Middle River Bridge Roadway Realignment

San Joaquin County near Holt at Middle River Bridge
District 10-SJ-4-4.1/4.9
Project ID: 10-1600-0139/EA 10-1F460
SCH: 2018082014

Initial Study
with Mitigated Negative Declaration

Prepared by the
State of California Department of Transportation

October 2018
General Information About This Document

The California Department of Transportation has prepared this Initial Study with Mitigated Negative Declaration for the proposed project in San Joaquin County, California. Caltrans is the lead agency under the California Environmental Quality Act (CEQA). The document tells you why the project is being proposed, what alternatives have been considered for the project, how the existing environment could be affected by the project, the potential impacts of each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures. The Initial Study was circulated to the public for 30 days between August 6th and September 5th, 2018. Comments were received from the Regional Water Quality Control Board during the circulation period. Elsewhere throughout this document, a vertical line in the margin indicates a change made since the draft document circulation. Minor editorial changes and clarifications have not been so indicated. Additional copies of this document and the related technical studies are available for review at the Caltrans District 10 office, 1976 E Dr. Martin Luther King, Jr. Blvd., Stockton, CA 95205. This document may be downloaded at the following website: http://www.dot.ca.gov/d10/projects.html.

For individuals with sensory disabilities, this document is available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please write to or call Caltrans, Attn: Jaycee Azevedo, Branch Chief, Northern San Joaquin Environmental Management Branch, 1976 East Dr. Martin Luther King Jr. Blvd, Stockton, CA 95205; 209-941-1919 or use California Relay Service 1 (800) 735-2929 (TTY), 1 (800) 735-2929 (Voice), or 711.
Curve correction to the east end of Middle River Bridge and upgrade traffic safety devices around Middle River Bridge

**INITIAL STUDY**
with Mitigated Negative Declaration

Submitted Pursuant to: (State) Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation

Date: 10/12/18

[Signature]

Haydee Azevedo
Branch Chief
California Department of Transportation
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Mitigated Negative Declaration
Pursuant to: Division 13, Public Resources Code

Project Description
The California Department of Transportation (Caltrans) proposes to realign the approach curve and widen shoulders on the east end of Middle River Bridge, in San Joaquin County on State Route 4 between post miles 4.1 and 4.9. In addition, traffic safety devices will be installed on the eastern and western approaches leading up to the bridge.

Determination
Caltrans has prepared an Initial Study for this project and, following public review, has determined from this study that the project would not have a significant effect on the environment for the following reasons:

The proposed project will have no effect on: aesthetics, cultural resources, air quality, geology and soils, hazardous waste and materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation/traffic, tribal cultural resource utilities and service systems, as well as mandatory findings of significance.

In addition, the proposed project will have no significant effect on: agriculture and forest resources.

Additionally, the proposed project would have no significantly adverse effect on biological resources because the following mitigation measures would reduce potential effects to insignificance:

- Caltrans will apply for a 2081 Incidental Take Permit from the California Department of Fish and Wildlife (CDFW) for impacts to Swainson’s hawk.
  Caltrans will consult with CDFW to determine the amount and type of mitigation.

Jayce Acevedo
Branch Chief
California Department of Transportation

10/12/18
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Project Description and Background

**Project Title**
Middle River Bridge Roadway Realignment

**Project Location**
The project is on State Route (SR) 4, in San Joaquin County, near Middle River Bridge, at post mile 4.4. The project is about four (4) miles east of the Contra Costa and San Joaquin County line and nine (9) miles west of Stockton.

Figure 1. Project Vicinity Map
Description of Project

Caltrans proposes to realign the approach curve and widen shoulders on the east end of Middle River Bridge. Also, safety devices will be improved, such as upgrading the existing Metal Beam Guardrail to Midwest Guardrail System, replacing non-standard end treatments, installing flashing beacons on the east and west ends of the bridge, and installing a crash cushion on the northeast corner of the bridge. Furthermore, street lighting will need to be relocated and trenching will take place on the shoulders to accommodate placement of electrical conduit. Work will only take place on the eastern and western approaches to the bridge and no work will be done to the structure itself.

During construction approximately 2,500 cubic yards of soil will be excavated and about 13,000 cubic yards of imported soil will be needed to create the new embankment for the new alignment. The maximum height of the new embankment will be 25 feet.

In addition, the scope of work will include repairing a damaged dolphin structure at Pier 5. The existing dolphin structure is a set of six timber piles surrounding a steel pile driven into the riverbed that serves to prevent watercraft from hitting the existing bridge. Caltrans will attempt full removal of the existing timber piles with a crane and clamp or with a vibratory hammer. If that fails, then the timber piles will be removed to the mudline. Six new piles made from reinforced recycled plastic lumber will be installed around the existing steel pile using a vibratory hammer.
All work will be restricted to state right-of-way and newly acquired right-of-way from the farmland parcel located directly east of the Middle River Bridge. Existing driveways to private properties adjacent to SR 4 will be modified and extended to meet the new alignment.

Design Alternative 1 will have a shorter curve alignment that will allow vehicles to travel 20 miles per hour. This option will require a right-of-way acquisition of approximately 3.8 acres.

See Appendix F for preliminary layout of the design.

Rejected Alternatives
A longer curve alignment (Alternative 2) was considered that would allow vehicles to travel 30 miles per hour. This alternative would have required a right-of-way acquisition of approximately 8.6 acres. Of the 8.6 acres being acquired, 6.1 acres would have been used in the new highway alignment, and 2.5 acres would remain between the new alignment and the existing alignment. This design option was rejected because it did not meet the Safety Index threshold for the project. The Safety Index is a measure that calculates the benefit/cost ratio between the dollar amount of accidents saved versus the project capital cost.

A no-build alternative was also considered, but rejected, because it did not meet the purpose and need of the project.

Surrounding Land Uses and Setting
The project is located within the Sacramento-San Joaquin River Delta, about nine (9) miles west of the city of Stockton and about four (4) miles east of the Contra Costa and San Joaquin County line. The project area is surrounded predominately by agricultural fields and waterways in the vicinity of SR 4. Middle River meets Victoria Canal and Trapper Slough near the project location.

Coming from the east, SR 4 runs along the levee of Trapper Slough in a southwest direction until it crosses Middle River at post mile 4.4. After crossing Middle River, SR 4 travels in a westward direction until it reaches the Contra Costa and San Joaquin county line at Old River Bridge. SR 4 is surrounded by farmland on either side through this stretch of highway.

Table 1. Other Public Agencies Whose Approval is Required

<table>
<thead>
<tr>
<th>Agency</th>
<th>Permit/Approval</th>
<th>Status</th>
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<tbody>
<tr>
<td>United States Fish and Wildlife Service (USFWS)</td>
<td>Letter of Concurrence for Section 7 consultation for federally listed threatened and endangered species</td>
<td>Informal Consultation with the United States Fish and Wildlife Service (USFWS) was initiated on July 17, 2018. A Letter of Concurrence was received on August 15th, 2018.</td>
</tr>
<tr>
<td>National Oceanic and Atmospheric Administration (NOAA) Fisheries</td>
<td>Letter of Concurrence for Section 7 consultation for federally listed threatened and endangered species</td>
<td>Informal Consultation with the NOAA Fisheries Service was initiated on July 17, 2018. A Letter of Concurrence was</td>
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<tr>
<td>Agency</td>
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<tr>
<td>California Department of Fish and Wildlife</td>
<td>2081 Incidental Take Permit</td>
<td>Application for the 2081 permit will be submitted during the design phase of the project.</td>
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<tr>
<td>Regional Water Quality Control Board</td>
<td>401 Water Quality Certification</td>
<td>Application for the 401 permit will be submitted during the design phase of the project.</td>
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<tr>
<td>United States Army Corps of Engineers</td>
<td>404 Nationwide Permit</td>
<td>Application for the 404 permit will be submitted during the design phase of the project.</td>
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<tr>
<td>California Department of Fish and Wildlife</td>
<td>Fish and Game Code Section 1602 Streambed Alteration Agreement</td>
<td>Application for the 1602 permit will be submitted during the design phase of the project.</td>
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</table>
This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or is within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

<table>
<thead>
<tr>
<th>I. AESTHETICS: Would the project:</th>
<th>Potentially Significant Impact</th>
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<tr>
<td>a) Have a substantial adverse effect on a scenic vista?</td>
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<td>b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?</td>
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<td>c) Substantially degrade the existing visual character or quality of the site and its surroundings?</td>
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<td>d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?</td>
<td>□</td>
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II. AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and 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? | □ | □ | ☒ | □ |

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | □ | □ | ☒ | □ |
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<th>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))?</th>
<th>Potentially Significant Impact</th>
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<th>d) Result in the loss of forest land or conversion of forest land to non-forest use?</th>
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<th>e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
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### III. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

<table>
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<th>a) Conflict with or obstruct implementation of the applicable air quality plan?</th>
<th>Potentially Significant Impact</th>
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<th>b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?</th>
<th>Potentially Significant Impact</th>
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<th>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)?</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
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<th>d) Expose sensitive receptors to substantial pollutant concentrations?</th>
<th>Potentially Significant Impact</th>
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<th>Less Than Significant Impact</th>
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<th>e) Create objectionable odors affecting a substantial number of people?</th>
<th>Potentially Significant Impact</th>
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### IV. BIOLOGICAL RESOURCES

Would the project:

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<th>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?</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
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<th>b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
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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?  

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

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?  

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

**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:

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?  

ii) Strong seismic ground shaking?  

iii) Seismic-related ground failure, including liquefaction?
iv) Landslides?

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

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

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

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

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?

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

Caltrans has used the best available information based to the extent possible on scientific and factual information, to describe, calculate, or estimate the amount of greenhouse gas emissions that may occur related to this project. The analysis included in the climate change section of this document provides the public and decision-makers as much information about the project as possible. It is Caltrans’ determination that in the absence of statewide-adopted thresholds or GHG emissions limits, it is too speculative to make a significance determination regarding an individual project’s direct and indirect impacts with respect to global climate change. Caltrans remains committed to implementing measures to reduce the potential effects of the project. These measures are outlined in the climate change section of the document.

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?

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

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

- - - •

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

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

- - - •

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

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

- - - •

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?

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

- - - •

IX. HYDROLOGY AND WATER QUALITY: Would the project:

a) Violate any water quality standards or waste discharge requirements?

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

- - - •

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

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

- - - •

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

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

- - - •

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?

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

- - - •

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?

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

- - - •

f) Otherwise substantially degrade water quality?

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

- - - •
| g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
| h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? | | | | |
| i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? | | | | |
| j) Inundation by seiche, tsunami, or mudflow | | | | |

**X. LAND USE AND PLANNING:** Would the project:

| a) Physically divide an established community? | | | | ✓ |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | | | | ✓ |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan? | | | | ✓ |

**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? | | | | ✓ |
| 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? | | | | ✓ |

**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? | | | | ✓ |
| b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | | | | ✓ |
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | | | | ✓ |
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

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<th>Potentially Significant Impact</th>
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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?

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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?

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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)?

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<th>Potentially Significant Impact</th>
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b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

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c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

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**XIV. PUBLIC SERVICES:**

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

- Fire protection?
  - Potentially Significant Impact: ☐
  - Less Than Significant with Mitigation: ☐
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- Police protection?
  - Potentially Significant Impact: ☐
  - Less Than Significant with Mitigation: ☐
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- Schools?
  - Potentially Significant Impact: ☐
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- Parks?
  - Potentially Significant Impact: ☐
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- Other public facilities?
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### XV. RECREATION:

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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?  

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

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?  

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

e) Result in inadequate emergency access?  

f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?  

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

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

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XVIII. UTILITY AND SERVICE SYSTEMS: Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

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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?

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c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

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d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

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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?

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f) Be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs?

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g) Comply with federal, state, and local statutes and regulations related to solid waste?

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### XIX. MANDATORY FINDINGS OF SIGNIFICANCE

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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, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

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

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?
Additional Explanations for Questions in the Impacts Checklist

IV. Biological Resources (checklist questions a)

A Natural Environment Study (NES) was completed for this project in April 2018. This technical study covers all the information discussed under the CEQA Appendix G Checklist item IV. Biological Resources. The information in this section is summarized from the NES (April 2018).

a) Threatened and Endangered Species

Caltrans initiated Section 7 Endangered Species Act consultation with the United States Fish and Wildlife Service (USFWS) and National Oceanic and Atmospheric Administration – Fisheries (NOAA Fisheries) on July 17, 2018. The Federal Endangered Species Act (FESA) determination for giant garter snake; Delta smelt and its critical habitat; green sturgeon and its critical habitat; Central Valley steelhead and its critical habitat; Central Valley Chinook salmon and its critical habitat; and Sacramento River Chinook salmon and its critical habitat is “may affect but is not likely to adversely affect.” A Letter of Concurrence was received from USFWS on August 15, 2018. A Letter of Concurrence was received from NOAA Fisheries on September 28, 2018.

Caltrans initiated Magnuson-Stevens Fishery Conservation and Management Act (MSA) consultation with NOAA Fisheries on September 4, 2018. The MSA determination for Pacific Groundfish, Coastal Pelagic, and Pacific Coast Salmon is “may adversely affect essential fish habitat.” The effects will be short-term and localized; the best management practices and minimization measures included in the project will minimize potential impacts to essential fish habitat.

Affected Environment

Swainson’s Hawk

The Swainson’s hawk (Buteo swainsoni) is state (California) listed as threatened. Nearly all North American populations of Swainson’s hawks (SWHA) winter in South America and Mexico. However, a small number of birds regularly winter in the Sacramento–San Joaquin River Delta of Central California. Their habitat requirements include large, open areas for foraging (e.g., native grassland or lightly-grazed dryland pasture, alfalfa and other hay crops, grain, rice, and row crops), an abundant available prey base (e.g., California Vole [Microtus californicus], small mammals, birds, and insects), and suitable nesting habitat (trees within mature riparian forests, lone trees and oak groves, and mature roadside trees). Some nesting sites have been found near human activity.

Caltrans biologists conducted field surveys on May 22, 2017, and July 6, 2017. Two adult Swainson’s hawks were observed in, and around, the project area during the May 22, 2017, field survey, but not the July 6, 2017, field survey. During the May 22 field visit, an active Swainson’s hawk nest was observed in a mature valley oak tree, at the entrance of the driveway to the private property, on the east side of the project area, near the bridge entrance. An adult Swainson’s hawk was observed to be sitting in the nest, and another Swainson’s hawk was observed to be flying overhead around the project area.
There are 96 California Natural Diversity Database (CNDDB) occurrences of Swainson’s hawk nesting within five miles of the project area. The nearest CNDDB occurrence is located approximately 0.06-mile northeast of the project area. A pair of adult Swainson’s hawks, and 2 young, were observed in a nest on June 14, 2010.

A Swainson’s hawk nest is considered active if there has been reported Swainson’s hawk activity within the last 5 years. Based on information gathered through the biological study, as well as CNDDB records, Swainson’s hawk has a high potential to occur within the project area. There are trees within the project area, especially near the farm buildings, which the Swainson’s hawk could potentially use for nesting.

**Environmental Consequences**

**Swainson’s Hawk**

Based on the current location of the active nest observed in May 2017, the Swainson’s hawks using the nest are accustomed to noise of vehicles driving by on SR 4 and through the private driveway. However, construction noise will be higher than what the SWHA are used to and this may disturb the birds, affect their reproductive behaviors, and potentially result in mortality of young through forced fledging, or nest abandonment by adult birds. In addition, impacts to Swainson’s hawk foraging habitat could result in reduced prey base and affect the survivability of nesting Swainson’s hawk in the project area.

Permanent and temporary impacts to Swainson’s hawk foraging habitat may occur to the annual grassland near the highway and the agricultural field, which both offer suitable foraging opportunities. For design option 1, there are 2.18 acres of annual grassland in the project area, of which 0.94 acre will be temporarily impacted and 0.39 acre will be permanently impacted. Also, there are 2.69 acres of agricultural field in the project area, of which 2.19 acres will be temporarily impacted and 0.48 acre will be permanently impacted.

For design option 2, there are 3.16 acres of annual grassland in the project area, of which 1.09 acres will be temporarily impacted and 0.17 acre will be permanently impacted. Furthermore, there are 5.64 acres of agricultural field in the project area, of which 4.79 acres will be temporarily impacted and 0.81 acre will be permanently impacted.

Permanent impacts are attributed to grading, paving, and tree removal for the curve realignment. Temporary impacts are attributed to equipment staging and laydown areas. Impacts to non-native grassland or other habitats more likely to support usable foraging for this species will occur.

At least 15 trees with trunks over four inches in diameter breast height (DBH) on the east side of the project area near the current SR 4 will be removed. These trees could be used by Swainson’s hawk for nesting. The tree where the Swainson’s hawk nest was found in the May 2017 survey will not be removed. If a Swainson’s hawk nest is found outside the project area limits within 600 feet, construction activities could potentially result in the mortality of young through forced fledging or nest abandonment by adult birds.
The project may result in take of the Swainson’s hawk due to the planned removal of potential nesting trees. The trees outside the project area limits will not be impacted by the construction. Impacts to potential nesting habitat and foraging habitat may occur.

Construction noise may be considered direct impact if it results in nest abandonment.

Caltrans will enact best management practices and construction site practices as project features to avoid and minimize impacts to Swainson’s hawk. In addition, since Swainson’s hawk is a special status species, any new sightings will be reported to the CNDDB and California Department of Fish and Wildlife (CDFW). These measures are discussed in detail in Appendix A.

Avoidance, Minimization, and/or Mitigation Measures

Swainson’s Hawk

Compensatory Mitigation for Swainson’s hawk. Consultation with CDFW will be needed to acquire the 2081 Incidental Take Permit. In addition, consultation with CDFW will discuss the amount and type of mitigation. If no mitigation bank is found to service the area, then Caltrans will create off-site mitigation nearby through the purchase of land and planting a number that is agreeable with CDFW.

The following avoidance and minimization measures will be used when work occurs near locations that may be subject to nesting by Swainson’s hawk. They are further referenced in detail in the Avoidance, Minimization, and Mitigation Measures section (Appendix A).

Environmental Awareness Training. All construction personnel will attend a mandatory environmental education program delivered by a qualified biologist prior to working in the project area.

Preconstruction SWHA Surveys. Caltrans will retain a CDFW-approved, qualified biologist to conduct pre-construction surveys to identify active nests in accessible areas within 0.5-mile of the project area. To meet the CDFW recommendations for mitigation and protection of Swainson’s hawks, surveys will be conducted for a 0.5-mile radius around all project activities. Surveys will be completed for at least the two survey periods immediately prior to a project’s initiation.

SWHA Nesting Avoidance and Minimization Attempt.

a. Because construction activities are tentatively scheduled within the Swainson’s hawk nesting period (March 20 to July 30), Caltrans will retain a CDFW-approved biologist to conduct construction monitoring surveys to monitor any active nests in accessible areas within 0.5-mile of the project area.

b. Any active Swainson’s hawk nest detected during pre-construction or construction-stage surveys will be monitored throughout any construction activities occurring during the Swainson’s hawk nesting season to monitor and document the behavior of nesting Swainson’s hawk. A CDFW-approved wildlife biologist with experience working with nesting raptors
will be present daily for the entire duration of any construction activities conducted during the Swainson’s hawk nesting period. Depending on the location of any active Swainson’s hawk nest, the CDFW-approved biologist will determine the feasibility of implementing of a no work buffer.

c. If it is determined that establishment of no-work buffers are not feasible, the CDFW-approved biologist will have the authority to recommend construction activity modifications if a SWHA exhibits distress and/or abnormal nesting, which has the potential to cause reproductive failure. To the greatest extent feasible, Caltrans will modify construction activities until the bird’s behavior has normalized.

d. Routine disturbances such as agricultural activities, commuter traffic, and routine facility maintenance activities within the buffer of an active nest will not be prohibited. If a nest tree must be removed, authorization from the CDFW (including conditions to off-set the loss of the nest tree) must be obtained. New sightings of nesting Swainson’s hawks will be reported to the CNDDB.
Appendix A  Project Features, Avoidance, Minimization, and Mitigation Measures

Mitigation

1. **Compensatory Mitigation for Swainson’s Hawk.** Consultation with CDFW will be needed to acquire the 2081 Incidental Take Permit. In addition, consultation with CDFW will discuss the amount and type of mitigation. If no mitigation bank is found to service the area, then Caltrans will create off-site mitigation nearby through the purchase of land and planting a number that is agreeable with CDFW.

Project Features

2. **Best Management Practices (BMPs).** Standard construction BMPs will be implemented throughout the course of construction. BMPs will address, among other things, soil stabilization, sediment control, wind erosion control, vehicle tracking control, non-storm water management, and waste management practices. Caltrans personnel and the contractor will perform routine inspections of the construction area to verify that BMPs are being properly implemented and maintained, and are operating effectively.

3. **Restoration and Revegetation.** All areas that are temporarily affected during construction will be recontoured and revegetated via hydro-seeding and planting with a mix of native grass, shrub, and tree species to restore habitat values back to preconstruction conditions. Invasive, exotic plants will be controlled within the project area to the maximum extent practicable, pursuant to Executive Order 13112 (Invasive Species).

4. **Migratory Bird Treaty Act (MBTA) Nesting Season Avoidance.** To avoid and minimize impacts to tree and shrub nesting species, the following measures will be implemented:
   a. If feasible, conduct all tree and shrub removal and grading activities during the non-breeding season (generally October 1 through January 31).
   b. If grading and tree removal activities are scheduled to occur during the breeding and nesting season (February 1 through September 30), preconstruction surveys will be performed prior to the start of project activities.

5. **Preconstruction Bird Surveys.** If construction, grading or other project-related activities are scheduled during the nesting season (February 1 to September 30), then preconstruction surveys for migratory bird species will take place no more than 15 days prior to the beginning of construction within 300 feet of suitable nesting habitat.
   a. If the pre-construction surveys do not identify any nesting migratory bird species within areas potentially affected by construction activities, no further mitigation will be required. If the pre-construction surveys identify nesting bird species within areas that may be affected by construction, then active bird nest avoidance (measure 6) will be enacted.
6. **Active Bird Nest Avoidance.** If active nest sites are discovered within areas that may be affected by construction activities, additional measures will be implemented.
   a. If active nests are found, project-related construction impacts will be avoided by establishment of appropriate no-work buffers to limit project-related construction activities near the nest site(s). The size of the no-work buffer zone will be determined in consultation with the CDFW. Generally, a 300-foot will be used when possible for raptors and 100 feet for passerines. The no-work buffer zone will be delineated by highly visible markers. In consultation with CDFW, monitoring of nest activity by a qualified biologist may be required if the project-related construction activity has potential to adversely affect the nest or nesting behavior of the bird. No project-related construction activity will commence within the no-work buffer area until a qualified biologist and CDFW confirms that the nest is no longer active.

7. **Construction Site Practices.**
   a. **Equipment Inspection.** All construction pipes, culverts, or similar structures that are stored on the construction site for one or more overnight periods will be thoroughly inspected for the wildlife before burying, capping, or otherwise using the structures. If wildlife is discovered during this inspection, the structure will not be disturbed until the individual leaves on its own accord.
   b. **Trash Abatement.** All food-related trash items such as wrappers, cans, bottles, and food scraps will be disposed of in closed containers and removed daily from the project site in order to reduce the potential for attracting wildlife onto the construction site.
   c. **Pets/Firearms Prohibition.** To eliminate the potential for harassment or injury to, or death of, any species resulting from the presence of pets and firearms, neither (with the exception of firearms carried by authorized law enforcement officials) will be allowed on the project site.
   d. **Chemicals Avoidance.** Use of herbicides and rodenticides, including fumigation and poison bait, will be prohibited.
   e. **Mono-filaments.** To avoid entangling any wildlife, erosion control methods will not utilize plastic, monofilament, jute, or similarly tightly woven fiber netting or other such materials. Acceptable substitutes include coconut coir matting, tackified hydro-seeding compounds, or other similar materials.
   f. **Construction Traffic.** Project-related vehicle traffic will be restricted to established roads and construction areas. Construction of access roads will occur only when necessary. All project-related vehicles will observe a daytime speed limit of no more than 20 miles per hour (mph) and a nighttime speed limit of no more than 10 mph in all project areas, except on the highway.
   g. **Dust Control.** Dust control measures will be implemented according to the Caltrans 2015 Standard specification under Section 14 for Dust Control.
h. **Weed Washing.** All equipment and vehicles will be thoroughly cleaned to remove dirt and weed seeds prior to being transported or driven to or from the project site.

i. **Weed Inspection.** Any borrow site or stockpile will be inspected for the presence of noxious weeds or invasive plants.

8. **Special-Status Species Reporting.** Any new sightings of the special-status species will be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marking the location of the observation also will be provided to the USFWS and/or CDFW.

**Avoidance and Minimization Measures**

9. **Environmental Sensitive Area (ESA) Designation.** Prior to the start of construction, high visibility temporary fencing (of a type/design that will not entangle either of the species) will be installed around the perimeter of ESA located outside of the project footprint, i.e., aquatic and upland areas, in order to ensure that construction equipment and personnel do not enter these locations. ESA provisions will be implemented as a first order of work and will remain in place until all construction activities are completed.

10. **Minimize Removal/Habitat Disturbance.** The project will minimize the effects of disturbance to the other waters of the United States and avoid effects to the adjacent open water and marsh habitats. Also, to control erosion and restore habitat value, vegetation removal in all areas within the project footprint that are disturbed during construction will be minimized to the maximum extent practicable. Vegetation will be cut above the soil level except in areas that will be excavated. This will allow plants that to re-sprout after construction.

11. **Environmental Awareness Training.** All construction personnel will attend a mandatory environmental education program delivered by a qualified biologist prior to working in the project area. The program will focus on conservation measures that are relevant to employee’s personal responsibility and will include an explanation on how to best avoid take of biological resources and sensitive habitats. Distributed materials will include a pamphlet with distinguishing photographs of sensitive species, species’ habitat requirements, compliance reminders, and relevant contact information. Documentation of the training, including sign-in sheets, will be kept on file and will be available on request.

12. **Preconstruction Plant Surveys.** A pre-construction survey will be done within the project area during the blooming period, June through August. A qualified biologist shall conduct pre-construction surveys for special-status plants within 30 days prior to construction. If a special-status plant is found, then the plant will be designated as ESA. USFWS and/or CDFW will be notified and further actions will be determined by the agencies. CDFW will need to be notified at least 10 days prior to construction impacts in the vicinity of special-status plant populations in accordance with the California Native Plant Protection Act of 1977 (CDFG Code Section 1900-1913). This will allow sufficient time to transplant the individuals to a suitable location or develop other mitigation measures in coordination with CDFW. If no special-status plants are found, then no further measures are necessary.
13. **Preconstruction SWHA Surveys.** The project area contained an active SWHA nest in the 2017 season, and mature trees that could be potentially used by SWHA for nesting occur both within the project area and within proximity (within 0.5-mile) to the project area. The combination of appropriate surveys, risk analysis, and monitoring has been determined to be very effective in reducing the potential for project-induced nest failures. Because construction activities are proposed to be scheduled within the Swainson’s hawk nesting period (March 20 to July 30), Caltrans will retain a CDFW-approved, qualified biologist to conduct pre-construction surveys to identify active nests in accessible areas within 0.5-mile of the project area. These surveys will follow the California Department of Fish and Wildlife’s (CDFW’s) *Recommended Timing and Methodology for Swainson’s Hawk Nesting Surveys in California’s Central Valley established by the Swainson’s Hawk Technical Advisory Committee; May 31, 2000*. To meet CDFW recommendations for mitigation and protection of Swainson’s hawks, surveys will be conducted for a 0.5-mile radius around all project activities. Surveys will be completed for at least two survey periods immediately prior to a project’s initiation. The survey periods are defined in the CDFW May 31, 2001 Protocol by the timing of migration, courtship, and nesting in a “typical” year for the majority of Swainson’s hawks from San Joaquin County to Northern Yolo County.

14. **SWHA Nest Avoidance and Minimization Attempt.**
   a. Because construction activities are tentatively scheduled within the Swainson’s hawk nesting period (March 20 to July 30), Caltrans will retain a CDFW-approved biologist to conduct construction monitoring surveys to monitor any active nests in accessible areas within 0.5-mile of the project area according to the CDFW May 31, 2001 Protocol.
   b. Any active SWHA nest detected during pre-construction or construction-stage surveys will be monitored throughout any construction activities occurring during the SWHA nesting season to monitor and document the behavior of nesting SWHA. A CDFW-approved wildlife biologist with experience working with nesting raptors will be present daily for the entire duration of any construction activities conducted during the SWHA nesting period. Depending on the location of any active SHWA nest, the CDFW-approved biologist will determine the feasibility of implementing a no work buffer. If determined feasible, CDFW guidelines recommend implementation of 0.25 to 0.5-mile buffers for nesting SWHA, but the size of the buffer may be adjusted to 600 feet if Caltrans, in consultation with CDFW, determines that such an adjustment will not adversely affect the nest.
   c. If it is determined that establishment of no-work buffers is not feasible, the CDFW-approved biologist will have the authority to recommend construction activity modifications if a SWHA exhibits distress and/or abnormal nesting behavior (swooping/stooping, excessive vocalization distress calls, agitation, failure to remain on nest, failure to deliver prey items for an extended time period, etc.) which have the potential to cause reproductive failure (nest abandonment and loss of eggs and/or young). To
the greatest extent feasible, Caltrans will modify construction activities until the bird's behavior has normalized. If SWHA behavior has not normalized following construction activity modification or if it is determined unfeasible to modify construction activity to prevent SWHA nesting distress, Caltrans will notify the CDFW and will discuss the results of the construction monitoring. Additionally, if the CDFW-approved biologist determines at any time during construction monitoring that a "take" of a SWHA chick or adult has occurred due to construction activities, Caltrans will notify the CDFW.

d. Routine disturbances such as agricultural activities, commuter traffic, and routine facility maintenance activities within the buffer of an active nest will not be prohibited. If a nest tree must be removed, authorization from the CDFW (including conditions to offset the loss of the nest tree) must be obtained. New sightings of nesting SWHAs will be reported to the CNDD.

15. Giant Garter Snake (GGS) Work Avoidance Window. A work window will be implemented between May 1 and October 1. During this time period, work can be done in the agricultural ditch in the project area. Work will not be done outside the species exclusionary fence during this time. All other construction activities can be done outside the work window.

16. Preconstruction GGS Surveys. A qualified biologist(s) will conduct a preconstruction visual survey of the project site no more than 24 hours prior to the beginning of ground disturbance or other general construction activities that could affect the GGS. The survey will pay particular attention to detecting any burrows that could be used as refugia by the species. If any burrows are discovered within 200 feet of the aquatic habitat, then they will be flagged or otherwise marked, and avoided by at least 50 feet until construction enters the GGS work window mentioned above.

17. GGS Construction Minimizations and Monitoring. Prior to construction work in the agricultural ditch, the water must be drained and allowed to dry for 15 days. This must be done during the GGS work window. If work on the agricultural ditch must start and/or continue beyond October 1, then all vegetation and upland areas with animal burrows up to 200 feet of aquatic habitat inside the work area of the project area are to be grubbed and graded prior to the giant garter snake wintering period. Additional conditions below also will apply:

   a. A USFWS-approved biological monitor will be onsite for the duration of construction activities on the agricultural ditch;

   b. If a GGS is encountered during construction activities, the biologist will stop work in the immediate area and allow the snake to move off the site by itself. The biologist will also notify the USFWS and CDFW immediately to determine the appropriate procedures and measures needed for the continuation of the project.

   c. No construction activities will be conducted in upland or aquatic habitat areas where the GGS may occur if 1) it is raining, 2) there is a greater than 70 percent chance of rain based on the National Oceanic and Atmospheric
Administration’s National Weather Service forecast on any given work day, or 3) within 48 hours following a rain event greater than 0.25 inch.

d. The agricultural ditch will be realigned as soon as possible outside the construction area.

18. **Reptiles Exclusion.** Silt fencing/species exclusionary fencing (in addition to ESA fencing) will be installed in the upland areas immediately adjacent to suitable aquatic habitat for the GGS, western pond turtle, and other reptiles in order to prevent them from entering the project area, and to keep equipment and construction personnel from encroaching into these habitat areas. All fencing will be installed during the active period for the species. A USFWS/CDFW approved biologist will work with the contractor to determine where the fencing will be placed and will monitor its installation. The fencing will measure at least 3 feet tall and will be buried at least 6 inches below ground level. The biologist will also periodically inspect the fencing to ensure that it remains intact.

19. **Wildlife Escape Ramps.** To prevent the inadvertent entrapment of the wildlife during construction, all excavated, steep-walled holes, or trenches measuring more than 6 inches deep either will be covered at the close of each working day using plywood or similar materials without openings, or will be provided with one or more escape ramps constructed of earth fill or wooden planks in the event that the holes/trenches cannot be fully covered. All holes or trenches will be checked daily for trapped wildlife. Before such holes or trenches are filled, they will be thoroughly inspected for trapped wildlife.

20. **Lighting Avoidance.** The use of artificial lighting on-site will be limited, except when necessary for construction, or for driver and pedestrian safety. Any artificial lighting used during construction, particularly at night, will be confined to areas within the construction footprint and away from surrounding habitat. Caltrans will limit thermal range and non-target casting of light by installing shielding behind and underneath the light source to further confine the illumination, and by using bulbs with color temperatures that minimize disturbance to the wildlife (e.g., in the range of 235 watt white light with a color temperature no greater than 4,000 Kelvin).

21. **Fish Work Avoidance Window.** A work window will be implemented between August 1 and October 31 for in-water work. During this time period, work can be done in-water for the dolphin structure in the project area. The main construction activity of pile driving must be completed during this time.

22. **Preconstruction Wildlife Survey.** A qualified biologist(s) will conduct a preconstruction visual survey of the project site no more than 24 hours prior to the beginning of ground disturbance or other general construction activities that could affect the western pond turtles, and other wildlife not specified above.

23. **Permits.** Caltrans will apply for any necessary permits from CDFW, the United States Army Corps of Engineers, and the Regional Water Quality Control Board. These permits applications will be submitted during the design phase of the project. Caltrans will agree to follow any additional conditions set forth by the previously mentioned regulatory agencies.
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### Appendix B  Listed Species, Natural Communities, and Critical Habitat Potentially Occuring or Known to Occur in the Project Area

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>Status</th>
<th>General Habitat Description</th>
<th>Habitat Present/Absent</th>
<th>Likelihood of Occurrence Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Plants</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bristly sedge</td>
<td>Carex comosa</td>
<td>-/- 2B.1</td>
<td>Perennial herb (rhizomatous). Found in wet places such as lake-margins, coastal prairie, marshes and swamps, and valley and foothill grasslands. Located in the Inner North Coast Ranges, High Cascade Range, Great Central Valley, Bay Area, San Bernardino Mountains, and Modoc Plateau. Bloom period of May – September. &lt; 2,050 ft. elev.</td>
<td>A</td>
<td>None; no suitable habitat present within the project footprint.</td>
</tr>
<tr>
<td>Parry’s rough tarplant</td>
<td>Centromadia parryi ssp. rudis</td>
<td>-/-4.2</td>
<td>Alkaline, vernally mesic, seeps, sometimes roadside. Found in Valley and foothill grassland and vernal pools. Bloom period May – October.</td>
<td>A</td>
<td>None; no suitable habitat present within the project footprint.</td>
</tr>
<tr>
<td>Woolly rosemallow</td>
<td>Hibiscus lasiocarpus var. occidentalis</td>
<td>-/- 1B.2</td>
<td>Perennial herb. Found in freshwater wetlands, wet banks, marshes, and rip-rap on sides of levees. Located in Cascade Range Foothills and the Great Central Valley. Bloom period June – September. &lt; 390 ft. elev.</td>
<td>HP</td>
<td>Low; potential habitat present but was not observed during surveys within the blooming period. Species not expected to be present in the project area. However, the project will not affect the marsh habitat.</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Scientific Name</td>
<td>Habitats</td>
<td>Bloom Period</td>
<td>Potential Habitat</td>
<td></td>
</tr>
<tr>
<td>----------------------------</td>
<td>-------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>-----------------------</td>
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<td></td>
</tr>
<tr>
<td>Delta tule pea</td>
<td><em>Lathrus jepsonii</em> var. jepsonii</td>
<td>Perennial herb. Found in coastal/estuarine marshes, and both freshwater and brackish marshes and swamps. Located in the Sacramento/San Joaquin delta and Bay Area. Bloom period May – September. &lt; 16 ft. elev.</td>
<td>Low; potential habitat present but was not observed during surveys within the blooming period. Species not expected to be present in the project area. However, the project will not affect the marsh habitat.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mason’s lilaeopsis</td>
<td><em>Lilaeopsis masonii</em></td>
<td>Perennial herb, endemic to California. Found in intertidal marshes, stream banks, marshes and swamps (brackish or freshwater), and riparian scrub. Located in Suisun Bay and Bay Area. Bloom period April – November. &lt; 32 ft. elev.</td>
<td>Low; potential habitat present but was not observed during surveys within the blooming period. Species not expected to be present in the project area. However, the project will not affect the marsh habitat.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suisun Marsh aster</td>
<td><em>Symphyotrichum lentum</em></td>
<td>Perennial herb (rhizomatous), endemic to California. Found in brackish and freshwater marshes and swamps. Located in the Sacramento Valley, Central Coast, and Bay Area. Bloom period May – November. &lt; 10 ft. elev.</td>
<td>None; potential habitat present but was not observed during surveys within the blooming period. No occurrences were recorded in CNDDB within 5 miles. Species not expected to be present in the project area. However, the project will not affect the marsh habitat.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delta mudwort</td>
<td><em>Limosella subuleta</em></td>
<td>Perennial herb, not native to California. Found in muddy or sandy intertidal flats, marshes and swamps (brackish or freshwater), and riparian scrub. Known in CA from several occurrences in the Delta. Bloom period May – August. &lt; 10 ft. elev.</td>
<td>Low; potential habitat present but was not observed during surveys within the blooming period. Species not expected to be present in the project area. However, the project will not affect the marsh habitat.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Large-flowered fiddleneck

| **Amsinckia grandiflora** | FE/SE/1B.1 | Annual herb, endemic to California. Historically found in native perennial bunch grass communities. Located in the Contra Costa, Alameda, and San Joaquin Counties. Blooming period April-May. <984 ft. elev. | A | None; no suitable habitat present within the project footprint. Native bunch grass is not present in the project area. |

## Animals

| **Western Pond Turtle** | **Emys marmorata** | -/-/-/SSC | Occurs throughout California west of the Sierra-Cascade crest; found from sea level to 6,000 feet; does not occur in desert regions except for along the Mojave River and its tributaries; occupies ponds, marshes, rivers, streams, and irrigation canals with muddy or rocky bottoms and with watercress, cattails, water lilies, or other aquatic vegetation in woodlands, grasslands, and open forests. | HP | Moderate; potential habitat present but was not observed during the surveys. Species has CNDDDB occurrences within the project area. Species may still have potential to be present in the project area. |

<p>| <strong>Giant Gartner Snake</strong> | <strong>Thamnophis gigas</strong> | FT/ST/- | Sloughs, canals, low-gradient streams, and freshwater marsh habitats with a prey base of small fish and amphibians; also found in irrigation ditches and rice fields; requires grassy banks and emergent vegetation for basking and areas of high ground protected from flooding during winter. | HP | Low; potential habitat present in the agricultural ditch but was not observed during the surveys. The nearest occurrence is around 8.3 miles away. Species not expected to be present in the project area. |</p>
<table>
<thead>
<tr>
<th>Species</th>
<th>Scientific Name</th>
<th>Category</th>
<th>Description</th>
<th>Action</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>California Red-legged Frog</td>
<td><em>Rana draytonii</em></td>
<td>FT/-/-</td>
<td>Found along the coast and coastal mountain ranges of California from Marin County to San Diego County and in the Sierra Nevada from Tehema County to Fresno County; occurs in permanent and semipermanent aquatic habitats, such as creeks and coldwater ponds, with emergent and submergent vegetation; may estivate in rodent burrows or cracks during dry periods.</td>
<td>A</td>
<td>None; no suitable aquatic habitat present within the project footprint.</td>
</tr>
<tr>
<td>California Tiger Salamander</td>
<td><em>Ambystoma californiense</em></td>
<td>FT/ST/CH</td>
<td>Vernal pools or other seasonal wet area with upland refugia</td>
<td>A</td>
<td>None; no suitable aquatic habitat present within the project footprint.</td>
</tr>
<tr>
<td>San Bruno elfin butterfly</td>
<td><em>Callophrys mossii bayensis</em></td>
<td>FE/-/-</td>
<td>Typical habitat consists of coastal grassland and low scrub of north-facing slopes within the fog belt where the larval host plant grows. All known locations are restricted to San Mateo County (San Bruno Mountain, Milagra Ridge, the San Francisco Peninsula Watershed, and Montara Mountain).</td>
<td>A</td>
<td>None; There are no coastal grasslands within the project area, and the project area is not within the coastal fog belt.</td>
</tr>
<tr>
<td>Valley elderberry longhorn beetle</td>
<td><em>Desmocerus californicus dimorphus</em></td>
<td>FT/-/-</td>
<td>Found on and close to its host plant red or blue elderberry along river and streams.</td>
<td>A</td>
<td>None; no elderberry bushes found in or near the project area.</td>
</tr>
<tr>
<td>Vernal Pool Fairy Shrimp</td>
<td><em>Branchinecta lynchii</em></td>
<td>FT/-/-</td>
<td>Found in Central Valley, central and south Coast Ranges from Tehama County to Santa Barbara County; isolated populations also in Riverside.</td>
<td>A</td>
<td>None; no suitable aquatic habitat present within the project footprint.</td>
</tr>
<tr>
<td>Species</td>
<td>Scientific Name</td>
<td>Status Code</td>
<td>Occurrence</td>
<td>Habitat</td>
<td>Project Impacts</td>
</tr>
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</tr>
<tr>
<td>Vernal Pool Tadpole Shrimp</td>
<td><em>Lepidurus packardi</em></td>
<td>FE/-/-</td>
<td>Found from Shasta County south to Merced County; occurs in vernal pools and ephemeral stock ponds.</td>
<td>None; no suitable aquatic habitat present within the project footprint.</td>
<td></td>
</tr>
<tr>
<td>Tricolored blackbird</td>
<td><em>Agelaius tricolor</em></td>
<td>-/SC/S</td>
<td>Found in wetlands with cattails, bulrushes, and willows which are used for nesting. Foraging habitats include cultivated fields, feedlots.</td>
<td>Low; suitable habitats for nesting and foraging present in the project area. No CNDDB occurrences were recorded within 5 miles of the project area. No species were observed during the surveys. Species not expected to be present in the project area.</td>
<td></td>
</tr>
<tr>
<td>Burrowing owl</td>
<td><em>Athene cunicularia</em></td>
<td>-/-/SSC</td>
<td>Found in open habitats with sparse vegetation such as prairie, pastures, desert or shrub-steppe, and airports.</td>
<td>Low; suitable habitat is found in the annual grassland area. A CNDDB record is located 4.7 miles away. No species was observed during the surveys. Open foraging habitat is very limited most of the year due to agricultural fields with tall crops. Species is not expected to be present in the project area.</td>
<td></td>
</tr>
<tr>
<td>California Black Rail</td>
<td><em>Laterallus jamaicensis coturniculus</em></td>
<td>-/ST/FP</td>
<td>In coastal California during breeding season, presently found at Bodega Bay, Tomales Bay, Bolinas Lagoon, San Francisco Bay estuary, and Morro Bay. Overwhelming majority of birds in N. San Francisco Bay (San Pablo Bay) at relatively few sites. Occurs</td>
<td>Moderate; suitable habitat is found in the marsh area north of the road. The nearest CNDDB occurrence is less than a mile away. Species was not observed during the surveys. The species may occur in the project area. However, the project will not affect the marsh habitat.</td>
<td></td>
</tr>
<tr>
<td>Swainson's Hawk</td>
<td><em>Buteo swainsoni</em></td>
<td>-/ST/-</td>
<td>Inhabit a wide variety of open habitats, ranging from prairie and shrub steppe to desert and intensive agricultural systems. In Central California about 85% of nests are within riparian forest or remnant riparian trees. Breeds late March to late August.</td>
<td>HP</td>
<td>High; one individual observed nesting and another individual flying overhead during a survey in the project area. Present on site.</td>
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<tr>
<td>Song sparrow (“Modesto” Population)</td>
<td><em>Melospiza melodia</em></td>
<td>-/-/SSC</td>
<td>Often found in emergent freshwater marshes dominated by tules (<em>Scirpus</em> spp.) and cattails as well as riparian willow (<em>Salix</em> spp.). Also nest in</td>
<td>HP</td>
<td>Moderate; potential habitat present with CNDDB occurrences in the project area and nearby but was not observed during surveys within the nesting period. Species may</td>
</tr>
<tr>
<td>Species</td>
<td>Habitats</td>
<td>Presence and Impacts</td>
<td></td>
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<td>-------------------------------</td>
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</tr>
<tr>
<td>Riparian brush rabbit</td>
<td><em>Sylvilagus bachmani riparius</em></td>
<td>Low; potential habitat present but was not observed during the surveys. The riparian habitat present is very small and offers at most a migration corridor. The nearest occurrence is 7.5 miles southeast of the project area. Species not expected to be present in the project area. However, the project will not affect the riparian habitat.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green sturgeon</td>
<td><em>Acipenser medirostris</em></td>
<td>High; suitable habitat present in the project area. No surveys were done since the species are presumed to be present. Project is not anticipated to adversely affect species within the project area during the prescribed in-water work windows (August 1 through October 31).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delta smelt</td>
<td><em>Hypomesus transpacificus</em></td>
<td>High; suitable habitat present in the project area. No surveys were done</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Middle River Bridge Roadway Realignment • 36
<table>
<thead>
<tr>
<th>Species</th>
<th>Scientific Name</th>
<th>Water Column</th>
<th>Potential Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delta smelt</td>
<td><em>Spirinchus thaleichytys</em></td>
<td>Open water</td>
<td>Project is not anticipated to adversely affect species within the project area during the prescribed in-water work windows (August 1 through October 31).</td>
</tr>
<tr>
<td>Longfin smelt</td>
<td><em>Spirinchus thaleichytys</em></td>
<td>Open water estuaries</td>
<td>Project is not anticipated to adversely affect species within the project area during the prescribed in-water work windows (August 1 through October 31).</td>
</tr>
<tr>
<td>Steelhead – Central Valley DPS</td>
<td><em>Oncorhynchus mykiss irideus</em></td>
<td>Below dams</td>
<td>Project is not anticipated to adversely affect species within the project area during the prescribed in-water work windows (August 1 through October 31).</td>
</tr>
<tr>
<td>Chinook salmon – Central Valley Spring0run ESU</td>
<td><em>Oncorhynchus tshawytscha</em></td>
<td>Fresh and saltwater</td>
<td>Project is not anticipated to adversely affect species within the project area during the prescribed in-water work windows (August 1 through October 31).</td>
</tr>
</tbody>
</table>
and juvenile rearing in rivers followed by migrating to saltwater to feed, grow, and mature before returning to freshwater to spawn. They enter the Sacramento River from late March through September. Adults hold in cool water habitats through the summer, then spawn in the fall from mid-August through early October. Spring run juveniles migrate soon after emergence as young-of-the-year or remain in freshwater and migrate as yearlings.

| Chinook salmon – Sacramento River Winter-run | *Onorhynchus tshawytscha* | FE/CH | This species lives in both fresh and saltwater. Chinook salmon have a relatively complex life history that includes spawning and juvenile rearing in rivers followed by migrating to saltwater to feed, grow, and mature before returning to freshwater to spawn. They pass under the Golden Gate Bridge from November through May and pass into the Sacramento River from December through early August. SR winter-run Chinook Salmon spawn in the upper mainstem Sacramento River from mid-April through August. Fry and smolts emigrate | HP | Medium; habitat conditions present in the AA. No occurrences recorded in the AA. |
downstream from July through March through the Sacramento River, reaching the Delta from September through June. This species lives in both fresh and saltwater. Chinook salmon have a relatively complex life history that includes spawning and juvenile rearing in rivers followed by migrating to saltwater to feed, grow, and mature before returning to freshwater to spawn. They pass under the Golden Gate Bridge from November through May, and pass into the Sacramento River from December through early August.

SR winter-run Chinook Salmon spawn in the upper mainstem Sacramento River from mid-April through August. Fry and smolts emigrate downstream from July through March through the Sacramento River, reaching the Delta from September through June.

**Absent [A]** - no habitat present and no further work needed.  **Habitat Present [HP]** - habitat is, or may be present. The species may be present.  **Present [P]** - the species is present.  **Critical Habitat [CH]** - project footprint is located within a designated critical habitat unit, but does not necessarily mean that appropriate habitat is present.
Status: Federal Endangered (FE); Federal Threatened (FT); Federal Proposed (FP, FPE, FPT); Federal Candidate (FC), State Candidate (SC); State Endangered (SE); State Threatened (ST); Fully Protected (FP); State Rare (SR); State Species of Special Concern (SSC); California Native Plant Society (CNPS), etc.
Appendix C List of Technical Studies and Preparers

Natural Environment Study – April 2018 – Harvey Tran, Biologist.


Visual Impacts Memorandum – April 2018 – Robyn Fong, Landscape Architect.

Air, Noise, and Water Quality Memorandum – April 2018 – Cris Timofet, Transportation Engineer.

Appendix D  Distribution List

State Clearinghouse
Office of Planning & Research
P.O. Box 3044
Sacramento, CA 95812

Brentwood Library
35 Oak Street
Brentwood, CA 94513

Stockton - Chavez Central Library
605 N El Dorado Street
Stockton, CA 95202
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Appendix E  Species List

United States Department of the Interior
FISH AND WILDLIFE SERVICE
San Francisco Bay-Delta Fish And Wildlife
659 Capitol Mall
Suite 8-300
Sacramento, CA 95814
Phone: (916) 930-5603 Fax: (916) 930-5654
http://kim.squires@fws.gov

In Reply Refer To:  September 21, 2018
Consultation Code: 08FBDT00-2018-SLI-0311
Event Code: 08FBDT00-2018-E-00690
Project Name: 10-IF460 San Joaquin Middle River Bridge Roadway Realignment

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.
A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species, and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:


Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to “request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action”.

This species list is provided by:

San Francisco Bay-Delta Fish And Wildlife
650 Capitol Mall
Suite 8-300
Sacramento, CA 95814
(916) 930-5603
Project Summary
Consultation Code: 08FBDT00-2018-SLI-0311
Event Code: 08FBDT00-2018-E-00690
Project Name: 10-1F460 San Joaquin Middle River Bridge Roadway Realignment
Project Type: TRANSPORTATION
Project Description: Dolphin structure repair work and road curve realignment on the east side.

Project Location:
Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/37.89160881571556N121.49180214064253W

Counties: San Joaquin, CA
Endangered Species Act Species

There is a total of 10 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. **NOAA Fisheries**, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

### Mammals

<table>
<thead>
<tr>
<th>NAME</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Riparian Brush Rabbit <em>Sylvilagus bachmani riparius</em></td>
<td>Endangered</td>
</tr>
<tr>
<td>No critical habitat has been designated for this species.</td>
<td></td>
</tr>
<tr>
<td>Species profile: <a href="https://ecos.fws.gov/ecp/species/6189">https://ecos.fws.gov/ecp/species/6189</a></td>
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</tr>
</tbody>
</table>

### Reptiles

<table>
<thead>
<tr>
<th>NAME</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Giant Garter Snake <em>Thamnophis gigas</em></td>
<td>Threatened</td>
</tr>
<tr>
<td>No critical habitat has been designated for this species.</td>
<td></td>
</tr>
<tr>
<td>Species profile: <a href="https://ecos.fws.gov/ecp/species/4482">https://ecos.fws.gov/ecp/species/4482</a></td>
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</tbody>
</table>
### Amphibians

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<thead>
<tr>
<th>NAME</th>
<th>STATUS</th>
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</thead>
<tbody>
<tr>
<td>California Red-legged Frog <em>Rana draytonii</em></td>
<td>Threatened</td>
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<tr>
<td>California Tiger Salamander <em>Ambystoma californiense</em></td>
<td>Threatened</td>
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### Fishes

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Delta Smelt <em>Hypomesus transpacificus</em></td>
<td>Threatened</td>
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### Insects

<table>
<thead>
<tr>
<th>NAME</th>
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<tbody>
<tr>
<td>San Bruno Elfin Butterfly <em>Calloprys mossii bayensis</em></td>
<td>Endangered</td>
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<tr>
<td>Valley Elderberry Longhorn Beetle <em>Desmocerus californicus dimorphus</em></td>
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### Crustaceans

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<tr>
<td>Vernal Pool Fairy Shrimp <em>Branchinecta lynchii</em></td>
<td>Threatened</td>
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<tr>
<td>Vernal Pool Tadpole Shrimp <em>Lepidurus packardi</em></td>
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**Flowering Plants**

<table>
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<tr>
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<tbody>
<tr>
<td>Large-flowered Fiddleneck <em>Amsinckia grandiflora</em></td>
<td>Endangered</td>
</tr>
<tr>
<td></td>
<td>There is final critical habitat for this species. Your location is outside the critical habitat.</td>
</tr>
<tr>
<td></td>
<td>Species profile: <a href="https://ecos.fws.gov/ecp/species/5558">https://ecos.fws.gov/ecp/species/5558</a></td>
</tr>
</tbody>
</table>

**Critical habitats**

There is 1 critical habitat wholly or partially within your project area under this office’s jurisdiction.

<table>
<thead>
<tr>
<th>NAME</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delta Smelt <em>Hypomesus transpacificus</em></td>
<td>Final</td>
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<td></td>
<td><a href="https://ecos.fws.gov/ecp/species/3214/crithab">https://ecos.fws.gov/ecp/species/3214/crithab</a></td>
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<tr>
<td>Species</td>
<td>Element Code</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>bristly sedge</td>
<td>PMCYPG32Y0</td>
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<tr>
<td><em>Carex comosa</em></td>
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<tr>
<td>burrowing owl</td>
<td>ABNSB13010</td>
</tr>
<tr>
<td><em>Artemisia filifolia</em></td>
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<tr>
<td>California black rail</td>
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<td><em>Lathraea serotina</em></td>
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<tr>
<td>Coastal and Valley Freshwater Marsh</td>
<td>CTTS2410CA</td>
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<td>Coastal and Valley Freshwater Marsh</td>
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<tr>
<td>Delta mudwort</td>
<td>PDS3R10030</td>
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<td><em>Limosella australis</em></td>
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<td>Delta smelt</td>
<td>AFCHB01540</td>
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<tr>
<td><em>Hypobuthus transpacificus</em></td>
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<td>Delta tule pea</td>
<td>PDBF2503D2</td>
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<td><em>Lathyrus japonica</em></td>
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<tr>
<td>giant gartersnake</td>
<td>ARAD03610</td>
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<tr>
<td><em>Thamnophis gigeos</em></td>
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<td>Igeln smelt</td>
<td>AFCHB03010</td>
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<td><em>Spinus thalassica</em></td>
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<td>Mason's ilaeopsis</td>
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<tr>
<td><em>Laeopis masonii</em></td>
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<tr>
<td>song sparrow (&quot;Modesto&quot; population)</td>
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<tr>
<td><em>Mesorops melodia</em></td>
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<td>steelhead - Central Valley DPS</td>
<td>AFCH42099K</td>
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<tr>
<td>Oncorhynchus mykiss l. p. 11</td>
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<tr>
<td>Suisun Marsh aster</td>
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<td><em>Sympiesorhynchus lactiflorum</em></td>
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<td>Swannom's hawk</td>
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<td><em>Bufo anfractu</em></td>
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<td>tricolored blackbird</td>
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<td><em>Agama tricolor</em></td>
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<td>valley elderberry longhorn beetle</td>
<td>ICDL48011</td>
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<td><em>Deinacridus californicus dromiphas</em></td>
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<td>western pond turtle</td>
<td>ARAAD0230</td>
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<td><em>Emys marmorata</em></td>
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<tr>
<td>wooly rose-mallow</td>
<td>PDMAL0H9R3</td>
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<td><em>Hibiscus lacinipetalus var. occidentalis</em></td>
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Record Count: 18
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<tr>
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<th>Lifeform</th>
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<th>CA Rank</th>
<th>State Rank</th>
<th>Global Rank</th>
<th>Photo Year</th>
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<tr>
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<td>May-Sep</td>
<td>2B.1</td>
<td>S2</td>
<td>G5</td>
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<td>Centromadia parryi ssp. rudis</td>
<td>Parry's rough tarplant</td>
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<td>S3</td>
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<td>S2</td>
<td>G5T2</td>
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</table>

Middle River Bridge Roadway Realignment • 54
**Lilaeopsis masonii**  
Mason's Lilaeopsis  
Apiaceae  
perennial  
rhizomatous  
herb  
Apr-Nov  
1B.1 S2 G2

**Symphyotrichum lenticulare**  
Suisun Marsh Aster  
Asteraceae  
perennial  
rhizomatous  
herb  
(Apr) May-Nov  
1B.2 S2 G2

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**Suggested Citation**


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**Contributors**

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The California Lichen Society  
California Natural Diversity Database  
The Jepson Flora Project  
The Consortium of California Herbaria  
CalPhotos

Questions and Comments  

rareplants@cnps.org

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Quad Name: Hoit
Quad Number: 37121-H4

**ESA Anadromous Fish**
- SONCC Coho ESU (T) -
- CCC Coho ESU (E) -
- CC Chinook Salmon ESU (T) -
- CVSR Chinook Salmon ESU (T) -
- SRWR Chinook Salmon ESU (E) -
- NC Steelhead DPS (T) -
- CCC Steelhead DPS (T) -
- SCCC Steelhead DPS (T) -
- SC Steelhead DPS (E) -
- CCV Steelhead DPS (T) - X
- Eulachon (T) -
- sDPS Green Sturgeon (T) - X

**ESA Anadromous Fish Critical Habitat**
- SONCC Coho Critical Habitat -
- CCC Coho Critical Habitat -
- CC Chinook Salmon Critical Habitat -
- CVSR Chinook Salmon Critical Habitat -
- SRWR Chinook Salmon Critical Habitat -
- NC Steelhead Critical Habitat -
- CCC Steelhead Critical Habitat -
- SCCC Steelhead Critical Habitat -
**ESA Pinnipeds**

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

**Essential Fish Habitat**

Coho EFH -
Chinook Salmon EFH - cross
Groundfish EFH - cross
Coastal Pelagics EFH -
Highly Migratory Species EFH -

**MMPA Species (See list at left)**

**ESA and MMPA Cetaceans/Pinnipeds**

See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans -
MMPA Pinnipeds -
SC Steelhead Critical Habitat
CCV Steelhead Critical Habitat - X
Eulachon Critical Habitat - 
sDPS Green Sturgeon Critical Habitat - X

**ESA Marine Invertebrates**

Range Black Abalone (E) - 
Range White Abalone (E) - 

**ESA Marine Invertebrates Critical Habitat**

Black Abalone Critical Habitat - 

**ESA Sea Turtles**

East Pacific Green Sea Turtle (T) - 
Olive Ridley Sea Turtle (T/E) - 
Leatherback Sea Turtle (E) - 
North Pacific Loggerhead Sea Turtle (E) - 

**ESA Whales**

Blue Whale (E) - 
Fin Whale (E) - 
Humpback Whale (E) - 
Southern Resident Killer Whale (E) - 
North Pacific Right Whale (E) - 
Sei Whale (E) - 
Sperm Whale (E) -
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Appendix F  Preliminary Design Layouts
Appendix G Required Consultation/Concurrence Documentation

National Marine Fisheries Service Letter of Concurrence

September 28, 2018  Refer to NMFS No: WCR-2018-10417

James P. Hecker
Interim Branch Chief
California Department of Transportation, District 10
P.O. Box 2048
Stockton, California 95201

Ref: Endangered Species Act Section 7(a)(2) Concurrence Letter and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the San Joaquin Middle River Bridge Roadway Realignment Project (Caltrans File No: 10-SF-SR-4-PM-4.1-4.9)

Dear Mr. Hecker:

On September 4, 2018, NOAA's National Marine Fisheries Service (NMFS) received your request for a written concurrence that the California Department of Transportation's (Caltrans)1 San Joaquin Middle River Bridge Roadway Realignment Project (Project) is not likely to adversely affect species listed as threatened or endangered or critical habitats designated under the Endangered Species Act (ESA). This response to your request was prepared by NMFS pursuant to section 7(a)(2) of the ESA, implementing regulations at 50 CFR 402, and agency guidance for preparation of letters of concurrence.

NMFS also reviewed the proposed action for potential effects on essential fish habitat (EFH) designated under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), including conservation measures and any determination made regarding the potential effects of the action. This review was pursuant to section 305(b) of the MSA, implementing regulations at 50 CFR 600.920, and agency guidance for use of the ESA consultation process to complete EFH consultation.

This letter underwent pre-dissemination review using standards for utility, integrity, and objectivity in compliance with applicable guidelines issued under the Data Quality Act (section 515 of the

1 Effective October 1, 2012, Caltrans will be acting as the lead agency as the Memorandum of Understanding (MOU) between the Federal Highway Administration (FHWA) and Caltrans pursuant to the Moving Ahead for Progress in the 21st Century Act (MAP-21). This law allows the Secretary of Transportation to assign, and Caltrans to assume, responsibility for the environmental review, consultation, or other actions required under any environmental law with respect to one or more highway projects within the state of California. The MOU is an extension of previous agreements between FHWA and Caltrans in 2007 and 2010, under a similar law. Therefore, Caltrans is considered the federal action agency for ESA consultations with NMFS for federally funded projects involving FHWA.
Treasury and General Government Appropriations Act for Fiscal Year 2001, Public Law 106-554). The concurrence letter will be available through NMFS’ Public Consultation Tracking System. A complete record of this consultation is on file at NMFS’ North Central Coast Office in Santa Rosa, California.

**Proposed Action and Action Area**

Caltrans proposes to realign the approach curve and widen shoulders of a section of State Route 4 (SR-4), from PM 4.1-4.9, in San Joaquin County, California. The Project is intended to improve safety along this section of SR-4 and reduce the number and severity of collisions and maintain structural integrity of the bridge. To facilitate the SR-4 realignment, Caltrans will need to replace and repair the dolphin structure at Pier 5 of the Middle River Bridge located at approximately PM 4.5. The proposed in-water actions at Pier 5 will require removing the 6 13-inch-in-diameter timber piles and replacing them with 6 13-inch-in-diameter polymeric piles. The existing piles are attached by wire rope to a center steel pile and are likely treated with creosote. Existing creosote piles will be immediately placed on a barge following removal. Piles will be driven approximately 40-feet deep within the streambed and will be attached to the existing center steel pile using wire rope and bolts. Recycled plastic lumber blocking will be fitted between piles for further reinforcement. The footprint of the new dolphin structure will be the same as the existing dolphin structure. Pile driving to repair the dolphin structure will occur within the active channel between August 1 and October 31 of either 2020 or 2021. All in-water work is expected to be completed within one month. Pile driving and removal activity will occur during daylight hours. Installation of the new piles will take a total of approximately 12 hours to complete, and will be conducted in short intervals over the course of the first few days of in-water work.

All in-water work will be conducted from a 40- by 120-foot-long barge anchored nearby. The barge will house a crane and vibratory hammer. Existing timber piles will be completely removed from the benthos with either a vibratory hammer, or a crane and clamp. If pile removal is unsuccessful (i.e., the pile breaks), the damaged piles will be removed to the mudline. Following removal, the timber piles will be immediately lifted out of the water and properly stored on the barge. The new polymeric piles will be installed with a vibratory hammer between sites where existing piles were previously located.

Caltrans proposes the following best management practices (BMPs) to avoid and minimize listed species and habitat from being exposed to construction related turbidity and contaminants. A detailed description of these and other less pertinent minimization measures can be found in the biological assessment for the Project (Caltrans 2018).

- environmental awareness training for construction personnel;
- environmental monitoring by qualified personnel;
- use of a turbidity curtain during pile installation and removal;
- storm water pollution prevention plan and a water pollution control plan;
- asphalt and concrete containment measures; and
- proper storage and disposal of construction waste.

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2 On the PCTS homepage (https://pcts.nms.noaa.gov/pcts-web/homepage.pets), use the following PCTS tracking number within the Quick Search column: WCR-2018-10417.
There are no interrelated or interdependent activities associated with this project.

The action area is located in a tidally influenced reach of the Middle River, approximately 14 river miles (RM) upstream of the confluence of the Middle and San Joaquin rivers. The San Joaquin River drains into San Francisco Bay approximately 20 RM downstream of the action area. The Middle River (at the project site) and San Joaquin River are part of the San Francisco Bay Delta Watershed (or, “Delta”). The Delta consists of several major waterways, including the Sacramento and San Joaquin Rivers and their tributaries. Where these two large rivers meet near Sacramento, a large inland Delta is formed where the river waters collect before passing through the Carquinez Strait into San Francisco Bay.

For the purposes of this consultation, NMFS considers the action area to include in-water areas that will be affected by pile driving and pile removal activities, extending to the points in which water quality and elevated sound levels generated by the proposed action are indistinguishable from ambient levels. The channel substrate of the action area is comprised of mud and silt. The eastern bank immediately upstream of the action area is developed with docks and piers. Middle River is inhabited by anadromous species that use the river for migration, resting, and rearing.

**Action Agency’s Effects Determination**

Caltrans has determined that the project may affect, but is not likely to adversely affect listed fish species and their designated critical habitat. The primary reasons Caltrans cited in making this determination were that the proposed work window will avoid or reduce the presence of listed species during in-water work, and their proposed construction methods and BMPs were designed to avoid or minimize disturbance to aquatic habitat and listed species.

Available information indicates the following listed species (Evolutionarily Significant Units [ESU], or Distinct Population Segments [DPS]), and critical habitats under the jurisdiction of NMFS may be affected by the proposed project:

- **Central Valley Spring-run Chinook salmon ESU (O. tshawytscha)**
  Threatened (70 FR 37160; June 28, 2005);
- **Sacramento River Winter-run Chinook salmon ESU (O. tshawytscha)**
  Endangered (70 FR 37160; June 28, 2005);
- **California Central Valley steelhead DPS (O. mykiss)**
  Threatened (71 FR 834, January 5, 2006)
  Critical Habitat (70 FR 52488; September 2, 2005); and
- **North American green sturgeon southern DPS (Acipenser medirostris)**
  Threatened (71 FR 17757; April 7, 2006)
  Critical habitat (74 FR 52300; October 9, 2009).

The life history of steelhead is summarized in Busby et al. (1996) and Chinook salmon life history is summarized in Myers et al. (1998). California Central Valley steelhead, Sacramento River Winter-run Chinook salmon, and Central Valley Spring-run Chinook salmon use the Delta, including Middle River, primarily as a migration corridor while en route to the Pacific Ocean to rear as juveniles, or to upstream areas to spawn as adults. Adult Winter-run Chinook salmon may be
present in the Delta from December through July, and adult Spring-run Chinook may be present in late January and early February. Juvenile Chinook may be present in the Delta during the late winter and spring months, with peak presence in April. Based on the August 1 through October 31 in-water work window, Chinook are not expected to be present in the action area. Juvenile steelhead generally migrate to the ocean in the spring and early summer, with peak migration through the Delta in March through April; the in-water work window avoids overlap with juveniles in the action area. Adult steelhead have the potential to be in the Delta from August through April, and therefore, adult steelhead may be migrating through the action area during the proposed work window.

The life history of threatened green sturgeon in California is summarized in Adams et al. (2002) and NMFS (2018). Green sturgeon are anadromous, making migrations to the Sacramento River in the spring, with peaks in April-June (Moyle et al. 1995). Spawning occurs within the upper reaches of the Sacramento River, and eggs are broadcast-spawned over large cobble substrate, where they settle into the spaces between the cobbles. Juvenile green sturgeon may be present year round as they utilize freshwater habitats throughout their first years of growth before migrating to the ocean. Adults are most likely to be present in the winter and early spring as they move through the Delta towards their spawning grounds in the upper Sacramento River watershed. Juvenile green sturgeon may use the action area as migratory, resting, or rearing habitat, and may be present year round within the action area.

The designations of critical habitat for the above species use the term primary constituent element (PCE) or essential features. The new critical habitat regulations (81 FR 7414) replace this term with physical or biological features (PBFs). This shift in terminology does not change the approach used in conducting our analysis, whether the original designation identified primary constituent elements, physical or biological features, or essential features. In this letter of concurrence, we use the term PBF to mean PCE or essential feature, as appropriate for the specific critical habitat.

The PBFs in the action area essential for the conservation of California Central Valley steelhead are water quality, food resources, and freshwater migration corridors. For green sturgeon, the PBFs of designated critical habitat in estuarine areas include food resources, water flow, water quality, migratory corridors, and water depth.

**Magnuson-Stevens Fishery Conservation and Management Act**

Regarding EFH, Caltrans has determined that the proposed project may adversely affect EFH, but adverse effects are expected to be short-term and localized. The project area is located within an area identified as EFH for various life stages of fish species managed within the Pacific Coast Salmon Fishery Management Plan (FMP), the Pacific Groundfish FMP, and the Coastal Pelagic FMP. The action area is also located within an area designated as Habitat Areas of Particular Concern (HAPC) for various federally-managed fish species within the Pacific Coast Salmon FMP and Pacific Groundfish. HAPC are described in the regulations as subsets of EFH that are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area. Designated HAPC are not afforded any additional regulatory protection under MSA; however, federal projects with potential adverse impacts to HAPC are more carefully scrutinized during the consultation process. As defined in the Pacific Coast Salmon and Pacific Groundfish FMPs, Middle River, including the action area, is identified as estuary HAPC.
Consultation History

By email dated July 23, 2018, Caltrans transmitted the biological assessment for the Project and requested an informal consultation. On July 25, 2018, the applicant modified their determinations and requested a formal consultation with NMFS. NMFS completed a review of the application package and determined that there was insufficient information to initiate consultation. NMFS sent Caltrans an insufficiency letter on August 7, 2018, requesting additional information on the proposed action, action area, construction methods, and recommended Caltrans initiate an EFH consultation. Additionally, NMFS suggested that Caltrans reconsider their determination that the project is likely to adversely affect species and habitat. Between August and September 2018, Caltrans and NMFS staff spoke by phone on several occasions to discuss project details. By email on September 4, 2018, the Caltrans provided the information requested in our August 7, 2018 letter. Additionally, Caltrans changed their determination to “may affect, but is not likely to adversely affect” and requested an informal consultation, and a concurrent EFH consultation. On September 10, 2018, NMFS recommended Caltrans completely remove the existing creosote-treated timber piles, and Caltrans agreed to this recommendation. Caltrans sent a revised project description to NMFS on September 20, 2018, confirming this. On September 24, 2018, we notified Caltrans via email that we had sufficient information to initiate consultation on September 20, 2018.

ENDANGERED SPECIES ACT

Effects of the Action

Under the ESA, “effects of the action” means the direct and indirect effects of an action on the listed species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action (50 CFR 402.02). The applicable standard to find that a proposed action is not likely to adversely affect listed species or critical habitat is that all of the effects of the action are expected to be discountable, insignificant, or completely beneficial. Beneficial effects are contemporaneous positive effects without any adverse effects to the species or critical habitat. Insignificant effects relate to the size of the impact and should never reach the scale where take occurs. Discountable effects are those extremely unlikely to occur.

The effects of the proposed action are reasonably likely to include: 1) increased levels of underwater sound; 2) degradation of water quality; and 3) disturbance to benthic habitat.

Contaminants. Construction actions performed near water have the potential to introduce contaminants into the water. Contaminants that may be introduced to surface waters during Project construction include concrete, hydrocarbons, and similar substances that could be inadvertently released during near-water activities. If concrete used during construction is not adequately contained and inadvertently enters the Middle River prior to curbing and drying, the pH of the receiving waters can be elevated and possibly result in aquatic life/fish kills. Similarly, spills from construction equipment can contaminate receiving waters and result in aquatic life/fish kills. However, the proposed project incorporates BMPs to prevent and contain spills if they happen (e.g., storm water pollution prevention plan, and maintenance of containment equipment within the site and on construction equipment). These BMPs are expected to effectively prevent the introduction of oils and similar substances into Middle River during the roadway realignment and shoulder widening of SR-4. Similarly, the proposed project includes design elements, practices, and measures to prevent the introduction of concrete into the waters of Middle River. It is expected that
these measures will be implemented and are effective in preventing discharges of contaminants into Middle River. Thus, the potential for the Project to introduce contaminants into the waters of Middle River and result in effects to critical habitat or species is expected to be insignificant.

Underwater Sound. Caltrans proposes to use a vibratory hammer to install the new polymeric piles. Vibratory hammers generate lower sound levels and different sound wave forms that are less harmful than impact hammers. Based on hydroacoustic data collected previously from projects using vibratory hammers to install piles (ICF Jones and Stokes, and Illingworth and Rodkin, Inc. 2009), sound pressure levels generated by this project's installation of polymeric piles will not present a risk of physical injury or mortality to green sturgeon or steelhead. Pile driving activity will occur during the daylight hours of the in-water work window, when listed steelhead are least likely to be present in the action area. If present in the action area, pile driving activities could result in noise that may startle anadromous species and result in temporary dispersion from the action area. If anadromous species were to react behaviorally to the sound produced by construction activities, adequate depths and area within the open waters of adjacent Middle River, both up and downstream of the action area, are expected to provide sufficient area to disperse. Thus, the effects of underwater sound levels associated with pile driving activities are expected to be insignificant.

Suspended Sediment. Pile driving activity is reasonably expected to result in increased levels of turbidity within the action area. High suspended sediment concentrations can reduce dissolved oxygen in the water column, result in reduced respiratory functions, reduce tolerance to diseases, and can also cause fish mortality (Sigler et al. 1984, Berg and Northcote 1985, Gregory and Northcote 1993, Velagic 1995, Waters 1995). For fish exposed to high concentrations of suspended sediment, normal feeding behavior and feeding efficiency may be disrupted (Cordone and Kelley 1961, Berg and Northcote 1985), growth rates may be reduced (Crouse et al. 1981), and plasma cortisol levels may be increased (Servizzi and Martens 1992); indicating the potential for increased stress and impaired physiological condition. However, increased suspended sediment levels anticipated to result during pile removal and installation are expected to be short-term, localized, and considerably lower than the thresholds commonly cited as the cause of these possible behavioral and physical impacts. Furthermore, the action area is subject to tidal currents and elevated levels of turbidity are expected to quickly disperse from the project area with tidal circulation. Following the completion of in-water activities, it is expected that increased sediment concentrations will fully dissipate and return to pre-project conditions. Thus, effects to critical habitat and anadromous species resulting from increased suspended sediment concentrations are expected to be insignificant.

Benthic Fill. Construction activities that result in fill within soft-bottom sediments have the potential to injure, kill, or reduce benthic aquatic macroinvertebrates densities (Cushman 1985, Gilkinson et al. 2005, Reish 1961). Fill displaces soft bottom sediments and reduces habitat available for benthic macroinvertebrates. Reduced benthic macroinvertebrate densities has the potential to impair critical habitat by reducing the forage prey base. However, once construction actions cease, recolonization of disturbed areas by macroinvertebrates typically occurs within about two months (Cushman 1985, Thomas 1985, Harvey 1986, Gilkinson et al. 2005). Although a loss of benthic invertebrates is anticipated during construction, the effects on the forage prey base for steelhead and green sturgeon are expected to be insignificant because the reductions in prey will be temporary and limited to a relatively small area. Thus, NMFS expects that effects to designated critical habitat associated with the temporary loss of benthic macroinvertebrates from fill will be
insignificant. Furthermore, removal of existing piles will remove approximately 42.25 square feet of fill, and because new piles are identical in diameter, installation of new piles will result in benthic fill of the same amount; resulting in no net loss of benthic habitat.

**Creosote Pile Removal.** The removal of existing creosote-treated timber piles will eliminate an ongoing source of contamination. Creosote is a complex chemical mixture, up to 80 percent of which is comprised of polycyclic aromatic hydrocarbons (PAH). PAH is a chemical compound that is acutely toxic to aquatic life and can leach from creosote-treated wood into the environment. PAHs are known to cause cancer, reproductive anomalies, and immune dysfunction in fishes. The removal of creosote from Middle River is expected to improve PBFs of steelhead and green sturgeon critical habitat in the action area.

**Conclusion**

Based on this analysis, NMFS concurs with Caltrans that the proposed action is not likely to adversely affect the subject listed species and designated critical habitats.

**Reinitiation of Consultation**

Reinitiation of consultation is required and shall be requested by Caltrans or by NMFS, where discretionary Federal involvement or control over the action has been retained or is authorized by law and (1) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (2) the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this concurrence letter; or if (3) a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR 402.16). This concludes the ESA portion of this consultation.

**MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT**

Under the MSA, this consultation is intended to promote the protection, conservation and enhancement of EFH as necessary to support sustainable fisheries and the managed species’ contribution to a healthy ecosystem. For the purposes of the MSA, EFH means “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity”, and includes the associated physical, chemical, and biological properties that are used by fish (50 CFR 600.10), and “adverse effect” means any impact which reduces either the quality or quantity of EFH (50 CFR 600.910(a)). Adverse effects may include direct, indirect, site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

NMFS determined that the proposed action would adversely affect EFH from pile driving activities. Adverse effects include increased levels of underwater sound, degradation of water quality, and disturbance to benthic habitat. These effects are analyzed in the ESA section of this letter. This project includes best management practices and minimization measures described above that are anticipated to avoid and minimize potential impacts to EFH. In addition, the effects described above are short-term and localized, therefore, NMFS has no practical EFH Conservation Recommendations to offer at this time. Caltrans must reinitiate EFH consultation with NMFS if the proposed action is substantially revised in a way that may adversely affect EFH, or if new information becomes available that affects the basis for NMFS’ EFH conservation recommendations (50 CFR 600.920(l)). This concludes the MSA portion of this consultation.
Please direct questions regarding this letter to Elena Meza, North Central Coast Office in Santa Rosa, California at (707) 375-6068, or via email at elena.meza@noaa.gov.

Sincerely,

[Signature]

Barry A. Thom
Regional Administrator

cc: Harvey Tran, Caltrans, Stockton, CA
Copy to File ARN 151422WCR2018S009460
Copy to Chron File

LITERATURE CITED


California Department of Transportation. 2018. San Joaquin Middle River Bridge Roadway Realignment Project Biological Assessment. California Department of Transportation, District 10 Stockton, CA.


FEDERAL REGISTER NOTICES CITED


In reply refer to:
08FBDT00-2018-I-0320

Mr. Ben Broyles, Branch Chief
Northern San Joaquin Valley Environmental Branch
California Department of Transportation, District 10
P.O. Box 2048
Stockton, CA 95201

Subject: Informal Consultation on the San Joaquin Middle River Bridge Roadway Project, San Joaquin County, California.

Dear Mr. Broyles:

This letter is in response to the California Department of Transportation’s (Caltrans) July 17, 2018, letter requesting to initiate informal consultation with the U.S. Fish and Wildlife Service (Service) on the San Joaquin Middle River Bridge Roadway Project (project) in San Joaquin County, California. Caltrans determined that the project may affect the threatened giant garter snake (Thamnophis gigas) (GGS) or the threatened delta smelt (Hypomesus transpacificus) and its designated critical habitat. This response is provided under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.) (Act), and in accordance with the implementing regulations pertaining to interagency cooperation (50 CFR 402).

In reviewing this project, the Service has relied upon: (1) Caltrans’ July 17, 2018, letter requesting consultation; (2) the July 2018 San Joaquin Middle River Bridge Roadway Realignment Project Biological Assessment; (3) additional email and telephone correspondence between Caltrans and the Service; and (4) other information available to the Service.

Caltrans is proposing to realign the existing tight curve and enhance the sight distance at the east end of the bridge for the westbound and eastbound traffic, upgrade the existing safety devices, and repair the dolphin structure of the bridge. Work at the road alignment will require ground disturbance, including clearing, removal of existing pavement and concrete, construction of new pavement and concrete curb and gutter, new culvert installation, major grading and excavation. Fill will be imported in to raise the height of the new roadway to match the existing roadway. Fill will also be placed into a section of agriculture ditch on the east side of the project. Dewatering of the agricultural ditch will occur before placement of the fill and will consist of the construction of a sandbag cofferdam to stop the water flow and a pump to remove the water.
Caltrans may construct a ponding basin in the area between the existing roadway and the future road in order to retain runoff on-site.

Caltrans will construct end block corners at the corners of the bridge, attach bridge approach rails to protect corners, close gaps with Midwest Guardrail System (MGS), and replace metal beam guardrail with MGS. Caltrans may need to reconstruct concrete barrier at the northeast corner. Additional street lighting will need to be relocated and installed and traffic signs and flashing Beacons will need to be upgraded and installed. Caltrans will need to trench to install conduit in the roadway shoulder area to provide power for the flashing Beacons. Caltrans will also need to do remedial work to mitigate for project impacts on properties outside Caltrans Right-of-Way (ROW). This will involve removing some buildings on the existing farm, realigning and paving existing driveways, realigning the agricultural ditch outside the ROW, and relocating the leach lines for the septic system for the existing restaurant.

Project activities will also include some in-water work for repairing the damaged dolphin structure at Pier 5 and will involve underwater pile driving. The six existing damaged timber dolphin piles will be cut and removed to the mudline. The existing steel center pile will be retained. Six new 75-foot piles will be installed at least 15-20 feet deep into the streambed around the existing center steel pile in between the existing cut-off timber piles using a vibratory pile driver. The size of the dolphin structure will not change.

Construction work is scheduled to begin in May and is estimated to last at least 350 working days. In-water pile driving is expected to last one month and is proposed to occur between August 1 and October 31 to avoid effects to special status fish species.

The Service has reviewed the proposed project and its effects to the GGS. The project occurs within the GGS historic range and there is suitable aquatic and upland habitat nearby that could support GGS. The population status of GGS in and around the project area is largely unknown. A large portion of the Sacramento-San Joaquin Delta area has not been comprehensively surveyed for GGS, primarily because the majority of land is privately owned and sightings within the last 10 years have been random and sporadic. Several recent occurrences of GGS have been documented in the western Delta on Jersey, Bradford, Sherman, and Twitchell Islands between 2015 and 2017. No GGS have been documented within the project area and the nearest known occurrence was located approximately four miles north along the western edge of Upper Jones Tract in Middle River. Although the project is surrounded by large tracts of suitable wetland and upland habitats for GGS, the project area itself occurs almost exclusively in a developed portion and frequently traveled roadway through the Delta. Conditions within the project area effectively deters and/or discourages GGS from entering. Buildings, consistent vehicle traffic, human development and activity are immediately adjacent to the roadway and bridge. A small marina is located in the river next to the roadway and bridge and beyond that, are small patches of riparian habitat that support known mammalian predators of GGS such as raccoon, coyote, mink, and otter. The riparian habitat also supports herons and raptors that could also prey on GGS. A small portion of the project proposes to fill a nearby agricultural ditch. This action is very discrete and due to its proximity to the road, the bridge and small riparian areas, GGS would likely avoid this small area of disturbance and move into the larger nearby wetland or upland areas which allow substantial room for avoidance. Caltrans is also proposing conservation measures that further reduce the likelihood of GGS from occurring in the project area like exclusion fencing and...
draining of nearby agricultural ditches 15 days prior to construction. Additionally, Caltrans is proposing to employ a Service-approved biologist to conduct pre-construction and general construction surveys throughout the project and to conduct worker awareness training that further reduce the likelihood of adverse effects to negligible or discountable. The Service concurs with the determination that the project is not likely to adversely affect the GGS based on the poor habitat conditions directly within the project area, the presence of consistent vehicle traffic and other human activity, presence of adjacent riparian habitat that could support predators, and Caltrans' proposed conservation measures.

The Service has reviewed the proposed project and its effects to the delta smelt and its designated critical habitat. Caltrans proposes to conduct in-water pile driving work during the recommended August 1-October 31 work window. Delta smelt are unlikely to be present in Middle River at the project location during the proposed work window as water temperatures will likely be too hot and water quality too clear to support delta smelt. A small amount of substrate will be temporarily affected but will be backfilled and is anticipated to return to pre-project conditions after backfilling. The Service concurs with Caltrans' determination that the proposed project is not likely to adversely affect the delta smelt.

In designating critical habitat for the delta smelt, the Service identified the following Primary Constituent Elements essential to the conservation of the species and how the project may or may not affect each Primary Constituent Element. Primary Constituent Element 1 is physical habitat for spawning. In water work such as pile driving actions are very discrete and localized around the existing bridge structure. Reduction in overall spawning substrate is not expected to occur. Primary Constituent Element 2 is suitable water quality for all life stages. Middle River provides habitat for this Primary Constituent Element. During the proposed project, water in the action area may be affected through the creation of small sediment plumes (i.e., turbidity) during the pile driving and extraction and may be exposed to contaminants. The sediment plumes are temporary in nature and typically dissipate within the same day of activity. The sediment plumes are discountable in relation to the size of the Delta and temporary, and would not be expected to affect the overall water quality of the Delta ecosystem. Primary Constituent Element 3 is river flow. The proposed project does not permanently divert water out of or away from the surrounding aquatic environment and therefore is not expected to diminish river flow. Primary Constituent Element 4 is salinity for rearing. The project does not divert water or change the flow regimes of Middle River that would affect salinity. Based on the above analysis, the Service concurs with Caltrans' determination that the proposed project is not likely to adversely affect the delta smelt's designated critical habitat.

Unless new information reveals effects of the project that may affect federally listed species or critical habitat in a manner not identified to date, or if a new species is listed or critical habitat is designated that may be affected by the proposed action, no further action pursuant to the Act is necessary.
This letter concludes informal consultation on the San Joaquin Middle River Bridge Roadway Project. Please address any questions or concerns regarding this response to Brian Hansen, Fish and Wildlife Biologist, at Brian_Hansen@fws.gov or (916) 930-5653 or Kim Squires, Section 7 Division Chief, at Kim_Squires@fws.gov.

Sincerely,

[Signature]

Jana Alfonso
Assistant Field Supervisor
State Historic Preservation Office Letter of Concurrence

DEPARTMENT OF PARKS AND RECREATION
OFFICE OF HISTORIC PRESERVATION
Julianne Polanco, State Historic Preservation Officer
1725 23rd Street, Suite 100, Sacramento, CA 95816-7100
Telephone: (016) 445-7693 FAX: (016) 445-7653
cahpo.ohp@parks.ca.gov www.ohp.parks.ca.gov

July 26, 2018
VIA EMAIL

In reply refer to: FHWA_2018_0621_001

Mr. Ben Broyles, Senior
Northern San Joaquin Valley
Environmental Branch
Caltrans
PO Box 2048
Stockton, CA 95201

Subject: Determination of Eligibility for the Proposed Middle River Bridge-Curve Alignment and Shoulder Widening Project, San Joaquin County, CA

Dear Mr. Broyles:

Caltrans is initiating consultation for the above project in accordance with the January 1, 2014 First Amended Programmatic Agreement Among the Federal Highway Administration (FHWA), the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California (PA). As part of your documentation, Caltrans submitted a Historic Property Survey Report (HPSR), Historical Resource Evaluation Report (HRER), and an Archaeological Survey Report (ASR) for the project.

Caltrans proposes to bring the State Highway into compliance with safety regulations with design elements and upgrading safety devices under the auspices of the State Highway Operation and Protection Program. The project area limits begin at PM 4.1 on State Route 4, of the west side of the bridge and extend across the bridge eastward on SR 4 to PM 4.9 in San Joaquin County.

In accordance with Stipulation VIII C.6 of the PA, Caltrans is requesting concurrence that the complex located at 14210 West State Highway 4 is not eligible for the National Register of Historic Places (NRHP). Based on my review of the submitted documentation, I concur.
If you have any questions, please contact Natalie Lindquist of my staff at (916) 445-7014 with e-mail at natalie.lindquist@parks.ca.gov or Alicia Perez at (916) 445-7020 with e-mail at alicia.perez@parks.ca.gov.

Sincerely,

Julianne Polanco
State Historic Preservation Officer
Appendix H Comments and Responses

Response to Comment from Regional Water Quality Control Board

27 August 2018

Jaycee Azevedo
California Department of Transportation
1976 East Dr. Martin Luther King Jr. Boulevard
Stockton, CA 95205

CERTIFIED MAIL
91 7189 6991 7039 6933 7331

Central Valley Regional Water Quality Control Board

COMMENTS TO REQUEST FOR REVIEW FOR THE MITIGATED NEGATIVE DECLARATION, MIDDLE RIVER BRIDGE ROADWAY REALIGNMENT PROJECT, SCH# 201802014, SAN JOAQUIN COUNTY

Pursuant to the State Clearinghouse’s 6 August 2018 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the Request for Review for the Mitigated Negative Declaration for the Middle River Bridge Roadway Realignment Project, located in San Joaquin County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

I. Regulatory Setting

Basin Plan
The Central Valley Water Board is required to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act. Each Basin Plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives with the Basin Plans. Federal regulations require each state to adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. In California, the beneficial uses, water quality objectives, and the Antidegradation Policy are the State’s water quality standards. Water quality standards are also contained in the National Toxics Rule, 40 CFR Section 131.39, and the California Toxics Rule, 40 CFR Section 131.38.

The Basin Plan is subject to modification as necessary, considering applicable laws, policies, technologies, water quality conditions and priorities. The original Basin Plans were adopted in 1975, and have been updated and revised periodically as required, using Basin Plan amendments. Once the Central Valley Water Board has adopted a Basin Plan amendment in noticed public hearings, it must be approved by the State Water Resources Control Board (State Water Board), Office of Administrative Law (OAL) and in some cases,
the United States Environmental Protection Agency (USEPA). Basin Plan amendments only become effective after they have been approved by the OAL and in some cases, the USEPA. Every three (3) years, a review of the Basin Plan is completed that assesses the appropriateness of existing standards and evaluates and prioritizes Basin Planning issues.

For more information on the Water Quality Control Plan for the Sacramento and San Joaquin River Basins, please visit our website: http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/.

Antidegradation Considerations

All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 88-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The Antidegradation Policy is available on page IV-15.01 at: http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacjrv.pdf

In part it states:

*Any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent a condition of pollution or nuisance from occurring, but also to maintain the highest water quality possible consistent with the maximum benefit to the people of the State.*

*This information must be presented as an analysis of the impacts and potential impacts of the discharge on water quality, as measured by background concentrations and applicable water quality objectives.*

The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements (WDRs) permitting processes. The environmental review document should evaluate potential impacts to both surface and groundwater quality.

II. Permitting Requirements

**Construction Storm Water General Permit**

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction Activities (Construction General Permit), Construction General Permit Order No. 2009-009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan.
Middle River Bridge Roadway Realignment Project
San Joaquin County

(SWPPP).

For more information on the Construction General Permit, visit the State Water Resources Control Board website at: http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml.

**Phase I and II Municipal Separate Storm Sewer System (MS4) Permits**

The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at: http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/.

For more information on the Phase II MS4 permit and who it applies to, visit the State Water Resources Control Board at: http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml

**Industrial Storm Water General Permit**

Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 2014-0057-DWQ.

For more information on the Industrial Storm Water General Permit, visit the Central Valley Water Board website at: http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/industrial_general_permits/index.shtml.

**Clean Water Act Section 404 Permit**

If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACOE). If a Section 404 permit is required by the USACOE, the Central Valley Water Board will review the permit application to ensure

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1 Municipal Permit = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.
that discharge will not violate water quality standards. If the project requires surface water
drainage realignment, the applicant is advised to contact the Department of Fish and Game
for information on Streambed Alteration Permit requirements.

If you have any questions regarding the Clean Water Act Section 404 permits, please
contact the Regulatory Division of the Sacramento District of USACE at (916) 557-5250.

**Clean Water Act Section 401 Permit – Water Quality Certification**

If an USACE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of
Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or
any other federal permit (e.g., Section 10 of the Rivers and Harbors Act or Section 9 from
the United States Coast Guard), is required for this project due to the disturbance of waters
of the United States (such as streams and wetlands), then a Water Quality Certification
must be obtained from the Central Valley Water Board prior to initiation of project activities.
There are no waivers for 401 Water Quality Certifications.

**Waste Discharge Requirements – Discharges to Waters of the State**

If USACE determines that only non-jurisdictional waters of the State (i.e., “non-federal”
waters of the State) are present in the proposed project area, the proposed project may
require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley
Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to
all waters of the State, including all wetlands and other waters of the State including, but
not limited to, isolated wetlands, are subject to State regulation.

For more information on the Water Quality Certification and WDR processes, visit the
Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/help/business_help/permit2.shtml

**Dewatering Permit**

If the proposed project includes construction or groundwater dewatering to be discharged
to land, the proponent may apply for coverage under State Water Board General Water
Quality Order (Low Risk General Order) 2003-0003 or the Central Valley Water Board’s
Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Risk
Waiver)
R5-2013-0145. Small temporary construction dewatering projects are projects that
discharge groundwater to land from excavation activities or dewatering of underground
utility vaults. Dischargers seeking coverage under the General Order or Waiver must file a
Notice of Intent with the Central Valley Water Board prior to beginning discharge.

For more information regarding the Low Risk General Order and the application process,
visit the Central Valley Water Board websites at:

qc2003-0003.pdf
For more information regarding the Low Risk Waiver and the application process, visit the Central Valley Water Board website at:


**Regulatory Compliance for Commercially Irrigated Agriculture**

If the property will be used for commercial irrigated agricultural, the discharger will be required to obtain regulatory coverage under the Irrigated Lands Regulatory Program. There are two options to comply:

1. **Obtain Coverage Under a Coalition Group.** Join the local Coalition Group that supports land owners with the implementation of the Irrigated Lands Regulatory Program. The Coalition Group conducts water quality monitoring and reporting to the Central Valley Water Board on behalf of its growers. The Coalition Groups charge an annual membership fee, which varies by Coalition Group. To find the Coalition Group in your area, visit the Central Valley Water Board’s website at: http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/apply_coalition_group/index.shtml or contact water board staff at (916) 464-4611 or via email at IrrLands@waterboards.ca.gov.

2. **Obtain Coverage Under the General Waste Discharge Requirements for Individual Growers, General Order R5-2013-0100.** Dischargers not participating in a third-party group (Coalition) are regulated individually. Depending on the specific site conditions, growers may be required to monitor runoff from their property, install monitoring wells, and submit a notice of intent, farm plan, and other action plans regarding their actions to comply with their General Order. Yearly costs would include State administrative fees (for example, annual fees for farm sizes from 10-100 acres are currently $1,084 + $6.70/Acre); the cost to prepare annual monitoring reports; and water quality monitoring costs. To enroll as an Individual Discharger under the Irrigated Lands Regulatory Program, call the Central Valley Water Board phone line at (916) 464-4611 or e-mail board staff at IrrLands@waterboards.ca.gov.

**Low or Limited Threat General NPDES Permit**

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for Dewatering and Other Low Threat Discharges to Surface Waters (Low Threat General Order) or the General Order for Limited Threat Discharges of Treated/Untreated Groundwater from Cleanup Sites, Wastewater from Superchlorination Projects, and Other Limited Threat Wastewaters to Surface Water.
(Limited Threat General Order). A complete application must be submitted to the Central Valley Water Board to obtain coverage under these General NPDES permits.

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at: http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/5-2013-0074.pdf

For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at: http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/5-2013-0073.pdf

**NPDES Permit**

If the proposed project discharges waste that could affect the quality of surface waters of the State, other than into a community sewer system, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. A complete Report of Waste Discharge must be submitted with the Central Valley Water Board to obtain a NPDES Permit.

For more information regarding the NPDES Permit and the application process, visit the Central Valley Water Board website at: http://www.waterboards.ca.gov/centralvalley/help/business_help/permit3.shtml

If you have questions regarding these comments, please contact me at (916) 464-4644 or Stephanie.Tadlock@waterboards.ca.gov.

Stephanie Tadlock
Senior Environmental Scientist

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento
Response to Comment from Regional Water Quality Control Board

This project is anticipated to create soil disturbances of less than one acre. Therefore, Caltrans is not required to obtain coverage under the Construction General Permit (CGP). Instead, discharges of storm water runoff from the construction sites will be covered under Caltrans’ Statewide NPDES Permit. The project will not need to formulate a CGP Storm Water Pollution Prevention Plan, and will instead be required to formulate a Caltrans Water Pollution Control Program.

In addition, as previously mentioned in the document on page 10, Caltrans will apply for a Clean Water Act Section 404 permit from the United States Army Corps of Engineers and Clean Water Act Section 401 Permit – Water Quality Certification from the Regional Water Quality Control Board, which will be obtained prior to construction, during the design phase of the project.