

**Initial Study
and Mitigated Negative Declaration**

for the

**Glenn County Road 200A Bridge Replacement Project
Bridge No. 11C-0245, Federal Aid No. BHLO-5911(031)**

October 2019



Lead Agency:

Glenn County
Public Works Agency
777 N Colusa Street, Willows, CA 95988

Prepared By:



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1 Project Contacts and Information

This Project Information, Description, and Environmental Checklist contained herein constitute the contents of an Initial Study in accordance with Section 15063 of the California Environmental Quality Act (CEQA) Guidelines:

Project Title	Glenn County Road 200A Bridge Replacement Project
Lead Agency Contact and Address	County of Glenn Public Works Agency 777 N Colusa Street Willows, CA 95988
Project Sponsor's Name and Address	County of Glenn Public Works Agency Cole Grube, Assistant Director (530) 934-6530 (530) 934-6533 fax
Contact Person and Phone Number	Cole Grube, Assistant Director County of Glenn Public Works Agency (530) 934-6530 (530) 934-6533 fax

2 Project Description

The proposed Stony Creek Bridge (No. 11C-0245) Replacement Project (project) involves the replacement of the existing structurally deficient single-lane bridge on County Road 200A that crosses Stony Creek. The proposed project is included in the County Capital Improvement Program and the Federal Statewide Transportation Improvement Program, and is being funded by Local Highway Bridge Program funds administered by the California Department of Transportation (Caltrans) District 3-Marysville.

Glenn County proposes removing the existing bridge and associated footings and replacing it with a wider, three-span precast bridge structure to improve safety and traffic operations along County Road 200A. The project area or work limits for the bridge has been defined to include bridge replacement, staging areas, and all areas of ground-disturbing activities, as applicable (**Figure 1-Project Work Limits**).

2.1 Project Location

The proposed Glenn County Road 200A Bridge Replacement Project is located in Township 22N, Section 27, Range 05W of the Julian Rocks United States Geological Survey (USGS) 7.5-minute quadrangle. The proposed project is located approximately 11.5 miles west of the City of Orland and Interstate 5 (I-5) and 0.5 miles southwest of the southernmost boundary of Black Butte Lake Recreation Area in Glenn County, California. Black Butte Dam is located approximately 7.04 miles northeast of the project area (**Figure 2-Location Map**).

2.2 Existing Structure

The existing Stony Creek Bridge (Bridge No. 11C-0245) was constructed in 1960 by the U.S. Army Corps of Engineers as part of a county road relocation resulting from the Black Butte Dam Project. The existing bridge is approximately 500 feet long, with eight simple steel girder spans of 62 feet each. The bridge structure has seven piers with spread footings resting on substrates of either stream gravel or rock. The bridge has a single lane measuring approximately 15 feet wide with a 1.5-foot wide curb on either side with metal beam guard railing (**Appendix A – Photo Package**).

2.3 Proposed Structure

The proposed project would replace the existing eight span slab on steel girder bridge with a new three span, cast-in-place, box girder bridge founded on drilled shaft foundations. The new bridge would be located directly downstream (north) of the existing bridge and would be the same length as the existing bridge. The new bridge structure will be approximately 32-feet wide to accommodate two travel lanes and two 4-foot wide shoulders. The new bridge abutment locations would be constructed downstream and in line with the existing abutments. The existing bridge would continue to facilitate traffic during construction of the new bridge.

It is anticipated that bridge construction will be implemented over two construction seasons. Work during the first season would likely include the construction of the 8-foot diameter drilled shaft foundations and 7-foot diameter columns for the two bents in the creek bed as well as both abutments. The shaft foundations could be drilled up to 30 feet below the existing ground surface. This would represent the maximum depth of ground disturbance during construction. During the second season, the contractor will construct the temporary falsework, the box girder superstructure, and the roadway approaches, as well as, remove the falsework and the existing bridge.

During the first season, the contractor will most likely construct two 20-foot by 20-foot temporary timber work platforms that will support the drill rig during the drilling of the foundational shafts. Temporary timber pads, or other similar method may be needed to support heavy equipment while mobilizing through the construction access road within the channel of Stony Creek. It is anticipated that during the second season, a falsework support system will need to be constructed in the creek bed. Falsework may entail a number of small timber pads located throughout the creek bed to provide adequate support. As an alternative, the contractor may elect to drive temporary steel piles for the falsework support system. As with the pads, the exact number and location of the driven piles would be determined by contractor in his falsework shop drawing submittal. Once the new bridge has been constructed, the contractor will grade and pave the new approach roadway. Based on the current design, rock slope protection (RSP) would be placed around the wingwalls and abutments to prevent erosion and scour. Rock slope protection is expected to range in size from ¼ ton to ½ ton and would cover an area measuring approximately 75 feet long by 12 feet wide around the wingwalls on both sides of the creek. Once the new bridge is completed the existing bridge and road would be removed. Demolition activities would consist of the removal of the existing bridge foundations within Stony Creek to a depth of approximately three feet below the existing grade.

Some activities would need to occur within the creek, including the placement of timber pads along the construction road access to support the mobilization of heavy equipment to the construction area, the construction of temporary falsework, and drilling/excavating the foundational shafts. The proposed construction activities within the creek would be timed to occur under the driest conditions possible; and as such, in-water work (i.e. water diversions) would be minimized. However, given the placement of existing foundations and the proposed placement of the new pier foundations, both water diversions and dewatering may be required depending on the conditions present at the time of construction/demolition.

Two potential construction staging areas have been identified for the proposed project. Both are located on the north side of County Road 200A, approximately 400 to 600 feet east of the existing bridge. One of the potential staging areas would be selected as the designated areas for material or equipment storage and could encompass up to 1.34 acres (**Figure 3 – Project Plans**).

In order to access the work area within the channel of the creek, a temporary construction access road may need to be established. The construction access route will follow an existing dirt road north from County Road 200A to the channel of Stony Creek. The route then continues along the eastern bank of the creek to the work area for the new bridge.

Traffic will continue to utilize the existing bridge during construction of the new bridge. During the roadway paving tie-ins, temporary traffic control in the form of flagmen will be required to control traffic. The existing bridge would be demolished and removed from the project site after the new bridge is constructed and open to traffic. The project will require some relocation of public utilities.

The types and number of construction equipment as well as the number of construction workers would vary based on the specific activity being conducted. Construction equipment is expected to include but not be limited to an excavator, loader, dump truck, grader, vibratory roller compactor, crane, drill rig, fork lift, pile driving hammer, pile driving equipment, baker tanks, pumps, concrete trucks, several work trucks, and an assortment of other support vehicles. It is anticipated, approximately 8 to 10 construction workers may work on the project during any given day; however, up to 25 workers may be required during special operations.

Construction activities could take up to 24 months to complete over two construction seasons. Work within the channel of Stony Creek could begin in late spring and end in early fall, as necessary to satisfy

seasonal restrictions for in-channel work typically required by state and federal agencies to protect water resources. Construction may include a winter suspension between seasons.

2.4 Environmental Setting

The project occurs in the right-of-way of County Road 200A. Surrounding land rolling and gently sloping and is predominantly oak woodland dominated by blue oak (*Quercus douglasii*), scattered valley oak (*Q. lobata*), and grassland habitats. A rural residence can be found approximately 650 feet southeast of the existing bridge. A ranch and associated pasture land can be found north and west of the existing bridge.

In 2017, North State Resources, Inc. (NSR) prepared a Delineation of Waters of the United States. Approximately 2.19 acres of pre-jurisdictional Waters of the United States were delineated within the biological survey area and is comprised primarily of Stony Creek. Hydrology in the creek is driven by regulated flows from the Stony Gorge Reservoir. The creek carries water from the reservoir eventually to the Sacramento River approximately 31 river miles east of the study area. Generally, Stony Creek is a meandering stream with a wide, nearly level floodplain that flows from southwest to the northeast. Local precipitation events during the winter months could also contribute to hydrology seen on-site.

Four vegetation communities were observed within the project area including annual grassland, blue oak woodland, riverine, and valley foothill riparian based on descriptions provided in A Guide to Wildlife Habitat of California (Mayer and Laudenslayer 1988). Annual grassland is located in the northeast portion of the study area and characterized by a dense herbaceous layer. Dominant plant species include ripgut brome (*Bromus diandrus*), rattail fescue (*Festuca myuros*), harewell barley (*Hordeum murinum* sp. *leporinum*), bur-clover (*Medicago polymorpha*), winter vetch (*Vicia villosa*), and rose clover (*Trifolium hirtum*). Blue oak woodland occurs on the slopes above the Stony Creek floodplain and at the eastern portion of the study area. It is characterized by an open canopy of blue oaks (*Quercus douglasii*), with a dense herbaceous understory containing ripgut brome, rattail fescue, and winter vetch. Riverine habitat consists of Stony Creek, the dominant substrates within the creek include cobble, gravel and sand. Valley foothill riparian habitat occurs as bands of vegetation along the banks of Stony Creek. The habitat is characterized by a moderate to dense overstory of riparian trees and shrubs including Fremont cottonwood (*Populus fremontii*), mulefat (*Baccharis salicifolia*), arundo (*Arundo donax*), and sandbar willow (*Salix exigua*). Herbaceous species within the understory include ripgut brome, annual ragweed (*Ambrosia artemisiifolia*), yellow sweet clover (*Melilotus indicus*), and deergrass (*Muhlenbergia rigens*).

In addition, North State Resources, Inc. prepared a Natural Environmental Study (NES) (**Appendix B**) which included a list of special-status plants and wildlife species from information provided by the U.S. Fish and Wildlife Services (USFWS) species list, the California Department of Fish and Wildlife Natural Diversity Database (CNDDB), and the California Native Plant Society (CNPS) species list. The database was evaluated to determine the likelihood of each species' occurrence in and near the project and the potential impacts from the proposed bridge replacement project (North State Resources, Inc., March 2017). Three special-status plant species and 11 special-status animal species have the potential to occur on-site including red-flowered bird's foot trefoil (*Acmispon rubriflorus*), Stony Creek spurge (*Euphorbia ocellate* ssp. *rattanii*), Ahart's paronychia (*Paronychia ahartii*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), foothill yellow-legged frog (*Rana boylei*), northwestern pond turtle (*Actinemys marmorata*), Swainson's hawk (*Buteo swainsoni*), grasshopper sparrow (*Ammodramus savannarum*), loggerhead shrike (*Lanius ludovicianus*), white-tailed kite (*Elanus leucurus*), pallid bat (*Antrozous pallidus*), western red bat (*Lasiurus blossevillei*), American badger (*Taxidea taxus*), ring-tailed cat (*Bassariscus astutus*), and migratory birds protected by the Migratory Bird Treaty Act (MBTA). Numerous cliff swallow (*Petrochelidon pyrrhonota*) nests were present beneath the bridge. Suitable nesting habitat for a variety of species protected under the MBTA occurs adjacent to the project area.

The mean annual precipitation is approximately 20 inches per year. The mean annual air temperature during the summer is approximately 77°F, and approximately 48°F during the winter months. (WRCC 2017). The site is approximately 500 feet above sea level.

2.5 Other Public Agencies Whose Approval is Required/Obtained

United States Army Corps of Engineers

- Section 404 Clean Water Act (CWA), Nationwide Permit #14 Linear Transportation Project

Regional Water Quality Control Board

- Section 401 CWA Water Quality Certification

California Department of Fish and Wildlife-Fish and Game Code

- Section 1600 Lake and Streambed Alteration Agreement

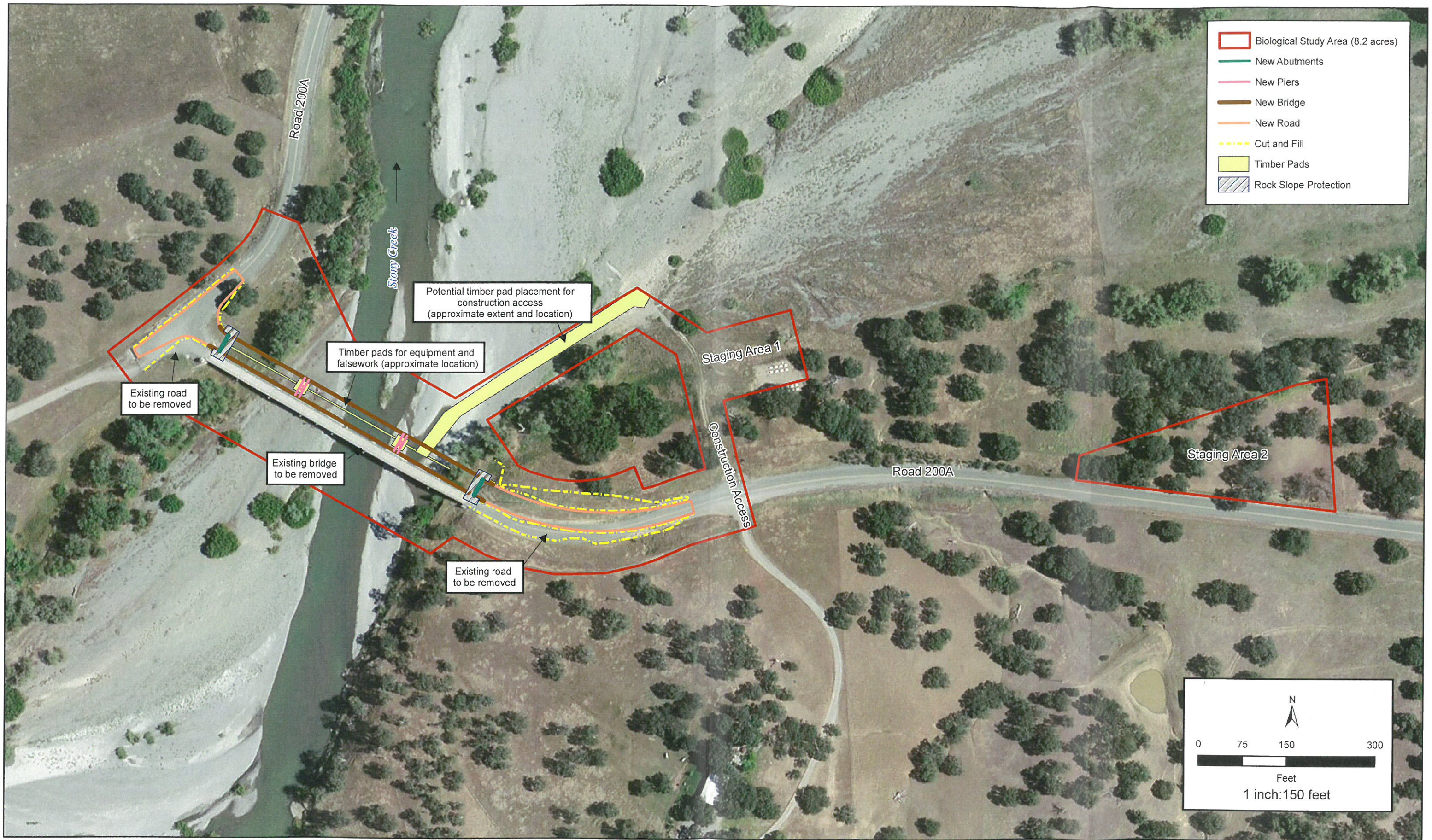
2.6 Regulatory Guidance

This document is an Initial Study, prepared pursuant to the California Environmental Quality Act (CEQA), for the proposed Glenn County Road 200A Bridge Replacement project. This Initial Study has been prepared in accordance with CEQA, Public Resources Code Sections 21000 et seq. and the CEQA Guidelines found in Chapter 14 of the California Code of Regulations (CCR).

An Initial Study is conducted by a lead agency to determine if a project may have a significant effect on the environment. In accordance with CEQA Guidelines Section 15064(a)(1), an environmental impact report (EIR) must be prepared if there is substantial evidence in light of the whole record that the proposed project under review may have a significant effect on the environment. A negative declaration may be prepared if the lead agency finds that there is no substantial evidence, in light of the whole record, that the project may have a significant effect on the environment. A negative declaration is a written statement describing the reasons why a proposed project will not have a significant effect on the environment and, therefore, why the proposed project will not require the preparation of an EIR (CEQA Guidelines Section 15371). Furthermore, CEQA Section 15070 indicates that a public agency shall prepare a proposed negative declaration or mitigated negative declaration for a project subject to CEQA when the initial study has identified significant effects, but:

- (1) Revisions in the project plans or proposals in accordance with the CEQA Guidelines Section 15070(b) made by or agreed to by the applicant before the proposed mitigated negative declaration and initial study is released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and
- (2) There is no substantial evidence, in light of the whole record before the agency, that the proposed project as revised may have a significant effect on the environment.

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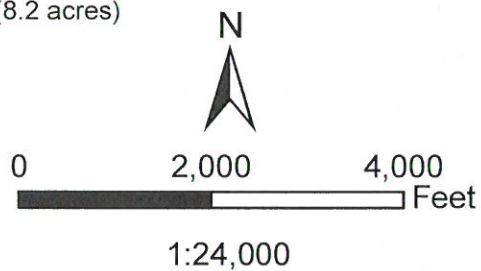
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 Biological Study Area (8.2 acres)

Public Land Survey:
Section 27
T22N, R5W (MDBM)

7.5' USGS Quad:
Julian Rocks



3 Determination

3.1 Environmental Factors Potentially Affected

The environmental factors checked below could be potentially affected by this project; however, with the incorporation of mitigation measures, "potentially significant impacts are reduced to less than significant level by the project" (CEQA Guidelines Section 15382).

- | | | |
|--|--|--|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agricultural/Forestry Resources | <input checked="" type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Energy |
| <input type="checkbox"/> Geology/Soils | <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards/Hazardous Materials |
| <input type="checkbox"/> Hydrology/Water Quality | <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources |
| <input type="checkbox"/> Noise | <input type="checkbox"/> Population & Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation | <input type="checkbox"/> Tribal Cultural Resources |
| <input type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> Wildfire | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

3.2 Determination:

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

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

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

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

Matt Rogers, Associate Planner

Printed Name



Signature:

10/28/19
Date

Glenn County Public Works Agency

For

4 Environmental Checklist

4.1 Aesthetics

Would the project:	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources within a state scenic highway?				X
c) Substantially degrade the existing visual character or quality of the site/surroundings?				X
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				X

4.1.1 Discussion

- a) **Less than Significant.** The proposed project involves the construction of a new bridge and the demolition of the existing bridge across Stony Creek along County Road 200A. The proposed project will not change regulations or policies (or their implementation) relative to aesthetic/visual resources. Project construction will not change the established visual character and planned future use of the surrounding area as similar components (i.e. bridge) already exist at the location. Placement of the new bridge will not interfere with the views of scenic vistas from the adjacent residence and public right-of-way. Although the rural setting and unique geography of Glenn County and its surrounding area have created a number of scenic vistas and corridors, the proposed project only includes bridge replacement, roadway, and approach rehabilitation along the existing roadway alignments for improved safety and will not have a substantial adverse effect on a scenic vista.
- b) **No Impact.** There are no designated resources within a state scenic highway in the project area. Furthermore, there are no officially recognized scenic roadways in Glenn County. The proposed project would not result in a significant change to the appearance of the existing roadway, nor would it eliminate access to scenic views or alter the landscapes surrounding the project site.
- c) **No Impact.** The proposed project will not substantially degrade the existing visual character or quality of the site and its surroundings. The project would not create structures with a substantial vertical presence. Temporary visual impacts may occur during construction activities, when heavy equipment and construction materials will be present within the project area. Neither the function nor the general appearance of the surrounding area would be substantially modified by the proposed project.
- d) **No Impact.** The improvements associated with this project do not include the installation of lighting or reflective surfaces that could contribute to substantial sources of light or glare. Additionally, construction will not occur during the evening or nighttime hours.

Mitigation: None required

4.2 Agricultural and Forestry Resources

Would the project:	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact
a) Convert Farmland (Prime, Unique or of Statewide Importance) pursuant to the Farmland Mapping and Monitoring Program of the CA Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 1220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
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?			X	

4.2.1 Discussion

- a) **No Impact.** The proposed project does not occur on lands designated as Important Farmlands; although, the project will occur in adjacent lands designated as grazing land and Farmland of Local Potential. Because the project occurs within the existing county right-of-way and is the replacement of an existing structure it would not result in the conversion of Prime Farmland, Farmland of Statewide Importance, Unique Farmland or Farmland of Local Importance, as shown on the maps prepared pursuant to Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.
- b) **No Impact.** The project will not conflict with existing zoning for agricultural use, or a Williamson Act Contract. While there are Williamson Act Contracts on lands adjacent to the project, project activities in these areas will occur within the existing roadway right-of-way. Therefore, relative to land use designations and Williamson Act contracts, there would be no impact.
- c) **No Impact.** The proposed project would not conflict with existing zoning for, or cause the rezoning of forestland (as defined in Public Resources Code §1220(g)), timberland (as defined in Public Resources Code §4526), or Timberland Production (as defined in Government Code §51104(g)), because the project site and the surrounding area does not contain forest land. The proposed project is located in the northern portion of California's Central Valley, a non-forested region.
- d) **No Impact.** The proposed project would not cause the rezoning or loss of forestland or timberland to non-forest use due to its location within Glenn County. The project is located within the foothills of the northern portion of California's Central Valley, and, as such does not contain forest land.
- e) **Less Than Significant.** The proposed project does not involve changes to the existing environment that could result in the conversion of Farmland to non-agricultural use. The proposed project involves the

replacement of a bridge within the road right-of-way. Agricultural uses in the surrounding area will continue.

Mitigation: *None required*

4.3 Air Quality

Would the project:	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		X		
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including emissions that exceed quantitative thresholds for ozone precursors)?		X		
d) Expose sensitive receptors to substantial pollutant concentrations?		X		
e) Create objectionable odors affecting a substantial number of people?			X	

4.3.1 Setting

The proposed project is in the Northern Sacramento Valley Planning Area (NSVPA), which includes the following counties: Butte, Colusa, Glenn, Shasta, Sutter, Tehama, and Yuba. The NSVPA is bounded on the north and west by the Coastal mountain range and on the east by the southern portion of the Cascade mountain range and the northern portion of the Sierra Nevada mountains. High temperatures and low humidity, with prevailing winds from the south, characterize summer conditions. Occasional rainstorms, interspersed with stagnant and sometimes foggy weather, characterize winter conditions. Southern winds continue to predominate during the winter. Two types of inversions occur in the NSVPA: 1) during the summer, sinking air forms a lid over the region and distributes photochemical smog and 2) air cools next to the ground while air aloft remains warm causing poor dispersion of ground level pollutant emissions.

The California Air Resources Board (CARB) prepares and submits to the EPA a State Implementation Plan (SIP) explaining how the state will attain compliance with Federal clean air standards. The NSVPA is subject to federal, state, and local regulations. The NSVPA adopted an updated 2012 Triennial Air Quality Attainment Plan as its component of the SIP in compliance with the Federal and California Clean Air Acts.

The Glenn County Air Pollution Control District (GCAPCD) is responsible for attainment of the National and California Air Quality Standards in Glenn County. The GCAPCD's primary role when reviewing projects is to evaluate their consistency with ambient air quality standards and the provisions of SIP and Attainment Plan. The following table identifies criteria pollutants and the applicable state and federal attainment status:

Table 4.3.1: Glenn County Ambient Air Quality Attainment Status (GCAQMD, 2015)

Pollutant	State Designation	Federal Designation
ozone	Attainment	--
8-hour ozone		Unclassified/Attainment
Carbon monoxide	Unclassified	Unclassified/Attainment
Nitrogen Dioxide	Attainment	Unclassified/Attainment
Sulfur Dioxide	Attainment	Unclassified
PM10	Nonattainment	Unclassified
PM2.5	Attainment	Unclassified/Attainment

4.3.2 Discussion

- a) **Less Than Significant.** The proposed project is the replacement of a structurally deficient bridge with a new cast in place structure. It does not involve the construction of new expanded facilities. The proposed project will be required to comply with all applicable rules, regulations, and control measures including permitting, prohibitions, and limits to emissions that work to reduce air pollution throughout California. Therefore, it will not conflict with or obstruct implementation of any air quality plans in Glenn County. The proposed project would not create a source of new vehicle traffic, such as a new housing development or commercial uses, and thus there would be no added vehicle trips to the existing roadway network, and no long-term air quality impacts. The proposed project is located within the Northern Sacramento Valley Air Basin (NSVAB) and the jurisdiction of CGAPCD. Construction activities may result in ground disturbance due to vegetation removal and placement of bridge components. To comply with Caltrans Standard Specifications, the County shall comply with all Best Available Mitigation Measures (BAMMs), as described in mitigation measure **Air Quality MM1**, for the control of construction related particulate emissions
- b) **Less Than Significant With Mitigation Incorporated.** Implementation of the proposed project would result in the generation of short-term construction-related air pollutant emissions. Diesel fumes may be noticeable near the site; however, diesel fumes will be a short-term effect. All equipment must comply with California emissions standards and Caltrans Standard Specifications. Exhaust emissions from construction equipment would contain reactive organic gases (ROG), nitrogen oxides (NOx), carbon monoxide (CO) and particulate matter less than 10 microns in diameter (PM10). Particulate matter less than 10 microns emissions would also result from windblown dust (fugitive dust) generated during construction activities. As shown in **Table 4.3.1**, per the California Ambient Air Quality Standards (CAAQS) the project area is designated as a non-attainment area for PM10.

Because the project is receiving funding from the Highway Bridge Program, the project must comply with Caltrans Standard Specifications (Section 7-1.01F, Air Pollution Control and Section 10.1, Dust Control), therefore, the contractor is required to comply with other local jurisdiction rules,

regulations, ordinances, and statutes. The proposed project requires a relatively limited scale of roadway work for bridge replacement. The project would not result in construction related emissions exceeding GCAPCD emission thresholds, having a less than significant impact to regional air quality. The incorporation of **Air Quality MM-1**, would ensure construction related emissions impacts would be less than significant.

- c) **Less Than Significant With Mitigation Incorporated.** Bridges and roadways are conduits that enable vehicular traffic to move from one point to another. The project involves replacement of an existing bridge, and does not generate new traffic, thereby generating more emissions, as would new development (i.e., residential or commercial land uses).

The project will generate short-term construction related emissions associated with equipment used for construction activities. These emissions would contain ozone precursors, PM₁₀ and PM_{2.5}. Additional particulate matter emissions in the form of fugitive dust could be generated during ground disturbing activities for vegetation removal and placement of abutments and rock slope protection.

The proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard. Each of the above impacts are temporary, local, and construction related. The incorporation of **Air Quality MM-1** would reduce impacts associated with PM₁₀ to a less than significant level. Air quality mitigation measures are consistent with the requirements of Glenn County General Plan and the GCAPCD and Caltrans Standard Specifications for pollution and dust control.

- d) **Less Than Significant With Mitigation Incorporated.** Two residences can be found in close proximity to the project area. A residential dwelling exists approximately 625 ft. to the southeast of the bridge. Project activities consist of removal of the current structure and replacement with a new bridge structure as well as roadway approach work. There are no schools, hospitals, or other sensitive receptors in the area and no substantial pollutant concentrations are anticipated to occur. Temporary construction activities would result in particulate emissions in an area designated as non-attainment. However, implementation of BAMM's and the incorporation of **Air Quality MM-1** would minimize the exposure of sensitive receptors to fugitive dust to the maximum extent possible.
- e) **Less Than Significant.** Other than construction activities (diesel odors may be noticeable near the construction site), no long-term odor producing activities would result from the project. Therefore, the proposed project would not result in less than significant objectionable odor impacts.

4.3.3 Mitigation:

Air Quality MM-1: Best Available Mitigation Measures for the Control of Construction Related Particulate Emissions

To comply with the Glenn County Air Pollution Control District's (GAPCD) regulations (section 76 visible emissions), the County shall comply with all Best Available Mitigation Measures (BAMMs) for the control of construction related particulate emissions. The contractor shall submit an Air Quality Attainment Plan to the County for approval. The approved plan shall include all applicable BAMMs as specified by GCAPCD's Standard Construction Phase Mitigation Measures, including but not limited to the following:

1. Haul trucks must be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained.

2. Construction equipment exhaust emissions shall not exceed GCAPCD Section 76 Visible Emissions (40 percent opacity or Ringelmann 2.0). Operators of vehicles and equipment found to exceed opacity limits shall act to repair the equipment within 72 hours or remove the equipment from service.
3. The area disturbed by demolition, clearing, grading, earth moving, or excavation operations shall be minimized at all times.
4. Suspend grading or earth moving activities when wind speeds exceed 20 mph
5. Minimize unnecessary idling time to 5 minutes.
6. Water shall be applied as needed to prevent fugitive dust impacts offsite.
7. All onsite vehicles should be limited to a speed of 15mph on unpaved roads.

4.4 Biological Resources

Would the project:	Potentially Significant	Less Than Significant With Mitigation	Less Than Significant	No Impact
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?		X		
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 Game or US Fish and Wildlife Service?			X	
c) Have a substantial adverse effect on protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			X	
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?			X	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
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?				X

4.4.1 Setting

Natural Environment Study (NES)

A NES report was prepared by North State Resources, Inc. in March of 2017 (**Appendix B**). The NES identified valley foothill riparian, riparian wetlands, perennial stream (Stony Creek), ephemeral stream, and intermittent stream. The NES also assessed the potential for significant impacts to special-status species. As part of the NES, a list of special-status plant and animal species was compiled from the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Conservation database, California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB), and the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants to determine special-status species that may potentially be affected by the proposed project. All the special-status species listed by the USFWS, CDFW, and CNPS occurring within the Julian Rocks, Newville, Sehorn Creek, Black Butte Dam, Chrome, Fruto NE, Elk Creek, Fruto and Stone Valley USGS quadrangles are included in the NES, in Table 1. Based on the CNDDDB data, four special-status plant species occur within five miles of the project site, plamate-bracted bird's-beak (*Chloropyron palmatum*), red-flowered bird's-foot (*Acmispon rubriflorus*), Stony Creek spurge (*Euphorbia ocellate* ssp. *rattanii*), Ahart's paronychia (*Paronychia ahartii*). No special-status plant species were encountered during the botanical field survey of the project area during June of 2016.

Special-status wildlife species with at least moderate potential to occur within the project area include, valley elderberry longhorn beetle (*Desmicerus californicus dimorphus*), foothill yellow-legged frog (*Rana boylei*), northwestern pond turtle (*Emys marmorata*), grasshopper sparrow (*Ammodramus savannarum*), loggerhead shrike (*Lanius ludovicianus*), white-tailed kite (*Elanus leucurus*), Swainson's hawk (*Buteo swainsoni*), pallid bat (*Antrozous pallidus*), western red bat (*Lasiurus blossevillei*), American badger (*Taxidea taxus*), ring-tailed cat (*Bassariscus astutus*), and birds protected by the Migratory Bird Treaty Act (MBTA).

In addition, avoidance and minimization measures would ensure impacts to aquatic and upland habitat will be reduced. The County will implement avoidance and minimization measures as detailed in applicable regulatory permits to avoid impacts. Measures may include but are not limited to construction within the right-of-way (ROW), staging the equipment and the excavated material in designated areas, and using erosion control methods such as silt fencing and straw wattles.

Other measures may include, but are not limited to:

- Construction within the County ROW
- Staging equipment and excavated materials in the designated areas
- Using erosion control methods such as silt fencing and straw wattles

There are no federally listed special-status species with at least moderate potential to occur within the project area (including the potential for foraging habitat) and associated effect determination.

Table 2 includes federally listed special-status species with at least moderate potential to occur within the project (including the potential for foraging habitat) and an associated effect determination.

**Table 4.4.1: Federally listed Species with Potential to Occur
in the Action Area and Effect Determinations**

Species	Effect Determination
Valley elderberry longhorn beetle (<i>Desmicerus californicus dimorphus</i>)	No effect

Table 3 includes State listed species and CDFW Species of Special Concern with at least moderate potential to occur within the project area.

**Table 4.4.2: State listed Species with Potential to Occur
in the Action Area and Associated Status**

Species	Status
Foothill yellow-legged frog (<i>Rana boylei</i>)	Species of Special Concern
Northwestern pond turtle (<i>Emys marmorata</i>)	Species of Special Concern
Grasshopper sparrow (<i>Ammodramus savannarum</i>)	Species of Special Concern
Loggerhead shrike (<i>Lanius ludovicianus</i>)	Species of Special Concern
White-tailed kite (<i>Elanus leucurus</i>)	Fully Protected
Swainson's hawk (<i>Buteo swainsoni</i>)	State Threatened
Paillid bat (<i>Antrozous pallidus</i>)	Species of Special Concern
Western red bat (<i>Lasiurus blossevillii</i>)	Species of Special Concern
American badger (<i>Taxidea taxus</i>)	Species of Special Concern
Ring-tailed cat (<i>Bassariscus astutus</i>)	Fully Protected

Draft Delineation of Aquatic Resources

A Draft Delineation of Aquatic Resources (**Appendix C**) was prepared for this project by North State Resources, Inc. in January 2017. A total of 2.194 acres of pre-jurisdictional waters of the U.S. were delineated within the project area including 0.254 acres of riparian wetland, 0.001 acres of ephemeral stream, 0.016 acres of intermittent stream, and 1.923 acres of perennial stream. According to the Draft Delineation, the riparian wetlands are located adjacent to and within the ordinary high water mark of Stony Creek, the ephemeral stream is located in the southeastern portion of the study area near Stony Creek, the intermittent stream is located in the northwest portion of the study area and flows seasonally, and the perennial stream is Stony Creek which bisects the study area. The determinations concerning Waters of the United States are subject to verification by the U.S. Army Corps of Engineers.

Required Regulatory Permitting

The USACE and the EPA regulate the discharge of dredged or fill material into jurisdictional waters of the United States, under Section 404 of the CWA. The issuance of a Section 404 permit is contingent on a project's demonstration of adherence to the maximum extent practicable to the following principals: 1) avoidance of impacts, 2) minimization of potential impacts, and 3) compensation for any remaining unavoidable impacts. Thus, acquisition of a Section 404 permit is indicative of adherence to the USACE "no net loss" policy for area and function of Waters of the US. Furthermore, the proposed project would be required to obtain water quality certification per Section 401 of the Clean Water Act as a condition of 404 permit acquisition. The Regional Water Quality Control Board (RWQCB) issues water quality certifications within the scope of the following mandates: Section 401 of the Clean Water Act, California Porter-Cologne Water Quality Control Act, and State and Federal No Net Loss Policies. Acquisition of water quality certification is indicative of compliance with the state's water quality standards, including beneficial uses, water quality objectives, and an anti-degradation policy.

The CDFW grants approval per the Streambed Alteration Agreement Program under one of the following two scenarios, as described in Section 1602 of the Fish and Game Code:

- The activity will not substantially adversely affect an existing fish or wildlife resource, and that the entity may commence the activity without an agreement.
- The department determines that the activity may substantially adversely affect an existing fish or wildlife resource and issues a final agreement to the entity that includes reasonable measures necessary to protect the resource, and the entity conducts the activity in accordance with the agreement.

4.4.2 Discussion

- a) **Less Than Significant With Mitigation.** Field surveys of the project area were conducted on November 9, 2016 by North State Resources, Inc. Based on the survey results and review of existing documentation, 11 special-status species have at least moderate potential to occur within the project area, including valley elderberry longhorn beetle, foothill yellow-legged frog, northwestern pond turtle, grasshopper sparrow, loggerhead shrike, white-tailed kite, Swainson's hawk, pallid bat, western red bat, American badger, ring-tailed cat and migratory birds protected by the MBTA. Species with a low or no potential to occur within the project site are not discussed further because the potential for these species to occur is negligible (Refer to Table 3). The eleven special-status species with a moderate potential to occur are discussed in further detail below.

Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle (VELB) is federally listed as threatened and critical habitat has been designated by the USFWS. The beetle is endemic to riparian systems along the margins of rivers and streams, and in adjacent grassy savannas in California's Central Valley. The VELB occurs in the Central Valley of California below 3,000 feet. It is distributed primarily within riparian habitats from Shasta County to Kern County. Valley elderberry longhorn beetles feed and reproduce exclusively on two species of elderberry, including blue elderberry (*Sambucus nigra* ssp. *caerulea*) and red elderberry (*S. racemosa*). The adult female beetles deposit eggs in the bark crevices of living plants. Larvae bore into the pith (plant tissue in the center of the stem) of larger elderberry stems upon hatching, where the majority of the animal's lifespan occurs. Following pupation in the spring, the adult beetle emerges, creating a hole in the bark of the stem or branch. Adults feed on foliage and are present from March through early June. Because the adult stage is short lived, survey techniques focus on the presence of emergence holes for evidence of VELB. Valley elderberry longhorn beetle emergence holes have been observed in shoots or branches with diameters as small as 0.5 inches (13 mm) but are more common in older, larger branches. Besides exhibiting a preference for "stressed" elderberry shrubs, VELB prefer shrubs with stems of a certain size class. Exit holes have been found more frequently in trunks or branches that are 5 to 20 cm (2-8 in) in diameter, or at least 1.0 inch or greater at ground height (USFWS 1999) and less than one meter off the ground (Collinge et al. 2001). Research also shows that exit holes more consistently occur in clusters or stands of elderberry shrubs surrounded by associate riparian vegetation, rather than in isolated shrubs (Collinge et al. 2001). Exit holes are circular to slightly oval and are usually 7-10 mm in diameter. Valley elderberry longhorn beetles are the only insect species known to inhabit live elderberry shrubs and/or make exit holes of a similar size and shape in the Central Valley (USFWS 1991). No VELB or evidence of their presence was detected within the project area. However, due to the presence of a blue elderberry shrub approximately 30 feet from ground disturbing activities the implementation of **Biological Resources MM – 1** would ensure project related impacts to VELB would be less than significant.

Foothill Yellow-legged Frog

The yellow-legged frog is a state species of concern which occurs along the Coast Range of California, to the Transverse Mountains in Los Angeles County, and throughout most of northern

California west of the Cascade crest. It can be 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, costal scrub, mixed chaparral, and wet meadows. Adult yellow-legged frogs eat both aquatic and terrestrial invertebrates and yellow-legged frog tadpoles generally graze on algae and diatoms on rocky stream bottoms. The foothill yellow-legged frog is typically found in partly shaded, shallow streams and riffles with a rocky substrate in a variety of aquatic habitats. They generally prefer low- to moderate-gradient streams, especially for breeding and egg-laying, requiring at least some cobble-sized substrate for egg-laying, which they do following the end of spring flooding (mid-March to May). During the summer and fall, adult frogs prefer stream channels that provide exposed basking sites and cool shady areas. The tadpoles require water for at least 3 to 4 months while continuing to develop, hence the yellow-legged frog is rarely found far from permanent water sources. Garter snakes and bullfrogs have been documented as predators of the yellow-legged frog. Although suitable habitat is present within the project area, no foothill yellow-legged frogs were observed during biological surveys within the project area. Implementation of **Biological Resources MM-2** would ensure potential impacts to foothill yellow-legged frog would be less than significant.

Northwestern Pond Turtle

The northwestern pond turtle is a CDFW Species of Special Concern that occurs within a variety of habitats across the state. Northwestern pond turtles are associated with permanent or nearly permanent waters including ponds, lakes, sloughs, streams, irrigation ditches. Potentially suitable aquatic and nesting habitat occurs within the project area. Although no turtles of any species were observed during the biological survey of the project area in April 2017. Implementation of **Biological Resources MM-3** would ensure project related impacts to northwestern pond turtles would be less than significant.

Loggerhead Shrike

Loggerhead shrikes are common residents and winter visitors in lowlands and foothills throughout California. They can be found in open habitats with scattered shrubs, trees, posts, fences, utility lines or other perches. Typically, they occur in open canopied valley foothill hardwood, valley foothill hardwood-conifer, valley foothill riparian, pinyon-juniper, juniper, desert riparian, and Joshua tree habitats. They rarely occur in heavily urbanized areas but are often found in open croplands. Loggerhead shrikes mainly eat large insects, but also take small birds, mammals, amphibians, reptiles, fish, carrion, and various other invertebrates. They nest in shrubs or trees at heights ranging from 0.4 to 15 meters above the ground. Adults lay eggs from March to May with male and females tending their young into July or August. Although suitable habitat is present within the project area, no loggerhead shrikes were observed during biological surveys of the project area.

The implementation of **Biological Resources MM-4** will ensure potential impacts to loggerhead shrike would be less than significant.

White-Tailed Kite

The white-tailed kite is a CDFW fully protected bird species that can be found as a yearlong resident in coastal and valley lowlands near agricultural areas. Its habitat includes herbaceous and open stages of most habitats and cismontane habitats in California. The kite forages in undisturbed open grasslands, meadows, farmlands, and emergent wetlands where there are dense populations of voles (their main food source). White tailed kites require dense broad-leaved deciduous tree woodlands for nesting. Although suitable habitat is present within the project area, no white-tailed kites were observed during biological surveys within the project area.

The implementation of **Biological Resources MM-4** will ensure potential impacts to white-tailed kite would be less than significant.

Swainson's Hawk

Swainson hawk is a State-threatened species with no federal status listing. The species can be found throughout much of California, but the greatest concentration of breeding pairs is found in the Central Valley from Butte to San Joaquin counties. The species often nests in riparian areas adjacent to agricultural fields. Swainson's hawks are migratory, arriving in California in late February/early March and departing the breeding grounds in September.

The nearest known occurrence of Swainson's hawk is approximately six miles to the southeast of the project area. However, the riparian trees located near the existing bridge could provide suitable nesting habitat for the species. No Swainson's hawks or any large nests were observed during the biological survey.

The implementation of **Biological Resources MM-4** will ensure potential impacts to Swainson's hawk would be less than significant.

Pallid Bat

The pallid bat (*Antrozous pallidus*) is a rather large, pale, yellowish-brown bat with long prominent ears, a blunt snout, and pinkish-brown or gray wing and tail membranes. Pallid bats tend to roost alone or in small groups and are known to use day and night roosts in crevices of rocky outcrops and cliffs, caves, mines, trees (bole cavities of oaks, exfoliating Ponderosa pine and valley oak bark, deciduous trees in riparian areas, and fruit trees in orchards), and various man-made structures such as bridges and buildings (Baker et al. 2008). The pallid bat primarily preys on a variety of arthropods, grasshoppers, crickets, beetles, moths, occasionally small reptiles and rodents (Hermanson and O'Shea 1983). This species of bat is very vulnerable to disturbance that many times results in mass displacement of the species. If the species is detected in the project area, actions to coax the bat out of the area should be taken prior to the end of October when the bat seeks its winter hibernacula, isolation measures should be installed to prevent re-entry to the roost (Sherwin, 1998). Potential roosting habitat for pallid bat is present. Implementation of **Biological Resources MM-5** will ensure potential impacts to pallid bat would be less than significant.

Western Red Bat

The western red bat (*Lasiurus blossevillei*) is found in California from Shasta County to the Mexican border, west of the Sierra Nevada/Cascade crest and deserts. Winter range includes western lowlands and coastal habitats south of San Francisco. The western red bat roosts primarily in trees within forests and woodlands in edge habitats from sea level to mixed conifer forests (Williams and Findley 1979). However, the western red bat may have an association with riparian habitats with dense stands of cottonwood and sycamore, and orchards (Bolster, 1998). Family groups are known to roost together, forming nursing colonies. They forage in open areas and feed on a variety of insects including moths, crickets, beetles, and cicadas (Shump and Shump 1982). Migrations typically occur in the spring from March to May and in the autumn from September to October. The western red bat has been seen at temperatures as low as 44°F, however, in these cold climates the bat spends winter in hibernation (LaVal and LaVal 1979). Although suitable roosting habitat is present, no western red bats were observed within the project area. Implementation of **Biological Resources MM-5** will ensure potential impacts to western red bat would be less than significant.

American Badger

The American badger (*Taxidea taxus*) is a carnivorous mammal found throughout the state of California, with the exception of the northernmost portion of the North Coast. American badgers are most often found in drier, open stages of most shrub, forest, and herbaceous habitats, with friable soils. Their diet consists primarily of fossorial rodents: rats, mice, chipmunks, and especially ground squirrels and pocket gophers. American badgers also eat some reptiles, insects, earthworms, eggs, birds, and carrion. Diet shifts seasonally and yearly in response to availability of prey. This species is considered a Species of Special Concern by the CDFW. Although suitable burrowing and foraging habitat is present within the project area, no American badgers were observed within the project area. Implementation of **Biological Resources MM-6** will ensure potential impacts to American badger that would be less than significant.

Ring-tailed Cat

The ring-tailed cat (*Bassariscus astutus*) is widely distributed throughout California, though its range extends from the western and southwestern United States, through Mexico and into Central America. It is a common to uncommon, permanent, non-migratory resident throughout its range. The ring-tailed cat is active year-round but is rarely seen as it is nocturnal and secretive in nature. It can be found at low to middle elevations and inhabit various riparian habitats, usually being found no more than 1 kilometer from water. The ring-tailed cat is primarily carnivorous, foraging for mice, woodrats, bird eggs, reptiles, invertebrates, fruits, nuts and some carrion on the ground, among rocks and in the trees (CDFG 2005). For nesting it utilizes rock recesses, hollow trees, logs, snags abandoned burrows and wood rat nests. Young are typically born in late spring or early summer. (David and Russell 1984). Although suitable habitat is present in the riparian areas, no ring-tailed cats were observed within the project area. Implementation of **Biological Resources MM-7** will ensure potential impacts to ring-tailed cats would be less than significant.

Migratory Birds and Raptors

The federal Migratory Bird Treaty Act (MBTA) and California F.G.C. Sections 3503 and 3800 protect the occupied nests and eggs of migratory and non-game bird species. Birds nest in a variety of places including trees, shrubs, man-made structures, and the ground. Work buffers around migratory birds and their nests are typically needed to minimize impacts to these species. Any proposed project must take measures to avoid the take of any migratory and non-game birds, nests, or eggs.

Numerous migratory bird species were observed during the wildlife survey. Active cliff swallow nesting was in progress beneath the bridge. With the implementation of **Biological Resources MM-4** impacts to migratory birds and raptors would be less than significant.

- b) **Less Than Significant.** The project area contains valley foothill riparian habitat, which is considered a sensitive natural community by the USACE and CDFW. The proposed project will temporarily and permanently impact valley foothill riparian habitat. Temporary impacts to valley foothill riparian habitat will be returned to pre-construction conditions. Mitigation purchase will likely be required by CDFW for tree loss within the valley foothill riparian habitat.
- c) **Less Than Significant with Mitigation.** A Draft Delineation of Waters of the U.S. (**Appendix C**) was prepared for the project site by North State Resources in January 2017. A total of 2.194 acres of pre-jurisdictional waters of the U.S. were delineated within the project area. The proposed project could affect Stony Creek, a perennial stream and a Waters of the U.S. In addition, the project would also be required to comply with FGC Section 1602, The following regulatory permits will be acquired prior to the start of any grading or construction activities within the project area:

- CWA Section 404 permit #14 Linear Transportation from the USACE
- CWA Section 401 Water Quality Certification from the RWQCB
- F.G.C. Section 1602 Streambed Alteration Agreement from CDFW

Obtaining the appropriate regulatory permits ensures: 1) compliance with applicable state and federal laws, 2) that potential impacts to wetlands and waters of the U.S., waters of the state, and streambed and banks (including irrigation ditches), and listed species are mitigated appropriately (including the payment of mitigation fees), and 3) minimizes, reduces, or avoids potentially significant impacts. Incorporation of **Biological Resources MM-1** would ensure that the county would obtain all required subsequent regulatory permits.

- d) **Less than Significant.** The proposed project would involve the removal of the current structurally deficient bridge and replacing it with a three span, cast-in-place, box girder bridge founded on drilled shaft foundations structure. Temporary disturbances resulting from vegetation removal will be restored to pre-project conditions. The project would not result in the introduction of permanent barriers to movement of any resident or migratory fish or wildlife species, nor would it result in the introduction of any new long-term factors (light, fencing, noise, human/presence and/or domestic animals) which could hinder the normal activities of wildlife.
- e) **No Impact.** The proposed project would not conflict with any local plans or policies that protect biological resources. The project would be required to adhere to the mitigation measures and standard/permitting requirements of regulatory agencies, as set forth in this study.
- f) **No Impact.** The project site is not subject to the provisions of any adopted habitat conservation plans or natural community conservation plans, as Glenn County has yet to prepare any. Regarding local plans, policies and ordinances, the proposed project would result in no impact.

4.4.3 Mitigation:

Biological Resources MM-1: Valley Elderberry Longhorn Beetle and Obtain Regulatory Permits and Implement Avoidance and Minimization Measures

The following avoidance and minimization measures, which are consistent with the *Formal Programmatic Consultation Permitting Projects with Relatively Small Effects on the Valley Elderberry Longhorn Beetle within the Jurisdiction of the Sacramento Field Office, California* (USFWS 1996) and the *Conservation Guidelines for Valley Elderberry Longhorn Beetle* (USFWS 1999), will be implemented to minimize the potential impacts to VELB

- Worker awareness training will be provided to all construction personnel. The training will be administered by a qualified biologist and will provide the workers with information on their responsibilities in regards to the sensitive biological resources in the BSA. The program will specifically address the status of VELB, the species life history, how to identify the species and its habitat, the need to protect the beetle and its host plant, and the project conservation and avoidance and minimization measures.
- Project activities within 100 feet of elderberry shrubs will be timed to occur outside of the VELB active season (mid-March through mid-May) to the greatest extent practicable.
- Prior to construction activities, an environmentally sensitive area will be designated around the elderberry shrub not slated for removal using exclusionary fencing, signs, and flagging under the supervision of a qualified biologist. A 100-foot buffer zone around the elderberry shrub will be marked within stakes or flags as a minimal disturbance area. Because project activities would

encroach within 100 feet of the shrub, exclusionary fencing will be placed at a distance of 20 feet or more from the dripline of the shrub. Signs stating *“This area is a habitat for the VELB, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment.”* will be erected and attached to the fencing. The signs will be placed in clearly visible locations and will be readable from a distance of 20 feet. Fencing and signs will be maintained throughout the entire project duration.

- No insecticides, herbicides, fertilizers, or other chemicals that might harm the beetle or its host plant will be used within 100 feet of any elderberry shrub with one or more stems measuring 1.0 inch or greater in diameter at ground level.
- Any damage to the buffer area (i.e. area within 100 feet of elderberry shrub with stems of suitable size) during construction will be restored following construction. Restoration will include erosion control and revegetation with appropriate native plants, as appropriate.
- A qualified biologist will conduct a pre and post-construction survey of the elderberry shrub as a result of the proposed action. The pre-construction survey will document the conditions of the shrub prior to construction activities and document compliance with mitigation measures. The post-construction survey will verify that no additional impacts to the elderberry shrub took place. If the shrub becomes damaged during construction activities, the County may be required to compensate for the loss of the shrub through compensatory mitigation.

Additionally, the project will obtain the following permits, as necessary and applicable:

- CWA Section 404 permit #14 Linear Transportation from the USACE
- CWA Section 401 Water Quality Certification from the RWQCB
- F.G.C. Section 1602 Streambed Alteration Agreement from CDFW
- The project will incorporate the avoidance and minimization measures (AMMs), standard BMPs and other notification requirements identified in applicable permits, such as pre and post-construction surveys and documentation, worker awareness training, exclusionary measures, AMM compliance and reporting, incident reports and monitoring requirements.

Biological Resources MM-2: Foothill Yellow-legged Frog Avoidance and Minimization Measures

- Environmental awareness training will be conducted by a qualified biologist prior to onset of the work for construction personnel to brief them on how to recognize foothill yellow-legged frog and other special-status animals that may occur in the project area.
- To avoid potential injury or mortality to foothill yellow-legged frogs using vegetated areas for cover along Stony Creek, initial vegetation clearing (i.e. removal of small trees, shrubs, brush, and tall dense grasses) along Stony Creek will be done manually using hand tools (e.g. chainsaw, lopper, weed whacker). The vegetation will be cut to ground level and be removed from the work area by hand. Heavy equipment may be used once the initial vegetation clearing along the creek is complete.
- Stony Creek outside the work area will be staked, flagged, or signed to avoid encroachment by equipment and construction crews. The number of access routes, size of the staging area, and the total area of impact will be limited to the minimum necessary to achieve the proposed project goal. This goal includes locating access routes and construction areas outside of the creek to the maximum extent practicable. The flagged areas will confine access routes and construction areas to the minimum area necessary to complete construction and minimize the impact on natural habitats in the BSA.

- Upon completion of construction activities, any diversions or barriers to flow will be removed in a manner that would allow flow to resume with the least disturbance to the substrate. Alteration of the streambed will be minimized to the maximum extent possible.
- If foothill yellow-legged frogs are encountered in the BSA during construction and will be harmed by construction activities, work will stop in the area and the County will notify CDFW. Upon authorization from CDFW, a qualified biologist may relocate the individual(s) the shortest distance possible to a location containing habitat outside of the project area.

Biological Resources MM-3: Northwestern Pond Turtle Avoidance and Minimization Measures

- No later than 48 hours prior to any ground disturbance, pre-construction surveys will be conducted by a qualified biologist within the project limits.
- If a pond turtle is observed in the project limits during construction, all work will be stopped, and the turtle will: 1) be allowed to leave on its own volition, or 2) be moved by the project biologist in the direction it was heading (upstream or downstream), at a safe distance from the construction activities, and at a safe location. The biologist will report observations and relocations to the County.

Biological Resources MM-4: Swainson's Hawk, White-tailed Kite, Loggerhead Shrike and Migratory Birds Avoidance and Minimization Measures

- If species covered under the Migratory Bird Treaty Act and Fish and Game Code sections 3503, 3503.5, and 3513 are determined to be present within the project vicinity, construction activity including clearing of vegetation, generation of mechanical noise, or ground disturbance should be conducted outside of the breeding season (February 1 to August 31), if feasible.
- If Project activities must be conducted during the nesting bird season, then the following shall be conducted:
 - The County will retain a qualified biologist to conduct a pre-construction survey of the BSA, and within an appropriate distance from the BSA boundary, as access is available (e.g., 0.25 miles for Swainson's hawk and 500 feet for other raptors). The pre-construction survey will be performed between February 15 and September 15, but no more than 14 days prior to the implementation of construction activities (including staging and equipment access).
 - If active nests are found during the pre-construction survey, the County will coordinate with CDFW and USFWS on additional protection measures, such as establishment of a buffer zone around the nest tree. No construction activity will be conducted within this zone during the nesting season (generally February through September) or until such a time that the qualified biologist determines the nest is no longer active. The buffer zone will be marked with flagging, stakes, or other means to mark the boundary. All construction personnel will be notified of the existence of the buffer zone and shall avoid entering the buffer zone during the nesting season.
 - Existing cliff swallow nests on the existing bridge will be removed prior to the nesting season (i.e., removal between September 16 and February 14) to discourage continued nesting on this structure prior to construction. An effective deterrent to cliff swallow nesting should be installed on the bridge prior to the nesting season. If a nesting deterrent is used, the deterrent shall be monitored for integrity and effectiveness until the project is completed. If nesting activities cannot be effectively deterred, continuous removal of cliff swallow nest starting prior to egg-laying may be necessary before construction activities

are initiated. Disturbance or removal of active nests (i.e., nests containing eggs) shall not be conducted without the appropriate authorization(s) from the USFWS and/or CDFW.

- Information on nesting special-status and migratory birds will be provided during the worker environmental awareness training.

Biological MM-5: Pallid Bat and Western Red Bat Avoidance and Minimization Measures

- In conjunction with the pre-construction nesting bird survey, a qualified biologist will conduct a reconnaissance level pre-construction survey of the suitable roosting locations. The pre-construction survey will be performed to determine if the existing vegetation or bridge is being used by bats as a roosting location.
- If the biologist finds evidence of bat roosts, the biologist will attempt to determine which species are present, which features are being used, and for which roosting purpose. If it is determined that roosting bats are not present or only using the area as a night roost (i.e., no young are present in the roost), no further avoidance and minimization measures are necessary.
- If during the survey, pallid bat or western red bat day roost or maternity roosts are identified in the vegetation or structure (e.g., the bridge) slated for removal, the County will coordinate with CDFW to determine the next steps and appropriate methods for removal. The installation or the exclusionary netting would help ensure roosting bats are no present under the existing bridge prior to demolition.
- Removal of the vegetation would need to be scheduled before the birthing season for bats (i.e., prior to May 1) or after young bats are able to fly (i.e., after August 31). Removal of active bat roosts should be conducted in a manner that allows the bats the best opportunity to leave during darker hours to increase their chance of finding new roosts within minimum exposure to predation during daylight.

Biological MM-6: American Badger Avoidance and Minimization Measures

- The project has been designed to minimize impacts on the American badger's native habitat, to the maximum extent possible. The majority of construction activities would occur in previously disturbed areas, including the existing road, shoulders, and bridge.
- A pre-construction survey will be performed to detect if American badger is present. If the species is detected the Glenn County will coordinate with CDFW and identify appropriate measures to avoid impacts during construction activities, such as using non-invasive techniques to encourage badgers to leave the area prior to ground disturbance.

Biological MM-7: Ring-tailed Cat Avoidance and Minimization Measures

- The project has been designed to minimize impacts on the ring-tailed cats's native habitat, to the maximum extent possible. The majority of construction activities would occur in previously disturbed areas, including the existing road, shoulders, and bridge.
- Worker awareness training will be provided to all construction personnel. The training will be administered by a qualified biologist and will provide the workers with information on their responsibilities in regards to the sensitive biological resources in the BSA. The program will specifically address the status of ring-tailed cat, the species life history, how to identify the species and its habitat, the need to protect the species, and the project conservation and avoidance and minimization measures.

- As work will occur during the natal denning season period for ring-tailed cat (March 1 to June 30), the Glenn County will retain a qualified biologist to conduct a pre-construction survey no more than 3 days prior to the commencement of construction activities. If an active denning site is located during the survey, Glenn County will coordinate with a qualified biologist and CDFW, as necessary, on additional protection measures.
- If a ring-tailed cat is encountered in the BSA during construction, work will stop and the individual will be allowed to freely leave the work area.

4.5 Cultural Resources and Tribal Cultural Resources

Would the project:	Potentially Significant	Less Than Significant With Mitigation	Less Than Significant	No Impact
a) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CA Code of Regulations, §15064.5?		X		
b) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X
c) Disturb any human remains, including those interred outside of formal cemeteries?		X		
d) 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:		X		
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 5020.1(k), or		X		
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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe				

4.5.1 Setting

North State Resources Inc. prepared a Draft Archaeological Survey Report (ASR) for the project to identify potentially significant cultural resources located in or within 0.5 miles of the proposed project's Area of Potential Effect (APE). The Draft ASR included background research, a record search conducted at the Northeast Information Center (NEIC), a search of the Native American Heritage Commission's

(NAHC) sacred lands file, outreach to Native American Tribes, individuals, or organizations identified by the NAHC that may have knowledge about the area, and a pedestrian survey of the APE.

The results of the Draft ASR identified three prehistoric sites – CA-GLE-32, CA-GLE-328, and CA-GLE-329 within the APE. However, upon review of maps provided, it appears CA-GLE-32 is located outside of the APE. Additionally, nine previously recorded cultural resources are within 0.5 miles of the APE, one of which CA-GLE-331 is located adjacent to the APE. The Stony Creek Bridge (No. 11C-0245) is listed on the Caltrans Historical Significance Local Agency Bridge List as not eligible for listing on the National Register of Historic Places (NRHP). Additionally, no properties or resources located in the NRHP, the California Register of Historic Resources, the California Historical Lands Listings, the California Points of Historical Interest, the Archaeological Determinations of Eligibility for Glenn County and the Historic Property Data File for Glenn County are located in or within 0.5 miles of the APE. A pedestrian survey was completed on April 7, 2017, CA-GLE-32 was not relocated during the pedestrian survey. Both CA-GLE-328 and CA-GLE-329 were relocated during the survey. The Draft ASR determined the area to have high sensitivity for cultural resources.

In August 2017, North State Resources, Inc. conducted an Extended Phase I (XPI) archaeological investigation for the project. The XPI was conducted to identify the presence or absence, and nature of, archaeological deposits or features related to archaeological sites CA-GLE-32, CA-GLE-328, and CA-GLE-329 within the project area of direct impact. For the investigation, eight shovel test pits measuring 50 centimeters (cm) in diameter were hand excavated to depths ranging from 24 cm to 100 cm below ground surface in areas that could be subject to project-related ground disturbances. No temporally or culturally diagnostic artifacts or features (i.e. projectile points, shell beads), or prehistoric features such as hearths, house pits, rock alignments, etc. or human remains were identified during this investigation. However, buried deposits related to middens were found.

Based on the results of the XPI, Phase II testing was recommended to determine if either CA-GLE-328 or -329 is eligible for listing on either the National or California Register. Far Western prepared an Archaeological Evaluation Proposal (AEP) for Phase II testing of sites in March of 2019 for the proposed project. In support of the AEP, Far Western staff conducted archival record search, consultations and an archaeological field survey to identify the cultural resources occurring, or potentially occurring, in the project area. Additionally, a tribal consultation involved potentially interested Native American groups, as identified by the Native American Heritage Commission (NAHC).

Due to the finding of the initial archaeological field survey, Far Western conducted a more extensive field survey which included not only historic resources GLE-328 and GLE-329 but also the surrounding area. The majority of GLE-329 is located on private property and therefore the majority of this site was not explored, only the boundary of the site that extends into the county (ROW). The more intensive survey, which took place between June 24 and 28, 2019, involved digging backhoe trenches, several surface transects by shovel, as well as several control units at both CA-GLE-328 and CA-GLE-329.

Test excavation at CA-GLE-328 produced a small house floor, a hearth, ash features, charcoal, baked clay, fire cracked rock, flaked stone, one core, three flake tools, a handstone, and millstone fragment. The test excavation at CA-GLE-329 produced flaked stone, baked clay, faunal bone, charcoal, a midden containing substantial quantities of ash and fire cracked rock, debitage, one flaked stone tool, and one core. Both sites are consistent with habitation sites found within the general area.

4.5.2 Discussion

- a) Less than Significant With Mitigation Incorporated.** The field surveys conducted by Far Western resulted in the identification of several prehistoric resources in addition to the two known

prehistorical resources within the project site. However, due to the locations of the prehistorical resources, the absence of ground disturbing activities near the known resources and the suggested establishment of an Environmentally Sensitive Area around them, it is not anticipated that the proposed project would result in significant impacts to the prehistoric resources. In the event that additional unknown resources are uncovered during the proposed construction activities the incorporation of **Cultural Resources MM-1** would ensure impacts to archaeological resources would be less than significant.

- b) **No Impact.** There is no record of paleontological or unique geological resources present within the projects site and further more no evidence of paleontological or unique geological resources was uncovered during field surveys.
- c) **Less than Significant with Mitigation Incorporated.** Although there are habitation sites present, no human remains were uncovered during the archaeological field survey, as stated in Archaeological Evaluation Proposal for Phase II. In the event human remains are uncovered during work activities, pursuant to Health and Safety Code (§7050.5), the Coroner must be contacted if human remains are uncovered during construction activities (See item d below). Previously unidentified human remains are subject to regulations set forth at the state and federal levels, including the CA Public Resources Code and the Native American Graves Protection and Repatriation Act (NAGPRA). Incorporation of **Cultural Resources MM-1** will ensure impacts to archaeological resources would be less than significant.
- d) **Less than Significant with Mitigation Incorporated.** As discussed above there are two known prehistorical sites present within the project area and several additional resources were uncovered during the field surveys. In the event that additional resources are uncovered during the proposed construction activities the incorporation of **Cultural Resources MM-1** would ensure impacts to archaeological resources would be less than significant.
 - i) **Less than Significant with Mitigation Incorporated.** According to the discussion in the Summary of Phase II Evaluation Testing of Sites of CA-GLE-328 (P-11-000328) and CA-GLE-329 (P-11-000329) Stony Creek Bridge Replacement Project provided by Far Western, both of these prehistoric resources are likely eligible to the National Register and the California Register of Historic Resources under Criterion D, has the potential to yield information important in regional prehistory. It is suggested that an Environmentally Sensitive Area be established around both sites to prevent any further disturbances during construction.
 - ii) **Less than Significant with Mitigation Incorporated.** After review and an examination of criteria set forth in subdivision (c) of Public Resources Code Section 5024.1 both CA-GLE-238 and CA-GLE-329 are considered significant resources to the California Native American tribe.

4.5.3 Mitigation:

Cultural Resources MM-1: Disturbance of Prehistoric Resources

Though no ground disturbing activities will occur within the known prehistoric resources within the project area it is still possible that additional prehistoric discoveries may be uncovered during construction. If unknown resources are discovered during construction and excavation activities, the following Cultural Resources Mitigation Measures will be included in all contract documents and construction plans.

- Worker awareness to educate construction personnel in best management practices for cultural site preservation.

- Should archaeological resources be encountered at any point during project excavation and construction activities, all activity around the discovery will cease. The County will retain the services of a qualified archaeologist to examine the findings, assess their significance, and offer proposals for any exploratory procedures deemed appropriate to further investigate and/or mitigate any adverse impacts.
- Should human remains be encountered during excavation activities in the project area, the following procedures shall be followed:
 - Per Health and Safety Code §7050.5(b), the Glenn County Coroner's Office will be contacted immediately; all work must cease, no further disturbances may occur until the Coroner has made findings as to the origins and disposition per Public Resources Code §5097.98.
 - If the Coroner determines the remains are Native American, the Office will notify the Native American Heritage Commission (NAHC) within 24 hours.
 - Following receipt of the Coroners notice, the NAHC will contact a Most Likely Descendent (MLD). The MLD will then have 48 hours in which to make recommendations to the County and the consulting archaeologist regarding the treatment and/or re-interment of the human remains and any associated grave items.

4.6 Energy

Would the project:	Potentially Significant	Less Than Significant With Mitigation	Less Than Significant	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?				X
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				X

4.6.1 Discussion

- a) **No Impact.** The proposed project will not result in any potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation. Construction energy consumption would largely occur from fuel consumption by heavy equipment during bridge construction and subsequent demolition of the existing bridge, transportation of materials to and from the site, and construction worker trips to and from the project site. Energy consumption during construction related activities would vary substantially depending on the level of activities, length of construction period, construction operations, type of equipment used, and number of personnel present. Despite this variability, the overall scope of construction is moderate and would be completed within two construction seasons. Increasingly stringent state and federal regulations regarding engine efficiency combined with state, local, and federal regulations limiting engine idling times and recycling of construction debris, would further reduce the amount of transportation fuel demand during construction.

The proposed project is the installation of a new safer bridge with improved roadway approaches, as such, it will not use any energy resources during operation.

- b) **No Impact.** Many of the state and federal regulations regarding energy efficiency focus on increasing building efficiency and renewable energy generation, as well as reducing water consumption and vehicle miles traveled. The proposed project includes conservation measures to meet or exceed the regulatory requirements including limiting idling time of heavy equipment during construction activities. The project will comply with Glenn County and Caltrans standards regarding engine efficiency and limiting idling time during project construction.

4.6.2 Mitigation: *None Required*

4.7 Geology and Soils

Would the project:	Potentially Significant	Less Than Significant With Mitigation	Less Than Significant	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i.) Rupture of a known earthquake fault, as delineated on the Alquist-Priolo Earthquake Fault Zoning Map for the area or based on other substantial evidence of a known fault?				X
ii.) Strong seismic ground shaking?				X
iii.) Seismic-related ground failure/liquefaction?				X
iv.) Landslides?				X
b) Substantial soil erosion or the loss of topsoil?			X	
c) Located on a geologic unit or soil that is unstable, or would become unstable as a result of the project, and potentially result in landslide, lateral spreading, subsidence, liquefaction or collapse?				X
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?				X
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?				X

4.7.1 Discussion

a) **No Impact.**

- i & ii)** The site is not within an Alquist-Priolo Earthquake fault zone and is not within an aftershock epicenter region. There are no known active faults in Glenn County. The closest active fault is the Cleveland Hill fault zone, located approximately 60 miles southeast of the project site near Lake Oroville. Like most of Central California, the site can be expected to be subjected to seismic ground shaking at some future time. However, active faults are quite distant from the project site and ground shaking due to a seismic event is expected to have a lower intensity at the project site. As the project appears to be located such that the probability of significant ground shaking is low, and beca

use the project does not propose the addition of significant structures that would be at risk to seismic activity, potential geologic impacts would be less than significant.

- iii) Liquefaction is a phenomenon where loose saturated, granular soils lose their inherent shear strength due to excess water pressure that builds up during repeated movement from seismic activity. Factors that contribute to the potential for liquefaction include a low relative density of granular materials, a shallow groundwater table, and a long duration and high acceleration of seismic shaking. Liquefaction usually results in horizontal and vertical movements from lateral spreading of liquefied materials and post-earthquake settlement of liquefied materials. Liquefaction potential is greatest where the groundwater level is shallow, and submerged loose, fine sands occur within a depth of approximately 50 feet or less. According to Section 3.3.1 of Environmental Setting Technical Paper, Glenn County General Plan, Volume III, Glenn County is in a relatively inactive seismic area. During the past 100 years, the County has experienced only minor earthquakes within its boundaries and secondary impacts from earthquakes centered out of the area. The United States Geologic Survey (USGS) and California Geologic Survey (CGS) produced a Seismic Shaking Hazards in California map (revised April 2003), which depicts the peak ground acceleration (pga) percentage that has a ten percent potential of occurring in the next fifty years. The project site is rated as 10%–20% on a scale of 0%–100%, quite low. Additionally, no earthquake greater than a magnitude 5.5 have occurred in Glenn County in over 200 years (CGS Map 49, California Earthquakes, 1800-2000). These two facts, and the relatively flat slope of the project site, create a less than significant impact regarding risk of damage from earthquakes. However, all construction will comply with the California Building Code (CBC) including the requirements for seismic design.
 - iv) The potential for landslides on the project site is considered remote due to the lack of significant topography on the project site and on the surrounding parcels.
- b) **Less than Significant.** The project is the replacement of a structurally deficient bridge within Glenn County. Project activities at Bridge 11C0245 include vegetation removal, removal of existing bridge structure, the installation/construction of the new cast-in-place bridge structure, and construction of roadway approaches on both side of the new structure. During construction the project would be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) in compliance with the Construction General Permit. Specific erosion control and surface water protection methods would be implemented within the project site. such as straw wattles and silt fencing, covering materials and dumpsters, storing fuel and other potentially hazardous materials away from channel, and the use of erosion control seeding. These control measures are standard in the construction industry and are commonly utilized to minimize soil erosion and water quality degradation. The project will have a less than significant impact on loss of top soil.
- c) **No Impact.** No major earthquakes have been recorded within Glenn County. The project will not expose people or structures to potential substantial adverse effects due to rupture or a known earthquake fault, seismic ground shaking, seismic-related ground failure including liquefaction. The project will not result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. The project site would not be subject to landslide free zone due to its relative flat topography and gently sloping hills
- d) **Less than Significant.** The soil present within the project site consists primarily of Riverwash which consists of cobble and gravel. The site is not located on expansive soil and would not create substantial risks to life or property. Bridge design and all construction will comply with CBC requirements.

- e) **No Impact.** The project will not utilize septic tanks or an alternative wastewater disposal system on the site. Therefore, the proposed project will not result in an impact due to soils incapable of adequately supporting septic systems.

4.7.2 Mitigation: *None required.*

4.8 Greenhouse Gas Emissions

Would the project:	Potentially Significant	Less Than Significant With Mitigation	Less Than Significant	No Impact
a) Generate greenhouse gas emissions, directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?			X	

4.8.1 Discussion

- a)-b) **Less than Significant.** It is anticipated that bridge replacement activities would generate short-term temporary GHG emissions associated with construction equipment. Examples of sources for construction related GHGs are equipment fossil fuel combustion, material transportation, and purchased electricity. See the BMP's discussed in Section 3, Air Quality, minimize temporary emissions associated with the construction activities.

4.8.2 Mitigation: *None required.*

4.9 Hazards and Hazardous Materials

Would the project:	Potentially Significant	Less Than Significant With Mitigation	Less Than Significant	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
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?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
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?				X

Would the project:	Potentially Significant	Less Than Significant With Mitigation	Less Than Significant	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 for people residing or working in the project area?				X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X

4.9.1 Discussion

An Initial Site Assessment Transaction Screen Assessment was completed for the project by Willdan Engineering for the bridge in 2012. The purpose of the assessment is to evaluate whether there is evidence of a recognized environmental condition (REC) that may have impacted or could potentially impact the environment resulting from project activities. The assessment for the bridge included research of site history, review of information provided by regulatory databases, observed site conditions, and discussions with owners, local officials, or regulatory personnel regarding past site activities and history. According to the ISA prepared for the project there are no recognized environmental conditions within the project area.

- a) **Less than Significant.** The proposed project would not involve the routine transport, use, or disposal of hazardous materials, and would not result in such impact. Construction activities associated with the project would include refueling and minor onsite maintenance of construction equipment, which could lead to minor fuel or oil spills. The use and handling of hazardous materials during construction activities would occur in accordance with applicable federal, state, and local laws including CalOSHA requirements.
- b) **Less than Significant.** The proposed project would not result in new land uses when compared to existing conditions. The project would not construct dwellings, occupy structures, or result in land uses that could generate or emit hazardous materials. Project activities are not anticipated to result in a release of hazardous materials into the environment, or to create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions as stated previously the use and handling of hazardous materials during construction activities would occur in accordance with applicable federal, state, and local laws including California Occupational Health and Safety Administration (CalOSHA) requirements.
- c) **No Impact.** The proposed project does not involve any emission or handling of any hazardous materials, substances, or waste within one-quarter mile of an existing school. No existing or proposed school facilities are located within one-quarter mile radius of the project site. As stated previously, the

use and handling of hazardous materials during construction activities would occur in accordance with applicable federal, state, and local laws including CalOSHA requirements.

- d) **No Impact.** The project is not included on a list of sites containing hazardous materials, and would not result in a significant hazard to the public or to the environment. The project site is not included on the Cortese list compiled pursuant to Government Code Section 65962.5. The nearest sites containing hazardous materials are located approximately 11.7 miles east of the project area in Orland California. As per the ISA, there are no recognized environmental conditions within the project area.
- e) **Less than Significant.** The proposed project site is not located within two miles of a public airport. The nearest public airport is the Haigh Field Airport located approximately 14.3 miles east of the project area.
- f) **No Impact.** The proposed project site is not located within the vicinity of a private airstrip and the project would not result in permanent structures that expose people to an airport or airstrip related safety hazard.
- g) **Less than Significant.** The proposed project does not include any actions within the roadways that would physically interfere with any emergency response or emergency evacuation plans. The existing bridge would remain in place during construction of the new bridge to facilitate access. The project would not result in an increase in traffic, and thus would not significantly reduce the current level of service of the area road network.
- h) **Less than Significant.** The Fire Severity Zone Maps adopted by Cal Fire in 2007 identifies the project site in a Federal Responsibility Area. The project does not involve the construction of significant structures that would be considered residential in nature, and thus would not expose people or associated structures to risk of loss, injury or death involving wildland fires. The project is the replacement of a structurally deficient 15-foot wide single-lane bridge with a 32-foot wide two-lane bridge. The new bridge would improve emergency access to the area.

Mitigation: None required.

4.10 Hydrology and Water Quality

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

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

4.10.1 Discussion

- a) **Less Than Significant.** As identified in Section 4.4 of this document (**Biological Resources MM-1**), the project will obtain all appropriate regulatory permits including certification from a RWQCB per Section 401 Water Quality Certification of the Clean Water Act prior to construction activities. A Section 401 permit is contingent on sufficient evidence that a project would not pose a threat to water quality or quantity leaving the proposed project's site. No additional mitigation measures are necessary. Additionally, the project would be required to prepare a Storm Water Pollution Prevention Plan and implement all applicable erosion control BMPs, which include: the installation of straw wattles, and silt fencing to prevent silt/sediment from entering the waterways, and re-seeding of disturbed upland areas post construction. As described in the Air Quality Section 4.3 of this document, the project will be required to adhere BAMMs standard mitigation measures for fugitive dust control outlined in Section 4.3, (**Air Quality MM-1**).
- b) **No Impact.** The proposed project involves the replacement of an existing bridge and does not propose activities requiring increases in groundwater use. No new extraction wells or buildings with the potential to increase water usage are proposed.

- c) **Less Than Significant.** Project activities include the replacement of an existing bridge and bridge approach work. The overall direction of drainage on the site will not change. The implementation of Stormwater Pollution Prevention Plan and BMPs during construction activities will minimize soil erosion and siltation. Additionally, the proposed project will not alter the existing drainage pattern of the site, including through the alteration of the course of Stony Creek in a manner that will result in substantial erosion or siltation on- or off-site

Less than Significant. Avila & Associates prepared a Hydraulic Study Report (HSR) for the project which analyzed potential changes in hydrological conditions based on project activities at the bridge. The HSR utilized the Hydraulic Engineering Center River Analysis System (HEC-RAS) to estimate the hydraulic conveyance capacity under project conditions. The HSR concluded the addition of the new proposed bridge will improve hydraulics by replacing seven existing narrow piers that are susceptible to debris accumulation with two wider piers which will reduce the potential for debris capture. The HSR for the bridge is available from the Glenn County Public Works Agency Engineering Division located at 777 N. Colusa Street, Willows, CA 95988.

- e)-j) **No Impact.** The proposed project is located within a non-printed flood map boundary (FIRM Map Number 06021C0350D) and would not result in significant increases in the surface area of impervious materials or redirect flood flows. The project does not involve the construction of dwelling units and will not place housing within the flood hazard area. Furthermore, the project would not expose people or structures to significant loss, injury, or death involving flooding, including levee or dam failure. There are no anticipated impacts to the proposed project from seiche, tsunami, or mudflow, as no topographical features of water bodies capable of producing such events exist within the project site vicinity.

4.10.2 Mitigation: *None Required*

4.11 Land Use and Planning

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

4.11.1 Discussion

- a), b) **No impact.** The project is the replacement of an existing bridge structure and will not physically divide an established community. The proposed project would not conflict with an applicable land use plan, policy, or regulation of any agencies with jurisdiction adopted for the purpose of avoiding or mitigating an environmental effect.

- c) **No Impact.** The project will not have a substantial conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan as there are none in Glenn County.

4.11.2 Mitigation: *None required.*

4.12 Mineral Resources

Would the project:	Potentially Significant	Less Than Significant With Mitigation	Less Than Significant	No Impact
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?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site on a local general plan, specific plan or other land use plan?				X

4.12.1 Discussion

- a), b) **No Impact.** The California Geological Survey's (Department of Conservation) map "Fifty-Year Aggregate Demand Compared to Permitted Aggregate Resources" (2018) does not identify extraction facilities near the project site. The General Plan and State of California Division of Mines and Geology Special Publication 132 do not list the site as having any substantial mineral deposits of a significant or substantial nature.

4.12.2 Mitigation: *None required*

4.13 Noise

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

Would the project:	Potentially Significant	Less Than Significant With Mitigation	Less Than Significant	No Impact
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

Setting

The Health and Safety Element of the Glenn County General Plan identifies land use compatibility standards for exterior community noise for a variety of sensitive land uses. For residential designations, a maximum allowable noise exposure level of 60 L_{dn}/CNEL outdoors and 45 L_{dn}/CNEL decibel level is generally identified as being an acceptable noise environment requiring no special noise insulation or noise abatement features. This standard is applicable to properties containing noise sensitive land uses are generally defined as locations where people reside or where the presence of unwanted sound could adversely affect the use of the land.

The Glenn County Noise Control Ordinance provides the County with a means of assessing complaints of alleged noise violations and to address noise level violations. The ordinance sets forth exterior and interior noise level standards that are applicable to sensitive areas within Glenn County, including residential uses. Among the noise generating activities subject to the noise ordinance are noise sources associated with construction. If project operations occur between 7:00a.m. to 10:00p.m. the maximum decibel level is 70 dB. From 10:00p.m. to 7:00a.m. decibels must remain below 65dB.

4.13.1 Discussion

a)-d) Less Than Significant. The proposed project will be required to comply with all applicable rules, regulations and control measures including permitting, prohibitions and limits to emissions that work to reduce air pollution throughout California. The nearest residents to the project site are 400 feet away. While construction activities would generate noise, it is anticipated at this distance noise levels would not exceed established acceptable levels. The project would be expected to comply with the noise ordinance with regard to allowable construction times and noise limits.

e) No Impact: The proposed project is not located within an airport land use plan area and is located over 14 miles from the Haigh Field Airport. The proposed project will not expose people residing or working in the project area to excessive noise levels associated with airport landuses.

f) No Impact: The proposed project is not located within two miles of a private airstrip and people residing or working in the project area will not be exposed to excessive noise levels generated by private airstrips.

4.13.2 Mitigation: *None Required*

4.14 Population and Housing

Would the project:	Potentially Significant	Less Than Significant With Mitigation	Less Than Significant	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

4.14.1 Discussion

a)-c) No Impact: The proposed project is a bridge replacement project located in a rural portion of Glenn County. The proposed project will not induce substantial population growth in the area, directly or indirectly, or displace a substantial number of people or existing housing. The project will not displace people or housing nor necessitate the construction of replacement housing elsewhere. Therefore, the project will not impact population or housing.

4.14.2 Mitigation: *None required*

4.15 Public Services

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

4.15.1 Discussion

a)-e) No Impact. The proposed project would not construct buildings, businesses or other facilities that would result in an increased population in the area. Temporary delays to traffic may occur during construction activities. However, as required by state and local regulations, emergency vehicles will be given the right-of-way in the event of their presence at the project site. There would be no long-term demands on public services such as fire protection, police protection, schools, or parks generated

by this project. No changes in fire protection or police protection are proposed as part of this project. Therefore, the proposed project is not anticipated to impact public services.

4.15.2 Mitigation: *None required*

4.16 Recreation

Would the project:	Potentially Significant	Less Than Significant With Mitigation	Less Than Significant	No Impact
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?				X
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?				X

4.16.1 Discussion

a), b) No Impact. This proposed project will not result in residential development that would result in the increase the use of existing neighborhood and regional parks or other recreational facilities including recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

4.16.2 Mitigation: *None required*

4.17 Traffic and Transportation

Would the project:	Potentially Significant	Less Than Significant With Mitigation	Less Than Significant	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?				X
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?				X

Would the project:	Potentially Significant	Less Than Significant With Mitigation	Less Than Significant	No Impact
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
e) Result in inadequate emergency access?			X	
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?				X

4.17.1 Discussion

- a) **No Impact.** The proposed project is a bridge replacement that would result in the replacement of a single-lane bridge with a two-lane 32-foot wide bridge. The project will not conflict with an applicable plan, ordinance or policy regarding the effectiveness of the performance of the circulation system. The proposed project would not generate additional traffic, as it would not construct facilities or land uses that would generate additional vehicular traffic such as a retail center or residential subdivision.
- b) **No Impact.** The project is not expected to result in additional vehicular trips, or to impact levels of service and trip distributions within the project area. The proposed project will not conflict with an applicable congestion management program and will not affect travel demand measures. Roadway safety conditions are expected to improve upon project completion, as the project will include a new wider bridge and provide safer, wider transitions to the bridge structure.
- c) **No Impact.** The proposed project will not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that will result in substantial safety risks. The project site is not located in the vicinity of a public airport which is approximately 14 miles southeast of the project area. This project will not obstruct air traffic patterns.
- d) **No Impact.** The proposed project would replace a structurally deficient, narrow bridge, and make roadway-widening improvements in order to increase conveyance and safety for residents, farm equipment, and the public on County Road 200A within the existing public right-of-way. The proposed project would improve sight distances and safety and will not increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment).
- e) **Less than Significant.** During the construction phase, emergency vehicle access to, and passage through, the project site would be ensured through adherence to applicable roadway and/or lane closures and detour standards. The project will be required to adhere to pertinent local and state construction site regulations. Thus, temporary traffic control activities during the construction phase of the proposed project would not prevent emergency vehicle movement throughout the area. In addition, the existing bridge would remain in operation during construction activities. The proposed improvements, which would bring the existing facilities in the project site up to current design

standards, would provide safer passage for emergency vehicles. Therefore, relative to emergency access, impacts would be less than significant

- f) **No Impact.** The proposed project will not conflict with an applicable plan, ordinance or policy regarding public transit, bicycle or pedestrian facilities because the project site is located in a rural area that does not have any provisions for alternative transportation. No impact is anticipated.

4.17.2 Mitigation: *None required*

4.18 Utilities and Service Systems

Would the project:	Potentially Significant	Less Than Significant With Mitigation	Less Than Significant	No Impact
a) Exceed wastewater treatment requirements of the applicable Water Quality Control Board?				X
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
e) Result in a determination by the wastewater treatment provider which serves/may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?				X
g) Comply with federal, state, and local statutes and regulations related to solid waste?				X

4.18.1 Discussion

a)-e) **No Impact.** This project proposes replacing an existing bridge over Stony Creek, with a new wider bridge of similar size. The new bridge will not significantly increase the amount of impervious surfaces in the area, and will not increase the surface runoff of the area. All work will be conducted within the existing right-of-way, and will not require additional water supplies or entitlements. The project will not result in exceeding wastewater treatment requirements for the applicable RWQCB or result in the need for new wastewater treatment facilities because the project is not a use that generates wastewater.

f), g) **No Impact.** The proposed project would not generate impacts relative to landfill capacity, wastewater treatment or solid waste generation. Therefore, there would be no impact.

4.18.2 Mitigation: *None required*

4.19 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant	Less Than Significant With Mitigation	Less Than Significant	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				X
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?				X
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				X
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?				X

4.19.1 Setting

The project site is designated as a moderate fire hazard by the State Department of Forestry and Fire Protection. The project site is also within a designated Federal Responsibility Area (FRA), which means the federal jurisdiction has fiscal responsibility for preventing and suppressing wildfires.

4.19.2 Discussion

- a) **No Impact.** The project will not impair an adopted emergency response plan or evacuation plan. The existing bridge will be open to traffic during the project and would not constrict access for emergency vehicles.
- b) **No Impact.** The project site is located approximately 11 southwest of Orland, CA and the topography of the site is relatively flat to gently sloping and will not expose project occupants to pollution concentrations from a wildfire. The habitat within the project area is riparian with grass along the banks of Stony Creek with few residential land uses. Wildfires in the area are extinguished quickly and contained to a relatively small area due to the conditions of the area. No conditions or factors have been identified in the project area that would exacerbate wildfire risks.
- c) **Less Than Significant.** The proposed project involves replacement of a structurally deficient bridge on Road 200A in Glenn County, California which spans Stony Creek. Construction activities will comply with all applicable public resources code, therefore, roadway construction would not exacerbate a fire risk.
- d) **No Impact.** The proposed project is located on the edge of the Central Valley and the majority of the project site contains slopes between 0 and 10 percent, although small steeper slopes exist

along the channel of Stony Creek. The project area does not exhibit landslide potential, nor does it exhibit flood potential due to the high banks and wide channel as well as bridge design being able to pass any potential high flow events within the channel. Therefore, no impacts from post fire instability or drainage changes have been identified.

4.19.3 Mitigation: *None Required*

5 Mandatory Findings of Significance

Mandatory Findings of Significance	Potentially Significant	Less Than Significant With Mitigation	Less Than Significant	No Impact
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?		X		
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)?				X
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				X

5.1.1 Discussion

- a) **Less Than Significant with Mitigation Incorporated.** With the implementation of the mitigation measures included in this Initial Study, **Air Quality MM-1, Biological Resources MM-1 through MM-7 and Cultural Resources MM-1**, the proposed project would not degrade the environment; result in an adverse impact on fish, wildlife, or plant species including special status species, or prehistoric or historic resources.
- b) **No Impact.** The project is the replacement of a structurally deficient bridge which spans Stony Creek on Glenn County Road 200A with a wider bridge for safety purposes. The project does not involve the addition of new expanded structures, facilities, or growth inducing effects, which would be considered cumulatively considerable with regards to past or future projects.
- c) **No Impact.** Based on the preceding environmental analysis and adherence to applicable local, state and federal regulations, as noted in this document, the proposed project would not result in potentially significant cumulative, direct or indirect adverse effects on human beings.

6 Preparers and References

6.1 Report Preparation and Review

Kamie Loeser, Principle Planner, NorthStar, Reviewer

Matt Rogers, Associate Environmental Planner/ Biologist, NorthStar, Preparer

Billy Abbott, Assistant Environmental Planner, NorthStar, Preparer

Cole Grube, Assistant Director of Public Works, Glenn County, Reviewer

6.2 References

Avila and Associates Consulting Engineers, Inc. 2017. *Design Hydraulic Study County Road 200A Bridge at Stony Creek Bridge Number 11C2045*.

Baldwin, B.G., D.H Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2012. *The Jepson Manual: Vascular Plants of California, Second Edition*. University of California Press, Berkeley, CA.

California Department of Conservation. *Fault Activity Map of California Map*. Accessed April 2019.
Available at: maps.conservation.ca.gov/cgs/fam/

California Department of Conservation. *California Important Farmland Finder*. Accessed April 2019.
Available at: maps.conservation.ca.gov/ciff/ciff.html

California Department of Conservation. 2012. *Fifty-Year Aggregate Demand Compared to Permitted Aggregate Reserves*. Available at
www.conservation.ca.gov/cgs/information/publications/ms/Documents/MS_52_2012.pdf

California Department of Toxic Substance Control. 2009. *Envirostor Database*. Accessed April 2019.
Available at: <http://www.envirostor.dtsc.ca.gov/public>

Far Western Anthropological Research Group Inc. 2019. *Archaeological Evaluation Proposal for Phase II Testing of Sites CA-GLE-328 (P-11-000328) CA-GLE-329 (P-11-000329) Stony Creek Bridge Replacement Project*.

Far Western Anthropological Research Group, Inc. 2019. *Summary of Phase II Evaluation Testing of Sites CA-GLE-328 (P-11-000328) and CA-GLE-329 (P-11-000329), Stony Creek Bridge Replacement Project*.

Federal Emergency Management Agency. 2016. *FEMA Flood Map Service Center*. Accessed April 2019.
Map 0603940080B. Available at: <https://msc.fema.gov/portal>

North State Resources. 2017. *Stony Creek Bridge (No. 11C-0245) Replacement Project Archaeological Survey Report*.

North State Resources. 2017. *Extended Phase I Archaeological Report Stony Creek Bridge (No. 11C-0245) Replacement Project Archaeological Sites CA-GLE-32, CA-GLE-328, CA-GLE-329 Glenn County, California*.

North State Resources. 2017. *Natural Environmental Study. Stony Creek Bridge (No. 11C-0245) Replacement Project*.

Glenn County. 1993.. *Policy Plan Glenn County General Plan VOLUME 1*

Glenn County. 2017. *Climate Change and Health Profile Report*

Western Regional Climate Center. 2017. *Marysville, California, Period of Record General Climate Summary-Temperature and Precipitation, Station (0445385) MARYSVILLE, From Year=1897 to Year=2007.*

U.S. Department of Agriculture. 2019. *Web Soil Survey*. Available online at: websoilsurvey.sc.egov.usda.gov/App/HomePage.htm

University of California Davis. 2017. *Climate Change and Health Profile Report Glenn County.*

Willdan Engineering. 2013. *ISA Transaction Screen Assessment Proposed Bridge Replacement at County Road 200A at Stony Creek.*

7 Acronyms and Abbreviations

Agencies, Boards, Commissions, Districts:

CAAQS.....	California Ambient Air Quality Standards
Caltrans.....	California Department of Transportation
CARB.....	California Air Resources Board
CDFW.....	California Department of Fish and Wildlife
CDWR.....	California Department of Water Resources
DTSC.....	(California) Department of Toxic Substances Control
EPA.....	Environmental Protection Agency
FEMA.....	Federal Emergency Management Agency
NAHC.....	Native American Heritage Commission
NSVAB.....	Northern Sacramento Valley Air Board
RWQCB.....	Regional Water Quality Control Board
USACE.....	United States Army Corps of Engineers
USFWS.....	United States Fish and Wildlife Service
USGS.....	United States Geological Survey

Guidelines, Policies, Programs, Regulations:

CEQA.....	California Environmental Quality Act
CESA.....	California Endangered Species Act
CWA.....	Clean Water Act
ESA.....	Endangered Species Act
FGC.....	Fish and Game Code
MBTA.....	Migratory Bird Treaty Act
NESHAP.....	National Emission Standards for Hazardous Air Pollutants
NHPA.....	National Historic Preservation Act
NPDES.....	National Pollution Discharge Elimination System
NRHP.....	National Registry of Historic Places
SIP.....	State Implementation Plan

Miscellaneous:

APE.....	Area of Potential Effect
ASR.....	Archaeological Survey Report
BMPs.....	Best Management Practices
BSAs.....	Biological Study Areas
Cm.....	Centimeter
CNDDB.....	California Natural Diversity Database
CNEL.....	Community Noise Equivalent Level
CNPS.....	California Native Plant Society
CO.....	Carbon Monoxide
ESAs.....	Environmentally Sensitive Areas
FIRM.....	Flood Insurance Rate Map
GHG.....	Green House Gases
ISA.....	Initial Site Assessment
MLD.....	Most Likely Descendant
NES.....	Natural Environmental Study
NOx.....	Nitrogen oxides
PM ₁₀ / 2.5.....	Particulate Matter less than 10 / 2.5 Microns

ROG Reactive Organic Gases
RSP Rock Slope Protection

8 Mitigation Monitoring and Reporting Program

MM No.	Mitigation Measure	Timeframe for Implementation	Responsible Monitoring Agency	Verification of Compliance		
				Agency & Initials	Date	Notes
AIR QUALITY						
Air Quality MM-1		Fugitive Dust Control Plan - Prior to initiation of construction.	Glenn County – Public Works			
To comply with the Glenn County Air Pollution Control District’s (GAPCD) Regulations of the Air Pollution Control District of Glenn County (section 76 visible emissions), the County shall comply with all Best Available Mitigation Measures (BAMMs) for the control of construction related particulate emissions. The contractor shall submit a Air Quality Attainment Plan to the County for approval. The approved plan shall include all applicable BAMMs as specified by GCAPCD’s Standard Construction Phase Mitigation Measures, including but not limited to the following: <ul style="list-style-type: none">Haul trucks must be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained.Construction equipment exhaust emissions shall not exceed GCAPCD Section 76 Visible Emissions (40 percent opacity or Ringelmann 2.0). Operators of vehicles and equipment found to exceed opacity limits shall act to repair the equipment within 72 hours or remove the equipment from service.The area disturbed by demolition, clearing, grading, earth moving, or excavation operations shall be minimized at all times.Suspend grading or earth moving activities when wind speeds exceed 20 mphMinimize unnecessary idling time to 5 minutes.Water shall be applied as needed to prevent fugitive dust impacts offsite.All onsite vehicles should be limited to a speed of 15mph on unpaved						

MM No.	Mitigation Measure	Timeframe for Implementation	Responsible Monitoring Agency	Verification of Compliance		
				Agency & Initials	Date	Notes
roads.						
BIOLOGICAL RESOURCES						
Biological Resources MM-1 Valley Elderberry Longhorn Beetle and Obtain Regulatory Permits and Implement Avoidance and Minimization Measures The following avoidance and minimization measures, which are consistent with the <i>Formal Programmatic Consultation Permitting Projects with Relatively Small Effects on the Valley Elderberry Longhorn Beetle within the Jurisdiction of the Sacramento Field Office, California</i> (USFWS 1996) and the <i>Conservation Guidelines for Valley Elderberry Longhorn Beetle</i> (USFWS 1999), will be implemented to minimize the potential impacts to VELB <ul style="list-style-type: none"> • Worker awareness training will be provided to all construction personnel. The training will be administered by a qualified biologist and will provide the workers with information on their responsibilities in regards to the sensitive biological resources in the BSA. The program will specifically address the status of VELB, the species life history, how to identify the species and its habitat, the need to protect the beetle and its host plant, and the project conservation and avoidance and minimization measures. • Project activities within 100 feet of elderberry shrubs will be timed to occur outside of the VELB active season (mid-March through mid-May) to the greatest extent practicable. • Prior to construction activities, an environmentally sensitive area will be designated around the elderberry shrub not slated for removal using exclusionary fencing, signs, and flagging under the supervision of a qualified biologist. A 100-foot buffer zone around the elderberry shrub will be marked within stakes or flags as a minimal disturbance area. Because project activities would encroach within 100 feet of the shrub, exclusionary fencing will be placed at a distance of 20 feet or more from the dripline of the shrub. Signs stating “<i>This area is a habitat for the VELB, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of</i> 		Obtain Permits - Prior to initiation of construction. Purchase Compensatory Mitigation (if applicable) – Prior to initiation of construction. AMMs – Include in specifications and contract documents.	Glenn County – Public Works			

MM No.	Mitigation Measure	Timeframe for Implementation	Responsible Monitoring Agency	Verification of Compliance		
				Agency & Initials	Date	Notes
	<p><i>1973, as amended. Violators are subject to prosecution, fines, and imprisonment.</i>” will be erected and attached to the fencing. The signs will be placed in clearly visible locations and will be readable from a distance of 20 feet. Fencing and signs will be maintained throughout the entire project duration.</p> <ul style="list-style-type: none"> • No insecticides, herbicides, fertilizers, or other chemicals that might harm the beetle or its host plant will be used within 100 feet of any elderberry shrub with one or more stems measuring 1.0 inch or greater in diameter at ground level. • Any damage to the buffer area (i.e. area within 100 feet of elderberry shrub with stems of suitable size) during construction will be restored following construction. Restoration will include erosion control and revegetation with appropriate native plants, as appropriate. • A qualified biologist will conduct a pre and post-construction survey of the elderberry shrub as a result of the proposed action. The pre-construction survey will document the conditions of the shrub prior to construction activities and document compliance with mitigation measures. The post-construction survey will verify that no additional impacts to the elderberry shrub took place. If the shrub becomes damaged during construction activities, the County may be required to compensate for the loss of the shrub through compensatory mitigation. <p>Additionally, the project will obtain the following permits, as necessary and applicable:</p> <ul style="list-style-type: none"> • CWA Section 404 permit #14 Linear Transportation from the USACE • CWA Section 401 Water Quality Certification from the RWQCB • F.G.C. Section 1602 Streambed Alteration Agreement from CDFW <ul style="list-style-type: none"> ○ The project will incorporate the avoidance and minimization measures (AMMs), standard BMPs and other notification requirements identified in applicable permits, such as pre and post-construction surveys and documentation, worker awareness training, exclusionary measures, AMM 					

MM No.	Mitigation Measure	Timeframe for Implementation	Responsible Monitoring Agency	Verification of Compliance		
				Agency & Initials	Date	Notes
	compliance and reporting, incident reports and monitoring requirements.					
	Biological Resources MM-2: Foothill Yellow-legged Frog Avoidance and Minimization Measures <ul style="list-style-type: none"> Environmental awareness training will be conducted by a qualified biologist prior to onset of the work for construction personnel to brief them on how to recognize foothill yellow-legged frog and other special-status animals that may occur in the project area. To avoid potential injury or mortality to foothill yellow-legged frogs using vegetated areas for cover along Stony Creek, initial vegetation clearing (i.e. removal of small trees, shrubs, brush, and tall dense grasses) along Stony Creek will be done manually using hand tools (e.g. chainsaw, lopper, weed whacker). The vegetation will be cut to ground level and be removed from the work area by hand. Heavy equipment may be used once the initial vegetation clearing along the creek is complete. Stony Creek outside the work area will be staked, flagged, or signed to avoid encroachment by equipment and construction crews. The number of access routes, size of the staging area, and the total area of impact will be limited to the minimum necessary to achieve the proposed project goal. This goal includes locating access routes and construction areas outside of the creek to the maximum extent practicable. The flagged areas will confine access routes and construction areas to the minimum area necessary to complete construction and minimize the impact on natural habitats in the BSA. Upon completion of construction activities, any diversions or barriers to flow will be removed in a manner that would allow flow to resume with the least disturbance to the substrate. Alteration of the streambed will be minimized to the maximum extent possible. If foothill yellow-legged frogs are encountered in the BSA during construction and will be harmed by construction activities, work 	Prior to initiation of construction	Glenn County – Public Works			

MM No.	Mitigation Measure	Timeframe for Implementation	Responsible Monitoring Agency	Verification of Compliance		
				Agency & Initials	Date	Notes
	will stop in the area and the County will notify CDFW. Upon authorization from CDFW, a qualified biologist may relocate the individual(s) the shortest distance possible to a location containing habitat outside of the project area.					
Biological Resources MM-3 Northwestern Pond Turtle Avoidance and Minimization Measures	<ul style="list-style-type: none"> No later than 48 hours prior to any ground disturbance, pre-construction surveys will be conducted by a qualified biologist within the project limits. If a pond turtle is observed in the project limits during construction, all work will be stopped, and the turtle will: 1) be allowed to leave on its own volition, or 2) be moved by the project biologist in the direction it was heading (upstream or downstream), at a safe distance from the construction activities, and at a safe location. The biologist will report observations and relocations to the County. 	Prior to initiation of construction.	Glenn County – Public Works			
Biological Resources MM-4 Swainson's Hawk and Migratory Birds Avoidance and Minimization Measures	<ul style="list-style-type: none"> If species covered under the Migratory Bird Treaty Act and Fish and Game Code sections 3503, 3503.5, and 3513 are determined to be present within the project vicinity, construction activity including clearing of vegetation, generation of mechanical noise, or ground disturbance should be conducted outside of the breeding season (February 1 to August 31), if feasible. If Project activities must be conducted during the nesting bird season, then the following shall be conducted: <ul style="list-style-type: none"> The County will retain a qualified biologist to conduct a pre-construction survey of the BSA, and within an appropriate distance from the BSA boundary, as access is available (e.g., 0.25 miles for Swainson's hawk and 500 feet for other raptors). The pre-construction survey will be performed between February 15 and September 15, but no more than 14 days prior to the implementation of construction activities (including 	Prior to initiation of construction.	Glenn County – Public Works			

MM No.	Mitigation Measure	Timeframe for Implementation	Responsible Monitoring Agency	Verification of Compliance		
				Agency & Initials	Date	Notes
	<p>staging and equipment access).</p> <ul style="list-style-type: none"> ○ If active nests are found during the pre-construction survey, the County will coordinate with CDFW and USFWS on additional protection measures, such as establishment of a buffer zone around the nest tree. No construction activity will be conducted within this zone during the nesting season (generally February through September) or until such a time that the qualified biologist determines the nest is no longer active. The buffer zone will be marked with flagging, stakes, or other means to mark the boundary. All construction personnel will be notified of the existence of the buffer zone and shall avoid entering the buffer zone during the nesting season. ○ Existing cliff swallow nests on the existing bridge will be removed prior to the nesting season (i.e., removal between September 16 and February 14) to discourage continued nesting on this structure prior to construction. An effective deterrent to cliff swallow nesting should be installed on the bridge prior to the nesting season. If a nesting deterrent is used, the deterrent shall be monitored for integrity and effectiveness until the project is completed. If nesting activities cannot be effectively deterred, continuous removal of cliff swallow nest starting prior to egg-laying may be necessary before construction activities are initiated. Disturbance or removal of active nests (i.e., nests containing eggs) shall not be conducted without the appropriate authorization(s) from the USFWS and/or CDFW. ○ Information on nesting special-status and migratory birds will be provided during the worker environmental awareness training. 					
Biological MM-5: Pallid Bat and Western Red Bat Avoidance and		Prior to initiation of construction	Glenn County – Public Works			

MM No.	Mitigation Measure	Timeframe for Implementation	Responsible Monitoring Agency	Verification of Compliance		
				Agency & Initials	Date	Notes
Minimization Measures <ul style="list-style-type: none">• In conjunction with the pre-construction nesting bird survey, a qualified biologist will conduct a reconnaissance level pre-construction survey of the suitable roosting locations. The pre-construction survey will be performed to determine if the existing vegetation or bridge is being used by bats as a roosting location.• If the biologist finds evidence of bat roosts, the biologist will attempt to determine which species are present, which features are being used, and for which roosting purpose. If it is determined that roosting bats are not present or only using the area as a night roost (i.e., no young are present in the roost), no further avoidance and minimization measures are necessary.• If during the survey, pallid bat or western red bat day roost or maternity roosts are identified in the vegetation or structure (e.g., the bridge) slated for removal, the County will coordinate with CDFW to determine the next steps and appropriate methods for removal. The installation or the exclusionary netting would help ensure roosting bats are not present under the existing bridge prior to demolition.• Removal of the vegetation would need to be scheduled before the birthing season for bats (i.e., prior to May 1) or after young bats are able to fly (i.e., after August 31). Removal of active bat roosts should be conducted in a manner that allows the bats the best opportunity to leave during darker hours to increase their chance of finding new roosts within minimum exposure to predation during daylight.						
Biological MM-6: American Badger Avoidance and Minimization Measures <ul style="list-style-type: none">• The project has been designed to minimize impacts on the American badger’s native habitat, to the maximum extent		Prior to initiation of construction	Glenn County – Public Works			

MM No.	Mitigation Measure	Timeframe for Implementation	Responsible Monitoring Agency	Verification of Compliance		
				Agency & Initials	Date	Notes
	<p>possible. The majority of construction activities would occur in previously disturbed areas, including the existing road, shoulders, and bridge.</p> <ul style="list-style-type: none"> A pre-construction survey will be performed to detect if American badger is present. If the species is detected the Glenn County will coordinate with CDFW and identify appropriate measures to avoid impacts during construction activities, such as using non-invasive techniques to encourage badgers to leave the area prior to ground disturbance. 					
	<p>Biological MM-7: Ring-tailed Cat Avoidance and Minimization Measures</p> <ul style="list-style-type: none"> The project has been designed to minimize impacts on the ring-tailed cats's native habitat, to the maximum extent possible. The majority of construction activities would occur in previously disturbed areas, including the existing road, shoulders, and bridge. Worker awareness training will be provided to all construction personnel. The training will be administered by a qualified biologist and will provide the workers with information on their responsibilities in regards to the sensitive biological resources in the BSA. The program will specifically address the status of ring-tailed cat, the species life history, how to identify the species and its habitat, the need to protect the species, and the project conservation and avoidance and minimization measures. As work will occur during the natal denning season period for ring-tailed cat (March 1 to June 30), the Glenn County will retain a qualified biologist to conduct a pre-construction survey no more than 3 days prior to the commencement of construction activities. If an active denning site is located during the survey, Glenn County will coordinate with a qualified biologist and CDFW, as necessary, on additional protection measures. If a ring-tailed cat is encountered in the BSA during construction, work will stop and the individual will be allowed to freely leave 	Prior to initiation of construction	Glenn County – Public Works			

MM No.	Mitigation Measure	Timeframe for Implementation	Responsible Monitoring Agency	Verification of Compliance		
				Agency & Initials	Date	Notes
	the work area.					
CULTURAL RESOURCES						
Cultural Resources MM-1 <p>Although no prehistoric sites have been formally recorded or otherwise identified within the project site, the presence of buried cultural resources is always a possibility. Therefore, although unlikely, if unknown resources are discovered during construction and excavation activities, the following Cultural Resources Minimization Measures will be included in all contract documents and construction plans.</p> <ul style="list-style-type: none"> Should archaeological resources be encountered at any point during project excavation and construction activities, all activity around the discovery will cease. The County will retain the services of a qualified archaeologist to examine the findings, assess their significance, and offer proposals for any exploratory procedures deemed appropriate to further investigate and/or mitigate any adverse impacts. Should human remains be encountered during excavation activities in the project area, the following procedures shall be followed: <ul style="list-style-type: none"> Per Health and Safety Code §7050.5(b), the Glenn County Coroner's Office will be contacted immediately; all work must cease, no further disturbances may occur until the Coroner has made findings as to the origins and disposition per Public Resources Code §5097.98. If the Coroner determines the remains are Native American, the Office will notify the Native American Heritage Commission (NAHC) within 24 hours. Following receipt of the Coroners notice, the NAHC will contact a Most Likely Descendent (MLD). The MLD will then have 48 hours in which to make recommendations to the County and the consulting archaeologist regarding the treatment and/or re-interment of the human remains and any associated grave items. 		During construction, if resources are discovered.	Glenn County – Public Works			

Appendix A

Site Photos

Appendix B

Natural Environment Study

Appendix C
Draft Aquatic Resources Delineation
