). Eggs are typically laid from March through August. Nests are typically located in open areas with good sun exposure and few shrubs or trees and may be a considerable distance from the aquatic site (up to 0.25 mile) (Jennings and Hayes 1994). Females excavate an upland nest chamber in which the eggs are laid and subsequently buried. Eggs hatch approximately 2.5– 4 months later. Hatchling turtles are thought to emerge from the nest and move to the aquatic site in the spring.

The rocky, low-flow channel of Frasier Creek within the BSA provides suitable habitat for foothill yellow-legged frog. Biotic surveys within the project BSA found several Adult pond turtles basking on rocks just upstream of the existing bridge structure.

Potential Impacts to Western Pond Turtles from the Project

The proposed project has the potential to result in adverse impacts on western pond turtles as identified below:

- Although unlikely, construction related impacts, especially in-channel work, could result in an adverse effect via direct loss (e.g., due to operation of equipment in or adjacent to the creek channel when flowing or standing water is present). The potential for direct loss only occurs during project construction. Implementation of the avoidance and minimization measures will minimize the potential for direct loss.
- Activities related to the construction of the new bridge and roadway approaches would result in some localized loss of vegetation and general disturbance to the soil. Removal of vegetation and soil can accelerate erosion processes in the BSA and increase the potential for sediment to enter Frasier Creek. Excessive sedimentation into the stream channel has the potential to reduce habitat quality for western pond turtles (e.g. decreasing availability of potential food items including aquatic invertebrates). Implementation of Conservation Measure #4 (Replacement of Lost Riparian Habitat) will fully mitigate for any loss of riparian habitat and implementation of Conservation Measure #1 (Erosion and Sediment Control) will ensure that disturbed areas are stabilized and appropriate erosion control measures (i.e., silt fencing) have been implemented during, as well as immediately following, construction to minimize and/or prevent erosion and sedimentation effects.
- Construction activities typically include the refueling of construction equipment on location. As a result, minor fuel and oil spills may occur, with a risk of larger releases. Without rapid containment and clean up, these materials could be potentially toxic depending on the location of the spill in proximity to surface water features, including Frasier Creek. Implementation of Conservation Measure #2 (Prevention of Accidental Spills) will limit the potential for this impact by requiring that the contractor stage equipment and fuels a minimum of 150 ft from Frasier Creek, maintaining spill containment booms at the site, and by maintaining construction equipment to avoid mechanical breakdown and potential for fluid leaks.

Pallid bat

The pallid bat, a California Species of Special Concern and no Federal status, is a year-round resident throughout California, except in the high Sierra Nevada and in Del Norte and western Siskiyou counties in the northwestern corner of the state. Pallid bats often roost in groups (10 – 100+ individuals). They typically use separate day and night roosts and, in general, day roosts are in more enclosed, protected spaces than are night roosts (Tatarian 2001). The well-protected day roosts are required for maternity roosts where the young are reared (i.e., nursery colonies). Day and night roosts include crevices in rocky outcrops and cliffs, caves, mines, large tree cavities and various human structures such as bridges (especially wooden and concrete girder designs), barns, and vacant buildings (Sherwin and Rambaldini 2005). Maternity roosts are established in April, with young born in May through June. The young are typically volant (i.e., flying) by July through early August.

Pallid bat was not observed during the field surveys. The existing bridge does not have any suitable roosting crevices. The riparian habitat along Frasier Creek may provide suitable night roosting and foraging habitat for pallid bat. The closest CNDDDB occurrence record for pallid bat was recorded along the Russian River more than 5 miles west of the BSA. Given the absence of mines, caves, rock crevices, and large snags, the BSA is not anticipated to provide suitable breeding habitat (e.g., maternity roosts) for pallid bat.

Western red bat

Western red bat is a State species of special concern and has no federal status. This species of bat is considered highly migratory and broadly distributed, reaching from southern Canada through much of the western United States. They are typically solitary, roosting primarily in the foliage of trees or shrubs. Day roosts are commonly located in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas, possibly in association with riparian habitat (particularly willows, cottonwoods, and sycamores). Mating occurs in August and September. After delayed fertilization, the young are born in late May through early July. The young are typically volant (i.e., flying) by late July through early August.

Western red bat was not observed during the field surveys. The existing bridge does not have any suitable roosting crevices. The riparian habitat along Frasier Creek may provide suitable night roosting and foraging habitat for western red bat. The closest CNDDDB occurrence record for this species was recorded along the Russian River more than 5 miles west of the BSA. Given the absence of mature stands of cottonwood and sycamore, the BSA is not anticipated to provide suitable breeding habitat for western red bat.

Potential Impacts to Bats from the Project

The existing bridge does not provide suitable roosting crevices and the BSA has a low potential to provide suitable breeding habitat for pallid bat and western red bat. Project implementation is unlikely to have an adverse effect on foraging bats due to the abundance of suitable foraging habitat in the region and the temporary nature of impacts to riparian habitat within the BSA. Therefore, the proposed project is not anticipated to result in adverse impacts to these species. However, the implementation of BIO-8 (Mitigation Measures for Bats) will occur to further reduce to potential for adverse impacts on pallid bat and western red bat.

Migratory Birds

Most birds in the United States, including non-status species, are given special protection under the Migratory Bird Treaty Act of 1918. Riparian trees and street trees in the BSA may provide nesting habitat for songbirds or raptors. The bridge itself does not show any evidence of swallow nesting.

Potential Impacts to Migratory Birds from the Project

Migratory bird species may nest in or adjacent to the project area. Construction disturbance during the breeding season could result in the loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. The proposed project may also result in a small, temporary reduction of foraging or roosting habitat for migratory bird species. However, due to the regional abundance of similar habitats, temporary nature of habitat loss, and implementation of mitigation measure BIO-3 (replacement of lost riparian habitat), and BIO-9 (migratory birds), the project is not expected to result in a significant impact on migratory birds. (1,6,8,18,30,31,32,41)

Significance Level:

Less than Significant with Mitigation Incorporated

Mitigation:

BIO- 1- Mitigation Measures for Erosion and Sedimentation Control

Erosion control measures shall be implemented during construction of the proposed project. These measures shall conform to the provisions in the Caltrans Standard Specifications and the special provisions included in the contract for the project. Such provisions include the preparation of a Storm Water Pollution Prevention Plan (SWPPP), which describes and illustrates the of best management practices (BMPs) in the project site. Erosion control measures to be included in the SWPPP or to be implemented by the County include the following:

- To the maximum extent practicable, activities that increase the erosion potential in the project area shall be restricted to the relatively dry summer and early fall period to minimize the potential for rainfall events to transport sediment to surface water features. In channel construction will be conducted from June 15-October 31 and upland construction will likely occur throughout the year as long as work activities comply with the conservation and avoidance and minimization measures identified herein and for the protection of other sensitive or special-status plant or animal species. For upland construction activities (above the top of bank) that must take place during the late fall, winter, or spring, temporary erosion and sediment control structures shall be in place and operational at the end of each construction day and maintained until permanent erosion control structures are in place.
- Areas where wetland and upland vegetation need to be removed shall be identified in advance of ground disturbance and limited to only those areas that have been approved by the County. Exclusionary fencing will be installed around areas that do not need to be disturbed.
- At completion of construction and in those areas where subsequent ground disturbance will not occur for 10 calendar days or more, weed-free mulch shall be applied to disturbed areas to reduce the potential for short-term erosion. Prior to a rain event or when there is a greater than 50 percent possibility of rain within the next 24 hours, as forecasted by the National Weather Service, weed-free mulch shall be applied to all exposed areas upon completion of the day's activities. Soils shall not be left exposed during the rainy season.
- Suitable BMPs, such as silt fences, straw wattles, or catch basins, shall be placed below all construction activities at the edge of surface water features to intercept sediment before it reaches the waterway. These structures shall be installed prior to any clearing or grading activities. Further, sediment built up at the base of BMPs will be removed before BMP removal to avoid any accumulated sediments from being mobilized post-construction.
- All dewatering activities will be conducted in compliance with the Caltrans Field Guide for Construction Site Dewatering and Section 13-4.03G of the Caltrans Standard Specifications. Water removed from the excavated area for pier and abutment footings or construction of fishway shall be pumped to a temporary sediment retention basin outside of the channel, through a mechanized water filtration system, or into baker tanks or similar storage system and trucked offsite to an authorized disposal site. If a temporary basin is constructed, it shall be located

outside of the active channel and include sediment sock or similar sediment control on the discharge.

- If temporary stock piling is used, they shall be located such that they do not drain directly into a surface water feature, if possible. If a stockpile drains into a surface water feature, catch basins shall be constructed to intercept sediment before it reaches the feature. Stockpiles shall be graded and vegetated with native species, or covered by other means to reduce the potential for erosion.
- Sediment control measures (BMPs) shall be in place prior to the onset of the rainy season and will be monitored and maintained to be in good working condition until disturbed areas have been revegetated with native species.

BIO-2- Mitigation Measures to Prevent Accidental Spills and Pollution

Construction specifications shall include the following measures to reduce potential impacts to vegetation and aquatic habitat resources in the project area associated with accidental spills of pollutants (e.g., fuel, oil, asphalt and grease):

- A site-specific spill prevention plan shall be prepared, approved by the County and implemented for potentially hazardous materials. The plan shall include the proper handling and storage of all potentially hazardous materials, as well as the proper procedures for cleaning up and reporting any spills. If necessary, containment berms shall be constructed to prevent spilled materials from reaching surface water features.
- Where feasible, equipment and hazardous materials shall be stored at least 50 ft away from surface water features.
- Vehicles and equipment used during construction shall receive proper and timely maintenance to reduce the potential for mechanical breakdowns leading to a spill of materials. Maintenance and fueling shall be conducted in an area at least 50 ft away from Frasier and/or Big Sulphur Creeks or within an adequate fueling containment area.
- Equipment operating within the OHWM shall use non-toxic vegetable oil for operating hydraulic equipment opposed to traditional hydraulic fluids that can contain a wide range of chemical compounds.
- Place plastic materials (or similar) under asphaltic concrete (AC) paving equipment while not in use, to catch and/or contain drips and leaks.
- Minimize sand and gravel from new asphalt from getting into storm drains, streets, and creeks by sweeping. Old or spilled asphalt must be recycled or disposed as approved by the Resident Engineer.
- AC grindings, pieces, or chunks used in embankments or shoulder backing must not be allowed to enter any storm drain or watercourses. Install silt fence until structure is stabilized or permanent controls are in place.
- Collect and remove all broken asphalt and recycle when practical; otherwise, dispose in accordance with Standard Specification 7-1.13 and to an appropriately permitted site.
- During deck pothole patching application and sweeping operations, petroleum or petroleum covered aggregate must not be allowed to enter any storm drain or water courses. Use silt fence until installation is complete.

- Use only non-toxic substances to coat asphalt transport trucks and asphalt spreading equipment.
- Do not allow Portland Concrete Cement (PCC) or slurry to enter storm drains or watercourses.

BIO-3- Mitigation for Lost Riparian Habitat

The following measures shall be implemented to reduce potential impacts to riparian habitat in the action area:

- The width of the construction disturbance zone within the riparian habitat shall be minimized through careful pre-construction planning.
- Exclusionary fencing shall be installed along the boundaries of all riparian areas to be avoided to ensure that impacts to riparian vegetation outside of the construction area are minimized.
- Riparian habitat areas temporarily disturbed shall be replanted using riparian species that have been recorded along the Frasier Creek in the action area, including willow (*Salix lasiolepis* and *Salix laevigata*), white alder (*Alnus rhombifolia*), California bay Laurel (*Umbellularia californica*), CA Buckeye (*Aesculus californica*), Fremont cottonwood (*Populus fremontii*) Live Oak (*Quercus wislizenii*) and Valley Oak (*Quercus lobata*).
- Onsite creation/restoration shall occur in areas that have been disturbed during project construction and within interstitial spaces of the RSP. The amount of habitat created/restored shall be at a 3:1 ratio of new plantings per large (6 in. in diameter at breast height) woody plant removed. This replanting ratio will help ensure successful establishment of at least one vigorous plant for each plant removed to accommodate the project.
- Plant spacing intervals will be determined as appropriate based on site conditions following construction.
- Non-native tree species removed in riparian areas during project construction will be replaced with native riparian (e.g., willow, alder, and cottonwood)
- Revegetation monitoring would be implemented in compliance with regulatory permit conditions (typically 5 years in duration) and be initiated immediately following completion of the planting. The monitoring surveys will consist of a general site walkover evaluating the survival and health of riparian plantings, signs of drought stress, weed or herbivory problems, and the presence or trash or other debris. Within the mitigation area, less than 50 percent total mortality of planted species (including container stock and hardwood cuttings) would be considered a success, unless other permitting documents require greater survival rates. Volunteer growth of native species would be counted toward the vegetation coverage in the mitigation area. If monitoring results indicate that revegetation efforts are not meeting established success criteria, corrective measures would be implemented.

BIO-4- Mitigation to Prevent of Spread of Invasive Species

The following measures shall be implemented to prevent the spread of invasive species in the action area:

- All equipment used for off-road construction activities will be weed-free prior to entering the construction area.
- If project implementation calls for mulches or fill, they will be weed free

- Any seed mixes or other vegetative material used for re-vegetation of disturbed sites will consist of locally adapted native plant materials.
- Any personal equipment (including boots/waders), construction materials (falsework members, sand bags, etc.) and construction equipment shall be properly disinfected or cleaned according guidance provided by the State of California Aquatic Invasive Species Management Plan (California Department of Fish and Game, (CDFG) 2008; U.S. Bureau of Reclamation 2012) prior to in-channel work to prevent the spread of aquatic invasive species.

BIO-5- Mitigation for Salmonids

- Prior to October 15, the temporary culverts, pipe, and work platforms shall be removed from the channel. The river rock base shall be excavated down to the point at which there is a thin veneer remaining on the existing channel bed. Upon removal of the culverts and fish rock, hand crews may redistribute the remaining fish rock such that it does not become a barrier to the free passage of water or the movement of fish and aquatic animals. It shall not impede, or tend to impede, the passage of fish at any time, pursuant to Fish and Game Code Section 5901.
- The crossings shall not change the flow characteristics (i.e., velocity, depth, width) of the water as it flows through the project area. No ponding of flow shall occur upstream of the pipe.
- Culverts shall be maintained and kept open while in place. Any ponding shall be corrected immediately. The County is responsible for such maintenance as long as the culvert remains in the stream.
- Any structure/culvert placed within a stream where fish do/may occur shall be designed, constructed, and maintained such that they do not constitute a barrier to upstream or downstream movement of aquatic life or cause an avoidance reaction by fish that impedes their upstream or downstream movement. This includes, but is not limited to, the supply of water at an appropriate depth, temperature, and velocity to facilitate upstream and downstream fish migration. For this project, this equates to designing the culverts to meet guidelines outlined in NMFS (2001).
- Any new or previously excavated gravel material placed in the channel shall meet Caltrans' Gravel Cleanliness Specification #227 having a value of 85 or higher (excluding such materials as soil in the RSP to allow for riparian planting).
- Impacts to herbaceous cover will be offset by reseeded any unvegetated and impacted areas with a suitable seed mixture post construction.
- All of the interstitial spaces of the RSP will be filled with well-graded soil to allow for revegetation.
- Any construction equipment operating on work pads or adjacent to Frasier Creek shall be inspected daily for leaks. External oil, grease, and mud shall be removed from equipment and disposed of properly. Spill containment booms shall be maintained onsite at all times during construction operations and/or staging of equipment or fueling supplies. Fueling trucks shall maintain adequate spill containment materials at all times.
- The contractor shall develop and implement site-specific BMPs, a water pollution control plan, and emergency spill control plan. The contractor shall be responsible for immediate containment and removal of any toxins released.
- The project will require some work in the flowing water of the creek to construct the gravel work pad. In addition, steelhead could be indirectly impacted if soils, fuels or other debris from construction are allowed to enter the water. The fish capture and relocation plan along with the

avoidance and minimization measures to protect water quality will minimize these impacts to steelhead.

- Steelhead could also be impacted through loss of shading to the creek via loss of riparian vegetation. The BIO-3- Replacement of lost riparian habitat will minimize this impact to steelhead.

BIO-6- Mitigations for Amphibians

- Foothill yellow-legged frogs and red bellied newts may move into and out of the construction area (BSA) at any time. These amphibians tend to hide and shelter under boulders and down vegetation. One year prior to construction county biologist will simplify habitat by removing features within the BSA to lessen the possibility of these species being present when construction begins.
- Because California foothill yellow-legged frogs and red bellied newts may move into and out of the BSA at any time, a pre-construction survey for the species is necessary to confirm its status (presence/absence) on the site immediately prior to the onset of project construction. Therefore, a qualified biologist shall conduct a minimum of one survey of the BSA for these amphibians. The survey shall be conducted a maximum of one week prior to construction. If individuals of any of these species is found within a construction impact zone, the biologist shall move it to a safe location within suitable habitat based upon their extensive experience working with the species.
- If a foothill yellow-legged frogs or red bellied newts is encountered during construction, activities in the vicinity shall cease until appropriate corrective measures have been implemented or it has been determined that the individual will not be harmed. A qualified boilological monitor may need to be present to survey the construction site each morning prior to starting construction, any frogs or newts encounted shall be moved to a safe location with suitable habitat. Alternatively, any frogs encountered during construction shall be allowed to move away on their own. Any trapped, injured, or killed frogs shall be reported immediately to CDFW.

BIO-7- Mitigation measures for Turtles

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

BIO-8- Mitigation measures for Bats

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

BIO-9- Mitigation measures for Migratory Birds

Mitigation measure BIO-3 (replacement of lost riparian habitat), the project will minimize permanent loss of nesting sites. However, some removal of riparian vegetation and street trees is required. Tree removal during times of nesting could result in negative effects to the young of nesting birds. The following avoidance and minimization measure will reduce any potential impact to breeding birds:

- The County shall only allow trees to be removed from the project site after August 31, and before February 15 of the following year, when bird nesting is most likely avoided, unless a qualified biologist has inspected the site and determined that the tree removal will not affect nesting birds.
- If work is conducted during the nesting season, pre-construction surveys for nesting birds and other special-status birds and appropriate nesting habitat shall be conducted no more than 3 days prior to ground disturbing activities. If an active nest is found, a qualified biologist, in conjunction with CDFW, shall determine the appropriate buffer size and delineate the buffer using fencing, pin flags, yellow caution tape, and etc. During construction, the qualified biologist shall conduct regular monitoring (at CDFW approved intervals) to evaluate the nest(s) for potential disturbances associated with construction activities. Construction within the buffer shall be prohibited until the qualified biologist determines the nest is no longer active. If an active nest is found after the completion of the pre-construction surveys and after construction begins, all construction activities shall stop until a qualified biologist has evaluated the nest and erected the appropriate buffer around the nest. If establishment of the buffer is not feasible, CDFW and/or USFWS shall be contacted for further avoidance and minimization guidelines.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Comment:

The Geysers Road Bridge over Frasier Creek and the Project BSA are directly surrounded by grazed grasslands to the west and undeveloped steep hillsides to the east. The natural communities of concern within the BSA itself include riparian habitat on the banks of Frasier Creek, Waters of the U.S., designated Critical Habitat for the Central California Coast steelhead DPS, and wildlife corridors.

Riparian Habitat

Riparian habitat is present in a narrow band along the banks of Frasier Creek within the BSA. In general, riparian habitat provides food, water, breeding sites, egg deposition areas, and nesting areas for a wide variety of wildlife. Riparian vegetation provides protective cover and shade and contributes woody debris to stream channels, creating important habitat for aquatic species. Vegetation filters sediment and pollutants in storm water runoff, slows flood flows, provides erosion protection for stream banks, and facilitates groundwater recharge.

The riparian habitat on site is dominated by willows, bays, and alders, and varies from zero to about 60 feet wide on each bank in the project limits.

The CDFG Stream Inventory Report (2006) for Frasier Creek determined that Frasier Creek in general has a low percentage of riparian canopy (especially in the lower stream reaches), and identified opportunities for enhancing (fisheries) habitat by increasing riparian cover throughout the watershed.

Potential Impacts to Riparian Habitat from the Project

The proposed project may result in direct permanent impacts on a small area of riparian forest, including the removal of approximately 10 of various species, with greater than 6 inches diameter at breast height (dbh). These impacts would be due to the construction of the new bridge and temporary detour bridge, including the placement of the abutments for the crossings.

The project shall be designed and constructed to avoid and minimize removal of riparian vegetation to the maximum extent practicable. Staging areas and construction access routes will avoid encroachment into riparian vegetation where practicable and minimize encroachment where complete avoidance is not practicable. "Avoided" riparian habitat will be clearly identified in the construction drawings and contractor work plans. Exclusionary fencing will be installed to mark boundaries of avoided riparian areas. The exclusionary fencing shall be inspected and maintained on a regular basis throughout project construction. Additionally, impacts to riparian habitat will be compensated for as described in mitigation measure BIO-3 (Replacement of Lost Riparian Habitat).

Waters of the United States

Frasier Creek is a perennial stream that discharges to Big Sulphur Creek and then into the Russian River. As such, it is subject to jurisdiction under both federal (ACOE) and state (RWQCB) regulations. The limit of ACOE jurisdiction is the ordinary high water mark (OHWM); RWQCB jurisdiction extends to the top of bank.

Sonoma County Environmental Specialist Rich Stabler conducted a delineation of waters of the United States within the BSA on May 11, 2018. Verification of the delineation by the Corps is pending. Potentially jurisdictional waters include a seasonal wetland, perennial stream and intermittent streams. These features occupy a total of 0.39 acre of land.

Potential Impacts to Waters of the United States from the Project

The replacement bridge will be a single-span structure supported by new abutments that will be placed above the 100-year flood elevation. The new bridge design uses abutments that will not be located within the OHWM as are portions of the abutments of the existing bridge. Due to the flow velocities of the Frasier Creek, scour protection from creek flows will be required; the scour protection is expected to consist of approximately 102 sq. ft. RSP placed within jurisdictional waters of Frasier Creek.

Seasonal Wetland area is present adjacent to the project site. The location and extent of wetland areas meeting the Army Corps of Engineers' three-parameter wetland definition are shown on the enclosed Figure 4 below. The total area of seasonal wetlands identified is about 0.39 acres (1700 sq. ft.). The project areas of direct impacts will avoid the wetland; ESA fencing will delineate the limits to ensure construction activities avoid any impacts.

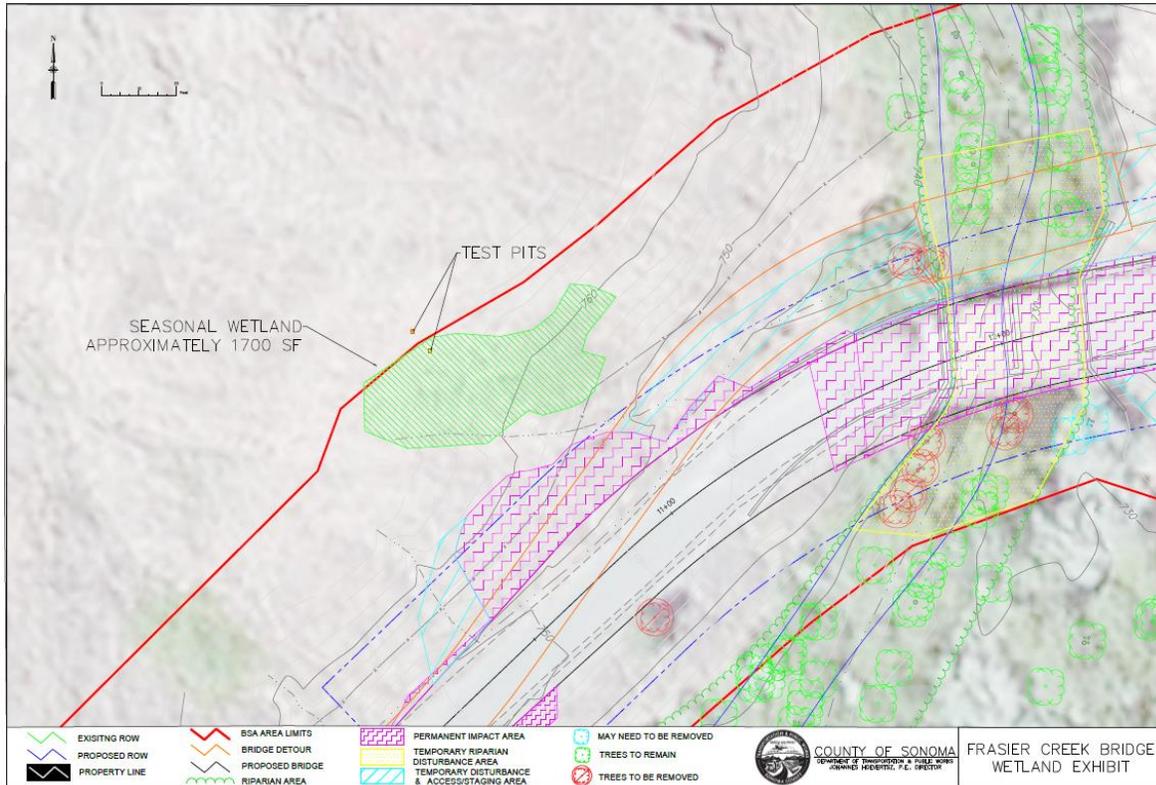
Table 1. Acreage Summary of Potentially Impacted Waters of the United States

Waters of the United States	Total Acreage	Total Linear Feet
Other Waters		
Perennial Stream	0.08	102
Total Waters of the United States	0.08	102

Executive Order 11990, Protection of Wetlands (1977), calls for no net loss of habitats referred to as wetlands and established a national policy to avoid adverse effects on wetlands wherever there is a

practicable alternative. No direct impacts to the identified wetland are proposed. Accordingly, a wetland only practical finding is not required at this time.

Figure 4: Wetland Exhibit



Wildlife Corridors

The Frasier Creek riparian corridor potentially serves as a migration corridor for both terrestrial and aquatic or semi-aquatic species, including both common species, as well as for special-status species such as foothill yellow legged frog, western pond turtle, red bellied newts, and steelhead.

Tracks of common mammal species (including deer and raccoon) were observed in the BSA, indicating its probable use as a migratory corridor for common mammal species. The BSA may also serve as a migratory corridor for special-status species such as foothill yellow legged frog, western pond turtle, red bellied news, and steelhead.

Potential Impacts to Wildlife Corridors from the Project

The creek will be partially obstructed and there would be elevated noise level in the area by construction activities. The project site and the BSA will be available for wildlife movement after hours. The project is only expected to require a single working season. Any impact would be temporary as wildlife will still be able to use the site as a migratory corridor both during and after construction. (1,30)

Significance Level:

Less than Significant with Mitigation Incorporated

Mitigation:

BIO-10: Mitigation for Riparian Vegetation

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

BIO-11- Mitigation Measure for Waters of the United States/ Waters of the State

To the extent practicable, the discharge of dredged or fill material into "waters of the United States," including wetlands shall be avoided (this also includes waters not subject to Corps jurisdiction, but subject to RWQCB jurisdiction). However, complete avoidance is not feasible due to the need for the placement of new piers, thus the following measures shall be implemented to avoid or minimize the potential for project-related impacts on "waters of the United States":

- To the maximum extent practicable, activities that increase the erosion potential in the project area shall be restricted to the relatively dry summer and early fall period to minimize the potential for rainfall events to transport sediment to surface water features. If these activities must take place during the late fall, winter, or spring, then temporary erosion and sediment control structures shall be in place and operational at the end of each construction day and maintained until permanent erosion control structures are in place.
- Areas where wetland and upland vegetation need to be removed shall be identified in advance of ground disturbance and limited to only those areas that have been approved by the County.
- Within 10 days of completion of construction in those areas where subsequent ground disturbance will not occur for 10 calendar days or more, weed-free mulch shall be applied to disturbed areas to reduce the potential for short-term erosion. Prior to a rain event or when there is a greater than 50 percent possibility of rain within the next 24 hours, as forecasted by the National Weather Service, weed-free mulch shall be applied to all exposed areas upon completion of the day's activities. Soils shall not be left exposed during the rainy season.
- Suitable BMPs, such as silt fences, straw wattles, or catch basins, shall be placed below all construction activities at the edge of surface water features to intercept sediment before it reaches the waterway. These structures shall be installed prior to any clearing or grading activities.
- If temporary stockpile sites are used, they shall be located such that they do not drain directly into a surface water feature, if possible. If a stockpile drains into a surface water feature, catch basins shall be constructed to intercept sediment before it reaches the feature. Stockpile sites shall be graded and vegetated to reduce the potential for erosion.
- Sediment control measures shall be in place prior to the onset of the rainy season and will be monitored and maintained in good working condition until disturbed areas have been revegetated.
- Any new or previously excavated gravel material placed in the channel shall be washed at least once and have a cleanliness value of 85 or higher based on Caltrans Test No. 227.
- A site-specific spill prevention plan shall be implemented for potentially hazardous materials. The plan shall include the proper handling and storage of all potentially hazardous materials, as well as the proper procedures for cleaning up and reporting any spills. If necessary, containment berms shall be constructed to prevent spilled materials from reaching surface water features.
- Where possible, equipment and hazardous materials shall be stored at least 50 ft away from surface water features.

- Vehicles and equipment used during construction shall receive proper and timely maintenance to reduce the potential for mechanical breakdowns leading to a spill of materials. Maintenance and fueling shall be conducted in an area at least 50 ft away from Frasier and/or Big Sulphur Creeks or within an adequate fueling containment area.

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

Comment:

The Army Corps of Engineers (Corps) regulates “Waters of the United States”, including adjacent wetlands, under Section 404 of the federal Clean Water Act. Waters of the United States include navigable waters, interstate waters, territorial seas and other waters that may be used in interstate or foreign commerce. Potential wetland areas are identified by the presence of (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the Clean Water Act. Areas that are inundated for sufficient duration and depth to exclude growth of hydrophytic vegetation are subject to Section 404 jurisdiction as “other waters” and are often characterized by an ordinary high water mark (OHWM). The discharge of dredged or fill material into a Waters of the U.S. (including wetlands) generally requires a permit from the Corps under Section 404 of the Clean Water Act.

“Waters of the State” are regulated by the Regional Water Quality Control Board (Water Board) under the State Porter-Cologne Water Quality Control Act. Waters of the State are defined by the Porter-Cologne Act as any surface water or groundwater, including saline waters, within the boundaries of the State. RWQCB jurisdiction includes “isolated” wetlands and waters that may not be regulated by the ACOE under Section 404 (such as roadside ditches). Section 401 of the Clean Water Act specifies that any activity subject to a permit issued by a federal agency must also obtain State Water Quality Certification (401 Certification) that the proposed activity will comply with state water quality standards. If a proposed project does not require a federal permit, but does involve dredge or fill activities that may result in a discharge to Waters of the State, the Water Board has the option to regulate the dredge and fill activities under its state authority through its Waste Discharge Requirements (WDR) program.

The project would result in permanent and temporary impacts on wetland features under the jurisdiction of the Corps, pursuant to Section 404 of the Clean Water Act, as well as waters protected under the State Porter-Cologne Water Quality Act. See section 4b for further discussion. Mitigation measure BIO-1 (erosion and sediment control), Bio-2 (accidental spills), BIO-4 (invasive species), BIO-11 (Waters of the United States/ Waters of the State) are determined to reduce impacts to less than significant.

Temporary, indirect impacts may occur if construction-related sediment enters streams within the BSA. However, implementation Mitigation Measure BIO-1 would reduce impacts to a less-than-significant level.

The project may generate surplus soils for disposal off-site, and improper disposal of this material could affect off-site wetlands or other sensitive habitats. The impact can be reduced to a less-than-significant level by controlling the disposal of surplus soils, as required by mitigation measure BIO-12 (Disposal of Surplus Solid Waste). (1,30)

Significance Level:

Less than Significant with Mitigation Incorporated

Mitigation:

BIO-12- Mitigation Measure for Disposal of Surplus Solid Waste

All surplus soils that cannot be used on the project site shall be disposed of at an acceptable disposal site. If any areas outside the project site are used for disposal or stockpiling of soil or other materials, the contractor shall be required to demonstrate that the site has all the required permits, including, if applicable, a grading permit. The contractor shall notify CDFW of the intent to use the site, and the Sonoma County PRMD to determine if a grading permit is required. The contractor shall be required to provide evidence to the County that the site does not affect wetlands under the jurisdiction of the Corps, or that the site has the appropriate permit from the Corps.

Surplus concrete rubble or pavement shall either be disposed of at an acceptable and legally permitted disposal site or taken to a permitted concrete and/or asphalt recycling facility.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Comment:

Frasier Creek provides spawning habitat for Central California coast steelhead, which use the creek for both migration and spawning. Replacement of the bridge could result in the temporary disruption of fish moving up and downstream. To ensure that hydraulic conditions are suitable and the temporary work platform would not impede the movement of aquatic organisms, the culverts have been designed within the proposed construction work pad and would be installed according to NMFS' *Guidelines for Salmonid Passage at Stream Crossings* (National Marine Fisheries Service 2001). Other aquatic and terrestrial wildlife undoubtedly move within and through the area in and around the BSA. The creek likely attracts wildlife in the area due to the presence of water. Amphibians and turtles may move through the creek corridor. Limiting construction to daytime hours, will allow wildlife to move through the area during the hours construction is not actively occurring. Biologists will be onsite each morning to survey and potentially move any remaining wildlife outside the construction zone to similar suitable habitat on Frasier Creek.

The area surrounding the BSA is a large expanse of relatively undisturbed habitat that many wildlife species are likely to utilize as core habitat. Because of the large expanse of relatively open space in the vicinity, the BSA and vicinity is more appropriately described as a core habitat area for a wide variety of wildlife species, which may move in areas throughout the woodland and grasslands in the region. In addition, the impacts to wildlife are temporary and will only occur during the duration of construction of the project. (1, 30)

Significance Level:

Less than Significant with Mitigation Incorporated

Mitigation:

Implementation of Mitigation Measure BIO-5 (salmonids), BIO-6, (amphibians) BIO-7 (turtles) would reduce potentially significant impacts to special status fish to a less than significant level.

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

Comment:

Regulatory Framework

The following discussion identifies local environmental regulations that serve to protect sensitive biological resources relevant to the California Environmental Quality Act (CEQA) review process.

Biotic Habitat (BH) Combining Zone

The BH combining zone is established to protect and enhance Biotic Habitat Areas for their natural

habitat and environmental values and to implement the provisions of the General Plan Open Space and Resource Conservation Element, Area Plans and Specific Plans. Protection of these areas helps to maintain the natural vegetation, support native plant and animal species, protect water quality and air quality, and preserve the quality of life, diversity and unique character of the County.

Tree Protection Ordinance

Chapter 26, Article 88. Sec. 26-08-010 (m) of the Sonoma County Code contains a tree protection ordinance (Sonoma County 2013). The ordinance designates 'protected' trees as well as provides mitigation standards for impacts to protected trees. While this ordinance is not applicable to County Public Works projects, it is used as a guide for determining impacts and appropriate mitigation measures.

Sonoma County General Plan

The *Sonoma County General Plan 2020* (Sonoma County 2008) Land Use Element and Open Space & Resource Conservation Element both contain policies to protect natural resource lands including, but not limited to watershed, fish and wildlife habitat, biotic areas, and habitat connectivity corridors. Policy OSRC-8b establishes streamside conservation areas along designated riparian corridors.

Riparian Corridor Ordinance

The RC combining zone is established to protect biotic resource communities, including critical habitat areas within and along riparian corridors, for their habitat and environmental value, and to implement the provisions of the General Plan Open Space and Resource Conservation and Water Resources Elements. These provisions are intended to protect and enhance riparian corridors and functions along designated streams, balancing the need for agricultural production, urban development, timber and mining operations, and other land uses with the preservation of riparian vegetation, protection of water resources, floodplain management, wildlife habitat and movement, stream shade, fisheries, water quality, channel stability, groundwater recharge, opportunities for recreation, education and aesthetic appreciation and other riparian functions and values.

The project as proposed will not conflict with the above policies and ordinances. The bridge has been designed so that vegetation removal will be minimized to the maximum extent feasible. Riparian trees removed having greater than 6 inches diameter breast height will be replaced at a minimum 3:1 ratio. Mitigation measure BIO-3 (Lost Riparian Habitat) will further ensure the project has a less than significant impact on vegetation.

Significance Level:

Less than Significant with Mitigation Incorporated

Mitigation:

BIO-3 (Replacement of lost Riparian Habitat)

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?

Comment:

Currently, there are no adopted Habitat Conservation Plans, Natural Community Conservation Plans, or other approved habitat conservation plans that cover the project area.

Significance Level:

No Impact

5. CULTURAL RESOURCES:

In 2016, TRC Solutions was retained to prepare cultural resource reports for the proposed bridge replacement project. The records search completed through the Northwest Information Center (NWIS), at Sonoma State University in Rohnert Park, CA resulted in determination that previous investigation within the project Area of Potential Effects (APE) had identified potential for resources near the defined project area.

The following cultural resources reports for the proposed bridge replacement project: 1) Historic Resources Evaluation Report (HRER); 2) Archaeological Survey Report (ASR); and 3) Environmentally Sensitive Area Action Plan. A brief summary of the HRER and ASR is provided below.

Area of Potential Effects (APE)

The APE encompasses the maximum extent of proposed construction activities, including staging areas. The architectural APE is congruent with the archaeological APE except where the latter extends to include the boundaries of the archaeological site. The subsurface vertical APE is approximately 13 feet for the proposed bottom of footing elevation for Abutment 1 and approximately 11 feet for the proposed bottom of footing elevation for Abutment 2. Pile lengths for the proposed cast-in drilled piles have not been determined, but could be assumed to be around 50 feet.

Cultural Resources

TRC conducted a pedestrian survey on April 12, 2016, pursuant to Section 106 of the NHPA, to identify cultural resources within the APE. The project area consists of open landscape on both sides of the existing bridge. Access to the project site is via Geysers Road. A portion of the APE has been affected by construction of the existing Geysers Road. Surface visibility at the time of the 2016 survey was poor because of high grass throughout the APE. In mid-September 2017, The Project APE was expanded and TRC conducted an additional survey that included an areas not previously identified.

Would the project:

- a) **Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?**

Comments:

The Project Archaeological Survey Report states that no historic properties were identified in the project area that meet the significance criteria of the National Register of Historic Places. The bridge is listed as a Category 5 bridge by Caltrans and as such does not meet the criteria for listing on the National Register of Historic Places. (34, 35, 36)

Significance Level:

No Impact

- b) **Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?**

Comment:

The Project Archaeological Survey Report states that there is the potential for prehistoric resources to be found in the project area and vicinity. In addition, the project area is situated adjacent to two perennial watercourses (Frasier and Big Sulphur Creeks), on a well-drained landform that likely would

have been suitable for early Native American occupation. The presence of documented prehistoric-era resources in the general vicinity of the project area suggests there is a potential for presently unrecorded resources to be encountered during ground-disturbing activities associated with project construction. An environmentally sensitive area (ESA) will be established to protect known resource, which is located adjacent to but outside of the area of direct impact. (Due to the confidential nature of cultural resources, specifics of the environmentally sensitive area are addressed in the confidential ESA Action Plan (available to qualified personnel upon request). *Mitigation Measure CUL-1 – Cultural Resources* will be used to reduce any potential impacts on prehistoric resources to a less-than-significant level. (1, 33)

Significance Level:

Less than Significant with Mitigation Incorporated

Mitigation

Mitigation Measure CUL-1: Cultural Resources

If archaeological or paleontological materials are discovered during project construction, construction shall cease in the immediate vicinity of the find until a qualified archaeologist is consulted to determine the significance of the find, and has recommended appropriate measures to protect the resource. Further disturbance of the resource shall not be allowed until those recommendations deemed appropriate by the County have been implemented.

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

Comment:

No burial sites are known in the vicinity of the project, and most of the project site has already been disturbed by past construction. Implementation of Mitigation Measure CUL-2 would reduce potentially significant impacts to human remains to a less-than-significant level. (33)

Significance Level:

Less than Significant with Mitigation Incorporated

Mitigation

Mitigation Measure CUL-2: Human Remains

In the event that human remains are unearthed during construction, state law requires that the County Coroner be notified to investigate the nature and circumstances of the discovery. At the time of discovery, work in the immediate vicinity would cease until the Coroner permitted work to proceed. If the remains were determined to be prehistoric, the find would be treated as an archaeological site and the mitigation measure CUL-1 would apply.

6. ENERGY:

Would the project:

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

Comment:

The project will not change the operational capacity of Geysers Road and such would not cause wasteful, inefficient or unnecessary consumption of energy resources.

During construction, the use of heavy equipment running on diesel fuel will be required. Standard construction best management practices (BMPs) will be included in the project construction specifications and be required project condition to be adhered to by the selected contractor. These

construction phase BMPs include restricting the idling time for all construction vehicles and limiting construction times to Monday through Friday, from 7 AM to 7PM. Consumption of energy is necessary, but will the conditions proposed wasteful and inefficient consumption of energy would be less than significant. (1)

Significance Level:

Less than Significant Impact

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

Comment:

The replacement of a bridge structure on an existing roadway will not conflict or obstruct any plans for renewable energy or energy efficacy standards. (1)

Significance Level:

No Impact

7. GEOLOGY AND SOILS:

In 2015, Taber Associates, Inc. was retained to prepare a Geotechnical Design and Foundation report for the proposed project. This report was used in the following discussion of the environmental setting and impacts analysis for geology and soils.

At the bridge site, published mapping shows surface materials Published geologic mapping at the site as Jurassic to Cretaceous aged muscovite-bearing sandstone and shale. Other published geologic mapping (McLaughlin) shows surface materials around the confluence of Frasier Creek and Big Sulphur Creek as Quaternary aged alluvial and lacustrine deposits described as unconsolidated gravel, sand, silt, and clay, deposited as fan, lacustrine, and fluvial sediments. Surface materials adjacent to this area are shown as lithic graywacke described as thin bedded to massive with minor interbedded black shale with locally interbedded chert and greenstone.

Landslides are prevalent within the Project area. It appears from geologic mapping that Frasier Creek has been influenced by the slide materials and pushed laterally by the slides along various portions of the creek length.

Alluvium within and along the channel is predominately gravel and sand with rock outcrop observed upstream and downstream within the channel. Rock observed in the channel may be intact or "rafts" of rock transported during landslide deposition.

No other evidence of significant geologic hazards (such as faulting, volcanoes, settlement, very soft soils, severe erosion, springs, subsidence, etc.) was observed as the project site as part of the study. The bridge site is not in a tsunami inundation zone.

Would the project:

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

- i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**

Comment:

The project site is not located within an Alquist-Priola Earthquake Fault Zone for fault rupture hazard. The nearest such zone is located approximately 2.2 miles southwest from the site. While interpreted

and queried fault traces are shown on published mapping to cross through and nearby the site, no evidence of surface fault rupture was observed during our field review of the site. Based on the foregoing, the risk of surface fault rupture at this site is considered to be low, but cannot entirely be precluded. (9, 37)

Significance Level:

Less than Significant

ii. Strong seismic ground shaking?

Comment:

All of Sonoma County is subject to seismic shaking that would result from earthquakes along the San Andreas, Healdsburg-Rodgers Creek, Mayacamas and other faults. Predicting seismic events is not possible, nor is providing mitigation that can entirely reduce the potential for injury and damage that can occur during a seismic event. The design of the bridge structure will follow the Caltrans Seismic Design Criteria. Using accepted geotechnical evaluation techniques and appropriate engineering practices, potential injury and damage can be diminished, thereby exposing fewer people and less property to the effects of a major earthquake. Project conditions of approval require that bridge designs for construction meet all standard seismic and soil test/compaction requirements. The project would therefore not expose people to substantial risk of injury from seismic shaking. (9, 37)

Significance Level:

Less than Significant Impact

iii. Seismic-related ground failure, including liquefaction?

Comment:

Strong ground shaking can result in liquefaction, the sudden loss of shear strength in saturated sandy material, resulting ground failure. Areas of Sonoma County most at risk of liquefaction are along San Pablo Bay and in alluvial valleys. Liquefaction does not appear to be an issue except at locations in the upper material within the channel. (37)

Significance Level:

Less than Significant Impact

iv. Landslides?

Comment:

The Frasier (and Big Sulphur Creek) watershed is an area of abundant landslides. Historic landslides have been mapped in the Project area. The project site has the highest rating for landslide susceptibility in the Sonoma County Hazard Mitigation Plan. The project has been designed with foundations drilled deep into underlying rock. The project would therefore not expose people to substantial risk of injury from landslides.

Significance Level:

Less than Significant Impact

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

Soils on slopes adjacent to the bridge location are mapped as Laughlin-Yorkville complex, on 30-75% slopes. The Laughlin-Yorkville complex is a combination of loams and clay loams, and is considered highly erosive. Within the active channel, the site consists of alluvium (river-washed sands, gravels and cobbles). Portions of the north bank at the new bridge location consist of exposed bedrock.

Significance Level:

Less than Significant Impact

- 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?**

Comment:

The project site is subject to seismic shaking as described in item 6.a.ii. Above. No further mitigation is required. However, the design of the bridge structure will follow the Caltrans Seismic Design Criteria.

Significance Level:

Less than Significant Impact

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

Comment:

Table 18-1-B of the Uniform Building Code is an index of the relative expansive characteristics of soil as determined through laboratory testing. For the proposed project, soils at the site have not been tested for their expansive characteristics. No substantial risks to life or property would be created from soil expansion at the proposed project, even if it were to be affected by expansive soils.

Significance Level:

Less than Significant Impact

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

Comment:

The proposed project would not include the addition or removal of septic tanks or alternative wastewater disposal systems. Therefore, there would be no impact.

Significance Level:

No Impact

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

Comment:

A Cultural Resources Survey was prepared for the project by professional archaeologists on in 2018. There are no known paleontological resources on the site, but the project could uncover such materials during construction. Mitigation measure CUL-1 (cultural resources) will further mitigate in the even previously unknown resources are discovered during construction activities. No unique geologic features have been identified in the project action area.

Significance Level:

Less than Significant with Mitigation Incorporated

Mitigation

CUL-1: Cultural Resources

8. GREENHOUSE GAS EMISSIONS:

Would the project:

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

Comment:

The Northern Sonoma County Air Pollution Control District (NSCAPCD) currently does not have adopted Greenhouse Gas (GHG) thresholds of significance for CEQA review projects (NSCAPCD, 2010). Therefore, as the lead agency for the project, the DTPW has elected to use an approach for the determination of significance of GHG emissions based on the GHG significance thresholds adopted by the BAAQMD. While BAAQMD does not have any adopted GHG thresholds for construction-related emissions, their GHG operational threshold of significance is 1,100 metric tons (MT) of CO₂e/yr. (BAAQMD Air Quality CEQA Thresholds of Significance - Table 2-1).

GHG contributions of this magnitude are not anticipated with the proposed replacement of the Frasier Creek Bridge because the project would not generate new traffic and traffic volumes are expected to be similar to the existing traffic volumes on Geysers Road.

It is expected that the replacement of the existing bridge would generate the same baseline GHG emission levels because no additional travel lanes are proposed and no traffic controls (e.g., stop signs or signalization) are proposed. Geysers Road would continue to operate as a "Local Road" with an A-Level-of-Service (LOS), as specified in the Sonoma County General Plan 2020 Circulation and Transit Element. The estimated total Average Daily Trips (ADTs) volume of 83 along Geysers Road is not expected to change as a result of the proposed project. Consequently, the proposed bridge replacement would operate at current GHG emission levels associated with the existing bridge. Based on these assumptions a less than significant impact to GHGs is anticipated with the operational phase of the proposed bridge replacement.

The construction phase of the proposed project is not subject to thresholds of significance. Nevertheless, BMPs are applied by DTPW during the construction phase to assist in lowering GHGs pursuant to AB 32 GHG reduction goals and ensure that construction-related GHG emissions are minimized to the extent feasible. These construction phase BMPs include:

- Restricting the idling time for all construction vehicles
- Limiting construction times to Monday through Friday, from 7 AM to 7PM

Overall, the proposed project would not result in a cumulatively considerable contribution of GHG emissions or a cumulatively significant impact to global climate change. (1, 4, 5, 21)

Significance Level:

Less than Significant Impact

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

Comment:

The County does not have an adopted Climate Action Plan but has established GHG reduction goals. The project, by implementing current county codes would be consistent with local or state plans, policies, or regulations adopted for the purpose of reducing emissions of greenhouse gases.

Significance Level:

No Impact

9. 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?**

Comment:

Construction of the proposed project would require use of fuels and other hazardous materials. Improper storage or handling of these materials could result in spills. Mitigation measures BIO-2 (Prevent Accidental Spills and Pollution), and HAZ-1 (Storage of Hazardous Materials) will reduce severity in the event of accidental spills. Potential impacts from spills into the creek can be reduced to a less-than-significant level by requiring standard approved construction methods for handling hazardous materials.

Significance Level:

Less than Significant with Mitigation Incorporated

Mitigation

HAZ-1- Storage of Hazardous Materials

The construction contract shall require that any storage of hazardous materials be in compliance with all applicable local, state and federal laws for the protection of surface waters. In the event of a spill of hazardous materials the contractor shall immediately call the emergency number 9-1-1 to report the spill, and shall take appropriate actions to contain the spill to prevent further migration of the hazardous materials to stormwater drains or surface waters.

- 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?**

Comment:

A Phase 1 Initial Site Assessment was completed for the project. That document determined that no hazardous substances including raw materials; finished products and formulations; hazardous wastes; hazardous constituents and pollutants including intermediates and byproducts are currently present at the Site. (38)

Replacement of the existing bridge would involve using equipment that has a potential to release hazardous materials near Frasier Creek. Without adequate BMPs, accidental spills or falling debris could occur, causing potential contamination of the water body and adverse impacts on terrestrial and aquatic life forms.

Implementation of mitigation measure BIO-2 (accidental spills) and HAZ-1 (Storage of Hazardous materials) would reduce potential impacts to a less-than-significant level.

Significance Level:

Less than Significant with Mitigation Incorporated

Mitigation:

Mitigation Measure BIO-2 (accidental spills) and HAZ-1 (Storage of Hazardous materials)

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

Comment:

There are no existing or proposed schools within 0.25 miles of the project site. (1)

Significance Level:
No Impact

- d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?**

Comment:

The project site was not identified on, or in the vicinity of, any parcels on lists compiled by the California Environmental Protection Agency, Regional Water Quality Control Board, California Department of Toxic Substances, and the California Integrated Waste Management Board (CalRecycle). The area immediately surrounding the bridge site is undeveloped grassland, and hazardous materials are unlikely to be present. Therefore, no impact from hazardous materials is anticipated with the implementation of the proposed project.

Significance Level:
No Impact

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

Comment:

No public airstrips are located in the vicinity of the proposed project. Therefore, no impacts to public airstrips would occur with the implementation of the proposed project. (1)

Significance Level:
No Impact

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

Comment:

The project would not impair implementation of, or physically interfere with the County's adopted emergency operations plan. There is no separate emergency evacuation plan for the County. However, there is the potential for construction activities to slow emergency response times. Implementation of Mitigation Measure TRANS-2 would reduce potentially significant impacts related to any potential delays to a less-than-significant level.

Significance Level:
Less than Significant with Mitigation Incorporated

Mitigation:
Mitigation Measure TRANS-2

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

Comment:

The project is located in an area of high fire hazard. However, the project would not expose people to increased risk from wildland fires beyond existing conditions. It would not construct buildings that would be occupied by people or structures that would be affected by wildland fires. The proposed project consists of replacing an existing bridge and would not increase the vehicle capacity of the bridge. The bridge would be designed to current American Association of State Highway and Transportation Officials Standards to adequately accommodate emergency vehicles. Therefore, no impacts to people or structures from wildland fires are anticipated with the implementation of the

proposed project. (1, 11)

Significance Level:

Less than Significant Impact

10. HYDROLOGY AND WATER QUALITY:

Would the project:

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

Comment:

Frasier Creek flows into Big Sulphur Creek, which is a tributary of the Russian River. The “Total Maximum Daily Load” (TMDLs) regulations for pollutants, excluding sediment and temperature, have not been established for this watershed. Sediment impacts in Russian River and its tributaries prompted listing entire Russian River watershed for sediment. The most sensitive beneficial uses supported by the Russian River includes uses associated with the cold water fishery and municipal and domestic supply.

The project will require construction activities within the banks of the Frasier Creek. These activities have the potential to violate water quality standards or waste discharge requirements. A 404 Clean Water Act permit from the Corps, 401 Clean Water Act certification from the Water Board, , and a 1602 Streambed Alteration Agreement from CDFW will all be obtained prior to project implementation. Typical conditions contained in these permits regulate discharges to Waters of the State, Waters of the U.S., and discharges that may impact fish and wildlife. Mandatory compliance with the conditions set forth by these permits, along with mitigation measures BIO-1 (Erosion and Sediment Control), BIO-2 (Accidental Spills), BIO-3 (Riparian Habitat), BIO-11 (Waters of the US? Waters of the State), HAZ-1 (Storage of Hazardous Materials), HYD-1 (Surface Water), HYD-2 (Storm Water), HYD-3 (Ground Water) contained in this Initial Study, will ensure that water quality standards are not violated.

The project will incorporate post-construction BMPs to retain and treat runoff from new impervious surfaces. Drainage shall be designed to limit post-development soil and other pollutant discharges to pre-development levels in compliance with the Sonoma County’s best management practices for construction grading and drainage (1, 42).

*Total Maximum Daily Load – On a broad level, the TMDL process leads to a “pollution budget” designed to restore the health of a polluted body of water. The TMDL process provides a quantitative assessment of water quality problems, contributing sources of pollution, and the pollutant load reductions or control actions needed to restore and protect the beneficial uses of an individual water body impaired from loading of a particular pollutant.

Significance Level:

Less than Significant with Mitigation Incorporated

Mitigation:

The County will implement the following mitigation measures during project construction to minimize water quality impacts to Frasier Creek.

Mitigation Measure HYD-1- Surface Water

- No work shall occur between October 15 and June 15 below Frasier Creek top-of-bank.
- By October 15, the County shall require that all disturbed areas around the two permanent bridge abutments and piers be re-graded to match the surrounding topography. Straw and hydromulch

will be placed on disturbed areas above channel banks, and all other disturbed areas in the project site, with a jute mesh type or equivalent matting placed over straw and on disturbed banks, installed per the manufacturer's instructions. This matting shall have no plastic in it. Substitution of materials or erosion control methods shall be required prior approval from PRMD and the DTPW.

- The project site shall be inspected following the first heavy rain, during the middle of the rainy season and at the end of the rainy season following construction. During each visit, areas of significant erosion or erosion control device failure shall be noted and appropriate remedial actions taken.
- Prior to any clearing, grubbing, pruning, or groundbreaking activity, the limits of construction shall be fenced with temporary high-visibility construction fencing to protect environmentally sensitive areas, protect all riparian vegetation beyond that which must be cleared for construction access, and prevent any equipment from unnecessarily extending the work area or entering the wetted channel. In addition, silt fence shall be installed at the base of the construction fencing to prevent debris from entering the creek. All fencing shall be removed upon project completion.
- All stockpiling of construction materials, equipment, and supplies, including storage of chemicals, refueling and maintenance, shall occur outside the creek channel. No equipment shall be washed where wash runoff could enter the creek.
- All refueling and maintenance of equipment, other than stationary equipment, shall occur outside the channel of Frasier Creek, top-of-bank to top-of-bank. Receptacles containing fuel, oil, or any other substance that may adversely affect aquatic resources shall be stored outside of the channel. Any hazardous chemical spills shall be cleaned up immediately.
- Equipment and vehicles operated in the project area will be checked daily to prevent leaks of fuels, lubricants or other fluids to the creek.
- To minimize fluid leaks during operation, refueling, and maintenance of stationary equipment, spill control absorbent material shall be in place underneath this equipment at all times to capture potential leaks.
- Prior to construction, the contractor shall be required to prepare an Accidental Spill Prevention and Cleanup Plan. This plan shall include required spill control absorbent material, for use beneath stationary equipment, to be present on site and available at all times.
- The County shall require the contractor to use a drilling mud and slurry seal that is non-toxic to aquatic life for all drilling activities related to the permanent or temporary bridges. All drilling muds and fluid within all drilled holes shall be contained on site in tanks, removed from the project area, and disposed of in a permitted manner.
- No equipment, including concrete trucks, shall be washed within the channel of the creek, or where wash water could flow into the channel. Prior to project construction, the contractor shall establish a concrete washout area for concrete trucks in a location where wash water will not enter Frasier Creek. The washout area shall follow the practices outlined in the North Coast Regional Water Quality Control Board Erosion and Sediment Control Field Manual (page 107-108, July 1999) or equivalent guidelines. Substitution of the designated concrete washout area or methods shall require prior approval from PRMD and the DTPW.

Mitigation Measure HYD-2 Storm Water

- If work is to occur on the roadway and bridge approaches during the period October 15 to June 15, all drainage inlets within the project limits shall be protected from receiving polluted storm water through the use of filters such as fabrics, gravel bags, straw wattles, or other appropriate

BMPs.

- The County proposes to plant willow springs around the outfall located near the top of the easterly bank in order to reduce erosion of the bank associated with storm water discharge, which will in turn reduce sediment discharge to the creek.
- Construction grading and drainage shall be designed and constructed to maintain natural and existing drainage patterns.

Mitigation Measure HYD-3 Groundwater

- Water encountered during construction of the bridge foundations shall be pumped to an upland location where it cannot flow back into water courses or to storage tanks or trucks for disposal to a permitted upland location (not within the banks of any waterway).

Mitigation Measure HYD-4- Projects disturbing greater than 1 acre (General Construction Permit)

- Construction activities which involve disturbing 1 or more acres of ground, are subject to the requirements of the State Water Resources Control Board (SWRCB) NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit). Construction activities include clearing, grading, excavation, stockpiling, and reconstruction of existing facilities involving removal and replacement. Applicants of construction projects must file for coverage under the General Construction Permit by submitting a complete Notice of Intent (NOI) package to the SWRCB, and developing and implementing a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must contain a site map that shows the construction site perimeter; existing and proposed buildings, lots, roadways, and storm water collection and discharge points; general topography both before and after construction; and drainage patterns across the project site. The SWPPP must include the Best Management Practices (BMPs) that the applicant will use to protect the quality of storm water runoff and the placement of those BMPs.

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

Comment:

The proposed project would involve minimal use of water during and following construction, including for dust control and for watering plants during revegetation. Based on the small disturbance and revegetation areas, the amount of water use would not substantially deplete groundwater supplies. The addition of a very small amount of additional impervious surfaces would not substantially interfere with groundwater recharge. (1, 41)

Significance Level:

Less than Significant 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?

i. would result in substantial erosion or siltation on- or off-site?

Comment:

It is not anticipated that the proposed project would cause a substantial change to the erosion and accretion patterns. The drainage patterns in the project area will be slightly altered by widening the

impermeable roadway surfaces, but the changes should not cause substantial erosion. The potential for significant erosion and sedimentation from the project stems from the removal of vegetative cover and ground disturbance associated with construction. With the incorporation of mitigation measure BIO-1 (Erosion and Sediment Control), a less-than-significant impact from erosion is anticipated. (1, 41)

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

Comment:

Existing drainage into the project site will remain unchanged. Re-grading of the roadway will be required for construction of the new roadway approaches, but would not result in a loss of area or linear feet of drainage. Culvert replacements would occur in kind at the same location and at the same length. (1, 10, 45, 46)

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

Comment:

The Frasier Creek watershed lies within northeastern Sonoma County and southeastern Mendocino County. Comprised of steep hillsides, it originates in the Mayacamas Mountains and eventually drains westerly into the Russian River, approximately 20 miles downstream of the Frasier creek confluence with Big Sulphur Creek. Frasier creek drains a watershed area of approximately 6.25 square miles at its discharge to Big Sulphur Creek. The Proposed project will not contribute to runoff to exceeds the capacity of the drainage, widening the roadway approaches and bridge is not expected to create a substantial additional source of polluted runoff. (1, 42, 45, 46)

iv. Impede or redirect flood flows?

Comment:

The Project does not propose to change the land use or grading within the Project limits. The bridge has been designed so that the structure does not impede or redirect flood flows within Frasier Creek. A Location Hydraulic study has been completed for the proposed project, where hydraulic analyses were performed for the existing and proposed conditions using the U.S. Army Corps of Engineers Hydrologic Engineering Centers River Analysis (HEC-RAS) modeling software. The Project would not increase the water surface elevation (WSE) upstream of the bridge. Long-term adverse effects to the natural and beneficial floodplain values are not anticipated as a result of the Project. Therefore, the Project would have insignificant impacts on the floodplain storage.

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) panel 06097C0135E, dated December 2, 2008, for Sonoma County, California and Incorporated Areas, show the Project site is within an unshaded Zone X, which represents areas of minimal flood hazard level that are outside of the 0.2-percent-annual chance (500-year) floodplain. (1, 10, 45, 46)

Significance Level:

Less than Significant with Mitigation Incorporated

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

Comment:

The project site is not located in an area subject to seiche or tsunami. The drainage patterns in the project area will be slightly altered as a result of widening the approach roadways and bridge, but the changes will not increase surface runoff and cause flooding. Flooding has not occurred at the project site even after large storm events, and the minor alteration of drainage patterns associated with the

proposed project will not add to the frequency of flooding at the project site. (1, 10)

Significance Level:
No Impact

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

Comment:

The larger, wider new bridge structure and roadway approaches would increase the amount of impervious surface in the project area. The additional surface area would result in a slight, but less-than-significant, increase in storm water runoff and the potential for polluted runoff (e.g., lubricants). Roadway and bridge deck drainage for this project would be diverted away from the approach fills and directly into designed and natural drainage swales. Once the water is within the sediment treatment facilities per the project NPDES requirements, it is expected to infiltrate into the ground following typical rainfall events. Resource protection measures BIO-1, BIO-2, BIO-3, HYD-1, HYD-2, HYD-3 will be incorporated into the construction contract specifications for project construction to ensure this potential impact to a less-than-significant level. (1, 41)

Significance Level:
Less than Significant with Mitigation Incorporated

Mitigation:
BIO-1, BIO-2, BIO-3, HYD-1, HYD-2, HYD-3

11. LAND USE AND PLANNING:

Would the project:

a) Physically divide an established community?

Comment:

The project would not divide a community, because it would only replace an existing bridge. Traffic on Geysers Road will be conveyed over a one-lane temporary bridge that will be constructed on the upstream alignment. The Temporary structure will be removed once the replacement structure is opened to traffic to minimize disruption to the use of Geysers Road. The Rural location of the project is absent of an established community, therefore, no impact from dividing an established community would occur with the implementation of the proposed project. (1)

Significance Level:
No Impact

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

Comment:

Section 65402 of the California Government Code of Regulations requires that public and private projects be reviewed for conformity with the applicable County General Plan. The Comprehensive Planning Division of the Sonoma County Permit and Resource Management Department has reviewed the proposed project and found it to be consistent with the Sonoma County General Plan.

The project would not conflict with any applicable land use plan adopted for the purpose of avoiding or mitigating an environmental effect, including in the Sonoma County General Plan and zoning ordinance. (1, 7)

Significance Level:
Less than Significant Impact

12. MINERAL RESOURCES:

Would the project:

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

Comment:

The project site is not located within a known mineral resource deposit area (Sonoma County Aggregate Resources Management Plan, as amended 2010). Sonoma County has adopted the Aggregate Resources Management Plan that identifies aggregate resources of statewide or regional significance (areas classified as MRZ-2 by the State Geologist). Consult California Geologic Survey Special Report 205, Update of Mineral Land Classification: Aggregate Materials in the North San Francisco Bay Production-consumption region, Sonoma, Napa, Marin, and Southwestern Solano Counties, California (California Geologic Survey, 2013). (1, 7)

Significance Level:
No Impact

- 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?**

Comment:

The project site is not located within an area of locally-important mineral resource recovery site and the site is not zoned MR (Mineral Resources) (Sonoma County Aggregate Resources Management Plan, as amended 2010 and Sonoma County Zoning Code). No locally-important mineral resources are known to occur at the site. (1, 7)

Significance Level:
No Impact

13. NOISE:

Would the project:

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

Comment:

The Noise Element of the Sonoma County General Plan establishes goals, objectives and policies including performance standards to regulate noise affecting residential and other sensitive receptors. The general plan sets separate standards for transportation noise and for noise from non-transportation land uses.

Construction will occur during daytime hours (7am-7pm) only. The project construction noise will cease at the completion of the project and would not expose receptors to on-going noise that would require attenuation.

The project will not increase transportation noise at the site, because the project will not generate a

permanent increase in traffic volumes or shift travel lanes closer to any sensitive noise receptors.(1)

Significance Level:

Less than Significant Impact

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

Comment:

The project includes construction activities that may generate minor ground borne vibration and noise. These levels would not be significant because there are no nearby receptors, and they would be short-term and temporary, and would be limited to daytime hours. There are no other activities or uses associated with the project that would expose persons to or generate excessive ground borne vibration or ground borne noise levels. (1)

Significance Level:

Less than Significant Impact

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

Comment:

The site is not within an airport land use plan as designated by Sonoma County.

The project would not result in a permanent increase in ambient noise levels, because it would not increase traffic, nor shift ravel lanes closer to any sensitive receptors.(1, 7)

Significance Level:

No Impact

14. POPULATION AND HOUSING:

Would the project:

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

Comment:

The project would have no direct or indirect effect on population. It would consist of replacing an existing bridge without any housing or growth inducing development. Nor would the project new access to undeveloped areas. There are no new permanent employment opportunities associated with the project. Therefore, no impacts to population growth, housing or road extensions would occur. (1)

Significance Level:

No Impact

b) Displace substantial numbers of existing housing necessitating the construction of replacement housing elsewhere?

Comment:

No housing would be displaced by the project. Therefore, no impacts caused by displacing existing

housing or the need to construct new housing would occur. (1)

Significance Level:
No Impact

15. PUBLIC SERVICES:

Would the project:

- 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 rations, response times or other performance objectives for any of the public services:**

Comment:
Construction of the project would not involve substantial adverse physical impacts associated with provision of public facilities or services and the impact would be less than significant. (1, 7)

Significance Level:
Less than Significant Impact

i. Fire protection?

Comment:
CalFire would continue to serve this area with implementation of the project. There would be no increased need for fire protection resulting from the replacement of the existing bridge and the project would not require the provision of new or physically altered police protection facilities. The existing single lane bridge would be left in place to maintain traffic during construction, and then closed to traffic after the new bridge is constructed and opened to traffic. However, there is the potential for construction activities to slow emergency response times. Implementation of Mitigation Measure TRANS-2 would reduce potentially significant impacts related to any potential delays to a less-than-significant level. (1, 43)

Significance Level:
Less than Significant with Mitigation Incorporated

Mitigation:
Mitigation Measure TRANS-2

ii. Police?

Comment:
The Sonoma County Sheriff will continue to serve this area. There will be no increased need for police protection resulting from the project. No housing or jobs are included as a part of this project. (1)

Significance Level:
No Impact

iii. Schools?

Comment:
Replacement of the bridge would not increase the capacity of Geysers Road, nor would it increase the surrounding population. As such, no impacts would result from project implementation related to increased demands for schools, parks, or other public facilities. (1)

Significance Level:
No Impact

iv. Parks?

Comment:
No parks will be impacted by the project. (1)

Significance Level:
No Impact

v. Other public facilities?

Comment:
There are no other public facilities near or in the vicinity of the project that will be impacted by the project. (1)

Significance Level:
No Impact

16. RECREATION:

Would the project:

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

Comment:
Replacement of the bridge would not increase the capacity of Geysers Road, nor would it increase the surrounding population resulting in an increased demand for public recreation facilities. The proposed project would not involve activities that would cause or accelerate substantial physical deterioration of parks or recreational facilities. The project will have no impact on the use of existing neighborhood and regional parks or other recreational facilities. (1, 7)

Significance Level:
No Impact

- b) **Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?**

Comment:
The proposed project does not involve construction of recreational facilities. See item 16.a. above.(1)

Significance Level:
No Impact

17. TRANSPORTATION:

Would the project:

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

Comment:

Geysers Road forms a half-loop, connecting with the U.S. 101 corridor on both ends. The project is located approximately 10 miles from U.S. 101 driving from the northern end. Geysers Road at this location is classified as a local rural road. It is located in the rugged, rural Mayacamas Mountains, and the land uses surrounding the roadway in the general project vicinity include grazing, extremely low density rural residential development, private recreation (hunting), and geothermal power production at the Geysers geothermal resource area. Average daily traffic on Geysers Road is 83 vehicles per day (County of Sonoma, 2019). Geysers Road is not designated a bikeway in the Sonoma County Bicycle and Pedestrian Plan (2010), and bicyclist/pedestrian use is limited. There is no transit service. The existing single lane bridge will be left in place to maintain traffic during construction and then closed to traffic after the new bridge is completed and opened to traffic. The new bridge would not increase the vehicle carrying capacity compared to the existing bridge and would not generate any new vehicle trips during the operational phase. Most construction operations would not require any roadway closures. Some may require brief closures of 15 minutes or less, but provisions would be made so that emergency vehicles would be subject to delays of 5 minutes or less. Therefore, it would not conflict with any applicable plan, ordinance or policy. (1, 43)

Significance Level:

Less than Significant with Mitigation Incorporated

Mitigation:

Mitigation Measure TRANS-1- Notification of Closure

- The County shall notify property owners along Geysers Road at least 7 days in advance of the proposed temporary closure.
- Signage shall be placed at both ends of Geysers road notifying motorists of the planned closure.

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

Comment:

CEQA Guidelines Section 15064.3, subdivision (b) states that for transportation projects that have no impact on vehicle miles traveled (VMT) should be presumed to cause less than significant transportation impact. Replacement of an existing bridge will not increase roadway capacity and will not induce population growth in the project area. No increase to operational VMT would occur with project implementation; therefore, the impact is less than significant. (1, 43)

Significance Level:

Less than Significant Impact

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

Comment:

Geysers Road varies from one to two lanes along its length. In general, it is a narrow roadway, approximately 16 feet wide. The road often narrows even further, especially in areas where the unstable topography has caused landslides that result in loss of roadway width. Approaching the bridge location, Geysers Road is approximately 18 feet wide. The design speed for the road is 25 miles per hour. The existing bridge is a two-span reinforced concrete slab supported on a reinforced concrete pier wall and tall reinforced concrete abutments. Each span is about 20 feet long.

The new bridge will be 80 feet long, the new abutments will be located further up the creek bank from the existing abutments. A single span bridge is proposed, consisting of a cast-in-place reinforced concrete box girder type approximately 32 feet wide, with two 11 foot travel lanes and two 3 foot shoulders with no bikes lanes or sidewalks.

Though the bridge and approaches themselves will increase from one to two lanes, this does not represent an increase in capacity in Geysers Road and will not appreciably increase speeds along the roadway. The narrow widths and winding roadway along the 28-mile length of Geysers Road will continue to be the controlling factors for vehicle speed and roadway capacity. The project will not increase hazards due to geometric design, no change in uses are proposed due to the Project. (1, 43)

Significance Level:

Less than Significant Impact

d) Result in inadequate emergency access?

Comment:

The project is located in a State Responsibility Area, so fire protection services and emergency response services are provided by CalFire. The closest CalFire stations are located at 1001 S. Cloverdale Boulevard in Cloverdale, 17475 Fresdon Road in Healdsburg, and 16457 Hwy 175 in Cobb (Lake County). The Cloverdale Fire Protection District also provides fire protection and emergency response to some of the project vicinity. The Fire Protection District is located at 116 Broad Road in Cloverdale.

Police protection is provided by the Sonoma County Sheriff, operating from the main office in Santa Rosa.

The nearest hospital is Healdsburg District Hospital, located at 1375 University Street in Healdsburg, approximately 25 miles from the project site.

Due to the remote location of the project site, in critical emergencies requiring rapid response the emergency response is typically provided via helicopter. This will not change during construction, or in the case of a brief closure. If vehicle response is required, emergency vehicles can enter on the appropriate end of Geysers Road and will not have to cross through the project site. In addition, the measure listed below will ensure emergency vehicle access through the project site.

Calpine Corporation at the Geysers has its own emergency response plan. According to the plan, all emergency calls are routed through a central "Control One" facility, and then routed to the appropriate emergency response agency, including CalFire and the South Lake County Fire Protection District (SLCFPD). Calpine contracts with the SLCFPD for emergency services, so in many cases, emergency response will come from the Lake County side of the Geysers and will not access via Geysers Road. Calpine also has numerous helipad sites, and emergency response is largely via helicopter. Calpine has requested advanced notification of planned bridge closures during construction (Spooner, 2010).(1, 43)

Significance Level:

Less than Significant with Mitigation Incorporated

Mitigation:

Mitigation Measure TRANS-2 - Emergency Access

- Emergency response organizations and Calpine Corporation will be notified of the project construction schedule and any closure in advance. The County will require the contractor to provide passage of emergency vehicles through the project site at all times. The Contractor shall make plans for emergency vehicle staging on the easterly approach if complete closure is

determined necessary at any point in the construction schedule.

e) Result in inadequate parking capacity?

Comment:

There is only parking on the road shoulder and this will not change due to the project. During construction activities parking at the site may not be available but would be just slightly down the road. (1)

Significance Level:

No Impact

18. TRIBAL CULTURAL RESOURCES:

Would the project:

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California native American tribe, and that is:

i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5030.1(k), or

Comment:

The Project Archaeological Survey Report states that there is the potential for prehistoric resources to be found in the project area and vicinity. In addition, the project area is situated adjacent to two perennial watercourses (Frasier and Big Sulphur Creeks), on a well-drained landform that likely would have been suitable for early Native American occupation. The presence of documented prehistoric-era resources in the general vicinity of the project area suggests there is a potential for presently unrecorded resources to be encountered during ground-disturbing activities associated with project construction. An environmentally sensitive area will be established to protect known resource, which is located adjacent to but outside of the area of direct impact. (Due to the confidential nature of cultural resources, specifics of the environmentally sensitive area are addressed in the confidential Environmentally Sensitive Area Action Plan (available to qualified personnel upon request).

Mitigation Measure CUL-1 – Cultural Resources will be used to reduce any potential impacts on prehistoric resources to a less-than-significant level. (1, 33)

Significance Level:

Less than Significant with Mitigation Incorporated

Mitigation:

Mitigation Measure CUL-1: Cultural Resources, CUL-2: Human Remains

ii) A resource determined by the lead agency. In its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Comment:

See comment 18a(1). Tribal notifications have been mailed to tribes per AB52 requirements. No requests for consultation have been received (1, 33, 35)

Significance Level:

Less than Significant with Mitigation Incorporated

Mitigation:

Mitigation Measure CUL-1: Cultural Resources, CUL-2: Human Remains

19. UTILITIES AND SERVICE SYSTEMS:

Would the project:

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

Comment:

The project would not generate any septic effluent or wastewater discharge to contribute to the need for construction of water treatment facilities. The project will not require the construction of wastewater treatment facilities or expansion of existing facilities. The site will be graded to match adjacent slopes to ensure proper storm water drainage. Storm water drainage will adhere to conditions of project permits in compliance with the Clean Water Act and CA Department of Fish and Wildlife. Therefore, no impacts resulting from exceeding wastewater treatment standards would occur. (1)

Significance Level:

No Impact

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

Comment:

The proposed project would not include any buildings or structures requiring new or expanded water supplies. Therefore, impacts would be less than significant. (1)

Significance Level:

No Impact

- c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?**

Comment:

The project would not generate any wastewater discharge. Therefore, no impacts relating to wastewater treatment facility's capacity would occur. (1)

Significance Level:

No Impact

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

Comment:

Disposal of the waste that would result from the temporary construction phase of the proposed project would not exceed state or local standards. Therefore, impacts would be less than significant. (1)

Significance Level:

Less than Significant Impact

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

Comment:

Sonoma County has access to adequate permitted landfill capacity to serve the proposed project. Sonoma County has a solid waste management program in place that provides solid waste collection and disposal services for the entire County. The program can accommodate the permitted collection and disposal of the waste that would result from the temporary construction phase of the proposed project. Therefore, impacts would be less than significant. (1)

Significance Level:

Less than Significant Impact

20. WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire severity zones, would the project:

The project is located within the State responsibility area, and is land classified as a very high fire severity zone. (1, 7)

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

The project will not substantially impair emergency response. The structure has been design to better accommodate large vehicles associated with accessing the Geysers Geothermal operation. This will enhance the ability to evacuate the area in the event of emergency.

Emergency response access will be mitigated to less than significant with mitigations incorporated. See 17(d). TRANS-2 (Emergency Assess) (1, 7, 43)

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

The project is located in a very high Fire Hazard Severity Zone. Conditions in the surrounding area will remain unchanged compared to existing. The project will not expose occupants to wildfire. (1)

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

The roadway alignment will change slightly. The new section of roadway will require less short-term maintenance compared to the existing infrastructure. This change will not exacerbate fire risk at the project site nor in the surrounding areas. (1)

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

The project will not expose people to significant risk. The new bridge is designed so that downstream conditions would not change. The bridge will not alter area environmental conditions in the event of flooding, landslides, post-fire slope stability or drainage changes.

Significance Level:

Less than Significant with Mitigation Incorporated

Mitigation:

TRANS-2 (Emergency Assess)

21. MANDATORY FINDINGS OF SIGNIFICANCE

- 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?**

The incorporation of the mitigation measures included in Section 4 (Biological Resources) would reduce potential impacts to fish, wildlife, plants, to a less-than-significant level. The project site does not contain any resource listed in, or determined to be eligible by, the State Historical Resource Commission and does not contain a resource included in a local register of historic resources or identified as significant in a historical resource survey. Additionally, the project site does not contain any object, building, structure, site, area, place, record, or manuscript that a lead agency determined to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California. However, cultural resources could potentially be uncovered during construction. Mitigation measures included in Section 5 (Cultural Resources and Human Remains) would reduce potential impacts to a less-than-significant level.

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 projects, the effects of other current projects, and the effects of probable future projects)?**

Cumulative impacts are impacts on the environment that result from the incremental impacts of a proposed project when added to other past, present, and reasonably foreseeable future actions (State CEQA Guidelines Section 15355[b]). An additional bridge replacement is anticipated to take place on Geysers Road over Big Sulphur, approximately 1.5 miles upstream, and outside of this project's view shed. The Big Sulphur Bridge project is anticipated to be completed the preceding construction season. Potential impacts of the project would be reduced to less-than-significant via feasible mitigation measures similar to what is described for the Frasier Creek Bridge project in this document. The replacement of Geysers Road over Big Sulphur Creek is not anticipated to intensify development within the Geysers area given that the proposed project's potentially significant impacts can also be completely mitigated, cumulative impacts would be less than significant and the project's contribution to cumulative impacts would not be cumulatively considerable.

Less than Significant Impact

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

The proposed bridge replacement would reduce the safety hazards associated the existing bridge crossing Frasier Creek, which has a low seismic sufficiency rating and been determined to be functionally obsolete. Because the proposed project represents a net decrease in environmental effects that could adversely impact human beings, either directly or indirectly, project impacts to human beings would be less than significant.

Less than Significant Impact

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