

**CALIFORNIA ENVIRONMENTAL QUALITY ACT  
INITIAL STUDY/NEGATIVE DECLARATION**

[Pursuant to Public Resources Code Section 21080(c) and California Code of Regulations, Title 14, Sections 15070-15071]

**PROJECT TITLE**

Cotta Road Bridge Replacement Project

**PROJECT LOCATION**

Cotta Road Bridge (29C-292) over Upland Canal, east of N. Guard Road (see Figure 1 below)

**PROJECT APPLICANT**

San Joaquin County Public Works Department (SJCPWD) (Lead Agency)  
1810 E. Hazelton Avenue  
Stockton, California 95205

**CONTACT**

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In compliance with the California Environmental Quality Act (CEQA) (California Public Resources Code, Section 21000, et seq.), this Initial Study has been prepared to determine whether an Environmental Impact Report (EIR) or a Negative Declaration needs to be prepared or to identify the significant environmental effects to be analyzed in an EIR.

**GENERAL PLAN AND ZONING DESIGNATIONS**

The Cotta Road Bridge Replacement project site is in the San Joaquin County General Plan (SJC General Plan) Resource Conservation (OS/RC) land use designation and is zoned General Agriculture (AG Zone). The SJC General Plan designation provides for areas with significant resources that generally are to remain in open space. The County Zoning is established to preserve agricultural lands for the continuation of commercial agriculture enterprises. Minimum parcel sizes within the AG Zone are 20, 40, 80, and 160 acres, as specified by the precise zoning. West Cotta Road is not designated in the General Plan as an arterial or collector roadway (San Joaquin County General Plan, Figure TM-1, Circulation Diagram).

**EXISTING SETTING**

The two-lane Cotta Road Bridge was constructed in 1974 and consists of a two-span timber stringer structure with an asphalt concrete overlay. The substructure consists of Douglas fir piles with timber open-end seat abutments. The bridge measures approximately 39 feet in length with a clear width between curbs of approximately 18.4 feet. The average daily traffic of the bridge is 162 vehicles, including trucks. Upland Canal is an unlined canal that has year-round flow. Temporary scour protection has been placed on the upstream and downstream sides of the bridge around the abutments. The bridge does not span a FEMA or Central Valley

Flood Protection Board (CVFPB) Designated Floodway, and is exempt from the requirement to raise the bridge deck above the 100-year flood level.

Ruderal (weedy) vegetation and freshwater emergent and riverine/riparian habitats occupy the project area. The ruderal habitat is present along Upland Canal, Cotta Road., and adjacent to the agricultural row crops along North Guard Road. Freshwater emergent<sup>1</sup> wetland habitat is present along both banks of the canal. Outside of the project area, freshwater emergent and remnant valley foothill riparian (streamside) habitat continues as a corridor along the canal banks. Agricultural fields are the primary land use in the vicinity.

The project location along the eastern side of the Sacramento-San Joaquin Delta is also within one mile of a known Giant Garter Snake (GGS) population at the California Department of Fish and Wildlife's White Slough Wildlife Area. Substantial suitable upland and aquatic GSS habitat occurs within and around the project area, and the Upland Canal ties directly into the White Slough Wildlife Area. It is highly likely that the GGS occurs within or around the project area in the Upland Canal.

## **BACKGROUND**

Due to the aging structure and decaying timbers, Cotta Road Bridge is on the Eligible Bridge List with a sufficiency rating of 35, and is eligible for replacement under the Highway Bridge Program. The unknown bridge foundation has not been evaluated for scour. The purpose of this project is to replace the existing timber Cotta Road Bridge with a 50 foot long single-span, voided slab bridge. Without the project, the structure will continue to deteriorate, potentially resulting in bridge failure.

## **PROJECT DESCRIPTION**

The San Joaquin County of Public Works (County) through Caltrans is proposing to replace the existing two-lane, two-span timber bridge over Upland Canal with a new single-span voided-slab bridge. The new bridge will be approximately 26 feet long, including two 9-foot-wide traffic lanes with 2.25-foot shoulders, and two one-foot, nine-inch wide Type 80 concrete barriers on each exterior edge of the bridge. The proposed project also includes bridge approach work including impact attenuators on the two western approaches and guardrails on the eastern approaches. The existing bridge will be removed in its entirety, and the debris will be transported off-site for disposal at a suitable location. Demolition of the existing bridge will include stripping the asphaltic concrete and chip seal overlay from the bridge surface followed by removal of the concrete deck and existing rock slope protection (RSP). Truck-mounted cranes working from the existing roadbed will be used.

The superstructure will be constructed of precast pre-stressed concrete slab with a cast-in-place composite deck overlay supported on 18-inch diameter precast, pre-stressed concrete piles. The replacement structure will eliminate the intermediate bent (bridge support) that exists in the canal. Twelve piles driven to approximately 30 feet below finished grade will support each abutment. Diaphragm abutments constructed of reinforced cast-in-place concrete

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<sup>1</sup> "Emergent" vegetation grows in or close to permanent water and rises above the water surface, e.g. cattails, willows, rushes, etc.

will be 3 feet wide with a 2-foot seat. The new abutments will have monolithic backwalls and wingwalls built on the upstream and downstream sides of each abutment to retain backfill. A retaining wall approximately 6 feet high will extend from the southeastern bridge wingwall approximately 105 feet to the east to minimize encroachment into wetlands and state-owned property. No instream falsework (forms for pouring concrete) is anticipated because the girders and bridge deck will be constructed using precast concrete.

The project footprint will match the current configuration. The vertical elevation of the western roadway approach of the bridge will need to be raised by approximately 1.5 to 2 feet in order to meet the minimal sloping sight distance for the crest vertical curves. Approximately 225 feet of the western approach and 175 feet of the eastern approach will require additional fill to raise the road elevation to sufficient height. Some fill material will also be placed to support the new bridge abutments. Embankments will be 31 feet wide between hinge points at their widest point with either 2:1 or 3:1 slopes. Embankment crowns will be sloped 2 percent from the roadway centerline to edge-of-pavement and 8 percent along unpaved shoulders. No drainage collection system is planned for the proposed action.

A temporary water diversion will be necessary to accommodate demolition of the existing bridge and instream construction activities. Sandbags and plastic sheeting will be used to build cofferdams within the channel approximately 20-30 feet from both ends of the new bridge. The cofferdams will divert water into two parallel pipes with approximately 40-inch diameters to convey flow through the active construction area. The entire diversion structure will be confined to the channel and will extend from the northern to southern sides of the project area within Upland Canal. The temporary diversion will be constructed using a backhoe and excavator operating from above the channel. Construction of the temporary diversion is anticipated to take approximately 2-3 days.

Vegetation will be cleared from the channel bed and banks to accommodate a temporary stream flow diversion structure, "dewatering" the canal segment to allow for construction of the new wider bridge and roadway approaches, and to allow heavy construction equipment to enter the dewatered channel for bridge work and installation of streambank stabilization materials. Vegetation will also be cleared from the upland portions of the project area to prepare the ground for roadway and driveway improvements. Vegetation clearing is expected to take less than 1 day to complete.

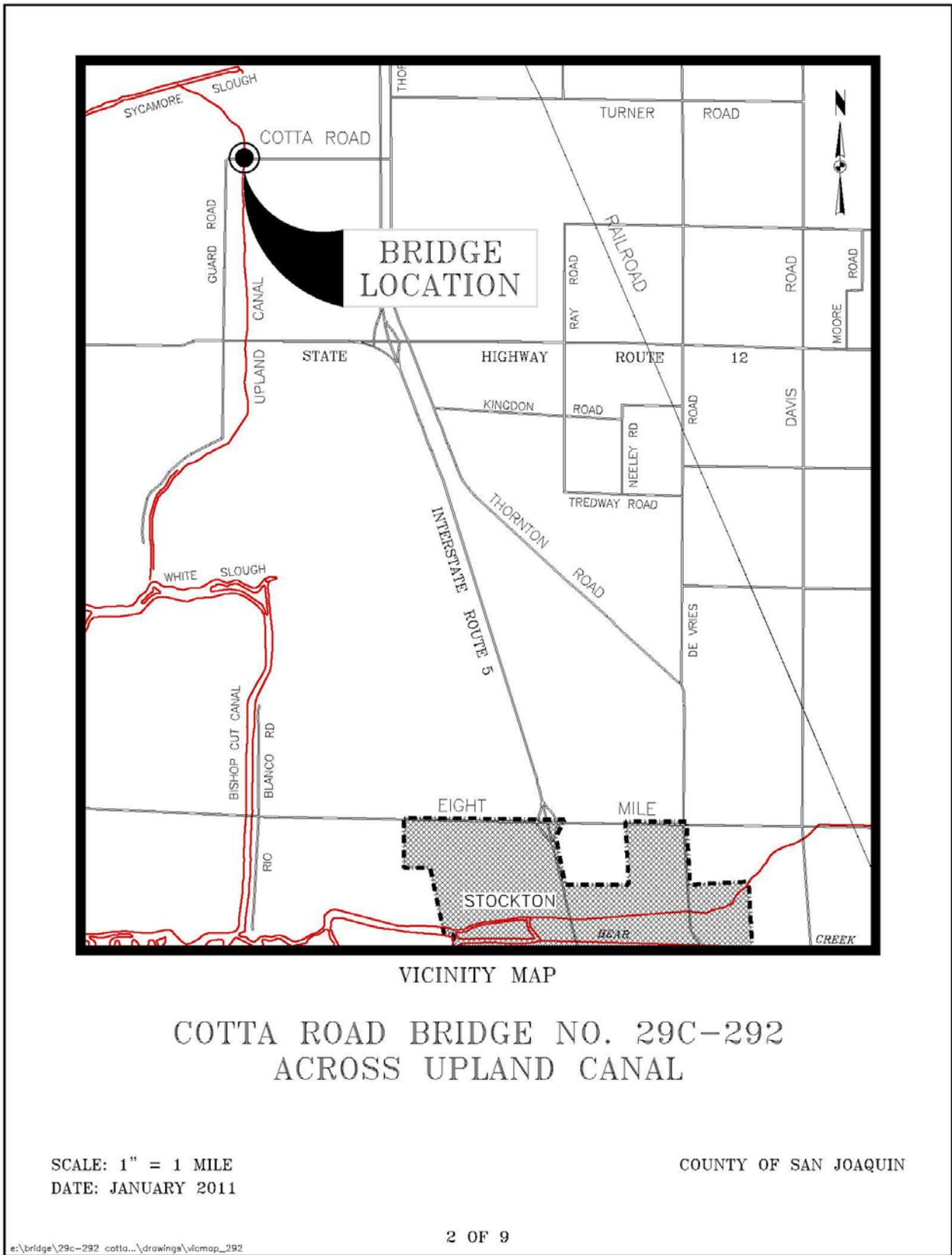
Upland Canal and its banks within the project area are not expected to be significantly or permanently altered. One area of the canal bank, most likely in the northwestern quadrant of the action area will be cut and graded wide enough to allow access for heavy construction equipment into the dewatered canal channel below the ordinary high water mark. To protect the new abutments beneath the bridge and channel erosion, RSP will be placed over a layer of filter fabric around the new abutments beneath the bridge and will extend to 10 feet north and south along the canal banks.

RSP will extend to the channel with a cutoff wall. Upon completion of construction, the temporary diversion and any plastic sheeting or sandbags placed in the channel will be

removed. Any remaining excavated spoils and debris will also be removed and disposed of at an appropriate location. In-channel work is expected to last approximately 8 weeks. The total duration of all project phases is anticipated to take approximately three months to complete.

Three driveways adjacent to Cotta Road west of the bridge (two on the north side and one on the south side of the road) that provide access to the agricultural fields will require reconstruction to conform with the new roadway alignment and the higher roadway elevation. Ground-disturbing activities for the reconstruction will be limited to the existing driveway approaches.

Numerous environmental-protection measures are incorporated into the project design and workflow, as required under permits from the California Department of Fish and Wildlife and other regulatory agencies. These measures are summarized in the discussions below, and detailed in the project's approved Preliminary Environmental Study with supporting Technical Studies performed in 2016 for the California Department of Transportation (Caltrans), the Biological Assessment performed for the project in 2018, the Stormwater Pollution and Prevention Plan (SWPPP) required for the project, and others. All materials cited and incorporated by reference are listed at the end of this document.



**Figure 1**

**ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:**

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages.

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Aesthetics                      | <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Air Quality                                   |
| <input checked="" type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources                 | <input type="checkbox"/> Geology/Soils                                 |
| <input type="checkbox"/> Greenhouse Gases Emissions      | <input type="checkbox"/> Hazards & Hazardous Materials      | <input checked="" 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/Traffic          | <input type="checkbox"/> Utilities/Service Systems          | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

**DETERMINATION:**

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the 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.

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Laurel Sears, Associate Planner  
San Joaquin County Public Works Department

June 5, 2019

Initial Study/Mitigated Negative Declaration  
Cotta Road Bridge Replacement Project, San Joaquin County Department of Public Works

June 2019

ISSUES:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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**I. AESTHETICS**

Would the project:

a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**BACKGROUND AND REGULATORY SETTING**

San Joaquin County is centrally located in the agricultural heartland of California, known as the San Joaquin Valley. The terrain is generally level with the foothills of the Diablo Range to the southwest and the foothills of the Sierra Nevada Range to the east. In addition to the vast acreage of agricultural land, a complex network of sloughs, canals, rivers, and creeks forms a distinctive landscape. The Delta wetlands, river corridors, valley oak tree groves, and sloping foothills and ridges of the Diablo and Sierra Nevada Ranges are the key scenic landscape features in San Joaquin County (Baseline Environmental Consulting 1992).

The County has designated Interstate 5, State Routes 4 and 99, and 26 local roadways as scenic routes; Interstates 5 and 580 are state-designated scenic highways (SJC 2030 General Plan, Natural and Cultural Resources Element, Figure NCR-1). These routes were selected based on several factors, including those roads which lead to recreation areas, exhibit scenery with agricultural/rural values or topographical interest, provide access to historical sites, or offer views of waterways. West Cotta and North Guard Roads are not classified as scenic routes.

**Impact Discussion:**

a-d) The project and surrounding area consists of rural and agricultural property. There are no designated scenic vistas or scenic highways within the vicinity of the project area. The proposed project will replace an existing bridge with one that will have similar visual characteristics, and will not directly change the overall setting. Because no new roadway

lighting is proposed, the proposed project would also not create a new source of substantial light or glare, adversely affecting day or nighttime views; therefore, no impacts associated with aesthetic changes are anticipated.

ISSUES:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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**II. AGRICULTURE AND FORESTRY RESOURCES**

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with existing zoning for agriculture use, or a Williamson Act contract?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Result in the loss of forest land or conversion of forest land to non-forest use?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Involve other changes in the existing environment which, due to their location or   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

nature, could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use?

## BACKGROUND AND REGULATORY SETTING

The California Department of Conservation, Division of Land Resource Protection, administers the California Farmland Mapping and Monitoring Program (FMMP), to assess and plan for California's agricultural land resources. The FMMP produces *Important Farmland Maps*, which identify "Prime Farmland" and "Farmland of Statewide Importance." These classifications are based on criteria developed by the United States Department of Agriculture Natural Resources Conservation Service (NCRS), which classify soils by various physical and chemical properties. For farmland to be considered "Prime" or of "Statewide Importance" in California, land must have been used for irrigated agricultural production at some time during the four years prior to the Important Farmland Map date. See California Department of Conservation, *Prime Farmland and Farmland of Statewide Importance*, available at [https://www.conservation.ca.gov/dlrp/fmmp/Pages/prime\\_farmland\\_fmmp.aspx](https://www.conservation.ca.gov/dlrp/fmmp/Pages/prime_farmland_fmmp.aspx) (accessed May 15, 2019).

The California Land Conservation Act of 1965 (commonly known as the Williamson Act) established a voluntary tax incentive program for preserving agricultural and open space lands. A property owner enters into a 10-year contract with the County, which places restrictions on the land in exchange for tax savings. The property is taxed according to the income it is capable of generating from agriculture and other compatible uses, rather than its full market value. Williamson Act contracts are renewed automatically each year unless they are canceled or a Notice of Non-renewal is filed with the County (Baseline 1992).

The California Department of Forestry and Fire Protection monitors and maps the state's forest resources and overall vegetation status, and produces a "land cover" map that classifies the State's lands into Forestland, Forest and Rangeland, Rangeland, and Other (includes agricultural and urban uses, and water bodies). The 2006 Land Cover map identifies the project area, as well as the majority of the San Joaquin Valley, as agricultural land. There is no mapped forestland in San Joaquin County. See California Department of Forestry and Fire Protection, *FRAP Map: Land Cover (2006)* available at [http://frap.fire.ca.gov/data/frapgismaps/landcover2006\\_download](http://frap.fire.ca.gov/data/frapgismaps/landcover2006_download) (accessed May 15, 2019).

### Impact Discussion:

a-e) The project and surrounding area consists of rural and agricultural property. The proposed project will replace an existing timber bridge with a pre-cast slab, and with the use of retaining walls will avoid the need for additional right-of-way; therefore, no agricultural land would be converted to non-agricultural uses, nor would the project conflict with agricultural zoning. There is no mapped forestland in the vicinity of the proposed project. Accordingly, no impacts associated with farmland or forestland loss are anticipated.

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

### BACKGROUND AND REGULATORY SETTING

San Joaquin County is located at the northern end of the San Joaquin Valley Air Basin (SJVAB), and is within the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD). The pollution potential for this air basin is very high due to the topographic and meteorological conditions which often trap air pollutants in the valley (SJC General Plan). In compliance with the federal Clean Air Act (CAA) and United States Environmental Protection Agency (EPA) requirements, the SJVAPCD prepares plans for reducing pollutants, particularly ozone, fine and ultrafine particulate matter (PM10 and PM2.5), and carbon monoxide emissions to meet the EPA's National Ambient Air Quality Standards (NAAQS) as well as the more stringent California standards. An air basin is in "nonattainment" when pollutant concentrations exceed these levels. The SJVAB is classified as "nonattainment" for ozone and PM according to both federal and state standards, and is in "attainment" for carbon monoxide.

Ozone, a colorless, reactive gas, is formed near the earth's surface when sunlight reacts with volatile organic compounds (VOCs), carbon monoxide (CO) and nitrogen oxides (NOX) from vehicle exhaust, industrial processes, wildfire smoke, and other causes. Ozone levels tend to

concentrate in the San Joaquin Valley because the surrounding mountain ranges limit air transport and pollutant dispersion. Ozone is hazardous to human health, and damages crops, ornamental vegetation, and man-made materials.

Particulate matter is a mixture of solid particles and liquid droplets of soot, ash, dust or man-made compounds, such as diesel emissions, suspended in the air; it can also form in the atmosphere through photochemical reactions of sunlight on airborne materials. PM can include chemicals or chemical compounds such as organic carbon, elemental carbon, geologic material, trace metals, secondary organic aerosols, ammonium nitrate, and ammonium sulfate. As referenced above, the EPA classifies PM into two categories: particles that are 10 microns or less in diameter (PM10) and particles that are less than 2.5 microns in diameter (PM2.5). The latter particles are typical of diesel emissions. Particulate matter is hazardous to human and animal health when inhaled, and obscures visibility.

Carbon monoxide (CO) is an odorless, colorless gas that is directly emitted as a product of combustion. High CO concentrations are generally associated with cold, stagnant weather conditions in winter. CO emissions typically are concentrated around emission sources, including stationary sources (internal combustion engines, generators, flares, gas-fired central furnaces, etc.) as well as vehicle emissions around heavily-congested intersections and roadways. CO is also hazardous to human and animal health, as it binds to hemoglobin in the blood and reduces the ability of blood to carry oxygen; it is particularly dangerous for individuals with heart or lung disease or anemia.

The following table summarizes the San Joaquin Valley Air Basin’s attainment status:

SAN JOAQUIN VALLEY ATTAINMENT STATUS		
Pollutant	Designation/Classification	
	<u>Federal Standards<sup>a</sup></u>	<u>State Standards<sup>b</sup></u>
Ozone - One hour	No Federal Standard <sup>f</sup>	Nonattainment/Severe
Ozone - Eight hour	Nonattainment/Extreme <sup>e</sup>	Nonattainment
PM-10	Attainment <sup>c</sup>	Nonattainment
PM-2.5	Nonattainment <sup>d</sup>	Nonattainment
Carbon Monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide (NOX)	Attainment/Unclassified	Attainment

SAN JOAQUIN VALLEY ATTAINMENT STATUS		
Sulfur Dioxide (SOX)	Attainment/Unclassified	Attainment
Lead	No Designation/Classification	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility-Reducing Particles	No Federal Standard	Unclassified
Vinyl Chloride	No Federal Standard	Attainment

<sup>a</sup> See 40 CFR Part 81

<sup>b</sup> See CCR Title 17 Sections 60200-60210

<sup>c</sup> On September 25, 2008, EPA re-designated the San Joaquin Valley to attainment for the PM10 National Ambient Air Quality Standard (NAAQS) and approved the PM10 Maintenance Plan.

<sup>d</sup> The Valley is designated nonattainment for the 1997 PM2.5 NAAQS. EPA designated the Valley as nonattainment for the 2006 PM2.5 NAAQS on November 13, 2009 (effective December 14, 2009).

<sup>e</sup> Though the Valley was initially classified as serious nonattainment for the 1997 8-hour ozone standard, EPA approved Valley reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010).

<sup>f</sup> Effective June 15, 2005, the U.S. Environmental Protection Agency (EPA) revoked the federal 1-hour ozone standard, including associated designations and classifications. EPA had previously classified the SJVAB as extreme nonattainment for this standard. EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan on March 8, 2010 (effective April 7, 2010). Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.

*Source:* San Joaquin Valley Air Pollution Control District, Ambient Air Quality Standards & Valley Attainment Status, available at <https://www.valleyair.org/aqinfo/attainment.htm> (accessed May 14, 2019).

The following table identifies health effects of some common pollutants in the SJVAB (SJVAPCD 2014):

Air Pollutant	Concentration/Averaging Time		Most Relevant Health Effects
	State Standard (California Ambient Air Quality Standards)	Federal Primary Standard (National Ambient Air Quality Standards)	
Ozone	0.09 ppm (180 µg/m <sup>3</sup> ), 1-hr. avg. 0.070 ppm (137 µg/m <sup>3</sup> ), 8-hr avg.	0.075 ppm (147 µg/m <sup>3</sup> ), 8-hr avg. (three-year average of annual 4 <sup>th</sup> -highest daily maximum)	(a) Pulmonary function decrements and localized lung edema in humans and animals; (b) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (c) Increased mortality risk; (d) Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (e) Vegetation damage; and (f) Property damage
Nitrogen Dioxide <sup>1</sup>	0.18 ppm (339 µg/m <sup>3</sup> ), 1-hr avg. 0.030 ppm (57 µg/m <sup>3</sup> ), annual arithmetic mean	0.100 ppm (188 µg/m <sup>3</sup> ), 1-hr avg. (three-year avg. of the 98 <sup>th</sup> percentile of the daily maximum 1-hour avg.) 0.053 ppm (100 µg/m <sup>3</sup> ), annual arithmetic mean	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extrapulmonary biochemical and cellular changes and pulmonary structural changes; and (c) Contribution to atmospheric discoloration
Carbon Monoxide	20 ppm (23 µg/m <sup>3</sup> ), 1-hr avg. 9.0 ppm (20 µg/m <sup>3</sup> ), 8-hr avg.	35 ppm (40 µg/m <sup>3</sup> ), 1-hr avg. (not to be exceeded more than once per year) 9 ppm (10 µg/m <sup>3</sup> ), 8-hr avg. (not to be exceeded more than once per year)	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; and (d) Possible increased risk to fetuses
Sulfur Dioxide <sup>2</sup>	0.25 ppm (655 µg/m <sup>3</sup> ), 1-hr. avg. 0.04 ppm (105 µg/m <sup>3</sup> ), 24-hr avg.	0.075 ppm (196 µg/m <sup>3</sup> ), 1-hr avg. (three-year avg. of the 99 <sup>th</sup> percentile) No 24-hr avg.	Broncho-constriction accompanied by symptoms, which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma
Suspended Particulate Matter (PM10)	50 µg/m <sup>3</sup> , 24-hr avg. 20 µg/m <sup>3</sup> , annual arithmetic mean	150 µg/m <sup>3</sup> , 24-hr avg. (not to be exceeded more than once per year on average over three years)	(a) Excess deaths from short-term exposures and exacerbation of symptoms in sensitive patients with respiratory disease; and (b) Excess seasonal declines in pulmonary function, especially in children.
Suspended Particulate Matter (PM2.5)	12 µg/m <sup>3</sup> , annual arithmetic mean	35 µg/m <sup>3</sup> , 24-hr avg. (three-year average of 98 <sup>th</sup> percentile) 15 µg/m <sup>3</sup> , annual arithmetic mean (three-year average)	(a) Increased hospital admissions and emergency room visits for heart and lung disease; (b) Increased respiratory symptoms and disease; and (c) Decreased lung functions and premature death.

Air Pollutant	Concentration/Averaging Time		Most Relevant Health Effects
	State Standard (California Ambient Air Quality Standards)	Federal Primary Standard (National Ambient Air Quality Standards)	
Lead <sup>3</sup>	1.5 µg/m <sup>3</sup> , 30-day avg.	1.5 µg/m <sup>3</sup> , calendar quarter 0.15 µg/m <sup>3</sup> , three-month rolling average	(a) Increased body burden; and (b) Impairment of blood formation and nerve conduction
Visibility-Reducing Particles	Extinction coefficient of 0.23 per kilometer - visibility of 10 miles or more due to particles when relative humidity is less than 70 percent.	None	The statewide standard is intended to limit the frequency and severity of visibility impairment due to regional haze. This is a visibility based standard not a health based standard. Nephelometry and AISI Tape Sampler; instrumental measurement on days when relative humidity is less than 70 percent.
Sulfates	25 µg/m <sup>3</sup> , 24-hr avg.	None	(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; and (f) Property damage
Hydrogen Sulfide	0.03 ppm (42 µg/m <sup>3</sup> ), 1-hr avg.	None	Odor annoyance
Vinyl Chloride <sup>3</sup>	0.01 ppm (26 µg/m <sup>3</sup> ), 24-hr avg.	None	Highly toxic and a known carcinogen that causes a rare cancer of the liver.

Source: South Coast Air Quality Management District, Final Program Environmental Impact Report for the 2012 Air Quality Management Plan, (2012) Table 3.2-8, p. 3.2-29

µg/m<sup>3</sup> = microgram per cubic meter.

ppm = parts per million by volume.

<sup>1</sup> On January 25, 2010, the USEPA promulgated a new 1-hour NO<sub>2</sub> standard. The new 1-hour standard is 0.100 parts per million (188 micrograms per cubic meter [µg/m<sup>3</sup>]) and became effective on April 12, 2010.

<sup>2</sup> On June 3, 2010, the USEPA issued a new 1-hour SO<sub>2</sub> standard. The new 1-hour standard is 0.075 parts per million (196 µg/m<sup>3</sup>). The USEPA also revoked the existing 24-hour and annual standards citing a lack of evidence of specific health impacts from long-term exposures. The new 1-hour standard became effective 60 days after publication in the Federal Register.

<sup>3</sup> CARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

The SJVAPCD 2016 Ozone Plan's principal goal is to attain the EPA 2008 8-hour ozone standard of 75 parts per billion (ppb) by the end of 2031 (and the 2015 70 ppb standard by 2037) by reducing all ozone-generating pollutants from both stationary and mobile emission sources. Quantitatively, this means reducing present ozone-precursor emissions, primarily NO<sub>x</sub>, by 207.7 tons per day. The Plan contains rules for stationary sources and cites California Air Resources Board (ARB) regulations for mobile sources (on- and off-road vehicles, trucks, buses, boats, etc.) as part of an overall emissions-reduction strategy. The 2016 Ozone Plan shows that these strategies continue to be considerably effective, showing a drop in 8-hour

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ozone levels from approximately 115 ppb in 2004-2005 to approximately 92 ppb in 2015. See generally San Joaquin Valley Air Pollution Control District, 2016 Plan for the 2008 8-Hour Ozone Standard (June 16, 2016), available at [http://valleyair.org/Air\\_Quality\\_Plans/Ozone-Plan-2016.htm](http://valleyair.org/Air_Quality_Plans/Ozone-Plan-2016.htm), (accessed May 22, 2019).

The SJVAPCD 2018 Particulate Matter Plan for the 1997, 2006, and 2012 PM<sub>2.5</sub> Standards is the latest effort to combine successive plans to reduce overall PM, but particularly PM<sub>2.5</sub>, in order to achieve EPA attainment status (the San Joaquin Valley has attained the federal PM<sub>10</sub> standard). The Plan includes regulatory measures – “Rules” – for stationary sources (industrial flares, internal combustion engines, boilers/steam generators, glass melting furnaces, agricultural operations, etc.) and construction equipment or practices (such as requiring catalyzed engines, watering of soil surfaces one or more times per day), measures for mobile sources (trucks, buses, agricultural equipment, passenger vehicles, trains, etc.), measures addressing concentrated PM sources that create “hot spots,” such as residential wood burning and commercial charbroilers. Additionally, the Plan includes public outreach measures as well as research on and demonstration of new clean air technologies for reducing emissions. PM-reduction efforts have been quite successful – the number of days that Valley air exceeded the federal 2006 24-hour PM<sub>2.5</sub> Standard (35 micrograms/cubic meter) have dropped from approximately 130 days in 2002 to 50 days in 2017 (San Joaquin Valley Air Pollution Control District, *2018 PM 2.5 Plan for the San Joaquin Valley, Executive Summary*, Figure 6 (November 15, 2018), available at <http://valleyair.org/pmplans/documents/2018/pm-plan-adopted/ExecutiveSummary.pdf> (accessed May 22, 2019). With compliance, the Plan will reduce approximately 4.2 tons per day of directly-emitted PM<sub>2.5</sub> emissions and 173.5 tons per day of NO<sub>x</sub> from the baseline year of 2013 to the final attainment year of 2025. See generally San Joaquin Valley Air Pollution Control District, *2018 PM 2.5 Plan for the San Joaquin Valley* (November 15, 2018), available at <http://valleyair.org/pmplans/documents/2018/pm-plan-adopted/04.pdf> (accessed May 22, 2019).

The SJVAPCD implements the California Air Resources Board (ARB) 2004 Revision to the California State Implementation Plan (SIP) for Carbon Monoxide (CO), which in turn implements the federal Clean Air Act’s ongoing requirements. Although the SJVAPCD is in attainment for CO, ongoing efforts are necessary to maintain attainment. These efforts, including rules for stationary sources and vehicle-emissions reductions, have accomplished nearly a 60% reduction in CO levels since 1993. See California Air Resources Board, *2004 Revision to the California State Implementation Plan for Carbon Monoxide* (July 22, 2004), available at [https://www.arb.ca.gov/planning/sip/co/final\\_2004\\_co\\_plan\\_update.pdf](https://www.arb.ca.gov/planning/sip/co/final_2004_co_plan_update.pdf) (accessed May 22, 2019).

The SJVAPCD sets thresholds of significance for “criteria” pollutants: CO, NO<sub>x</sub>, ROG (reactive organic gases), SO<sub>x</sub> (sulfur oxides), PM<sub>10</sub> and PM<sub>2.5</sub> as shown in the table below:

AIR QUALITY THRESHOLDS OF SIGNIFICANCE – CRITERIA POLLUTANTS			
Pollutant/Precursor	Construction Emissions	Operational Emissions	
		Permitted Equipment and Activities	Non-Permitted Equipment and Activities
	tons/year	tons/year	tons/year
CO	100	100	100
NOx	10	10	10
ROG	10	10	10
SOx	27	27	27
PM10	15	15	15
PM2.5	15	15	15

*Sensitive Receptors.* Sensitive receptors are places typically occupied for extended periods by individuals with greater susceptibility to air pollution’s hazardous effects, such as residences, hospitals, schools, day care centers, retirement homes, and convalescent facilities where there is reasonable expectation of continuous human exposure to poor air quality standards (CARCB 2007).

Impact Discussion:

a, b) The proposed project would not conflict with, or obstruct implementation of the applicable air quality plan, violate any air quality standard, or contribute substantially to an existing or projected air quality violation, because, as explained below, project construction and operation would not be anticipated to generate pollutants in excess of applicable thresholds. Construction of the project would result in short-term emissions and/or odors associated with construction equipment and dust from earthmoving activities; however, SJVAPCD fugitive dust control requirements for construction sites would apply to all earthmoving and ground-disturbing activities (Regulation VIII (Fugitive PM10 Prohibitions), which would reduce PM impacts to less than significant levels. Other emissions from construction equipment are not anticipated to be significant, primarily because they would be limited to the duration of project construction and would cease when the bridge is completed. Moreover, this project was evaluated by the California Department of Transportation (Caltrans) in conjunction with the federal funding obtained for project construction. Caltrans did not require additional air quality studies to determine whether additional mitigation measures were necessary. Accordingly, with compliance with existing regulations, impacts associated with violations of air quality standards or inconsistency with air quality plans are anticipated to be less than significant.

c) A project is generally deemed inconsistent with air quality plans if it would result in population and/or employment growth that exceeds growth estimates set forth in the applicable air quality plan. Accordingly, proposed projects need to be evaluated to determine whether they would generate population and employment growth, and if so, whether that growth would exceed the growth rates specified in the relevant air plans. The proposed project would replace

an existing bridge, and would not introduce new housing or employment-related construction, and thus would not induce population or employment growth. Therefore, the proposed project would not affect local or regional air quality plans.

d, e) The nearest sensitive receptors in the vicinity of the project area are located more than 0.5 mile of the project site, and are not anticipated to be affected by emissions generated by project construction. The project would result in temporary pollutant emissions and/or odors associated with construction equipment and dust from earthmoving activities; however, construction activities would be in compliance with the SJVAPCD fugitive dust control requirements referenced above, which would reduce any impacts to less than significant levels.

ISSUES:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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**IV. BIOLOGICAL RESOURCES**

Would the project:

- |  |                          |                          |                                     |                                     |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local,   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

regional, or state habitat conservation plan?

*Note:* The analysis below incorporates and relies on the findings presented in the Biological Assessment (BA) prepared in July, 2018, for the California Department of Transportation (Caltrans) by the San Joaquin County Public Works Department (County), and the Biological Opinion Letter dated November 15, 2018, from Ms. Kaylee Allen, Field Supervisor, United States Fish and Wildlife Service, to Mr. Dominic Vitali, Acting Branch Chief, Northern San Joaquin Valley Environmental Branch, Caltrans District 10. These documents are on file with the San Joaquin County Public Works Department, Transportation Planning Division.

## BACKGROUND AND REGULATORY SETTING

In 1973, the federal Endangered Species Act (ESA) was passed by Congress to protect ecosystems supporting special-status species and to be administered by the U.S. Fish and Wildlife Service (USFWS). The California Endangered Species Act (CESA) was passed as a parallel act to be administered by the California Department of Fish and Wildlife (CDFW).

Special-status species include:

- USFWS-designated listing of threatened or endangered species, as well as candidate species;
- CDFW-designated listing of rare, threatened, or endangered species, as well as candidate species;
- Species considered to be rare or endangered under the conditions of Section 15380 of the CEQA Guidelines, such as those identified in the Inventory of Rare and Endangered Vascular Plants of California by the California Native Plant Society; and
- Other species that are considered sensitive or of special concern due to limited distribution or lack of adequate information to permit listing, or rejection for state or federal status, such as Species of Special Concern designated by the CDFW.

The USFWS and CDFW both publish lists of special-status species, which satisfy criteria classifying them as endangered. Species that have been proposed for listing, but have not yet been accepted are classified as candidate species. Generally, the term endangered (federal, state) refers to a species that is in danger of becoming extinct throughout all or a significant portion of its range, while a threatened (federal, state) or rare (state) species is one that could become endangered in the foreseeable future.

### Special Status Species

Database listings from the USFWS and CDFW for the United States Geological Survey (USGS) Thornton, California, quadrangle was reviewed to determine if there have been any occurrences of special status species within the vicinity of the project area. The Biological Study Area (BSA) consists of Cotta Road, the Upland corridor, and surrounding open space/agricultural fields (NSR 2017).

No special-status plant species were detected during the reconnaissance-level survey conducted in November 2014. For each species listed in the USFWS special list and CNDDDB and CNPA database records, habitat requirements were assessed and compared to the Initial Study/Mitigated Negative Declaration  
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habitats within the BSA and immediate vicinity in order to determine their potential to occur. The special-status plant species with potential to occur are Bristly sedge (*Carex comosa*), Delta tule pea (*Lathyrus jepsonii* var. *jepsonii*), Delta mudwort (*Limosella australis*), Mason's lilaeopsis (*Lilaeopsis masonii*), Sanford's arrowhead (*Sagittaria sanfordii*), Side-flowering skullcap (*Scutellaria lateriflora*), Suisun marsh aster (*Symphotrichum lentum*), and Woolly rose-mallow (*Lasiocarpus* var. *occidentalis*). The survey performed on May 30, 2017 occurred during the blooming period of all eight species when they would be readily identifiable. These species were determined to be absent from the BSA during the biological surveys conducted in the BSA.

There are several special status wildlife species recorded within the quadrangle: delta smelt (*Hyposmesus transpacificus*), giant garter snake (*Thamnophis gigas*), western pond turtle (*Actinemys marmorata*), Swainson's hawk (*Buteo swainsoni*), tricolored blackbird (*Agelaius tricolor*), white-tailed kite (*Elanus leucurus*), Modesto population song sparrow (*Melospiza melodia*), and western red bat (*Lasiurus blossevillii*).

Upland Canal provides very low quality habitat potential for delta smelt. The canal portion of the BSA contains dense beds of submerged aquatic vegetation and has warm water temperatures during the summer months, both of which would preclude the species from utilizing the canal as spawning or rearing habitat (U.S. Fish and Wildlife Service 2016). Furthermore, the control structures at either end of Upland Canal in combination with limited tidal influence, suggest that delta smelt spawning and rearing in the vicinity of the BSA is highly unlikely. Therefore, Upland Canal does not provide suitable spawning or rearing habitat, but could allow for the transitory passage of individuals through the BSA. (Stantec 2017).

The BSA is in the current known range of the giant garter snake (GGS). The nearest known occurrence of the species is approximately 2 miles south of the BSA in the fresh emergent habitat located in the White Slough Wildlife Area. Based on the reconnaissance-level survey performed on May 30, 2017, suitable aquatic and upland habitat for GGS is present in the BSA. The Biological Assessment determined that the project may affect and is likely to adversely affect GGS. Upland Canal and the freshwater emergent vegetation provide adequate water, cover, and prey items for the species during the active season (May 1 through October 1). Rip-rap around the existing bridge and small mammal burrows within 200 feet of the BSA provide suitable upland refugia habitat for the species during the inactive season (Stantec 2017).

The County, in conjunction with the California Department of Transportation (Caltrans), the NEPA lead agency, initiated formal Section 7 Consultation with the United States Fish & Wildlife Services on July 25, 2018. USFWS issued a Biological Opinion on November 15, 2018, which is discussed further below.

The BSA is located within the current known range of western pond turtle. Shallow, slow-moving water in Upland Canal and downed woody debris within and adjacent to the channel

provide aquatic and basking habitat for western pond turtle. The ruderal and fresh emergent wetlands along the banks of the canal provide upland habitat for the species (Stantec 2017).

The project area and its vicinity provides potential nesting habitat and foraging habitat for special status species such as Swainson's hawk, burrowing owl, tricolored blackbird, and other protected special-status migratory birds and raptors whose nests and eggs are protected by the California Fish and Game Code Sections 3503 and 3503.5 and the federal Migratory Bird Treaty Act (MBTA). In the Central Valley, birds like Swainson's hawk, white-tailed kites, and loggerhead shrikes typically nest in oak or cottonwood trees in or near riparian habitats, oak groves, roadside trees, and isolated trees. The trees, shrubs, and other substrates (e.g., exposed piping and the existing bridge) in and near the BSA provide nesting and foraging habitat for various bird species, such as Swainson's hawk, Modesto population song sparrow, tricolored blackbird and white-tailed kite. These birds prefer nesting sites that provide sweeping views of nearby foraging grounds consisting of grasslands, irrigated pastures, alfalfa, hay, row crops, and grain crops. The CNNDDB reports recorded occurrences of all four special-status bird species within 5 miles of the BSA. These occurrences include: a 2009 record of a song sparrow nest within the fresh emergent vegetation located in the southeast portion of the BSA; a 2002 Swainson's hawk nest occurrence along Upland Canal less than 0.5 mile from the BSA; a 2008 record of a white-tailed kite nest along the banks of White Slough approximately 4 miles southwest of the BSA; and a 2015 occurrence documenting a colony of tricolored blackbirds nesting approximately 4.5 miles east of the BSA outside of Lodi (Stantec 2017)

#### Impact Discussion:

- a) San Joaquin County Department of Public Works is proposing to replace the existing bridge within the channel. Direct impacts on individual GGSs or Delta Smelt, if present in the work area during construction, could include injury or mortality, increased risk of predation, and increased stress. Indirect impacts could include alteration of potential aquatic/breeding habitat in the BSA and vicinity, or the release of sediment or other pollutants into adjacent aquatic habitat. The staging of heavy equipment and ground-disturbing construction activities could disturb burrows or other upland refugia, and could inadvertently affect the species if present. Minimal permanent habitat impacts will occur because the proposed project will largely be limited to existing paved surfaces (i.e., Cotta Road). Construction activities will also be scheduled during the dry season when water flows are lowest in the canal to further minimize impacts on the species. The proposed project has been designed to minimize impacts on native habitats, to the maximum extent practicable, and construction activities will occur during the summer months during the active (non-hibernating) season (May–October) for GGS, maximizing any individual snake's ability to leave the area. Also, construction during the low flow period would reduce conflicts with any fish migrating through the area.

BMPs will be implemented to reduce water quality impacts. The majority of the construction activities will occur in previously disturbed areas, including the existing road, shoulders, and bridge. In addition to the construction BMPs that have been incorporated into the proposed project, the following measures as outlined in the

Biological Opinion issued by USFWS on November 15, 2018 and will be implemented to further reduce the potential for impacts on GGS to less than significant impacts:

- Construction shall occur between May 1 and October 1 during the active period for GGS.
- Vegetation clearing will be limited within 200 feet of the banks of potential GGS aquatic habitat to the minimal area necessary. Movement of heavy equipment will be confined within 200 feet of the banks of potential GGS aquatic habitat to existing roadways to the extent practicable.
- Prior to ground disturbance, all on-site construction personnel shall be given instruction regarding the presence of GGS and the importance of avoiding impacts to the species and its habitat.
- Temporary fencing will be installed at the edge of the construction area and adjacent to the areas where wetlands, irrigation ditches, marsh areas or other potential GGS habitats are being retained on the site.
- No plastic, monofilament, jute netting, or similar erosion control matting that could entangle snakes will be placed on the site. Possible substitutes include coconut coir or matting, burlap-wrapped straw wattles, tackified hydroseeding compounds, or other materials approved by the Service.
- Work areas, spoils, equipment storage, and other project activities will be restricted to areas outside of the marshes, wetlands, and ditches.
- Construction runoff into wetland areas will be limited through the use of hay bales, filter fences, vegetative buffer strips, or other acceptable equivalents to maintain water quality.
- If on-site wetlands, irrigation ditches, marshes, etc. in the vicinity are relocated, the newly created aquatic habitat shall be created and filled with water prior to dewatering and destroying the pre-existing aquatic habitat.
- If wetlands, irrigation ditches, marshes, etc. will not be relocated, then the aquatic habitat shall be dewatered at least two weeks prior to commencing construction.
- Pre-construction surveys for the GGS shall occur within 24 hours of ground-disturbing activities.
- After completion of construction activities, any temporary fill and construction debris shall be removed. Areas disturbed by the action shall be restored to pre-construction conditions and topography that promotes preferred GGS upland and aquatic habitats. Restoration work may include such activities as replanting species removed from banks, replanting emergent vegetation in the active channel, or removing invasive species such as Himalayan blackberry (*Rubus armeniacus*). The site shall be monitored periodically until it is determined by the San Joaquin County Department of Public Works that preferred GGS habitat is well established in the areas that were impacted by the project.

With these measures in place as part of the project workflow, the proposed project will have a less than significant impact on GGSs or GGS habitat.

The avoidance and minimization measures described above for GGS will also reduce the potential for impacts on western pond turtles. Those measures will be applied to western pond turtle and will include: a pre-construction survey concurrently with the GGS survey, and a discussion of western pond turtle during the environmental training. In addition, if a pond turtle nest is found, the biologist shall flag the site and determine if construction activities can avoid affecting the nest. If the nest cannot be avoided, it will be excavated and re-buried at a suitable location outside of the construction impact zone by a qualified biologist. The County will inform CDFW prior to such an activity occurring (NSR 2017). With these measures in place as part of the project design, the proposed project will have a less than significant impact on the western pond turtle.

Noise associated with construction activities could result in the disturbance of special-status and protected non-special status migratory birds and raptors, if present in the area. To avoid construction-related impacts, the SJCPWD will require a qualified biologist to conduct a pre-construction survey for all special-status species and nesting birds if construction occurs within the breeding/nesting season and observe fish, snakes, turtles and/or water levels. Pre-construction survey for nesting birds has become standard practice performed by SJCPWD for all projects occurring from February 15 to September 1 and is not considered a mitigation measure for SJCPWD. If the survey findings indicate the presence of a special-status species or nesting protected species, the SJCPWD and a qualified biologist will consult with CDFW to determine the appropriate action. With these measures in place as part of the project design, the proposed project will have a less than significant impact on wildlife.

The BSA is located within the range of western red bat; this species could forage over the riverine and ruderal habitats in the BSA, as well as adjacent agricultural fields. Larger trees and shrubs in the riparian habitat in the southeastern portion of the BSA serve as potential roosting habitat for the species. Impacts on western red bat would be similar to those described for special-status bird species, migratory birds, and raptors. Foraging activity will not be affected because construction activities will take place during the day, and no temporary or permanent habitat losses are anticipated as a result of the proposed project. In conjunction with the pre-construction nesting bird survey, a qualified biologist will conduct a reconnaissance-level pre-construction survey of suitable roosting locations in the BSA (e.g., adjacent riparian habitat). 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 are only using the area as a night roost (e.g., no young are present in the roost), no further avoidance and minimizations measures are necessary. If during the survey, western red bat day roost or maternity roosts are identified, the County will coordinate with CDFW to determine the next steps (NSR 2017). With these measures in place as part of the project design, the proposed project will have a less than significant impact on the western red bat. .

The California Department of Fish and Wildlife (CDFW) has jurisdiction over streams that support fish and wildlife resources. Section 1602 of California Fish and Game Code requires any person, state or local governmental agency, or public utility to notify CDFW before beginning any activity that will do one or more of the following:

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1. Substantially divert or obstruct the natural flow of any river, stream or lake;
2. Substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake; or
3. Deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

If CDFW determines that an activity has a potential to substantially adversely affect an existing fish and wildlife resource, the agency may require that a Lake or Streambed Alteration Agreement be obtained prior to proceeding with any work in areas subject to CDFW jurisdiction. The Lake or Streambed Alteration Agreement contains measures that are required to be implemented to protect fish and wildlife resources.

CDFW jurisdiction extends beyond the ordinary high water mark of streams. CDFW jurisdiction encompasses all portions of the bed, bank, and channel of a stream; and often includes adjacent riparian vegetation and floodplains. As such, CDFW's jurisdictional area is generally larger than the U.S. Army Corps of Engineers jurisdictional area.

*Permanent Impacts:* Upland Canal and its banks within the project area are not expected to be significantly altered. Areas subject to CDFW jurisdiction occupy approximately 0.9 acre of the project area, and consist of the Upland Canal and associated vegetation. Based on the current level of project detail and existing Rock Slope Protection (RSP) on the banks of the channel, the project would result in *permanent* impacts to less than 0.3 acre of ruderal habitat subject to CDFW jurisdiction, excluding Upland Canal. The *permanent* impacts would result from the channel re-contouring and the placement of additional RSP within the creek. Any changes in the stream banks resulting from equipment access into the channel would be graded to match adjacent contours.

*Temporary Impacts:* The project would also result in *temporary* impacts to less than 0.31 acre of riparian wetland and upland ruderal habitat, less than 0.01 acre of riparian and 0.3 acre of ruderal respectively. This area is subject to CDFW jurisdiction, excluding Upland Canal. *Temporary Staging:* Approximately 0.2 acre of habitat along Cotta Road will be disturbed, which includes temporary construction staging along the road in ruderal habitat. Of this 0.2 acres, less than 0.1 acre is classified as ruderal habitat. This impacted area includes the staging areas necessary for construction of the temporary cofferdams and for personnel and equipment access to the dewatered channel.

*Mitigation Response:* The County is a participant in the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), operated by the San Joaquin Council of Governments. The SJMSCP is a habitat conservation plan that the County will participate in to mitigate the loss of habitat caused by the proposed project. With these measures in place as part of the project design and normal County practice, the proposed project will have a less than significant impact.

- b) The project area contains elements of riparian habitat because of the presence of year-round water in a man-made canal, but is not in an area identified as a “sensitive natural community”, as confirmed by the biological assessment performed by North State Resources in May 2017. With the measures integrated into the proposed project, and required by the project’s Lake and Streambed Alteration Agreement described in part (a) above, the project will have a less-than-significant impact to riparian resources.
- c) Section 404 of the Clean Water Act prohibits the discharge of dredged or fill material into waters of the United States, including wetlands, without a permit issued by the U.S. Army Corps of Engineers (33 USC 1344). The proposed project will require the discharge of dredged or fill material into waters of the United States. The BSA encompasses approximately 0.429 acre (89 linear feet) of wetlands and other waters of the United States. The County will obtain coverage under a Nationwide Permit (No. 14) via a Pre-Construction Notification and comply with all of the conditions in the verification letter received from the Corps. With these measures in place as part of the project design and Permit requirements, the proposed project will have a less than significant impact to waters of the United States.
- d) Upland Canal is an unlined agricultural water conveyance feature which flows southerly through the BSA connecting White Slough and Sycamore Slough, draining water from the surrounding agricultural land uses in the vicinity. Native & non-native fish have the potential to or are known to occur within Littlejohns Creek in the BSA. Swallow nests were observed under Cotta Road Bridge during the May 2017 biological assessment reconnaissance survey (NSR, 2017). There is potential for low-quality habitat for several special status species, including a variety of songbirds. If construction activities during the nesting season cannot be avoided, existing swallow nests on Cotta Road Bridge will be removed prior to the nesting season (between September 1 and February 15) to discourage continued nesting on this structure prior to construction, and nets will be installed and monitored to prevent new nests from being constructed. Furthermore, the County will comply with mitigation measures required by outside agencies once permitting is complete. Therefore, the proposed project will have a less than significant impact with measures incorporated as part of the project workflow.
- e) The proposed project does not include the removal of trees. Therefore, the proposed project will have no impact on trees.
- f) In order to address concerns about impacts to sensitive resources, San Joaquin County adopted the *San Joaquin County Multi-Species Habitat Conservation and Open Space Plan* (SJMSCP) in 2004. The key purpose of the SJMSCP is to 1) provide a strategy for balancing the need to conserve open space and the need to convert open space to non-open space uses while protecting the region’s agricultural economy; 2) preserve landowner property rights; 3) provide for the long-term management of plant, fish, and wildlife species, especially those that are currently listed, or may be listed in the future, under the federal and state ESA; 4) provide and maintain multiple-use open spaces which contribute to the quality of life of the residents of San Joaquin County; and 5) accommodate a growing population while minimizing costs to project proponents and society at large. The SJMSCP is locally implemented by the San Joaquin Council of Governments (SJCOG). Participation in the SJMSCP satisfies

requirements of both the state and federal ESA and ensures the impacts are mitigated below a level of significance for CEQA compliance (SJCOG 2001).

Because San Joaquin County signed the initial agreement to participate with the SJMSCP, any land conversion, temporary or permanent impacts would anticipate participation in the SJMSCP; however, this project is working within a channel and is not permanently changing use or flow. Therefore, the proposed project will have no impact with respect to habitat conservation plans.

ISSUES:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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**V. CULTURAL RESOURCES**

Would the project:

- |  |                          |                          |                                     |                          |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?    | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?      | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Disturb any human remains, including those interred outside of formal cemeteries?                           | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

*Note:* The analysis below incorporates and relies on the findings presented in the Historic Property Survey Report (July 2018) and the Archaeological Survey Report (December 2017) prepared for the California Department of Transportation (Caltrans). These documents are on file with the San Joaquin County Public Works Department, Transportation Planning Division.

**BACKGROUND AND REGULATORY SETTING**

Cultural resources in California are protected by a number of federal, state, and local regulations and ordinances. The most frequently applied legislation consists of the provisions of CEQA that provide for the documentation and protection of significant prehistoric and historic resources. Prior to the approval of discretionary projects and the commencement of agency undertakings, the potential impacts of the project on archaeological and historical resources must be considered (Public Resources Code Sections 21083.2 and 21084.1 and the CEQA Guidelines [California Code of Regulations Title 14, Section 15064.5]).

The CEQA Guidelines define a significant historical resource as “a resource listed or considered eligible for listing on the California Register of Historical Resources” (CRHR) (Public Resources Code Section 5024.1). A cultural resource may be eligible for listing on the CRHR if it:

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

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## Investigation and Native American Consultation Results

San Joaquin County created the Area of Potential Effect Map (APE), (approved by Caltrans on November 29, 2016) and did a records search with the Central California Information Center at California State University Stanislaus and the Native American Heritage Commission (NAHC), which indicated minimal prehistoric/historical resources (July 2015). The NAHC provided contact information of Native Americans who may have information regarding the project area (July 2015). San Joaquin County sent letters to these contacts in Spring 2016. San Joaquin County further retained the services of a consultant, North State Resources (NSR), to confirm the record search, follow-up with Native American tribes, field survey the APE area, and to provide documentation of their findings to Caltrans (December 2016). NSR produced two documents: a Historic Property Survey Report and an Archaeological Survey Report. Caltrans, under authority delegated by the Federal Highway Administration, has approved the cultural documents to meet and address requirements of the National Environmental Policy Act under section 106.

### Impact Discussion:

a – c) San Joaquin County Department of Public Works is proposing scour mitigation measures within the channel. ESA confirmed the record search, follow-up with Native Americans, and provided documentation of their finding to Caltrans (December 2016). The reconnaissance-level pedestrian survey of the area did not reveal any prehistoric or historic-period resources. The archaeological sensitivity assessment suggests the APE has low sensitivity for buried prehistoric archaeological cultural resources and for buried historic-period archaeological cultural resources. While results of the records research and field survey did not yield findings of cultural, historical, or paleontological resources, or unique geologic features, the proposed project will excavate within the area, which could result in a find. If any subsurface resources are discovered, all work will stop until a qualified archaeologist has evaluated the finding. Therefore, the proposed project will have a less-than-significant impact on cultural or paleontological resources.

d) In accordance with the California Health and Safety Code, if human remains are uncovered, all work within the area must stop and the San Joaquin County Coroner and a professional archaeologist must be contacted to determine the nature of the remains. The coroner is required to examine all discoveries of human remains within 48 hours of receiving a notice of discovery on private or state lands (Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, he or she will contact the NAHC by phone within 24 hours of making that determination (Health and Safety Code Section 7050[c]) ([www.http://leginfo.legislature.ca.gov/](http://leginfo.legislature.ca.gov/)). Following the coroner's findings, the archaeologist, and the NAHC-designated Most Likely Descendent (MLD) shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. Therefore, the proposed project will have a less-than-significant impact with respect to discovery of human remains.

ISSUES:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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**VI. GEOLOGY AND SOILS**

Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## BACKGROUND AND REGULATORY SETTING

### Geology

San Joaquin County is located in the San Joaquin Valley, which comprises the southernmost portion of the Great Valley Geomorphic Province of California. The Great Valley is an elongated lowland bounded by the tilted block of the Sierra Nevada on the east and the Coast Ranges to the west. The Sacramento River drains the northern portion and the San Joaquin River drains the southern portion (DWR 2006).

### Soils

The soil type in the project area is guard clay loam. This is a hydric, poorly-drained alluvium derived from mixed rock sources. Depth to the restrictive layer is greater than approximately 90 inches. Depth to the water table is approximately 60 inches.

### Geologic Hazards

Hazards in San Joaquin County include subsidence, expansive soils, erosion, and, infrequently, soil instability. Subsidence, expansive soils, and erosion occur in the Delta, and pose serious problems for agricultural production. Expansive soil conditions are a concern for urban development in the Tracy and the Stockton-French Camp areas. Slope stability hazards are most confined to the foothills and mountain terrain that border the San Joaquin Valley, the steep banks of the major rivers which pass through the Valley floor, and the levees of the Delta (SJC General Plan).

In San Joaquin County, subsidence is generally attributed to overdrafting groundwater basins and from peat oxidation of the Delta islands. Effects of subsidence include lower levees, lower islands, flooding, infrastructure failure, crop losses, disruption to recreation, and increased maintenance costs. Overdrafting, causing subsidence, occurs when the groundwater is pumped out faster than it can be replenished.

Seismic hazards refer to earthquake-induced ground rupture, ground shaking, liquefaction, or water movement. Of the known faults in San Joaquin County, none are classified by the State Geologist as active. Localized ground shaking and liquefaction are the most significant seismic hazards of the County. The most likely sources of these hazards are from the Hayward, San Andreas, Calaveras, Marsh Creek-Greenville, Green Valley-Concord, or Mt. Diablo Thrust (SJC General Plan). The geology of San Joaquin County is composed of high-organic alluvium, which is susceptible to earthquake movement. Strong ground-shaking from an earthquake could cause significant damage, especially to unreinforced masonry buildings built before 1933. According to the Working Group of California Earthquake Probabilities 2008, there is a 93 percent probability of an earthquake with a 6.7 magnitude or greater to occur in the next 30 years (SJC General Plan).

Dam and levee failure protection is critical, as well as reservoir failure which could occur in the event of a high magnitude earthquake. Water movement resulting from seismic activity includes landslide splashes and seismic seiches. An added hazard is flooding due to dam or

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levee failures. There are no historical records of seismic-generated water movements occurring in or adjacent to San Joaquin County. This should not, however, rule out the possibility of one occurring in the future. A seismically-induced wave in the Delta channels could damage levees, causing localized flooding. The occurrence of a seismic-generated landslide splash in one of the reservoirs located in San Joaquin County could result in dam failure and flooding.

Liquefaction occurs when a water-saturated, cohesionless soil loses its strength and liquefies during intense and prolonged ground shaking. Areas which have the greatest potential for liquefaction are those areas where the water table is less than 50 feet below the surface and soils are predominantly clean, comprised of relatively uniform sands, and are of loose to medium density. The type of ground motion expected from large earthquakes felt in San Joaquin County is expected to be a rolling type motion, which would be less likely to cause liquefaction.

#### Impact Discussion:

a: i) San Joaquin County does not have any classified active faults (SJC General Plan). While it is not possible to eliminate all seismic and geological hazards, the County's proposed project will be replacing the existing bridge with a similar structure. Therefore, the proposed project will not increase people's or structures' exposure to greater adverse effects than already exist, nor would the project expose people or structures to geologic hazards from fault rupture. No associated impacts are anticipated..

a: ii, iii) Localized ground shaking and liquefaction are the most significant seismic-related hazards in San Joaquin County. The project area is located within an area underlain by recent alluvial and estuarine sediments. Due to the shallow depth to groundwater, these deposits potentially include saturated granular sediments. Such sediments may liquefy under moderate to strong ground shaking from a large regional earthquake. While it is not possible to eliminate all seismic and geological hazards, the County's proposed project will be constructed according to established Federal Highway Manual and California seismic standards, which are designed to reduce or minimize risk from liquefaction or other seismic-related ground failure to people and structures. Moreover, the project will be placing scour-reduction measures within the existing channel, further protecting the new bridge foundation. Therefore, impacts associated with ground shaking or liquefaction are anticipated to be less than significant.

iv) Slope-stability hazards within San Joaquin County are mostly confined to three areas: 1) the foothills and mountain terrain which border the San Joaquin Valley, 2) the steep banks of the major rivers which pass through the Valley floor, and 3) the levees of the Delta. The County's proposed project will be replacing the existing bridge with a similar structure that is not located within one of these areas, and is unlikely to be subject to landslides. Therefore, the proposed project will not expose people or structures to landslides, and no associated impacts would result.

b) The project area is located in an area identified as having moderate water erosion potential; however, the proposed project would replace the existing bridge with a similar structure, with scour-protection features that would reduce erosion around the bridge support structure. The project would not involve substantial grading or excavation of soils on the land surfaces on either end of the bridge. Therefore, impacts associated with soil erosion or loss of topsoil are anticipated to be less than significant.

c, d) The project area is located within an area underlain by alluvial deposits. Due to the depth of the groundwater, these deposits potentially include saturated granular sediments, which may liquefy under strong ground shaking from a large regional earthquake. While it is not possible to eliminate all seismic and geological hazards, the proposed bridge project would likely be more stable than the existing bridge, since it will be constructed to current seismic standards, including standards for construction on soils subject to liquefaction or other instability. Moreover, the proposed bridge would replace an existing bridge in the same location, and would not increase the risks associated with ground failure more than they exist now. Impacts associated with unstable soils are anticipated to be less than significant.

e) The proposed project would replace an existing bridge with a new bridge, on an existing roadway, and would not involve septic systems or other waste-water treatment. Therefore no impacts associated with soils incapable of supporting such systems would occur.

ISSUES:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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**VII. GREENHOUSE GAS EMISSIONS**

Would the project:

- |  |                          |                          |                                     |                          |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?      | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**BACKGROUND AND REGULATORY SETTING**

“Greenhouse gases” (so called because of their role in trapping heat near the surface of the earth) emitted by human activity are implicated in global climate change, commonly referred to as “global warming.” These greenhouse gases contribute to an increase in the temperature of the earth by allowing incoming short wavelength visible sunlight to penetrate the atmosphere,

while restricting outgoing terrestrial long wavelength heat radiation from exiting the atmosphere. The principal greenhouse gases (GHGs) include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O). Collectively GHGs are measured as carbon dioxide equivalents (CO<sub>2</sub>e).

Fossil-fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) is the single largest source of GHG emissions, accounting for approximately half of global GHG emissions. Industrial and commercial sources are the second-largest contributors of GHG emissions, constituting about one-fourth of total emissions. According to climate scientists, California and the rest of the developed world must cut emissions by 80 percent from today's levels to stabilize the amount of CO<sub>2</sub> in the atmosphere and prevent the most severe effects of global climate change.

California has passed several bills and former Governor Jerry Brown has signed seven executive orders (EOs) regarding greenhouse gases. GHG statutes and EOs include Assembly Bill (AB) 32, Senate Bill (SB) 1368, EO S-03-05, EO S-20-06, EO S-01-07, EO S-13-08, EO B-16-12, EO B-18-12, and EO B-30-15. Of these, AB 32, the California Global Warming Solutions Act of 2006, mandates that California's GHG emissions be reduced to 1990 levels by 2020, and tasks the California Air Resources Board (CARB) with regulating GHG emissions as well as coordinating with other state agencies to implement AB 32's reduction goals.

EO S-3-05 provides a more long-range goal and requires an 80 percent reduction of GHGs from 1990 levels by 2050. On a per-capita basis, that means reducing annual emissions of 14 metric tons (MTs) of CO<sub>2</sub> equivalents for every person in California down to approximately 10 MTs per person by 2020. Issued in 2015, EO-B-30-15 sets an increasingly-aggressive GHG-emissions target for 2030, 40 percent below 1990 levels. EO-B-30-15 was codified by SB 32 in 2016, which also provided the CARB with additional direction for refining the Climate Change Scoping Plan. That EO set forth five "pillars" for accomplishing GHG reduction, including (1) reducing today's petroleum use in cars and trucks by up to 50 percent; (2) increasing from one-third to 50 percent our electricity derived from renewable sources; (3) doubling the energy efficiency savings achieved at existing buildings and making heating fuels cleaner; (4) reducing the release of methane, black carbon, and other short-lived climate pollutants; (5) managing farm and rangelands, forests and wetlands so they can store carbon; and (6) periodically updating the state's climate adaptation strategy, *Safeguarding California*.

The CARB's 2017 Climate Change Scoping Plan, in part implements EO B-30-15, and sets forth a "reference scenario" as a baseline for measuring how much GHG emissions can be reduced in several economic sectors. This scenario illustrates the level of GHG emissions generated statewide through 2030 with existing policies and programs, but without any further action to reduce GHGs. This level is estimated to be approximately 400 million metric tons (MMTs) of CO<sub>2</sub>e from all sources in 2030. The CARB's statewide 2030 target level of emissions is approximately 260 MMTs. The Scoping Plan estimates that the change from 1990 levels in the residential and commercial sectors must be from 44 MMTCO<sub>2</sub>e to 38-40 MMTCO<sub>2</sub>e by 2030, a four- to eight-percent reduction.

Senate Bill 375 was enacted to link land use and transportation in a manner that would reduce vehicle miles traveled (VMT), thereby reducing GHG emissions. Under SB 375, the California Air Resources Board (CARB) is responsible for establishing GHG emission-reduction targets, and regional Metropolitan Planning Organizations (MPOs) are responsible for preparing and adopting “Sustainable Communities Strategies” that achieve CARB’s targets.

The San Joaquin Council of Governments (SJCOG) is the local MPO that includes the San Joaquin County, and is preparing a Climate Adaptation & Resiliency Study to incorporate strategies set forth in the SJCOG’s 2018 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS). Those strategies include reducing transportation-related emissions, but do not set quantitative thresholds for GHG emissions. (See San Joaquin Council of Governments, Request for Proposals, Climate Adaptation & Resiliency Study, September 7, 2018, available at <https://www.sicog.org/DocumentCenter/View/4302/Climate-Adaptation--Resiliency-Study-RFP---Sept-2018?bidId=> (accessed June 4, 2019).)

Note that compliance with GHG-reduction strategies may not reduce an individual project’s impacts below significant levels unless an emissions target or threshold, based on substantial evidence has been adopted by a local agency. In the absence of a target or threshold, quantified GHG emissions may be determined to be significant and unavoidable. However, if a project demonstrates consistency with either a local CAP or with the CARB Scoping Plan, a finding of “less than significant with mitigation incorporated” may be appropriate.

Impact Discussion:

a-b) The proposed project will be replacing the existing bridge with a similar structure. Project construction would generate short-term greenhouse gas emissions, but these emissions would be limited in duration, would cease after construction, and are not anticipated to cause significant impacts to the environment. Moreover, the project will not increase bridge capacity, and will not alter the location, distribution, or traffic intensity of the area. Furthermore, the proposed project will not create new housing, commercial or other land uses that would generate new vehicle trips and associated greenhouse gas emissions, nor would the project result in increased transportation needs. Therefore, impacts associated with greenhouse gas emissions or conflicts with greenhouse-gas reduction plans are anticipated to be less than significant.

ISSUES:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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**VIII. HAZARDS AND HAZARDOUS MATERIALS**

Would the project:

- |  |                          |                          |                                     |                                     |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?                                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

## BACKGROUND AND REGULATORY SETTING

Hazardous materials include all flammable, reactive, corrosive, or toxic substances, which, because of these properties, pose potential harm to the public or environment. Hazardous materials include, but are not limited to, agricultural chemicals, natural gas and petroleum, explosives, radioactive materials, and various commercial substances that are used, stored, or produced (SJC General Plan).

Hazardous waste is waste, or a combination of waste, that either causes or significantly contributes to an increase in mortality or an increase in serious irreversible illness, incapacitating reversible illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of.

Numerous Federal and State laws regulate hazardous materials and wastes, such as Cal/EPA and Department of Toxic Substances Control (DTSC). However, depending on the waste, Office of the State Fire Marshal (OSFM), the State Water Resources Control Board (SWRCB), or another agency may be involved. Locally, the San Joaquin County Environmental Health Department (SJCEHD), San Joaquin County Office of Emergency Services (SJCOES), and the San Joaquin Valley Air Pollution Control District (SJVAPCD) have responsibility for enforcing some state standards (SJC General Plan).

The SJCEHD regulates large- and small-quantity hazardous waste generators, administers the underground storage tank program, and oversees the investigation and cleanup of contaminated underground tank sites under a contract with the SWRCB. Enforcement of San Joaquin County hazardous material regulations is under the jurisdiction of the SJCOES. The SJVAPCD regulates air emissions from industrial operations and contaminated soils (SJC General Plan).

San Joaquin County Public Works, Transportation Planning, reviewed available records pertaining to the proposed project with federal, state, and local resources.

### Impact Discussion:

a–c) The proposed project will be replacing the existing bridge with a similar structure which does not involve the use, transport or disposal of any hazardous materials. There are no schools within one quarter mile of the project site. Moreover, soil will be tested for heavy metals, pesticides, and herbicides as a precautionary measure against accidental release. Impacts associated with using, transporting or disposing hazardous materials are anticipated to be less than significant.

d) The project area is not listed on any lists identified under California Government Code Section 65962.5 (<http://leginfo.legislature.ca.gov/>). Furthermore, the San Joaquin County Environmental Health Department did not have any case files for the project area or immediately adjoining properties. Both the California Envirostor and Geotracker websites were

reviewed as part of the Preliminary Environmental Study for the project and no sites were identified. Accordingly, no impacts associated with hazardous waste sites are anticipated.

e, f) The proposed project area is not located in an airport land use plan or within two miles of a public or private airport/airstrip. The proposed project would replace the existing bridge with a similar structure, which would not otherwise result in a safety hazard for people residing or working in the project area. No safety hazards associated with development around an airport are anticipated.

g) The proposed project may impair implementation of or physically interfere with an adopted emergency response plan when the bridge is closed during construction (removal of the existing bridge and installation of the new bridge) because of a required traffic detour to another Upland canal crossing. After the old bridge is removed and the new bridge can support vehicle traffic, one lane of the bridge and entire road will remain open during the remainder of construction. Because the closure would be temporary and as brief as possible, impacts to emergency response or evacuation plans are anticipated to be less than significant.

h) The proposed bridge-replacement project is surrounded by irrigated agricultural land and crosses the Upland Canal, and is not in wildland terrain. According to the California Department of Forestry and Fire Protection Natural Fire Hazard map (2007), the project area is not located within a fire hazard area. Furthermore, the proposed project would not build housing or other structures and/or facilities that would be occupied by people. Accordingly, the project would not expose people or structures to significant risks from wildland fires, and no related impacts are anticipated.

ISSUES:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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**IX. HYDROLOGY AND WATER QUALITY**

Would the project:

a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

- |   |                          |                          |                                     |                                     |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| f) Otherwise substantially degrade water quality?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| g) Place housing within a 100-year floodplain hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| j) Inundation by seiche, tsunami, or mudflow?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

*Note:* The analysis below incorporates and relies upon the hydraulic study performed for the Preliminary Environmental Study prepared for the project: Domenichelli and Associates, Inc., *Hydraulic Study*, Cotta Road Bridge Project (April 2, 2015), (on file with the San Joaquin County Public Works Department, Transportation Planning), as well as information contained in the San Joaquin County General Plan.

## BACKGROUND AND REGULATORY SETTING

Four major rivers flow through or along the boundaries of San Joaquin County: San Joaquin, Stanislaus, Mokelumne, and Calaveras. The flows in these rivers are controlled by dams, which impound six major reservoirs to provide water supplies and flood control. Numerous tributaries and irrigation canals drain into the major rivers, which drain into the Delta.

The San Joaquin Valley is comprised of several sub-basins, identified by geologic and hydrologic barriers. The project area is located within the Eastern San Joaquin sub-basin,

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which is defined by the areal extent of unconsolidated to semi-consolidated sedimentary deposits that are bounded by the Mokelumne River on the north and northwest; San Joaquin River on the west; Stanislaus River on the south; and consolidated bedrock on the east. It is drained by the San Joaquin River and several of its major tributaries such as the Stanislaus, Calaveras, and Mokelumne Rivers (DWR 2006).

Water-bearing formations of significance in the Eastern San Joaquin sub-basin consist of the Alluvium and Modesto/Riverbank Formations, Flood Basin Deposits, Laguna Formation, and Mehrten Formation. The Mehrten Formation is considered to be the oldest freshwater-bearing formation on the east side of the basin. Annual precipitation in this sub-basin ranges from about 11 inches in the southwest to about 25 inches in the northeast (DWR 2006).

### Flood Hazard Areas

San Joaquin County receives runoff from over 40 percent of the land area in California (SJC Dam Failure Plan, 2003). Flooding is the most likely natural hazard to occur in the County, although many physical and management systems are in place to limit risks of flooding or damage when it periodically occurs. Flood events from rainstorms generally occur between November and April and are characterized by high peak flows of moderate duration. Snowmelt floods, which normally occur between April and June, have larger water volumes and last longer than rain flooding. Intensive rainstorm or snowmelt generally cause flooding because of levee overtopping, levee failure, or localized drainage problems (SJC General Plan).

### 100-year Floods

The boundary of the 100-year floodplain is the basic planning criterion used to demarcate unacceptable public safety hazards. The 100-year floodplain boundary defines the geographic area that would be inundated by a flood having a one percent (1%) chance of being equaled or exceeded in a given year, which is based on hydrology, topography, and the modeling of flow during predicted rainstorms. Outside the boundary, the degree of flooding risk is not considered sufficient to justify the imposition of floodplain management regulations, while inside the 100-year floodplain a tighter level of regulation is required to protect public health, safety, and welfare (SJC General Plan 2014).

San Joaquin County has been participating in the National Flood Insurance Program (NFIP) since 1973. This federal program is administered by the Federal Emergency Management Act (FEMA). The primary benefit of participating in this program is that it provides an opportunity for property owners to purchase flood insurance if their community has made a commitment to implement floodplain management regulations that are specified by FEMA. Failure to implement these regulations could result in suspension from the program (SJC General Plan).

### Levees

All of the major rivers and some streams in San Joaquin County contain levees. The potential of levee failure is highest in the Delta because these levees often contain unstable material and have been constructed on an unstable base, such as a mixture of peat and silt. A breach

in a levee under non-flood conditions would be localized to the specific Delta tract, while 100-year conditions could lead to levee failure on a series of Delta islands (SJC General Plan).

## Dams

There are 15 major dams that have been identified as having the potential to inundate portions of San Joaquin County in the event of a dam failure. A dam failure can occur as the result of an earthquake, an isolated incident due to structural instability, natural or human causes, or lack of maintenance (SJC General Plan).

## Seiches, Tsunamis, Mudflows

A seiche is a wave that oscillates in lakes, bays, or gulfs from a few minutes to a few hours as a result of seismic or atmospheric disturbances (wind and atmospheric pressure variations), including tsunamis (Merriam Webster 1994). A tsunami is a system of gravity waves formed in the sea by a large-scale disturbance of the sea level over a short duration of time. Tsunamis can be generated by submarine volcanic eruptions, coastal landslides into a bay or harbor, meteor impact, or by vertical displacement of the earth's crust along a subduction zone/fault (OES 2006). A mudslide, also called mudflow, is a flow of dirt and debris that occurs after intense rainfall or snow melt, volcanic eruptions, earthquakes and severe wildfires. The speed of the slide depends on the amount of precipitation, steepness of slope, vibration of the ground, and alternate freezing and thawing of the ground (Merriam Webster 1994).

For a comprehensive summary of environmental regulations for water quality, storm water pollution prevention plans, floodplain regulation, etc., see the San Joaquin County 2035 General Plan, Draft Environmental Impact Report, Chapter 4.J, Hydrology and Water Quality (2014), available at <https://www.sjgov.org/commdev/cgi-bin/cdyn.exe/file/Planning/Environmental%20Impact%20Reports/GENERAL%20PLAN%202035%20-%20DRAFT%20EIR.pdf> (accessed June 5, 2019).

### Impact Discussion:

a, c, e, f) The proposed project would not be anticipated to violate water quality standards/waste discharge requirements, alter the drainage pattern of the site or area, increase stormwater discharges or otherwise substantially degrade water quality, since all construction within the Upland Canal and on its banks will be subject to the conditions set forth in the project's permits from State and Federal agencies, which are designed to minimize significant impacts to water resources. The proposed project would replace the existing bridge with a similar structure. This requires minor excavation and the placement of a No.1 class layer of Rock Slope Protection (RSP) to conform to the upstream and downstream conditions. The proposed project activities will be within the channel. Project permits (404, 401, LSAA, CVFPB), SWPPP and general construction permit will govern any mitigation required. Therefore, the proposed project will have less than significant impact with mitigation.

b) The proposed project will have no impact on groundwater supplies, because it would not create a water-consuming land use.

d) Project construction will require temporarily de-watering and re-directing water flow in the Upland Canal in the vicinity of the bridge. However, flow would be restored after construction is completed, and any soil erosion or drainage alteration around the bridge would be moderated by the construction techniques described in the Project Description, above. Runoff from roadway surfaces would not be appreciably changed, since the roadway surface area is not proposed to be expanded or travel lanes added. Remaining impacts to the existing drainage pattern of the site are anticipated to be less than significant.

g, h) The project area is located within a 100-year flood zone. While a 500-year floodplain zone is adjacent to the 100-year flood zone, the proposed project is not considered a critical action (i.e., fire station, hospital, school, facilities producing or storing toxic materials, etc.). In addition, the proposed project will not result in the construction of new aboveground structures. Therefore, the proposed project will have no impact. As well, Cotta Road Bridge does not span a FEMA or CVFPB-Designated Floodway. Based on this condition, Cotta Road Bridge is exempt from the requirement to raise the bridge deck above the 100-yr flood level specified in Section 9-1605.16(f), Bridges Spanning a Floodway, of San Joaquin County's Title 9, Division 16 Safety Regulations.

i) The SJCOES has identified that the project area and surrounding area could potentially be inundated from a failure of the Woodward Reservoir located at the eastern edge of San Joaquin County (SJCOES 2006). While the project area has the potential to be flooded whether by overtopping of creek from intense rainstorms or dam failures, the proposed project by itself would not increase exposure of people or structures to a significant risk of loss, injury, or death than exists with the present bridge, as the proposed bridge-replacement project would not change the overall configuration of the structure that crosses the Upland Canal.. Accordingly, no associated impacts are anticipated..

j) Tsunamis and seiches are primarily a threat to coastal or lakeshore communities. Furthermore, while the project area is located near the Delta waterways to the west, there are no bays, harbors, or enclosed bodies of water near the project area. The project area is relatively flat and therefore would not be exposed to mudflows. Therefore, no impacts associated with tsunamis, seiches or mudflows would be anticipated.

ISSUES:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>X. LAND USE AND PLANNING</b>				
Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**BACKGROUND AND REGULATORY SETTING**

The SJC General Plan establishes general land use categories (designations) for the unincorporated portions of San Joaquin County. The San Joaquin County zoning ordinance implements the SJC General Plan’s goals and policies.

The SJC General Plan and zoning designation for the project is Resource Conservation (OS/RC) and General Agricultural (AG Zone)). The Resource Conservation (OS/RC) designation provides for areas with significant resources that generally are to remain in open space. The General Agriculture (AG Zone) zoning is established to preserve agricultural lands for the continuation of commercial agriculture enterprises. Minimum parcel sizes within the AG Zone are 20, 40, 80, and 160 acres, as specified by the precise zoning. Typical uses include crop production, feed and grain storage and sales, crop spraying, and animal raising and sales. The density is a maximum of one primary residence per 40 acres (SJC General Plan).

**Impact Discussion:**

- a) The proposed project will not divide an established community because it would replace an existing bridge on an existing roadway that passes through agricultural fields; therefore, the proposed project will have no impact.
- b) The proposed project is located within OS/RC and A/G designations and does not require purchase of additional right-of-way. The proposed project would not change the road’s classification nor would it conflict with any applicable land use plans, policies, or regulations of

any agencies with jurisdiction over the project; therefore, the proposed project will have no impact.

c) The proposed project may be subject to the San Joaquin Multi-Species Conservation Plan for the channel access and work done within the channel area. Although participation with the San Joaquin Multi-Species Conservation Plan is voluntary, it may be required for permitting purposes. As discussed in Part IV above, the County would comply with any permitting requirements. Accordingly, no conflicts with habitat or natural community conservation plans are anticipated, and no associated impacts are anticipated.

ISSUES:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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**XI. MINERAL RESOURCES**

Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**BACKGROUND AND REGULATORY SETTING**

The primary extractive resources in San Joaquin County are sand and gravel aggregate. Peat soil, placer gold and silver are extracted to a much lesser extent. These are all nonrenewable resources. The County seeks to protect these resources and manage their production in an environmentally sound manner. Reclamation plays a central role in determining the impact of extractive activities on the environment by controlling waste and erosion and rehabilitating streambeds. Sand and gravel are important resources used primarily for construction materials such as asphalt and concrete. Because materials are costly to transport, they are extracted as close as possible to their use (SJC General Plan and Development Title).

Impact Discussion:

a, b) The project area is not located within an area designated or otherwise identified as having known mineral resources; moreover, no excavation is proposed, other than borings for piles. Therefore, the proposed project will not result in the loss of availability of a known mineral resource that would be of local, regional, and statewide value. The proposed project will have no impact.

ISSUES:

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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**XII. NOISE**

Would the project result in:

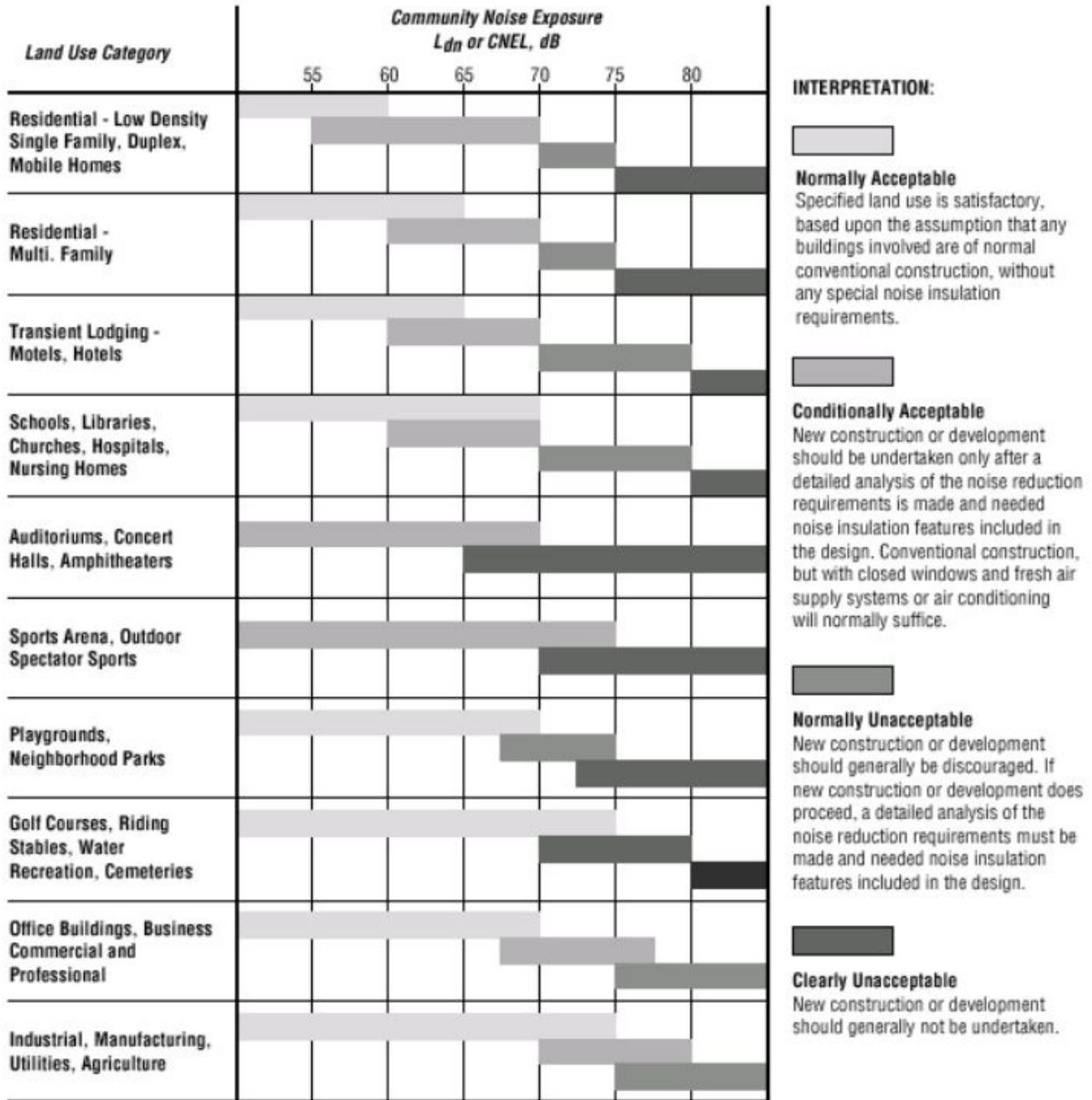
- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**BACKGROUND AND REGULATORY SETTING**

The County Development Title states that 65 decibels (dB) or less is considered acceptable for residential development and that development shall be planned and designed to minimize noise interference from outside noise sources (SJC Development Title). Exemptions include noise sources associated with construction, provided that such activities do not take place before 6:00 a.m. or after 9 p.m. on any day. The same applies to noise sources associated with work performed by private or public utilities in the maintenance or modification of its facilities (SJC Development Title).

The sound levels associated with common noise sources and their effects are presented in the following table (SJC General Plan, Final EIR, Figure 4.H-19)):

## TYPICAL SOUND LEVELS FOR COMMON NOISE SOURCES



The San Joaquin County Development Title further stipulates that proposed projects that will create new stationary noise sources or expand existing stationary noise sources shall be required to mitigate the noise levels from these stationary noise sources so as not to exceed the noise level standards specified in the following table (SJC Development Title).

## MAXIMUM ALLOWABLE NOISE EXPOSURE

<b>TRANSPORTATION NOISE SOURCES</b>		
Noise Sensitive Land Use (Use Types)	Outdoor Activity Areas <sup>1</sup> dB Ldn	Interior Spaces dB Ldn
Residential	65	45
Administrative Office	--	45
Child Care Services – Child Care Centers	--	45
Community Assembly	65	45
Cultural & Library Services	--	45
Educational Services: General	--	45
Funeral & Interment Services – Undertaking	65	45
Lodging Services	65	45
Medical Services	65	45
Professional Services	--	45
Public Services (excluding Hospitals)	--	45
Recreation – Indoor Spectator	--	45
Religious Assembly	65	45
STATIONARY NOISE SOURCES	Outdoor Activity Areas	Outdoor Activity Areas
	Daytime <sup>2</sup> (7 a.m. to 10 p.m.)	Nighttime <sup>2</sup> (10 p.m. 7 a.m.)
Hourly Equivalent Sound Level (Leq), dB	50	45
Maximum Sound Level (Lmax), dB	70	65

<sup>1</sup> Where the location of outdoor activity areas is unknown or is not applicable, the noise standard shall be applied at the property line of the receiving land use. When determining the effectiveness of noise mitigation measures, the standards shall be applied on the receiving side of noise barriers or other property line noise mitigation measures.

<sup>2</sup> Each of the noise level standards shall be reduced by 5 dB for impulsive noise, single tone noise, or noise consisting primarily of speech or music.

Exemptions include noise sources associated with construction provided that such activities do not take place before 6:00 a.m. or after 9 p.m. on any day. The same applies to noise sources associated with work performed by private or public utilities in the maintenance or modification of its facilities (SJC Development Title).

### Impact Discussion:

a – c) The project area is primarily located in an unpopulated area, on a minor roadway in San Joaquin County. No sensitive receptors are located within or near the project limits. The proposed project will not create any new permanent noise or vibration sources; rather, traffic-generated noise on West Cotta Road is likely to remain the same as baseline levels. No impacts with respect to excessive noise or vibration are anticipated.

Initial Study/Mitigated Negative Declaration

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Cotta Road Bridge Replacement Project, San Joaquin County Department of Public Works

d) Construction of the proposed project will create a temporary increase to the existing background noise levels from the bridge construction process. However, the area around Cotta Road is sparsely populated and farmed for row crops, with no sensitive receptors nearby. Cotta Road is an undesignated rural roadway, which has a low volume of truck and passenger vehicle traffic. Moreover, construction of the project will occur during daylight hours, between 6:00 a.m. and 9 p.m., so the noise level increase would be within allowable limits for construction noise. No impacts associated with temporary construction noise are anticipated.

e, f) The project area is not located within an airport land use plan or within two miles of a public airport or private airstrip, and the proposed bridge-replacement project would thus expose people residing or working in the project area to airport noise. Accordingly, no impacts associated with airport noise are anticipated.

ISSUES:

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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**XIII. POPULATION AND HOUSING**

Would the project:

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**BACKGROUND AND REGULATORY SETTING**

Residences in proximity to the project area are associated with agricultural uses. The surrounding area is rural and sparsely populated.

Impact Discussion:

a-c) The proposed bridge-construction project will not alter the location, distribution, density or growth rate of the human population in the area, because the project would replace an existing two-lane bridge on an existing rural roadway in an area zoned and used for agriculture. Accordingly, the proposed project will not affect housing or create a demand for additional housing, nor will it result in displacement of housing or people. Therefore, the project will have no impact associated with housing displacement or population growth.



throughout this document, environmental impacts arising from the proposed bridge replacement project are minimized through project design, existing regulations, and applicable mitigation measures. Moreover, the project is limited to removing and replacing the existing bridge, and would not trigger the need for other new public facility construction. Therefore, no associated impacts are anticipated.

ISSUES:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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**XV. RECREATION**

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**BACKGROUND**

The surrounding area provides fishing, boating, and wildlife viewing opportunities at the nearby Sacramento-San Joaquin Delta.

**Impact Discussion:**

- a) The proposed bridge-replacement project would not contribute to increased use or deterioration of neighborhood or regional parks in the County, or facilities in the Delta, because (1) Cotta Road does not provide access to any such facilities, and (2) the project will not create new population-generating development that would increase park use. No associated impacts are anticipated.
- b) The proposed bridge-replacement project will not include construction or expansion of recreational facilities. No impacts associated with such facilities' construction are anticipated.

ISSUES:  
Impact

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No
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**XVI. TRANSPORTATION/TRAFFIC**

Would the project:

- |   |                          |                          |                                     |                                     |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| e) Result in inadequate emergency access?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

**BACKGROUND AND REGULATORY SETTING**

The San Joaquin County General Plan requires Level of Service (LOS) standards consistent with the San Joaquin Council of Governments (SJCOG) Congestion Management Program (CMP) for State highways and designated County roadways and intersections of regional significance. The CMP requires all designated CMP roadways and intersections to operate at an LOS D or better except for roadways with “grandfathered”

LOS. LOS for State highways shall be maintained in cooperation with Caltrans. The County LOS standards for intersections is LOS D or better on Minor Arterials and roadways of higher classification and LOS C or better on all other non-CMP designated County roadways and intersections. The County must also maintain the following LOS:

- On State highways, LOS D or Caltrans standards whichever is stricter.
- Within a city's sphere of influence, LOS D, or the city-planned standards for that level of service.
- On Mountain House Gateways, as defined in the Master Plan, LOS D, on all other Mountain House roads, LOS C.

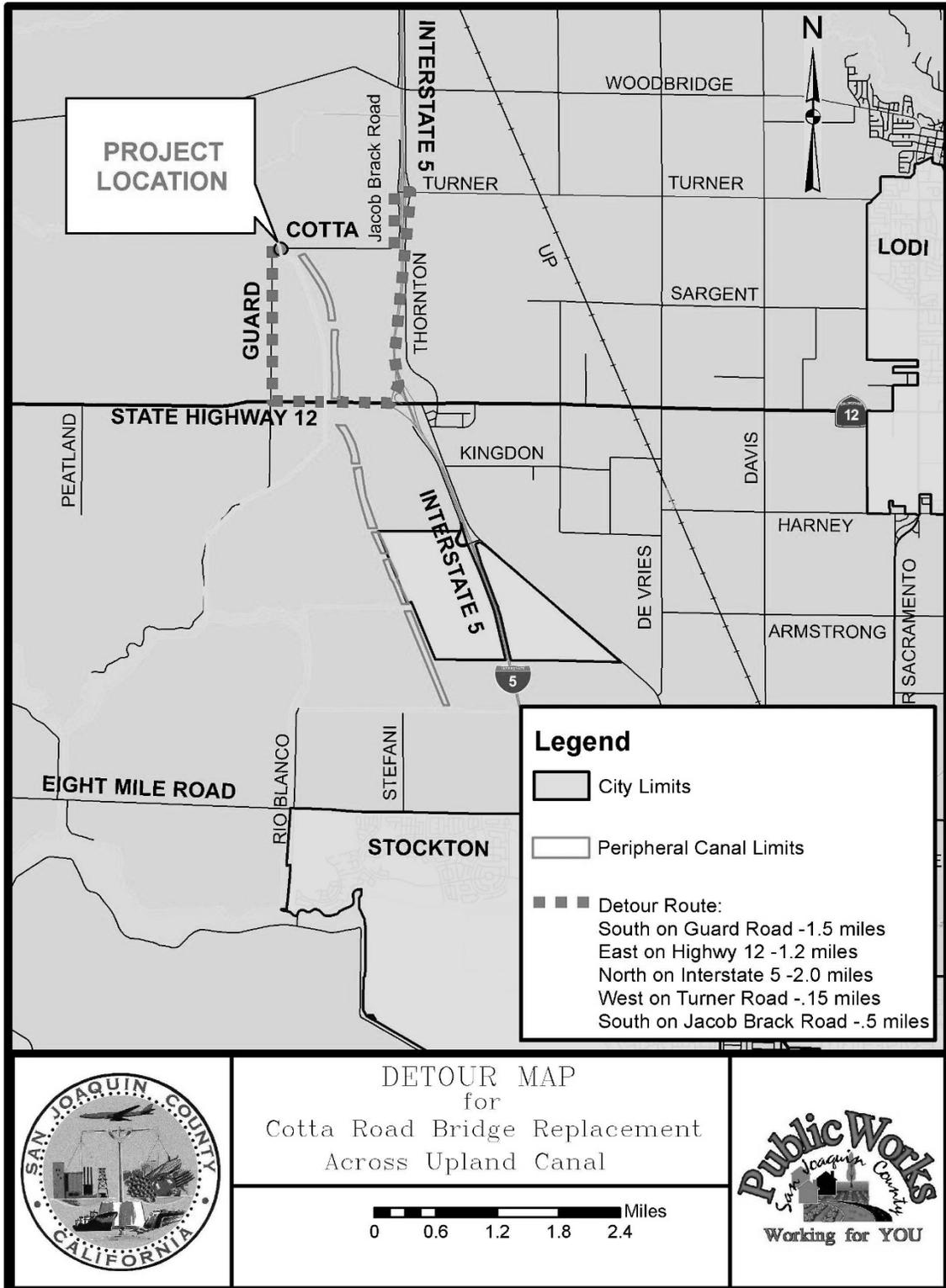
For State highways designated as part of SJCOG's CMP, both the Caltrans and CMP LOS standards apply. Where roadways are designated as part of SJCOG's CMP, both the County and CMP LOS standards shall apply. (SJC General Plan, Chapter 3.2, Public Facilities and Services Element).

Neither Cotta Road nor North Guard Road are classified in the County General Plan as arterial or collector roads.

#### Impact Discussion:

- a, b) The proposed bridge-replacement project will not individually or cumulatively conflict with local or regional transportation plans, congestion management plans, policies or ordinances, including the existing LOS established by San Joaquin County for designated roads or highways because the proposed project would not of itself generate new traffic, nor would it encourage greater use of Cotta Road. Moreover, the number of lanes on Cotta Road and the bridge would not be increased, potentially increasing vehicle traffic in relation to the road's existing traffic load and capacity. No impacts associated with traffic congestion and accompanying transportation plan conflicts are anticipated.
- c) The proposed bridge-replacement project will not 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. The new bridge structure would not have towers or other elements that could interfere with air traffic. No associated impacts are anticipated.
- d, f, g) The proposed bridge-replacement project will not result in a design feature change that will substantially increase hazards, result in inadequate parking capacity, or result in a conflict with adopted policies, plans, or programs supporting alternative transportation, because the new bridge will be constructed to current engineering standards for safety, minimizing hazards. . No impacts associated with design-feature hazards are anticipated...
- e) The proposed bridge-replacement project is not anticipated to result in permanently inadequate emergency access, because the new bridge will maintain the same capacity as exists now. During preparation for construction, one lane will remain open for traffic on Cotta Road and the bridge. During the actual replacement of the bridge, Cotta and North

Guard Roads will be closed to through traffic at the Upland Canal crossing. However, Cotta Road will remain accessible to emergency vehicles from Interstate 5 at Turner Road/Jacob Brack Road east of the project site, and North Guard Road will still be accessible from State Highway Route 12 to the south. See project detour map below for detour lengths. Because the closure will be temporary, impacts associated with emergency access are anticipated to be less than significant.



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

## BACKGROUND AND REGULATORY SETTING

The collection, treatment, and disposal of wastewater in San Joaquin County occurs in primarily two ways: community collection and treatment systems with discharge into various rivers, watercourses, and the Delta, or individual on-site treatment systems with discharge into the ground (SJC General Plan).

### Storm Drainage

Storm water runoff is that portion of rainfall not absorbed into the soil that leaves a site by surface flow. A storm drainage system designed to prevent flooding can consist of both natural and man-made structures used to collect, convey, and store rainwater during storms. The captured storm water is eventually discharged to a natural body of water via the terminal drainage (SJC General Plan).

### Water Supply

The Eastern San Joaquin County Groundwater Basin is the primary source of potable domestic water in San Joaquin County. The boundaries of the groundwater basin extend from the San Joaquin-Sacramento County line and Dry Creek in the north to the Stanislaus River in the south, and from the San Joaquin River and eastern edge of the Delta to the west to approximately the San Joaquin County line to the east (DWR 2006).

Groundwater has been the preferred water source for domestic consumption because the cost of good quality, fresh groundwater is substantially less than the cost of importing treated surface water. Groundwater generally requires little treatment, whereas surface water must be filtered and treated for domestic use. In addition, it is much less costly to locate wells near the end users with short transmission lines to transport water a longer distance through larger, more capital intensive systems. However, overdrafting in the past few decades has caused a steady decline in groundwater levels in San Joaquin County, creating a zone of depression in western San Joaquin County areas and allowing the intrusion of highly saline Delta water into the groundwater basin. A number of proposed projects to provide areas with supplemental water will decrease groundwater pumping to safe yield levels (SJC General Plan).

The second major source of water is supplied by major rivers such as the Mokelumne, Calaveras, Stanislaus, and San Joaquin Rivers, and reservoirs such as the Camanche, Pardee, Farmington, Woodward, New Hogan, and New Melones. Surface water is subject to a complex federal and state legal system establishing the rights of individuals and agencies to water flows through permits, licenses, court decrees, contracts, and federally prescribed flood control regulations (SJC General Plan).

The third major source of water is the Delta, particularly in southwest San Joaquin County. Exporting fresh water from the Delta, however, has caused many problems. Reverse flows, declining fisheries, water quality problems, and levee erosion are among the many problems associated with water transfers from the Delta (SJC General Plan).

### Solid Waste

The San Joaquin County Solid Waste Division is the lead for the administration of solid wastes and the operation of related facilities. The San Joaquin County Environmental Health Department is involved in administering local and state regulations regarding waste

management and has been appointed as the Local Enforcement Agency (LEA) in the unincorporated areas. San Joaquin County 2035 General Plan Policy PHS-6.5 requires the County to achieve a 75 percent diversion of landfilled waste by 2020, and a 90 percent diversion rate by 2035 (SJC General Plan).

Impact Discussion:

a,e,g) The proposed project will replace an existing bridge connecting Cotta Road with North Guard Road with a similar structure over the Upland Canal. The project will not generate wastewater, contribute to stormwater runoff, or require a water supply or wastewater treatment. Project construction will comply with all relevant statutes for solid waste disposal. No impacts associated with these utilities or service systems are anticipated.

f) The proposed bridge replacement project involves demolishing the existing two-lane concrete-deck bridge and decaying timber supports. Debris is planned to be transported off-site for disposal (the North County Recycling Center and Sanitary Landfill approximately 20 miles east of the project site, or equivalently suitable landfill), and a limited amount of landfill volume may be required for construction debris. The San Joaquin County 2030 General Plan Draft Environmental Impact Report (GPDEIR) (October 2014) notes that development facilitated by General Plan implementation could require more landfill space than is available (Impact 4.N-5); however, the waste diversion required by Policy PHS-6.5 described above (implementing GPDEIR Mitigation Measure 4.N-5) was considered to conserve landfill volume and to reduce impacts to less-than-significant levels. Because County activities, including the proposed bridge demolition, must comply with General Plan requirements for waste diversion, and the resulting bridge debris volume would be balanced by comparable waste material recycled or repurposed, impacts associated with landfill capacity are anticipated to be less than significant.

ISSUES:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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**XVIII. MANDATORY FINDINGS OF SIGNIFICANCE**

- |  |                          |                          |                                     |                                     |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

**Impact Discussion:**

- a) Less Than Significant Impact. As explained in Sections IV, Biological Resources, above, the proposed Cotta bridge-replacement project would not substantially degrade the quality of the environment, fish or wildlife habitat or populations, nor would it substantially impair plant or animal communities or affect rare or endangered plants. The project incorporates numerous BMPs and measures required by resource agencies intended to minimize impacts to biological resources, including conducting work during the late spring through summer timeframe when the canal water level is low to reduce the likelihood of killing hibernating GGS or western pond turtles, disturbing nesting bird species, or harming sensitive aquatic species. To avoid construction-related impacts, SJCPWD will require a qualified biologist to conduct a pre-construction survey for snakes, turtles, bats, and nesting birds if construction is scheduled within the breeding/nesting/active season and to observe fish and/or water levels. Project permits from the US Army Corps of Engineers, (404, 401) ,California Department of Fish and Wildlife (1602), San Joaquin County (General Construction Permit, Storm Water

Pollution Prevention Plan) set forth multiple requirements for avoiding significant impacts to biological and water resources. Remaining impacts to biological resources are anticipated to be less than significant.

Additionally, as explained in Section V, Cultural Resources, the project would not affect important historical, archaeological or paleontological resources, and compliance with existing regulations regarding discovery of human remains would avoid impacts to them. Remaining impacts to cultural resources are anticipated to be less than significant.

- b) No Impact. The proposed bridge-replacement project would not result in cumulatively considerable impacts, because the new two-lane bridge would not change the existing bridge's capacity, and would not provide new road access to an area that previously lacked access. Bridge replacement will not trigger re-classification of either Cotta or North Guard Roads. Additionally, the bridge structure would not significantly change the existing channel flow from present conditions. The project area is occupied by agricultural uses, which are not likely to change within the San Joaquin County 2030 General Plan's planning horizon. No cumulative impacts are anticipated.
- c) No Impact. As explained throughout this document, the proposed bridge-replacement project will not cause environmental effects that would result in substantial direct or indirect harm to humans.

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