INITIAL STUDY/
MITIGATED NEGATIVE DECLARATION

WILLOW CREEK BRIDGE ON CARBONDALE ROAD REPLACEMENT PROJECT
AMADOR COUNTY, CALIFORNIA
CALTRANS DISTRICT 10
FEDERAL AID NUMBER BRLO-5926(055)

LSA
January 2018
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DRAFT

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FEDERAL AID NUMBER BRLO-5926(055)

Submitted to:
Amador County Department of Transportation and Public Works
810 Court Street
Jackson, CA 94642

Prepared by:
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Project No. MKT1406

January 2018
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<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACAPCD</td>
<td>Amador County Air Pollution Control District</td>
</tr>
<tr>
<td>ACM</td>
<td>asbestos-containing materials</td>
</tr>
<tr>
<td>ACOE</td>
<td>United States Army Corps of Engineers</td>
</tr>
<tr>
<td>AFPD</td>
<td>Amador Fire Protection District</td>
</tr>
<tr>
<td>A-G</td>
<td>Agricultural-General designation in the Amador County General Plan</td>
</tr>
<tr>
<td>AG</td>
<td>Amador County General Plan Exclusive Agricultural District zoning</td>
</tr>
<tr>
<td>AAHSTO</td>
<td>American Association of State Highway and Transportation Officials</td>
</tr>
<tr>
<td>APE</td>
<td>Area of Potential Effects</td>
</tr>
<tr>
<td>APN</td>
<td>Assessor’s Parcel Number</td>
</tr>
<tr>
<td>ASR</td>
<td>Archaeological Survey Report</td>
</tr>
<tr>
<td>BMPs</td>
<td>best management practices</td>
</tr>
<tr>
<td>BSA</td>
<td>Biological Study Area</td>
</tr>
<tr>
<td>Buena Vista Rancheria</td>
<td>Buena Vista Rancheria of Me-wuk Indians</td>
</tr>
<tr>
<td>Caltrans</td>
<td>California Department of Transportation</td>
</tr>
<tr>
<td>CDFW</td>
<td>California Department of Fish and Wildlife</td>
</tr>
<tr>
<td>CE</td>
<td>Categorical Exclusion</td>
</tr>
<tr>
<td>CEQA</td>
<td>California Environmental Quality Act</td>
</tr>
<tr>
<td>CFGC</td>
<td>California Fish and Game Code</td>
</tr>
<tr>
<td>CHP</td>
<td>California Highway Patrol</td>
</tr>
<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
</tr>
<tr>
<td>CPEAP</td>
<td>Construction Period Emergency Access Plan</td>
</tr>
<tr>
<td>CRLF</td>
<td>California red-legged frog</td>
</tr>
<tr>
<td>Acronym</td>
<td>Full Form</td>
</tr>
<tr>
<td>----------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>CTS</td>
<td>California tiger salamander</td>
</tr>
<tr>
<td>CWA</td>
<td>Clean Water Act</td>
</tr>
<tr>
<td>dB</td>
<td>decibel</td>
</tr>
<tr>
<td>dBA</td>
<td>a-weighted decibel</td>
</tr>
<tr>
<td>DPP</td>
<td>Design Pollution Prevention</td>
</tr>
<tr>
<td>EIR</td>
<td>Environmental Impact Report</td>
</tr>
<tr>
<td>ESA</td>
<td>Environmentally Sensitive Area</td>
</tr>
<tr>
<td>FMMP</td>
<td>California Department of Conservation Farmland Mapping and Monitoring Program</td>
</tr>
<tr>
<td>FHWA</td>
<td>Federal Highway Administration</td>
</tr>
<tr>
<td>HBP</td>
<td>Highway Bridge Program</td>
</tr>
<tr>
<td>HPSR</td>
<td>Historic Property Survey Report</td>
</tr>
<tr>
<td>IS</td>
<td>Initial Study</td>
</tr>
<tr>
<td>LBP</td>
<td>lead-based paint</td>
</tr>
<tr>
<td>L_{dn}</td>
<td>Day night noise level</td>
</tr>
<tr>
<td>L_{max}</td>
<td>maximum instantaneous noise level</td>
</tr>
<tr>
<td>MCAB</td>
<td>Mountain Counties Air Basin</td>
</tr>
<tr>
<td>MLD</td>
<td>Most Likely Descendant</td>
</tr>
<tr>
<td>MND</td>
<td>Mitigated Negative Declaration</td>
</tr>
<tr>
<td>NAAQS</td>
<td>National Ambient Air Quality Standards</td>
</tr>
<tr>
<td>NEPA</td>
<td>National Environmental Policy Act</td>
</tr>
<tr>
<td>NOA</td>
<td>naturally occurring asbestos</td>
</tr>
<tr>
<td>NRCS</td>
<td>National Resources Conservation Service</td>
</tr>
<tr>
<td>NRHP</td>
<td>National Register of Historic Places</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------</td>
</tr>
<tr>
<td>NWP</td>
<td>nationwide permit</td>
</tr>
<tr>
<td>PM$_{10}$</td>
<td>particulate matter of 10 microns or less</td>
</tr>
<tr>
<td>Project</td>
<td>Willow Creek Bridge on Carbondale Road Replacement Project</td>
</tr>
<tr>
<td>RWQCB</td>
<td>Regional Water Quality Control Board</td>
</tr>
<tr>
<td>SPCP</td>
<td>Spill Prevention and Countermeasure Plan</td>
</tr>
<tr>
<td>TCE(s)</td>
<td>temporary construction easement(s)</td>
</tr>
<tr>
<td>TCP</td>
<td>Traditional Cultural Property</td>
</tr>
<tr>
<td>USFWS</td>
<td>United States Fish and Wildlife Service</td>
</tr>
<tr>
<td>WARF</td>
<td>Western Amador Recycling Facility</td>
</tr>
</tbody>
</table>
1.0 PROJECT INFORMATION

Project Title: Willow Creek Bridge on Carbondale Road Replacement Project

Lead Agency Name and Address: Amador County Department of Transportation and Public Works, 810 Court Street, Jackson, CA 94642

Contact Person and Phone Number: Jered Reinking (209) 223-6226

Project Location: The Willow Creek Bridge on Carbondale Road Project (Br. No. 26C0030) (referred to herein as either the “proposed Project” or “Project”) is located on Carbondale Road in a rural portion of Amador County. The Project is located 3.6 miles to the northeast of Carbondale, at the coordinates of 38° 26.885’N, 120° 57.782’W. Figure 1: Regional Location and Figure 2: Project Location show the location of the proposed Project on a regional and local scale, respectively.

Project Sponsor’s Name and Address: Same as Lead Agency Name and Address.

General Plan Designation(s): Agricultural-General (A-G).

Zoning: Exclusive Agricultural District (AG).

Description of Project: The County of Amador (County), in conjunction with the California Department of Transportation (Caltrans), proposes to replace the existing two-lane bridge crossing over Willow Creek in rural Amador County. This Project is funded through the Federal Highway Administration Highway Bridge Program (HBP) and local toll credits. Since this Project is being funded by the HBP, the County is serving as the Lead Agency under the California Environmental Quality Act (CEQA). This Initial Study/Mitigated Negative Declaration (IS/MND) will address all the potential impacts of the proposed Project and identify any feasible mitigation measures. Caltrans is the National Environmental Policy Act (NEPA) Lead Agency for the proposed Project under the NEPA delegation agreement with the Federal Highway Administration (FHWA). Compliance with NEPA will be conducted by Caltrans under a separate process by preparation of a Categorical Exclusion (CE) with required technical studies per Code of Federal Regulations (CFR) Title 23, Part 771, Activity (c)(28).  

The existing bridge has been given a sufficiency rating of 75.4 and a status of functionally obsolete. The structure does not meet current American Association of State Highway and Transportation Officials (AASHTO) standards due to its narrow width; and the metal pipe bridge railings and lack of approach guardrail are substandard. The bridge has inadequate hydraulic capacity, with design-year storms overtopping the bridge, and it has experienced long-term scour at the abutment and pier foundations. The existing bridge is 36 feet long and 20 feet wide. The structure is a two-span continuous steel girder bridge with a cast-in-place, reinforced concrete deck and metal pipe railings.

---

1  23 CFR 771 Activity (c)(28) is defined as, “Bridge rehabilitation, reconstruction, or replacement or the construction of grade separation to replace existing at-grade railroad crossings, if the actions meet the constraints in paragraph (e) of this section.”
The bridge is founded on concrete abutments and a center pier wall, all of which were constructed directly on the underlying rock.

The proposed Project would replace the existing bridge with a new structure accommodating two 11-foot-wide lanes, 2-foot-wide shoulders and bridge railings, resulting in an approximate bridge width of 29 feet. The new bridge would consist of an 80-foot-long two-span, cast-in-place, reinforced concrete slab supported on spread footings. The roadway alignment would remain unchanged. Along with a longer bridge, the roadway profile would be raised by approximately 4 feet to provide required hydraulic capacity. The western roadway approach would begin approximately 145 feet east of the Forest Home Road/Carbondale Road intersection, approximately 400 feet west of the proposed bridge. The eastern approach would begin approximately 560 feet east of the new bridge. A sliver right-of-way acquisition would be needed on the south side of the roadway to accommodate the higher roadway profile and increased roadway width. Temporary construction easements (TCEs) are also anticipated on the south to provide construction access. No utilities have been identified within the Project limits. **Figure 3: Project Design** shows the design of the proposed Project.

Construction of the Project would involve excavation for and construction of concrete abutments and a central pier supported on spread footings. Other temporary work within Willow Creek includes removal of the existing bridge, falsework erection and removal, and installation of scour countermeasures at the support locations. Willow Creek is a seasonal creek, and construction is anticipated to proceed without needing to divert water away from construction activities. Construction of the roadway approaches would involve the removal of existing pavement and the placement of fill material, aggregate base, and hot-mix asphalt pavement. Tree and vegetation removal along the creek will not be necessary for implementation of the proposed Project. During construction, Carbondale Road would be closed to traffic and a detour route provided. Construction is anticipated to commence in spring 2020 and would have a duration of approximately 6 months. During construction, the following equipment, including but not limited to, would be used: excavator, bulldozer, loader, dump truck, and water truck. The construction contractor would equip construction equipment (fixed or mobile) with properly operating and maintained mufflers consistent with manufacturers’ standards; utilize construction methods or equipment that would provide the lowest level of noise and ground vibration; and turn off idling equipment.

**Surrounding Land Uses and Setting:** The proposed Project is located in the foothills of the Sierra Nevada at an elevation of 530 feet above sea level, in a rural portion of Amador County. Land surrounding the Project site is rural in nature and mostly covered with natural vegetation. Willow Creek bisects the Project site. A residential unit associated with the Mystic Oak Ranch property is located approximately 1,300 feet east of the Project boundary. The land surrounding the Project site is designated as Agricultural-General (A-G) under the Amador County General Plan and is zoned Exclusive Agricultural District (AG).

**Other Public Agencies Whose Approval Is Required (i.e., permits, financial approval, or participation agreements):** Permits, reviews, and approvals required for implementation of the proposed Project are shown below in **Table 1: Project Permits and Approvals.**
Willow Creek Bridge (26C0030) on Carbondale Road Replacement Project
Federal Project No. BRLO-5926(055)
Regional Location

FIGURE 1

SOURCE: ESRI Street Map (2017)
E:\MKT1406\GIS\Reports\ISMND\fig1_reg_loc.mxd (10/24/2017)
FIGURE 2
Willow Creek Bridge (26C0030) on Carbondale Road Replacement Project
Federal Project No. BRLO-5926(055)
Project Location
FIGURE 3

Willow Creek Bridge (26C0030) on Carbondale Road
Replacement Project
Federal Project No. BRLO-5926(055)
Project Design
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### Table 1: Project Permits and Approvals

<table>
<thead>
<tr>
<th>Agency</th>
<th>Permit/Approval</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caltrans/FHWA</td>
<td>Approval of Categorical Exclusion under NEPA</td>
<td>Follows approval of technical studies</td>
</tr>
<tr>
<td>California Department of Fish and Wildlife</td>
<td>Section 1602 Streambed Alteration Agreement</td>
<td>Permit application to follow CEQA/NEPA process</td>
</tr>
<tr>
<td>Central Valley Regional Water Quality Control Board</td>
<td>Section 401 Water Quality Certification</td>
<td>Application to follow release of MND</td>
</tr>
<tr>
<td>United States Army Corps of Engineers</td>
<td>Section 404 Nationwide Permit</td>
<td>Application to follow release of MND</td>
</tr>
<tr>
<td>United States Fish and Wildlife Service</td>
<td>Section 7 Consultation for Threatened and Endangered Species</td>
<td>Natural Environment Study and Biological Assessment prepared as basis for informal consultation</td>
</tr>
<tr>
<td>Central Valley Regional Water Quality Control Board</td>
<td>General construction activity storm water discharge permit.</td>
<td>File Notice of Intent and prepare Stormwater Pollution Prevention Plan required prior to construction</td>
</tr>
</tbody>
</table>

Caltrans = California Department of Transportation  
CEQA = California Environmental Quality Act  
FHWA = Federal Highway Administration  
MND = Mitigated Negative Declaration  
NEPA = National Environmental Policy Act
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2.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, as indicated by the checklist and corresponding discussion on the following pages.

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

2.1 DETERMINATION

On the basis of this initial evaluation:

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

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

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

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

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

Signature

January 12, 2018

Date

Jered Reinking
Printed Name

January 12, 2018

Date
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EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an Environmental Impact Report (EIR) is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c) (3) (D). In this case, a brief discussion should identify the following:
   a) Earlier Analysis Used. Identify and state where they are available for review.
   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously
prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

   a) The significance criteria or threshold, if any, used to evaluate each question; and

   b) The mitigation measure identified, if any, to reduce the impact to less than significance.
3.0 ENVIRONMENTAL CHECKLIST

3.1 AESTHETICS

<table>
<thead>
<tr>
<th>I. Aesthetics - Would the project:</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Have a substantial adverse effect on a scenic vista?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☒</td>
</tr>
<tr>
<td>c. Substantially degrade the existing visual character or quality of the site and its surroundings?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<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>
<td>☐</td>
<td>☒</td>
<td>☒</td>
</tr>
</tbody>
</table>

Discussion/Conclusion/Mitigation

a) The proposed Project would replace the existing bridge with a new structure accommodating two 11-foot-wide lanes, and two 2-foot wide shoulders and bridge railings, resulting in an approximate bridge width of 29 feet. The new bridge would consist of an 80-foot-long, two-span, cast-in-place, reinforced concrete slab supported on spread footings. The roadway alignment would remain unchanged. Along with a longer bridge, the roadway profile would be raised by 4 feet to provide additional hydraulic capacity. The western roadway approach would begin 90 feet east of the Forest Home Road/Carbondale Road intersection, approximately 370 feet west of the proposed bridge. The eastern approach would begin approximately 560 feet east of the new bridge.

The Project site is not within a designated scenic vista per the Amador County General Plan. The topography of the area consists of rolling hills with naturally vegetated land consistent with the western foothills of the Sierra Nevada. The minor change in roadway elevation (4 feet of roadway profile increase) would not decrease views from the road (for motorists) or of the road and surrounding landscape (for nearby residents). As such, the proposed Project would have a less than significant impact on scenic vistas and mitigation measures would not be required.

b) Carbondale Road is not part of the California State Scenic Highway system within Amador County. The nearest California State Scenic Highway designation is a segment of State Route 88 (Carson Pass Highway from the Dew Drop Ranger Station to the Nevada state line) approximately 26 miles east of the Project site. The Project is not within a State Scenic Highway; therefore, the proposed Project would have no impact on scenic resources within a California State Scenic Highway, and no impact would occur.

c) The change in visual character from the existing bridge to the new bridge and updated roadway approaches would be noticeable to those familiar with the area. Viewer sensitivity to the visual change in this area is expected to be minimal because the new bridge would be constructed
along the same alignment and would not significantly alter the viewshed for motorists. Nearby residents would notice a difference when looking from their properties toward the roadway. However, this portion of the roadway is only noticeable from limited locations and would not regularly be seen by nearby residents due to the distance separation. Therefore, the proposed Project would have a less than significant impact on the existing visual character or quality of the site and its surroundings, and mitigation measures would not be required.

d) The proposed Project would not create a new source of light or glare. The proposed Project would not incorporate lighting elements into the design. The new bridge would not generate any additional traffic (e.g., additional vehicle headlights) or light or glare. Therefore, the proposed Project would not create a new source of substantial light or glare on the site and its surroundings. No impact would occur and mitigation measures are not required.
### 3.2 AGRICULTURE AND FORESTRY RESOURCES

<table>
<thead>
<tr>
<th>II. Agricultural and Forest Resources</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a.</strong> 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?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td><strong>b.</strong> Conflict with existing zoning for agricultural use, or a Williamson Act contract?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td><strong>c.</strong> 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))?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td><strong>d.</strong> Result in the loss of forest land or conversion of forest land to non-forest use?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td><strong>e.</strong> 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?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
</tbody>
</table>

**Discussion/Conclusion/Mitigation**

a) The California Department of Conservation Farmland Mapping and Monitoring Program (FMMP) designate the Project site and surrounding areas as Grazing Land. Implementation of the proposed Project would not convert Important Farmland (Prime Farmland, Unique Farmland, or Farmland of Statewide Importance) as the FMMP does not designate the land as such. There is no impact and no mitigation measures are required.

b) According to the Amador County General Plan the Project site and land surrounding the site is zoned Exclusive Agricultural District (AG). Implementation of the Project would not conflict with the AG zoning designation as the Project includes removal and replacement of an existing bridge and roadway approach work on existing Carbondale Road.
Review of the Amador County GIS Viewer\(^2\) indicates that the parcel (Assessor’s Parcel No. [APN] 001-180-026-000), which may require sliver acquisition to implement the Project, is currently not under a Williamson Act Contract. Parcels APN 001-170-026-000 and 001-180-025-000 are near the Project site, are currently not under a Williamson Act Contract, and the Project would not affect these parcels. Note that parcel APN 001-180-025-000 has split into two new parcels (APN 001-180-027-000 and 001-180-028-00) in 2017. Additionally, several parcels near the Project site (APNs 001-170-024-000, 001-180-018-000, 001-180-021-000) are currently under Williamson Act Contracts; however, the Project would not affect these parcels. There is **no impact** and no mitigation measures are required.

c) The Project site and surrounding land is not zoned as forest land, timberland, or timberland production. As such, implementation of the proposed Project would not conflict or result in rezoning of such designated land. There is **no impact** and no mitigation measures are required.

d) As discussed above in (c) the Project site is not designated as forest land, timberland, or timberland production. As such, there is **no impact** and no mitigation measures are required.

e) The Project does not propose any new land uses or the permanent conversion of existing agricultural lands or result in impacts to adjacent/nearby agricultural lands. The Project proposes to replace an existing bridge on Carbondale Road and includes roadway approach work. There is **no impact** and no mitigation measures are required.

3.3 AIR QUALITY

<table>
<thead>
<tr>
<th>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:</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Conflict with or obstruct implementation of the applicable air quality plan?</td>
</tr>
<tr>
<td>b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?</td>
</tr>
<tr>
<td>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)?</td>
</tr>
<tr>
<td>d. Expose sensitive receptors to substantial pollutant concentrations?</td>
</tr>
<tr>
<td>e. Create objectionable odors affecting a substantial number of people?</td>
</tr>
</tbody>
</table>

Discussion/Conclusion/Mitigation

a) The Project site is located in unincorporated Amador County within the Amador County Air Pollution Control District (ACAPCD). The ACAPCD is part of the Mountain County Air Basin (MCAB). The role of ACAPCD is to achieve clean air to protect public health and the environment. ACAPCD’s primary responsibility is attaining and maintaining National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards. ACAPCD is responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, and monitoring ambient air quality and meteorological conditions.

The purpose of the proposed Project is to replace the existing two-lane bridge crossing over Willow Creek with a bridge that would provide adequate and safe vehicle access and meet current design standards. The proposed Project would not increase roadway capacity or service capabilities that will induce unplanned growth or remove an existing obstacle to growth. The proposed Project would not increase long-term traffic levels and there would be no operational impacts to air quality. Therefore, the proposed Project would not conflict with the region’s air quality management plans and would be considered to have no impact. No mitigation measures are required.

b) The MCAB lies along the northern Sierra Nevada, close to or contiguous with the Nevada border, and covers an area of roughly 11,000 square miles. Elevations range from more than 10,000 feet at the Sierra crest down to several hundred feet above sea level at the Sacramento County boundary. Regional airflows are affected by the mountains and hills, which direct surface air flows, cause shallow vertical mixing, and create areas of high pollutant concentrations by hindering dispersion.
Because the proposed project would not add lanes or increase capacity, it would only affect local air pollutants during construction (approximately 9 months). The proposed Project would not affect long-term air pollutant emissions in the area or stationary air pollutant sources.

**Construction**

The primary concern to the ACAPCD during construction would be particulate matter of 10 microns or less (PM$_{10}$) emissions from dust-generating activities. As of September 14, 2011, Amador County is designated as unclassified for the PM$_{10}$ NAAQS.

The ACAPCD has adopted Rule 218- Fugitive Dust Emissions. The ACAPCD's approach to CEQA analysis of construction impacts is to require implementation of effective and comprehensive control measures rather than to require detailed quantification of emissions. Good housekeeping and/or work practices described in RULE 218 include but are not limited to the following:

- Application of water and/or approved chemicals to control emissions in the demolition of existing buildings or structures, construction operations, solid waste disposal operations, the grading of roads and/or the clearing of land
- Application of asphalt, water and/or approved chemicals to road surfaces
- Application of water and/or suitable chemicals to material stockpiles and other surfaces that may generate fugitive dust emissions
- Paving and/or repaving roads
- Maintenance of roadways in a clean condition by washing with water or sweeping promptly
- Covering or wetting material stockpiles and open-bodied trucks, trailers, or other vehicles transporting materials that may generate fugitive dust emissions when in motion
- Installation and use of paved entry aprons or other effective cleaning techniques to remove dirt accumulating on a vehicle's wheels on haul or access roads to prevent tracking onto paved roadways
- For process equipment, the installation and use of hoods, fans, and filters to enclose, collect, and clean the emissions prior to venting
- Ceasing operations until fugitive emissions can be reduced and controlled
- Using vegetation and other barriers to contain and to reduce fugitive emissions
- Using vegetation for windbreaks
• Instituting good housekeeping practices by regularly removing piles of material that have accumulated in work areas and/or are generated from equipment overflow

• Maintaining reasonable vehicle speeds while driving on unpaved roads in order to minimize fugitive dust emissions

• Other precautions not specifically listed in this rule but have been approved in writing by the ACAPCD prior to implementation

With implementation of these required controls \( PM_{10} \) impacts from construction of the proposed Project would be \textit{less than significant} and no mitigation measures are required.

\textit{Operations}

The proposed Project would not result in increased capacity or additional vehicle trips. The proposed Project would not increase long-term traffic levels. There would be \textit{no impact} to air quality under full operation of the proposed Project and no mitigation measures are required.

c) As discussed above under Item (b), the proposed Project would result in minimal air pollutant emissions during the short-term duration of construction. In addition, the proposed Project would not result in any operational activities or emissions. Therefore, the proposed Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment under an applicable federal or State ambient air quality standard. Consequently, this impact is \textit{less than significant} and no mitigation measures are required.

d) As noted above under Item (b), the proposed Project would not generate substantial pollutant concentrations with implementation of measures listed under RULE 218 and, therefore, would not expose sensitive receptors to substantial pollutant concentrations. The construction contractor will incorporate best management practices (BMPs), such as spraying water on the Project site, to reduce dust generation during Project construction. This coupled with the fact that the nearest sensitive receptors are 1,300 feet from the Project site, would reduce exposure to particulate particles during construction. Impacts would be \textit{less than significant} and no mitigation measures are required.

e) Generally, the types of projects or activities that pose potential odor problems include refineries, chemical plants, wastewater treatment plants, landfills, composting facilities, and transfer stations. The proposed Project is a short-term bridge replacement project that would be within a largely rural area of Amador County that would not create objectionable odors affecting a substantial number of people. This impact would be \textit{less than significant} and no mitigation measures are required.
3.4 BIOLOGICAL RESOURCES

<table>
<thead>
<tr>
<th>IV. Biological Resources – Would the Project:</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>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?</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
</tbody>
</table>

Discussion/Conclusion/Mitigation

LSA prepared a Natural Environment Study in December 2016 and a Biological Assessment (specific to federally listed species) in August 2017. A Biological Opinion was prepared by the United States Fish and Wildlife Service in October 2017 for the proposed Project (See Appendix A). The following summarizes the methods for conducting site reconnaissance and describes the Project area setting. Results from the analysis were used in addressing the impacts and developing mitigation measures.

A Biological Study Area (BSA) was developed to inventory biological resources that could be affected by the Project. The BSA is 5.06 acres in size and includes the project footprint, all access and staging areas, and lands beyond the footprint to the edge of the road right-of-way that could potentially be affected by Project construction and/or is determined necessary to inventory in order to perform an adequate analysis of Project impacts. The BSA lies in a largely rural area among rolling grasslands. Willow Creek and a small tributary are the only aquatic features within the BSA. Additional aquatic features in the vicinity include several stock ponds and other drainages. The dominant plant community in the BSA consists of California annual grasslands with interior live oak trees (*Quercus*...
\textit{wislizeni}) intermixed. Land uses in the BSA are primarily for rural residences and cattle grazing purposes.

A list of sensitive wildlife and plant species potentially occurring within the BSA and vicinity was compiled to evaluate potential impacts resulting from Project construction. Sources used to compile the list include the California Natural Diversity Database, the United States Fish and Wildlife Service (USFWS) Information for Planning and Conservation Trust Resources Report, the National Marine Fisheries Service Google Earth Species list, and the California Native Plant Society Online Edition referencing the \textit{Folsom SE}, \textit{Latrobe}, \textit{Fiddletown}, \textit{Carbondale}, \textit{Irish Hill}, \textit{Amador City}, \textit{Goose Creek}, \textit{Ione}, and \textit{Jackson} United States Geological Survey 7.5-minute quadrangles.

a) Impacts to candidate, sensitive, or special status species in the proposed Project area consist of the following.

\textbf{Bats}

One species of bat, the pallid bat (\textit{Antrozous pallidus}), may be present in the BSA. It is a State species of concern and has no federal status. The pallid bat is a locally common species at low elevations and is a yearlong resident through most of its range. It uses a wide variety of habitats from sea level up through mixed conifer forests, but is most common in open, dry habitats with rocky areas for roosting. This bat forages among trees and shrubs and over open ground and often takes prey on the ground. Its diet is a variety of insects and spiders, including large, hard-shelled prey, which is often carried to a perch or night roost for consumption. Caves, crevices, and sometimes hollow trees and buildings often provide day roosts. Roosts must protect bats from high temperatures. Night roosts may be in more open sites, such as porches and open buildings. Pallid bats are social and most roost in groups of 20 or more. Maternity colonies form in early April and may have 10 to 100 individuals. Males may roost separately or in the nursery colony. There is one known occurrence for the pallid bat, approximately 2.4 miles northeast of the Project site.

Implementation of the Project would result in permanent impacts, totaling 0.63 acre, and temporary impacts, totaling 0.49 acre to foraging habitat for the pallid bat. Loss of foraging habitat would occur during construction of the new roadway and bridge embankments. The Project would result in a temporary loss of night roost habitat for bats. The new bridge would provide equivalent night roost habitat so that no permanent impacts would occur. The following mitigation measures (MM-BIO-1 and MM-BIO-2) would be implemented to reduce any potential impacts to foraging bats:

\textbf{MM-BIO-1:} Work activities shall be limited to daylight hours to minimize potential effects to foraging bats.

\textbf{MM-BIO-2:} Following completion of the new bridge, all fill slopes, temporary impacts and/or otherwise disturbed areas shall be revegetated with the seed mix specific in Table 2: Native Seed Mix. Invasive exotic plans shall be controlled to the maximum extent practicable.
Table 2: Native Seed Mix

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Rate (lbs./Acre)</th>
<th>Minimum Percent Germination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Artemisia douglasiana</td>
<td>Mugwort</td>
<td>2</td>
<td>50</td>
</tr>
<tr>
<td>Baccharis pilularis</td>
<td>Coyote brush</td>
<td>1</td>
<td>40</td>
</tr>
<tr>
<td>Elymus X triticum</td>
<td>Regreen</td>
<td>10</td>
<td>80</td>
</tr>
<tr>
<td>Eschscholzia californica</td>
<td>California poppy</td>
<td>2</td>
<td>70</td>
</tr>
<tr>
<td>Lupinus bicolor</td>
<td>Bicolored lupine</td>
<td>4</td>
<td>80</td>
</tr>
</tbody>
</table>

Grasshopper Sparrow

The grasshopper sparrow (*Ammodramus savannarum*) is a California species of special concern. This species prefers open grasslands and prairies with patches of bare ground. Nesting occurs on the ground, hidden at the base of weeds, shrubs, or clumps of grass, with an opening at the front. Its primary food source includes insects (e.g., grasshoppers, beetles, caterpillars, ants) and seeds. The closest occurrence is 6.2 miles from the Project site.

The California annual grasslands throughout the Project site provide suitable habitat for this species. The Project would result in permanent impacts, totaling 0.57 acre, and temporary impacts, totaling 0.37 acre to suitable habitat for this species. Loss of habitat would occur during construction of the new roadway and bridge embankments. The following mitigation measures (MM-BIO 2 and MM-BIO-3 through MM-BIO-6) would be implemented to reduce any potential impacts to grasshopper sparrow.

**MM-BIO-3:** Prior to any ground disturbing activities, the site shall be surveyed by a qualified biologist for the presence of nesting grasshopper sparrows within annual grassland vegetation in the Project site. If no nesting grasshopper sparrows are observed, the Project construction may proceed.

**MM-BIO-4:** If nesting grasshopper sparrows are found within the Project site, a qualified biologist shall evaluate the potential for the Project to disturb nesting activities. California Department of Fish and Wildlife (CDFW) shall be contacted to review the evaluation and determine if the Project can proceed without adversely affecting nesting activities. The CDFW shall also be consulted to establish protection measures, such as buffers. Disturbance of active nests shall be avoided until it is determined by a qualified biologist that nesting is complete and the young have fledged. If work is allowed to proceed, at a minimum, a qualified biologist shall be on-site during the start of construction activities during the nesting season to monitor nesting activity. The monitor shall have the authority to stop work if it is determined the Project is adversely affecting nesting activities.
MM-BIO-5: Worker environmental awareness training shall be conducted by a qualified biologist for all construction personnel. This training instructs workers to recognize grasshopper sparrows and their habitat(s).

MM-BIO-6: Highly visible Environmentally Sensitive Area (ESA) fencing shall be placed along the limits of work to prevent unnecessary encroachment into adjacent areas. Fencing shall be maintained in good condition for the duration of construction activities.

**Ferruginous Hawk**

The ferruginous hawk (*Buteo regalis*) is a species on the California Watch List with no federal status. Ferruginous hawks breed in open country, primarily prairies, plains and badlands, from eastern Washington and southern Alberta eastward to southwestern Manitoba and eastern South Dakota, southward to Arizona and the panhandle of Texas. The species winters from Northern California and southern Nebraska southward to central Mexico. The closest known occurrence is located approximately 19 miles northwest of the Project site.

Permanent impacts, totaling 0.57 acre, and temporary impacts, totaling 0.37 acre, to ferruginous hawk suitable foraging habitat would occur as a result of the Project. Loss of foraging habitat would occur during construction of the roadway approaches and bridge embankments. The Project would not impact suitable nesting habitat but could impact nesting ferruginous hawks if this species is nesting within or in the vicinity of the Project site during construction. Implementation of MM-BIO-2 would reduce impacts to less than significant for this species.

**Swainson’s hawk**

The Swainson’s hawk (*Buteo swainsoni*) is a State-listed threatened species with no formal federal status. Swainson’s hawks are long-distance migrants, wintering primarily in South America, and returning north to breed. In California, Swainson’s hawks occur in the northeastern portion of the state, in the Great Basin Province, and in the Central Valley. They return to the Central Valley in mid-March to nest and begin migrating south in August. Nests are built in the tops of large trees, often those associated with riparian habitats. They are known to forage up to 10 miles from their nest sites. The closest known occurrence is 8.1 miles northwest of the Project site. The Project site provides suitable foraging habitat in the California annual grasslands. Suitable nesting habitat is present in the few valley oak trees adjacent to Willow Creek in the Project site. Suitable nest trees are also located in the vicinity of the Project site. The Project site is at the eastern extent of the Swainson’s hawk, and although potential foraging and nesting habitat is present, this species is unlikely to occur in the Project site.

Permanent impacts, totaling 0.57 acre, and temporary impacts, totaling 0.37 acre, to Swainson’s hawk suitable foraging habitat would occur as a result of the Project. Loss of foraging habitat would occur during construction of the new roadway and bridge embankments. The Project would not impact suitable nesting habitat but could impact nesting Swainson’s hawks if this
species is nesting within or in the vicinity of the Project site during construction. The following mitigation measures (MM-BIO-4 through MM-BIO-6 and MM-BIO-7) would be implemented to reduce any potential impacts to Swainson's hawk:

**MM-BIO-7:** If work begins between February 1 and August 31, an early season preconstruction survey for nesting Swainson’s hawks shall be conducted in the Project site and immediate vicinity (an approximately 0.25-mile radius) by a qualified biologist when tree foliage is relatively sparse and nests are easy to identify. A second preconstruction survey for nesting Swainson’s hawks shall be conducted in the Project site and immediate vicinity (an approximately 0.25-mile radius) by a qualified biologist no more than 14 days prior to initiation of construction activities.

**California Tiger Salamander**

The California tiger salamander (CTS) (*Ambystoma californiense*) is a large, terrestrial salamander and is most commonly found in annual grassland habitat. CTS may also occur in the grassy understory of valley-foothill hardwood habitats, and uncommonly along stream courses in valley-foothill riparian habitats. They range from Sonoma, Colusa, and Yolo Counties south through the Central Valley to Tulare County, and through the Coast Range into Santa Barbara County. An isolated population also occurs in Butte County. The CTS is both State and federally listed as a threatened species. Critical habitat has been designated for CTS, but the Project site is not located within designated critical habitat. The closest CTS critical habitat is Unit cv_4, which is approximately 8.4 miles southwest of the Project site along State Route 104 in eastern Sacramento County. The closest known occurrence is between Laguna Creek and Ione Road, 4.3 miles southwest of the Project site.

Willow Creek through the Project site is a slow-moving intermittent creek that flows from north to south. North of the bridge, the creek has been highly disturbed due to past dredging activities and does not provide suitable aquatic habitat for CTS. The bridge acts as a bottleneck for high flows in the creek, narrowing the watercourse downstream of the bridge. As a result, the flow downstream of the bridge would generally be too swift to provide suitable breeding habitat for CTS. Although there were small ponded areas observed south of the bridge, higher flows would cause CTS eggs to be swept downstream. Consequently, Willow Creek does not provide suitable aquatic habitat for CTS.

Numerous small- to large-sized ponds, which provide potential aquatic habitat for CTS, occur within 1.24 miles of the Project site. Some of the ponds are seasonal, although the larger ponds appear to hold water all year. Four ponds, ranging from small to large, are within 0.5 mile of the Project site. These ponds could provide aquatic habitat for CTS. A small pond associated with an adjacent property is 0.1 mile north of the Project site and could potentially provide suitable aquatic breeding habitat for CTS.

Suitable upland habitat is present in the grassland areas within and adjacent to the Project site. Numerous burrows of appropriate size were observed in the upland grassland habitat, along the
sides of the road, and under the rock slope protection around the bridge. The Project site does not provide suitable aquatic habitat for CTS; however, there are multiple ponds within 1.24 miles of the Project site that could provide suitable breeding habitat. Therefore, the annual grassland within the Project site is potential upland habitat for CTS. The Project would result in permanent impacts, totaling 0.57 acre, and temporary impacts, totaling 0.37 acre, to upland habitat for the CTS. Loss of CTS upland habitat would occur during construction of the new roadway and bridge embankments. The proposed Project may affect and is likely to adversely affect CTS. The following mitigation measures (MM-BIO-8 through MM-BIO-18) would be implemented to reduce any potential impacts to CTS (note that for CTS, the measures in the Biological Opinion (USFWS 2017), included in Appendix A, supersede the measures for CTS in the NES (2017).

**MM-BIO-8:** Prior to the start of construction, all construction personnel shall participate in an environmental awareness training conducted by a qualified biologist regarding special-status species and sensitive habitats present in the proposed Project work limits. At a minimum, the training shall include a description of listed species and their habitat within the action area; an explanation of the status of these species and protection under state and federal laws; the avoidance and minimization measures to be implemented to reduce or avoid take; communication and work stoppage procedures in case a listed species is observed within the action area; and an explanation of the environmentally sensitive areas’ wildlife exclusion fencing and the importance of maintaining these structures.

**MM-BIO-9:** Prior to commencing site disturbance, including vegetation and/or ground disturbance, a Service-approved biologist(s) will be identified to monitor implementation of biological mitigation measures. Caltrans shall send the credentials of the biologist(s) to the Service at least 4 weeks prior to the start of work. The Service-approved biologist shall be present during all Project activities requiring ground disturbance or vegetation removal within the construction area, including installation and removal of temporary fencing.

**MM-BIO-10:** ESA fencing shall be established to confine access routes and construction areas to the minimum area necessary to complete construction, and minimize the impact to habitat. The exact location of the fencing shall be determined by the resident engineer coordinating with the biologist, with the goal of protecting sensitive biological habitat and water quality.

**MM-BIO-11:** Before any ground-disturbing activities occur, the County shall prepare and implement a Stormwater Pollution Prevention Plan that outlines Best Management Practices (BMPs), including erosion control and construction waste containment measures, to protect water quality within impacted areas of Willow Creek. All refueling, storage, servicing, and maintenance of equipment shall occur at least 60 feet from aquatic habitat.
MM-BIO-12: A qualified biologist shall conduct a preconstruction clearance survey for CTS within 48 hours prior to any ground disturbance within the Project work limits, or after a substantial rain event (≥ 0.25 inches). These surveys shall consist of walking the Project work limits and action area, and investigating all potential cover sites for CTS. This includes examining mammal burrows and appropriately size soil cracks with the aid of a scope. If CTS or other listed species are found within the construction work area, the individual shall be allowed to voluntarily move outside of the work area on its own. The biologist shall contact the Service for further guidance as soon as possible (within 24 hours). CTS shall not be captured or handled within joint authorization from the Service and California Department of Fish and Wildlife.

MM-BIO-13: If a CTS is encountered in the action area during construction, work activities within 50 feet of the individual shall cease immediately and the resident engineer and Service-approved biologist shall be notified. Based on the professional judgement of the Service-approved biologist, if Project activities can be conducted without killing or injuring the animal, if may be left at the location of discovery and monitored by the Service-approved biologist. The individual shall be monitored until it leaves the action area on its own accord, unless the situation poses an imminent risk of injury or mortality to the individual(s). The biologist shall contact the Service as soon as possible for further guidance.

MM-BIO-14: To avoid entrapment of wildlife, all excavated steep-walled holes or trenches more than one foot deep shall be provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each workday. If escape ramps cannot be provided, then holes or trenches will be covered with plywood or similar materials. The trenches shall be thoroughly inspected for the presence of federally-listed species at the beginning of each workday.

MM-BIO-15: All ground disturbance activities in Willow Creek associated with construction of the Project shall be restricted to the dry season (June 1 and October 31) to avoid the period when listed amphibians could be actively dispersing.

MM-BIO-16: During Project activities, all trash that may attract predators shall be properly, contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris will be removed from work areas.

MM-BIO-17: All temporarily disturbed areas shall be returned to pre-project conditions upon completion of construction, and revegetated with appropriate native species.

MM-BIO-18: To offset permanent effects to CTS, suitable habitat shall be created, restored, or set aside in perpetuity at a ratio of 3:1 for permanent effects (0.57 acre) and 1:1 for temporary effects (0.37 acre). Caltrans proposes to purchase Service-approved conservation bank credits to preserve CTS upland habitat.
California Red-Legged Frog

The California red-legged frog (CRLF) (*Rana draytonii*) is a federally listed threatened species and a State species of concern. CRLFs inhabit lowlands and foothills in or near permanent sources of water. They prefer ponds, creeks, or marshes with extensive shoreline vegetation. Intermittent streams provide suitable habitat if some surface water remains through the summer. Breeding generally occurs in ponds or stream pools that contain water through late summer and support dense, shrubby, or emergent vegetation such as overhanging willows intermixed with cattails. However, breeding habitat can be varied and may include sag ponds, lagoons, stock ponds and backwaters within streams and creeks. CRLF use upland areas and riparian vegetation for resting, feeding, dispersal, and estivation. Riparian areas can meet all of these needs; the scope of upland habitat use is not well-understood. CRLF may spend considerable time in suitable upland areas during the summer dry period. They may use a variety of places for estivation, including small mammal burrows, cracks at the bottom of a dry pond, spaces under boulders, rocks, and downed trees, and agricultural features such as drains, watering troughs, and abandoned sheds. There is only one record of this species (occurring in 1942) approximately 10 miles northeast of the Project site.

The Project would result in permanent impacts to potentially suitable upland habitat for the CRLF. Permanent impacts, totaling 0.57 acre, and temporary impacts, totaling 0.37 acre, to upland habitat for the CRLF would result from Project implementation. Loss of CRLF upland habitat would occur during construction of the new roadway and bridge embankments. The following mitigation measures (MM-BIO-2 and MM-BIO-19 through MM-BIO-24) would be implemented to reduce any potential impacts to CRLF:

**MM-BIO-19:** Before any activities begin on the Project, a USFWS-approved biologist shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of CRLF and its habitat, the specific measures that are being implemented to conserve CRLF for the Project, and the boundaries within which the Project may be accomplished. Brochures, books, and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions.

**MM-BIO-20:** If any CRLF are observed in the project work limits during construction, work will immediately stop, the CRLF will be allowed to move out of harm’s way on its own accord, and the Service will be contacted within 24 hours to reinstitute consultation.

**MM-BIO-21:** During Project activities, all trash that may attract predators shall be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris shall be removed from work areas.

**MM-BIO-22:** All refueling, maintenance, and staging of equipment and vehicles shall occur at least 60 feet from riparian habitat or water bodies and not in a location where a
spill would drain directly toward aquatic habitat. The monitor shall ensure contamination of habitat does not occur during such operations. Prior to the onset of work, the County shall prepare a plan for prompt and effective response to any accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

**MM-BIO-23:** To control sedimentation during and after Project implementation, the County will implement BMPs outlined in any authorizations or permits, issued under the authorities of the Clean Water Act (CWA) that it receives for the specific Project. If BMPs are ineffective, the County will attempt to remedy the situation immediately, in consultation with the USFWS.

**MM-BIO-24:** To ensure that diseases are not conveyed between work sites by the USFWS-approved biologists, the field work code of practice developed by the Declining Amphibian Populations Task Force shall be followed at all times.

Implementation of mitigation measures **MM-BIO-1** through **MM-BIO-24** would reduce impacts on sensitive species to *less than significant*.

b) Natural communities of concern (i.e. riparian, wetlands, and oak woodlands) are considered sensitive under CEQA and may be regulated by the CDFW pursuant to Section 1602 of the California Fish and Game Code (CFGC). Riparian communities and wetlands may also be regulated by the United States Army Corps of Engineers (ACOE) and/or Regional Water Quality Control Board (RWQCB) if the community is determined to be waters of the United States, or waters of the State. No natural communities of concern occur within the Project site; therefore, *no impacts* would occur and no mitigation measures are required.

c) The proposed Project would impact wetlands and nonwetland waters subject to regulation by the ACOE, RWQCB, and CDFW, as summarized below in **Table 3: Impacts to Water of the United States Waters (acres)**.

<table>
<thead>
<tr>
<th>Features</th>
<th>Permanent Impacts</th>
<th>Temporary Impacts</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential Wetlands</td>
<td>0.06</td>
<td>0.11</td>
<td>0.17</td>
</tr>
<tr>
<td>Nonwetland Waters</td>
<td>0.01</td>
<td>0.02</td>
<td>0.03</td>
</tr>
<tr>
<td>Total</td>
<td>0.07</td>
<td>0.13</td>
<td>0.20</td>
</tr>
</tbody>
</table>

Source: Natural Environment Study Carbondale Road Bridge Replacement, LSA, December 2016, pg.40.

Implementation of the Project would result in temporary and permanent impacts to potential wetlands totaling 0.06 acre and 0.11 acre, respectively. The waters of the United States within the Project site that would be affected by Project implementation are regulated by the ACOE under Section 404 of the CWA. It is expected that proposed discharge during construction can be authorized by the ACOE using nationwide permit (NWP) 14 – Linear Transportation Projects. In
accordance with the conditions of the NWP 14, a preconstruction notification would be submitted to the ACOE for verification that the proposed discharge associated with the Project would comply with the conditions of the subject NWP. With implementation of this condition of approval, impacts would be less than significant and mitigation measures would not be required.

d) Construction of the new bridge would not interfere with any movement corridors or the movement of any native resident or migratory fish or wildlife species. Disturbance of migratory birds during nesting season (February 1 to August 31) could result in “take”, which is prohibited under the Migratory Bird Treaty Act and Section 3513 of the CFGC. Implementation of mitigation measures MM-BIO-25 and MM-BIO-26 below would reduce impacts to less than significant.

**MM-BIO-25:** If work must begin during the nesting season (February 1 to August 31), a qualified biologist shall survey all suitable nesting habitat in the Project site for presence of nesting birds. This survey shall occur no more than 10 days prior to the start of construction. If no nesting activity is observed, work may proceed as planned. If an active nest is discovered, a qualified biologist shall evaluate the potential for the proposed Project to disturb nesting activities. The evaluation criteria shall include, but are not limited to, the location/orientation of the nest in the nest tree, the distance of the nest from the Project site, the line of sight between the nest and the Project site, and the feasibility of establishing no disturbance buffers. Additionally, CDFW shall be contacted to review the evaluation and determine if the Project can proceed without adversely affecting nesting activities.

**MM-BIO-26:** If work is allowed to proceed, a qualified biologist shall be on-site weekly during Project construction activities to monitor nesting activity. The biologist shall have the authority to stop work if it is determined the Project is adversely affecting nesting activities.

e) The proposed Project would not conflict with any ordinances, plans or policies protecting biological resources. As such, no impacts would occur and no mitigation measures would be required.

f) The proposed Project site is not subject to any local, regional or State habitat conservation plans. As such, no impacts would occur and no mitigation measures would be required.
3.5 CULTURAL RESOURCES

<table>
<thead>
<tr>
<th>V. Cultural Resources – Would the project:</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>d. Disturb any human remains, including those interred outside of formal cemeteries?</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Discussion/Conclusion/Mitigation

LSA completed a Historic Property Survey Report (HPSR) and an Archaeological Survey Report (ASR; October 2017) for the proposed Project. For purposes of this Project, LSA delineated a preliminary Study Area in coordination with Caltrans, the County, and Project engineers. The Study Area functioned as a larger preliminary Area of Potential Effects (APE) and was subject to the background research, consultation with interested parties, and field survey conducted for this study. The purpose of delineating the Study Area early on was to consider different Project design alternatives’ effects on cultural resources before establishing a Project design that would avoid such resources. Based on subsequent revisions to the Project design and updated right-of-way acquisition, LSA delineated an APE in coordination with Project engineers and the County. LSA completed the HPSR and ASR study to identify archaeological resources and sensitivity within the APE. This study consisted of background research, a field survey, and consultation with potentially interested parties. A North Central Information Center records search did not identify any previously recorded cultural resources in, or within 0.5 mile of, the APE. The field survey consisted of a pedestrian survey of the Study Area by LSA archaeologists, who were accompanied by members of the Buena Vista Rancheria of Me-Wuk Indians (Buena Vista Rancheria).

a) The background research and field survey identified one cultural resource (as defined in §15064.5) in the APE: a secondary agricultural ditch and associated culvert which carries it under Forest Home Road. This resource is exempt per the Section 106 PA. Exempt resources are not eligible for inclusion in the National Register of Historic Places (NRHP) and, therefore, further study of this resource was not warranted for purposes of this Project. The background research and field survey also identified three archaeological resources in the Study Area but outside the APE. The Project was designed to avoid these resources; therefore, further study of these resources is not warranted for purposes of this Project. Impacts would be less than significant and no mitigation measures would be required.

b) No archaeological resources (as defined in §15064.5) were identified or are known to exist within the Project’s APE. Three historic-period archaeological resources were identified in the Study Area: a square-shaped pit, a mining ditch, and an isolated stoneware fragment. The APE does not include these resources because the Project has been designed to avoid them.
However, if a cultural resource is found during Project work, then mitigation measure **MM-CUL-1** shall be implemented. Implementation of mitigation measure **MM-CUL-1** would reduce impacts to *less than significant*.

**MM-CUL-1:** Should an archaeological deposit be encountered during project subsurface construction activities, all ground-disturbing activities within 25 feet should be redirected and a qualified archaeologist meeting the Secretary of the Interior’s *Professional Qualifications Standards* for Archeology contacted to assess the situation, consult with agencies as appropriate (as well as tribal descendants, if the find is pre-contact in nature), and make recommendations for the treatment of the discovery. If found to be significant (i.e., eligible for listing in the California Register of Historical Resources), Amador County should be responsible for funding and implementing appropriate mitigation measures. Mitigation measures may include recording the archaeological deposit, data recovery and analysis of archaeological deposits, further tribal consultation (as warranted), and public outreach regarding the scientific and cultural importance of the discovery. Upon completion of the selected mitigations, a report documenting the methods, findings, and recommendations should be prepared and submitted to the County for review, and the final report should be submitted to the North Central Information Center at Sacramento State University. Significant archaeological materials should be submitted to an appropriate curation facility. Amador County should inform its contractor(s) of the sensitivity of the Study Area for archaeological deposits and should verify that the following directive has been included in the appropriate contract documents/specifications: “The subsurface of the construction site may be sensitive for archaeological deposits. If archaeological deposits are encountered during project subsurface construction, all ground-disturbing activities within 25 feet shall be redirected and a qualified archaeologist contacted to assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. Project personnel shall not collect or move any archaeological materials. Prehistoric archaeological deposits can include shellfish remains; bones; flakes of, and tools made from, obsidian, chert, and basalt; and mortars and pestles. Historic-period archaeological deposits can include concentrations of historic glass, cans, ceramics, or other “trash,” as well as structural features including buried wells, foundations, or privies.”

c) Paleontological resources are not anticipated to be present within the APE. However, should paleontological resources be discovered during Project construction mitigation measure **MM-CUL-2** shall be implemented. With implementation of **MM-CUL-2** impacts to paleontological resources would be *less than significant*.

**MM-CUL-2:** If paleontological resources are encountered during Project excavation and no monitor is present, all ground-disturbing activities within 50 feet of the find shall be redirected to other areas until a qualified paleontologist can be retained to evaluate the find and make recommendations for additional paleontological
mitigation, which may include paleontological monitoring; collection of observed resources; preservation, stabilization, and identification of collected resources; curation of resources into a museum repository; and preparation of a final report documenting the monitoring methods and results to be submitted to the museum repository and the County.

d) No human remains are known to exist within the APE. However, should human remains be discovered during Project construction mitigation measure **MM-CUL-3** shall be implemented. With implementation of **MM-CUL-3** impacts to human remains would be *less than significant*.

**MM-CUL-3:** If human remains are encountered, these remains should be treated in accordance with California Health and Safety Code §7050.5 and the appropriate procedures described above for archaeological deposits. Amador County should inform its contractor(s) of the appropriate procedures for treatment of human remains by including the following directive in contract documents/specifications: *"If human remains are encountered during project activities, work within 25 feet of the discovery shall be redirected and the Amador County Coroner notified immediately. At the same time, an archaeologist shall be contacted to assess the situation and consult with agencies as appropriate. Project personnel shall not collect or move any human remains and associated materials. If the human remains are of Native American origin, the Coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods."* Upon completion of the assessment, the archaeologist should prepare a report documenting the methods and results, and provide recommendations for the treatment of the human remains and any associated cultural materials, as appropriate and in coordination with the recommendations of the MLD. The report should be submitted to the County for review, and the final report should be submitted to the North Central Information Center.
3.6 GEOLOGY AND SOILS

<table>
<thead>
<tr>
<th>VI. GEOLOGY AND SOILS – Would the project:</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>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.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>ii. Strong seismic ground shaking?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>iii. Seismic-related ground failure, including liquefaction?</td>
<td>☐</td>
<td>☒</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>iv. Landslides?</td>
<td>☒</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>b. Result in substantial soil erosion or the loss of topsoil?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>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?</td>
<td>☒</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
</tbody>
</table>

Discussion/Conclusion/Mitigation

Amador County is located in the western foothills of the Sierra Nevada, on the eastern fringe of the Sacramento Valley. Amador County’s elevation ranges from less than 300 feet above sea level at the western end of the County to a high of more than 9,000 feet in the easternmost portion of the County. The Sierra Nevada trends north-northwest from Bakersfield to Lassen Peak, and includes the Sierra Nevada and a broad belt of western foothills. The Sierra Nevada block is composed of northwest-trending belts of metamorphic, volcanic, and igneous rocks. The Project site is located in the western portion of Amador County at an elevation of approximately 530 feet above sea level in an area of rolling hills transitioning to western foothills of the Sierra Nevada.³

Soils

The National Resources Conservation Service (NRCS) currently has a soil survey for Amador County including the area where the Project site is located. The NRCS indicates that the following soil types are located within the boundary of the Project site:

³ Amador County General Plan Environmental Impact Report, Chapter 4.6 Geology, Soils, Mineral Resources, and Paleontological Resources, Exhibit 4.6-4: Mineral Resources Zones, pg. 4.6-3 and 4.6-4, July 2016.
- Mine Tailings and Riverwash (Mn)
- Exchequer and Auburn very rocky loams, 3 to 31 percent slopes (ExD)
- Auburn silt loam, 0 to 31 percent slopes (ApD)

**Faults**

Amador County is located within an area with relatively low seismic activity. Seismic activity may result in geologic and seismic hazards, including seismically induced fault displacement and rupture, ground shaking, liquefaction, lateral spreading, landslides and avalanches, and structural hazards. Amador County has no Alquist-Priolo Earthquake Fault Zones. Several inactive faults are known to be present in Amador County. These faults, which are not known to have been active within the past 10,000 years, include faults associated with the Bear Mountains Fault Zone and the Melones Fault Zone of the Foothills Fault System, and with the Calaveras Shoo Fly Thrust.\(^4\)

a) i. Alquist-Priolo Earthquake Fault Zones are not present in Amador County; therefore, the Project site is not located in such a zone. **No impact** would occur and mitigation measures are not required.

ii. Amador County’s historical earthquake activity is relatively low compared to other counties in California. The most recent moderately strong earthquake felt in Amador County took place in South Lake Tahoe on September 12, 1994 and measured 6.0 on the Richter scale. The western portions of Amador County may experience ground shaking from distant earthquakes on faults in the Bay Area, Coastal Range, and eastern Sierra Nevada. The Project site has a 20 to 30 percent maximum considered earthquake ground motion (1 second) according to California Governor’s Office of Emergency Services MyPlan website.\(^5\) Although the Project site could be exposed to seismic ground shaking from distant earthquakes, the new bridge would be designed and constructed consistent with County and Caltrans standards. With such design considerations, impacts would be **less than significant** and mitigation measures would not be required.

iii. Soil liquefaction is a phenomenon primarily associated with the saturated soil layers located close to the ground surface. These soils lose strength during ground shaking events. Due to the loss of strength, the soil acquires “mobility” sufficient to permit both horizontal and vertical movements. Soils that are most susceptible to liquefaction are clean, loose, uniformly graded, saturated, finegrained sands that lie relatively close to the ground surface. However, loose sands that contain a significant amount of fines (minute silt and clay fraction) may also liquefy. Foothill and mountain areas in Amador County have a low potential for seismically induced liquefaction, except in areas of unconsolidated sediments. Impacts would be **less than significant** and mitigation measures would not be required.

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\(^4\) Amador County General Plan Environmental Impact Report, Chapter 4.6 Geology, Soils, Mineral Resources, and Paleontological Resources, Exhibit 4.6-4: Mineral Resources Zones, pg. 4.6-4, July 2016.

iv. The Project site is not located within a steep canyon. Rolling hills with slopes less than 30 percent are located within the Project vicinity and are not prone to landslides. The proposed Project would not alter slopes within the area in a manner that would increase the risk of landslides. The potential for seismically induced landslides is less than significant and mitigation measures are not required.

b) The proposed Project is not located on soils or with soil conditions that are susceptible to significant erosion concerns. The land surrounding the Project site has rolling hills with gentle slopes. Ground disturbing activities during Project construction would have low potential to result in soil erosion as construction would occur during the dry season when the land in the area is typically dry. Impacts would be less than significant and no additional mitigation measures would be required.

c) Please refer to the discussion above in (a). Impacts would be less than significant and mitigation measures would not be required.

d) Shrink-swell potential (expansive soils) is the relative change in volume to be expected with changes in moisture content, that is, the extent to which the soil shrinks as it dries out or swells when it gets wet. Extent of shrinking and swelling is influenced by the amount and kind of clay in the soil. Expansive soils cause damage to building foundations, roads, and other structures. A high shrink-swell potential indicates a hazard to maintenance of structures built in, on, or with material having this rating. Soils in Amador County with the greatest hazards related to shrink-swell potential include Peters soils, and some Argonaut and Cohasset soils. The Project site does not contain any of these soils; therefore, the chance of expansive soils impacting the proposed Project is minimal. Impacts would be less than significant and mitigation measures would not be required.

e) The proposed Project entails the demolition of an existing deficient bridge, the installation of a new bridge, and roadway approach work east and west of the Willow Creek crossing on Carbondale Road. Septic tanks would not be installed as part of the Project nor would they be removed due to Project implementation. No impact would occur and mitigation measures are not required.
3.7 GREENHOUSE GAS EMISSIONS

<table>
<thead>
<tr>
<th>VII. Greenhouse Gas Emissions – Would the project:</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
</tbody>
</table>

Discussion/Conclusion/Mitigation

a, b) The purpose of the proposed Project is to replace the existing, structurally deficient two-lane bridge crossing over Willow Creek on Carbondale Road to provide safe access for vehicles and meet current design standards. Consequently, the proposed construction Project is considered small, short-term in nature (a 6-month construction duration) and would not generate substantial air quality (including greenhouse gas emission) pollutant concentrations as discussed under the Air Quality section. As the proposed Project would not include additional through lanes, the proposed Project would not increase roadway facilities or service capabilities that would induce unplanned growth or remove an existing obstacle to growth. The proposed Project would not increase long-term traffic levels and the Project, once operational, would not generate an increase of greenhouse gases. Impacts are considered less than significant and mitigation measures would not be required.
### 3.8 HAZARDS AND HAZARDOUS MATERIALS

<table>
<thead>
<tr>
<th>VIII. Hazards and Hazardous Materials – Would the project:</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 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?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
</tbody>
</table>

**Discussion/Conclusion/Mitigation**

a) The proposed Project would involve the use of heavy equipment during the 6-month construction period. Use of this equipment may require the use of fuels and other common materials that have hazardous properties (e.g., fuels are flammable). These materials would be used in accordance with all applicable laws and regulations and, if used properly, would not pose a hazard to people, animals, or plants. All refueling of construction vehicles and equipment would occur within the designated staging area for the proposed Project. The use of hazardous materials would be temporary and the proposed Project would not include a permanent use or source of hazardous materials. Mitigation Measure **MM-HAZ-1** is recommended to reduce potential impacts to a *less than significant* level.

**MM-HAZ-1:** The contractor shall prepare a Spill Prevention and Countermeasure Plan (SPCP) prior to the commencement of construction activities. The SPCP shall include
information on the nature of all hazardous materials that will be used on-site. The SPCP shall also include information regarding proper handling of hazardous materials, and clean-up procedures in the event of an accidental release. The phone number of the agency representative overseeing hazardous materials and toxic clean-up shall be provided in the SPCP.

b) Construction of the proposed Project may include the handling and transport of potentially hazardous materials, including lead-based paint (LBP) and asbestos-containing materials (ACM). Naturally occurring asbestos (NOA) is typically located in geological areas with ultramafic rocks. Amador County contains several areas of ultramafic rock; however, the Project site is located on geological areas containing mine and dredge tailings and therefore is not located in an area where NOA can be disturbed.

The existing bridge on Carbondale Road over Willow Creek was built in 1940; therefore, the materials used in the existing bridge construction could contain LBP and ACM. As such, during the demolition of the existing bridge, there is a chance that construction workers could be exposed to LBP and ACM. To reduce the potential impacts associated with LBP and ACM, mitigation measures MM-HAZ-2 and MM-HAZ-3 would be implemented.

MM-HAZ-2: As the existing bridge on Carbondale Road over Willow Creek was built in 1940, the existing bridge may contain ACMs. Prior to demolition of the existing bridge, consistent with County and State requirements, the Project proponent shall retain a Certified Asbestos Consultant to determine the amount of ACMs in the existing bridge and provide removal procedures to reduce the amount of ACMs that would be exposed to construction workers and nearby residents.

MM-HAZ-3: As the existing bridge on Carbondale Road over Willow Creek was built in 1940, the existing bridge may contain LBP. Prior to construction and during the Plan, Specifications and Estimate (PS&E) stage of the Project the bridge shall be inspected to determine if LBP exists. If LBP does exist, removal procedures consistent with County and State requirements shall be implemented to reduce the amount of LBP that would be exposed to construction workers and nearby residents.

Implementation of mitigation measures MM-HAZ-2 and MM-HAZ-3 would reduce impacts to less than significant.

c) No schools are located within or adjacent to the Project site. The nearest school is in Plymouth, approximately 7 miles northeast of the Project site. As such, no impacts would occur and mitigation measures would not be required.

d) The California Department of Toxic Substances Control EnviroStor Website\(^6\) was reviewed and it indicated that the Project site was not near any hazardous materials sites compiled pursuant to

\(^6\) California Department of Toxic Substances Control, EnviroStor Website, 
Government Code Section 65962.5. As such, **no impacts** would occur and mitigation measures would not be required.

e) The Project site is not within 2 miles of a public airport. As such, **no impacts** would occur and mitigation measures would not be required.

f) The Project site is not near a private airstrip. As such, **no impacts** would occur and mitigation measures would not be required.

g) The proposed Project would not interfere with an emergency evacuation plan. Although Carbondale Road would be closed at the Willow Creek crossing during the 6-month construction of the Project site, local roadways would continue to be open, providing ingress and egress to major roadways (State Route 16) in the event of an emergency. Access to State Route 16, via Forest Home Road, would be available during Project construction. As such, impacts would be **less than significant** and no mitigation measures would be required.

h) According to the Amador County General Plan Environmental Impact Report, the Project site is located in a “moderate” Fire Hazard Severity Zone.7 The proposed Project would not include the development of structures or endanger lives of residents or construction workers if a wildland fire were to occur in the area. Residents and construction workers would be able to evacuate the area to major County roadways in spite of Carbondale Road’s closure for a temporary time at the Willow Creek crossing. As such, impacts would be **less than significant** and mitigation measures would not be required.

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7 Amador County General Plan Environmental Impact Report, Chapter 4.8 Hazards and Hazardous Materials, Exhibit 4.8-1: Fire Hazard Severity Zone, pg. 4.8-7, July 2016.
### 3.9 HYDROLOGY AND WATER QUALITY

<table>
<thead>
<tr>
<th>IX. Hydrology and Water Quality – Would the project:</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Violate any water quality standards or waste discharge requirements?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>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)?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>f. Otherwise substantially degrade water quality?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>j. Inundation by seiche, tsunami, or mudflow?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
</tbody>
</table>

**Discussion/Conclusion/Mitigation**

a) The Project site is within the jurisdiction of the Central Valley Regional Water Quality Control Board (Region 5) under the direction of the California State Water Resources Control Board. The new bridge construction would result in disturbances to the ground surface from earthwork, potentially increasing the amount of sediment or rubble entering Willow Creek. Generally, runoff during the winter season is of greater concern because of the potential for erosion of unprotected and/or graded surfaces. Sediments suspended in runoff would be carried downstream, where, if not controlled, could accumulate in downstream watercourses or wetlands areas and could potentially harm downstream aquatic resources and decrease water quality.
Potential short-term water quality effects from Project related construction activities can be minimized and reduced through implementation of standard BMPs and compliance with existing State and County regulatory requirements. Long-term water quality impacts are usually due to changes in stormwater drainage or permanent increases in impervious surfaces. Stormwater drainage associated with the proposed Project would remain similar to existing conditions. The new bridge would be slightly larger than the existing bridge; however, the increase in impervious surfaces would be nominal and would not increase pollutants draining from the Project.

Project construction would be subject to the requirements of the NPDES permit required for the Project, which requires implementation of Best Management Practices (BMPs) to minimize soil erosion and protect water quality. Typical BMPs include, but are not limited to, limiting the construction area to the smallest area required to complete construction; dust control measures, such as watering exposed soils; and use of silt fencing, fiber rolls, and sheeting to contain soils on site during storm events. Following construction, exposed soils would either be paved or be stabilized through compaction and/or planting of new vegetation. With implementation of standard BMPs and compliance with the NPDES requirements, the Project would not be expected to violate water quality standards. Furthermore, construction of the entire Project is anticipated to take approximately six months, with creek work scheduled during the dry season between April 15 and October 15 when temperatures are warmer and water levels are nearly non-existent at the Project site.

There are no waste discharge requirements applicable to the Project area, as the Project area includes a roadway and bridge where no wastewater is discharged.

As such, the proposed Project would have a less than significant impact on water quality standards and waste discharge requirements and mitigation measures would not be required.

b) The proposed Project would create additional impervious paved surfaces associated with the development of the new bridge. However, the proposed increase in impervious surfaces would be nominal and the area adjacent to the roadway improvements would remain unpaved and would allow for continued groundwater recharge. Because the increase in impervious surfaces would not affect the recharge of groundwater supplies, the proposed Project would have a less than significant impact on groundwater resources and mitigation measures would not be required.

c) The proposed Project would not alter the course of Willow Creek, nor would it alter the existing drainage pattern of the site. In fact, implementation of the Project would include a vertical height increase of 4 feet compared to the existing bridge, allowing a greater freeboard for water flow in Willow Creek. The proposed Project is designed to shed stormwater off the bridge and onto the surrounding area. The drainage of the site is not expected to result in substantial on or off-site siltation or erosion. The proposed Project would have a less than significant impact on drainage within the Project area and mitigation measures would not be required.
d) Please refer to (c) above. The proposed Project would not substantially increase the amount or rate of surface runoff such that on or off-site flooding would occur. Impacts would be less than significant and mitigation measures would not be required.

e) Please refer to (a) and (c) above. Impacts would be less than significant.

f) Potential impacts related to construction activities and post-construction site uses are addressed in Section VIII.c. The proposed Project would not adversely affect water quality and impacts would be less than significant.

g) According to the Amador County General Plan EIR, the Project Site (specifically Willow Creek) is located in a 100-year floodplain. The proposed Project does not include housing and would not place such structures within the 100-year flood plain. As such, no impacts would occur and mitigation measures would not be required.

h) The proposed Project would include development of a new bridge crossing over Willow Creek, which is located in a 100-year floodplain. The existing bridge, when Willow Creek is running at high flow, currently impedes water flow. Implementation of the proposed Project would include a bridge and roadway profile that is 4 feet taller than the existing bridge, thus providing a greater amount of freeboard between the Willow Creek high water mark and the bottom of the new bridge. The new bridge would be designed to ensure that Willow Creek water flows are no longer impeded or redirected. Impacts would be less than significant and mitigation measures would not be required.

i) The proposed Project is not located near, nor would it impact, a levee or dam. As such, the Project would not expose people or structures to a significant loss, injury or death due to the failure of a levee or dam. Impacts would be less than significant and mitigation measures would not be required.

j) No surface water bodies likely to be affected by seiches are located in the vicinity of the Project site. Given the distance from the coast and other water bodies, the Project site would not be affected by tsunami. As the topography of the Project area is rolling hills with a less than 30 percent slope, impacts from mudflows would not be expected. As such, no impacts would occur and mitigation measures are not required.

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8 Amador County General Plan Environmental Impact Report, Chapter 4.9 Hydrology and Water Quality, Exhibit 4.9-1: Flood Zones, pg. 4.9-5, July 2016.
3.10 LAND USE AND PLANNING

<table>
<thead>
<tr>
<th>X. Land Use Planning</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Physically divide an established community?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>c. Conflict with any applicable habitat conservation plan or natural community conservation plan?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
</tbody>
</table>

Discussion/Conclusion/Mitigation

a) The proposed Project would consist of replacement of an existing bridge and roadway approach work. Implementation of the Project, during construction and operation, would not physically divide an established community. During construction, detours may be implemented; however, accessibility to surrounding areas for local traffic would be allowed. As such, no impact would occur and mitigation measures are not required.

b) Implementation of the Project would not interfere with the existing activity associated with the surrounding agricultural parcels. No new land uses are proposed as part of the Project and once operational, Carbondale Road and the new Willow Creek Bridge would operate similar to existing conditions. The proposed Project would not conflict with any applicable plans of the area as it would replace an existing bridge with a new bridge. Impacts would be less-than-significant and no mitigation measures would be required.

c) The proposed Project is not located in an area under the jurisdiction of any applicable habitat conservation plan or natural community conservation plan and would not conflict with such plans. As such, no impact would occur and mitigation measures are not required.
3.11 MINERAL RESOURCES

| XI. Mineral Resources – Would the project:                                                                 |
|                                                                                                           |
| Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
| a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | ☐ | ☐ | ☑ | ☐ |
| 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? | ☐ | ☐ | ☑ | ☐ |

Discussion/Conclusion/Mitigation

a, b) According to the Amador County General Plan EIR, the proposed Project is located in an area designated as Mineral Resource Zone 3a. According to the California Department of Conservation, this zone is defined as having a “known mineral occurrence” in an “area of undetermined mineral resource significance”. The proposed Project includes the replacement of an existing bridge and roadway approach work on Carbondale Road. Construction activities would be temporary and the operation of the proposed Project would not conflict with mineral resources in the area. Impacts would be less than significant and no mitigation measures would be required.

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3.12 NOISE

<table>
<thead>
<tr>
<th>XII. Noise – Would the project:</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 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?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
</tbody>
</table>

Discussion/Conclusion/Mitigation

Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological damage and/or interfere with communication, work, rest, recreation or sleep. Several noise measurement scales exist that are used to describe noise in a particular location. A decibel (dB) is a unit of measurement that indicates the relative intensity of a sound. The 0 measurement on the dB scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Noise level changes of 3 dB or less are only perceptible in laboratory environments.

Sound levels in dB are calculated on a logarithmic basis. An increase of 10 dB represents a 10-fold increase in acoustic energy, while 20 dB is 100 times more intense and 30 dB is 1,000 times more intense. Each 10 dB increase in sound level is perceived as approximately a doubling of loudness. Sound intensity is normally measured through the A-weighted sound level (dBA). This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. The day night level (L_{D/N}) is the energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dBA added to the A-weighted sound levels occurring between 10 p.m. and 7 a.m. (defined as sleeping hours).

Two single-family residential units located approximately 1,300 feet west and north of the Project are the closest sensitive receptors to the proposed Project.

a) The nearest sensitive receptors to the Project site are two single-family residential units, approximately 1,300 feet to the west and north of the Project boundary. During demolition and
construction activities various pieces of construction equipment would be used on a temporary basis. The construction equipment that would be used includes an excavator, bulldozer, loader, dump truck, and water truck. If all of the construction equipment were to operate simultaneously, the noise levels generated would be 86 dBA maximum instantaneous noise level ($L_{\text{max}}$) at a distance of 50 feet from the equipment. The sensitive receptors at 1,300 feet from the Project site could experience temporary noise levels up to 58 dBA $L_{\text{max}}$ during Project demolition and construction. The Amador County General Plan and Amador County Municipal Code do not have specific thresholds for construction noise or the operation hours of construction activities; however, due to the distance the sensitive receptor is from the Project site, construction noise is not anticipated to impact the sensitive receptor. As discussed in the Project Description, the construction contractor would equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers’ standards, utilize construction methods or equipment that would provide the lowest level of noise and ground vibration impact, and turn off idling equipment. With implementation of these specifications, impacts would be less than significant and mitigation measures would not be required.

b) The proposed Project would not expose persons to a permanent noise source, excessive ground-borne vibration or noise levels as it is a bridge replacement Project. Once operational, the Project would be similar to the bridge that is currently on Carbondale Road under existing conditions. Therefore, development of the proposed Project would not permanently expose persons within or around the Project site to excessive ground-borne vibration or noise.

Construction activities associated with development of the proposed Project have the potential to temporarily expose persons in the vicinity of the proposed Project site to excessive ground-borne vibration or ground-borne noise levels. However, compliance with the Amador County General Plan and standard practices would reduce this impact to a less than significant level and mitigation measures would not be required.

c) The proposed Project would replace an existing deficient bridge on Carbondale Road with a new bridge and would include roadway approach work to the west and east of the new bridge. The proposed Project would not increase traffic capacity or through traffic; therefore, the proposed Project would not generate additional traffic noise in the vicinity of the Project site or at the closest sensitive receptor. No substantial long-term increase in ambient noise levels is expected as a result of Project development. No impact would occur and mitigation measures would not be required.

d) As discussed above in (a), the demolition and construction activities associated with Project development could generate maximum noise levels of 86 dBA as measured from 50 feet. The sensitive receptors, located 1,300 feet to the west and north of the Project, could be exposed to maximum construction noise levels of 58 dBA $L_{\text{max}}$. Compliance with the Amador County General Plan and standard practices would insure that construction noise levels would not impact the nearby sensitive receptors. Impacts would be less than significant and mitigation measures would not be required.
e, f) The proposed Project is not located within an airport land use plan or within 2 miles of a public airport or public use airport. *No impact* would occur and mitigation measures would not be required.
3.13 POPULATION AND HOUSING

<table>
<thead>
<tr>
<th>XII. Population and Housing – Would the project:</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>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)?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
</tbody>
</table>

Discussion/Conclusion/Mitigation

a) The proposed Project includes the replacement of an existing deficient bridge and roadway approach work along Carbondale Road. During construction, temporary employment would be generated; however, the construction crew working on the Project site is anticipated to come from local communities. The Project would not cause substantial direct or indirect population growth in the area, because once it is operational, the Project would remain a two-lane road with a bridge crossing over Willow Creek (similar to existing conditions). Therefore, it would not encourage population growth within the surrounding communities or near the site. Impacts would be less than significant and no mitigation measures are required.

b, c) The proposed Project is located in a rural portion of Amador County and would not require displacement of existing housing or population. The Project includes the replacement of an existing bridge and roadway approach work on Carbondale Road. Construction would be temporary (6 months in duration) and once operational, the Project area would operate similarly to existing conditions. As such, no impact would occur and no mitigation measures are required.
3.14 PUBLIC SERVICES

<table>
<thead>
<tr>
<th>XIV. Public Services – Would the project:</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. 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:</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>i. Fire protection?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>ii. Police protection?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>iii. Schools?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>iv. Parks?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>v. Other public facilities?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
</tbody>
</table>

Discussion/Conclusion/Mitigation

a) i. The Amador Fire Protection District (AFPD), via Station 121, would provide fire protection service to the Project site. Station 121 is located at 16850 DeMartini Road, which is 3.3 driving miles northeast of the Project site. This station currently maintains the following equipment: a Type 2 engine (750 gallons), a Type 4 engine, and a Type 1 water tender (3,500 gallons). Typically, development of new residential uses, commercial uses, and industrial uses generate an overall permanent increase for fire protection services; however, the development, repair, or replacement of infrastructure or transportation uses does not generate a permanent increase for fire protection services.

During construction of the proposed Project, a slight increase in accident or emergency incidents requiring fire protection services could occur; however, such an increase would be short-term, would occur infrequently if at all, and is anticipated to be handled by the existing fire protection service in the area. Construction of the Project could also require implementation of a detour that could affect response times to the area. A Standard Traffic Management Plan, as described under mitigation measure MM-TRAFF-1, would be implemented to minimize potential disruption of response times by the AFD if fire protection service is required. Once operational, the Project is not anticipated to create additional calls for fire protection service above and beyond those that occur during existing conditions. As such, impacts would be less than significant and additional mitigation measures would not be required.

ii. The Amador County Sheriff's Department provides law enforcement service to the Project site. The Patrol Bureau of the Amador County Sheriff's Department provides 27 deputies that are assigned to perform law enforcement and crime prevention work within 592 square miles of unincorporated Amador County. The California Highway Patrol (CHP) provides traffic enforcement and automobile accident investigations for the unincorporated portions of Amador County, including the Project site.

Typically, the development of new residential uses, commercial uses, and industrial uses generate an overall permanent increase for law enforcement services; however, the development/repair/replacement of infrastructure or transportation uses does not generate a permanent increase for law enforcement services. During construction of the proposed Project, a slight increase in accident or emergency incidents requiring law enforcement services could occur; however, such an increase would be short-term, would occur infrequently if at all, and is anticipated to be handled by the existing Amador County Sheriff's Department/CHP. Project construction could also require the implementation of a detour that could affect response times to the area. A Standard Traffic Management Plan, as described under mitigation measure MM-TRAF-1, would be implemented to minimize potential disruption of response times by the Amador County Sheriff's Department/CHP if law enforcement service is required. Once operational, the Project is not anticipated to create additional calls for law enforcement service above and beyond those that occur during existing conditions. As such, impacts would be less than significant and additional mitigation measures would not be required.

iii. The Project would not be located near a school and therefore would not impact such a facility. Additionally, the Project would not generate population growth and would not require new school facilities to accommodate such growth. As such, no impacts would occur and mitigation measures would not be required.

iv. The proposed Project would not generate an increase in population and therefore would not affect service ratios or parks in the area. Furthermore, the proposed Project would not include the development of any parks or recreation areas. As such, no impacts would occur and mitigation measure would not be required.

v. The Project is not near any Amador County public facilities; therefore, implementation of the Project would not impact such facilities. As such, no impacts would occur and mitigation measures would not be required.
3.15 RECREATION

<table>
<thead>
<tr>
<th>XV. Recreation – Would the project:</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant Impact with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
</tbody>
</table>

Discussion/Conclusion/Mitigation

a, b) The proposed Project includes the demolition of an existing bridge, new bridge installation, and approach roadway work along Carbondale Road. The Project would not generate a population that would increase the use of existing recreational facilities or parks in the area. Furthermore, the Project does not include the development of a recreational facility or park. As such, no impact would occur and mitigation measures are not required.
3.16 TRANSPORTATION/TRAFFIC

<table>
<thead>
<tr>
<th>XVI. Transportation/Traffic – Would the project:</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>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?</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location which results in substantial safety risks?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>e. Result in inadequate emergency access?</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
</tbody>
</table>

Discussion/Conclusion/Mitigation

Carbondale Road is a local road with an Average Daily Traffic (ADT) of 176 vehicles per day that provides access to adjacent properties. The proposed Project would replace the existing bridge with a new structure accommodating two 11-foot wide lanes with 2-foot shoulders and bridge railings, resulting in an approximate bridge width of 29 feet. The new bridge would consist of an 80-foot long, two-span, cast-in-place, reinforced concrete slab supported on spread footings with an increase in height of approximately 4 feet to allow required hydraulic capacity of Willow Creek. Implementation of the Project would not increase average daily traffic along Carbondale Road as the Project does not involve the addition of travel lanes.

During construction, Carbondale Road would close to traffic and a detour route would be provided. Staging and equipment storage/laydown areas would be located on the closed portion of Carbondale Road. Construction is anticipated to begin in spring 2020 and would last approximately 6 months.

a) Construction would generate a small volume of traffic during construction, resulting in an increase in vehicle trips associated with construction trucks and equipment. However, the number of vehicles would be relatively small (e.g., staging equipment to the site and daily trips...
by operators and workers to the site) and the construction period would be of limited duration. Construction of the proposed Project would include the closure of Carbondale Road for an estimated period of 6 months. Such a closure could conflict with County circulation plans for motorized and non-motorized (bicycles) forms of transportation by requiring a detour for local traffic and bicyclists using the local roadway system. Furthermore, the closure could conflict with emergency response plans for local law enforcement, fire protection, and emergency medical services, as it would result in a detour and potentially longer response times to incidents. Implementation of mitigation measure MM-TRAF-1 would reduce construction impacts and ensure the Project does not conflict with County plans. The proposed Project would not result in a permanent (operational) increase in traffic. Additional traffic would not be generated with implementation of the proposed Project.

**MM-TRAF-1:** Prior to construction commencement, Amador County shall prepare and implement a Traffic Management Plan (TMP) that provides BMPs that would reduce temporary impacts associated with the closure of Carbondale Road during construction. The TMP shall include discussions about local detours, road closure(s), and temporary routes for emergency services to continue to adequately serve the area in the event of an incident. Alternative routes for non-motorized transportation shall be provided in the TMP as well. The TMP shall also designate County staff to function as the primary liaison and information contact with emergency services and responders. The TMP shall also discuss that the County will provide the required public information updates on construction and road closures as applicable.

Impacts would be *less than significant* with implementation of mitigation measure **MM-TRAF-1**.

b) The proposed Project would replace an existing deficient bridge along the same alignment on Carbondale Road. The proposed Project would not result in a decrease in level of service standards established by the County. As such, *no impacts* would occur and mitigation measures would not be required.

c) The proposed Project includes the replacement of a deficient bridge and would not result in air traffic pattern changes. As such, *no impacts* would occur and mitigation measures would not be required.

d) The proposed Project would improve the current functionality and safety of Carbondale Road at the Willow Creek crossing. The new bridge would not include sharp curves, dangerous intersections, or incompatible uses. As such, impacts would be *less than significant*.

e) The proposed Project would require the closure of Carbondale Road for 6 months and thus could temporarily change emergency access to first responders in the area. To reduce such a temporary change, implementation of mitigation measure **MM-TRAF-1** would be required.

Implementation of **MM-TRAF-1** would reduce impacts to *less than significant*. 
f) The proposed Project would not conflict with policies supporting alternative transportation. The proposed Project is located in rural Amador County and alternative forms of transportation are not readily available in this area. As such, **no impacts** would occur and mitigation measures are not required.
3.17 TRIBAL CULTURAL RESOURCES

<table>
<thead>
<tr>
<th>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:</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>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)</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.</td>
<td></td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
</tbody>
</table>

Discussion/Conclusion/Mitigation

a, b) Section 106 consultation efforts were conducted with the Buena Vista Rancheria and the Ione Band of Miwok Indians beginning in December 2016 as requested by Caltrans. Below is a summary of this additional effort:

The Buena Vista Rancheria expressed concern that the APE is situated in a Traditional Cultural Landscape. Representatives from the Buena Vista Rancheria were present during the field survey and discussed their concerns with LSA. LSA explained that to be eligible for listing in the NRHP, a Traditional Cultural Property (TCP) must have defined boundaries and must currently retain its traditional use by the tribe. LSA also requested documentation and evidence supporting the landscape’s eligibility as a historic property, and informed the Buena Vista Rancheria representatives that the APE is situated on a landform that has a low sensitivity for buried resources.

Representatives of the Buena Vista Rancheria, LSA, and Caltrans, and the Project engineers met on site on March 23, 2017. Caltrans requested documentation from the tribe on April 4, 2017. On May 9, 2017, the Buena Vista Rancheria sent an email stating that, based on local history and a site visit conducted by the tribe’s archaeologist and board member and elder, they believe the possibility of encountering tribal artifacts or human remains may be significant. On May 17, 2017, Caltrans, as the lead agency, sent a letter to the Tribal Historic Preservation Officer of the Buena Vista Rancheria of Me-Wuk Indians stating that “Caltrans is of the opinion the research, survey and consultation efforts of the Project proponent Amador County have satisfied the requirements of the Cultural resource portion of NEPA and Section 106 of NHPA” and that not enough evidence has been provided to make the determination that a historic property under Section 106 would be affected by the proposed Project. The Buena Vista Rancheria maintains the stance that the APE is situated in a TCP, regardless of the
compromised integrity and the fact that the tribe does not currently use the land within the APE in a traditional capacity.

LSA contacted Randy Yonemura of the Ione Band of Miwok Indians to request documentation regarding significant resources within the APE. Mr. Yonemura responded with a request for consultation and a monitor during construction. During an on-site meeting between LSA, the County, Caltrans, and Project engineers with Mr. Yonemura on April 6, 2017, the Project engineers provided Mr. Yonemura with design plans for the bridge. Caltrans requested information regarding significant resources by mid-June; however, no response was received. Caltrans contacted Mr. Yonemura and provided an extension to provide this information; however, no response has been received to date.

Impacts would be less than significant and mitigation measures would not be required.
### 3.18 UTILITIES AND SERVICE SYSTEMS

<table>
<thead>
<tr>
<th>XVII. Utilities and Service Systems – Would the project:</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>f. Be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>g. Comply with federal, state, and local statutes and regulations related to solid waste?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
</tbody>
</table>

#### Discussion/Conclusion/Mitigation

a) The proposed Project includes the removal and replacement of an existing bridge and roadway approach work on Carbondale Road. Wastewater would not be generated during Project construction or operation due to the type of facility (a bridge) that would be replaced; therefore, implementation of the Project would not exceed wastewater treatment requirements. As such, **no impact** would occur and no mitigation is required.

b) As the Project would not generate wastewater during construction or operation, no new water or wastewater treatment facilities or the expansion of facilities would be required. **No impact** would occur and mitigation measures are not required.

c) The existing bridge crossing over Willow Creek on Carbondale Road is drained through ditches along the road to ensure conveyance of stormwater into Willow Creek. Implementation of the proposed Project would not require changes to the existing stormwater drainage facilities and stormwater runoff would continue to be conveyed as during existing conditions. Impacts would be **less than significant** and mitigation measures are not required.

d) During construction, the proposed Project would use nonpotable water for dust suppression. The nonpotable water would be brought to the site and stored in water trucks during the 6-month construction period. The amount of water that would be needed would be nominal and
would not affect existing entitlements and resources. Once operational, the proposed Project would not require water. Impacts would be less than significant and mitigation measures are not required.

e) As discussed above in (a) and (b), the Project would not generate wastewater during construction and operation. As such, no impact would occur and mitigation measures are not required.

f) ACES Waste Services collects solid waste in Amador County. It is then taken to the Western Amador Recycling Facility (WARF) (also known as the Buena Vista Landfill Transfer Station) for disposal. WARF has a current permitted daily intake capacity of 333 tons per day, and recyclable materials and residual municipal waste, once segregated, are disposed of at the Keifer Landfill in Sacramento County. The landfill is permitted a maximum of 10,800 tons per day of solid waste; however, as of 2016, it averages a daily intake of 6,000 tons per day. The permitted capacity of Keifer Landfill is 58 million tons of solid waste and the existing remaining capacity is approximately 56 million tons. Demolition and construction activities associated with the proposed Project would generate solid waste that would be transferred to WARF and then disposed of in the Keifer Landfill. The amount of solid waste that would be generated during demolition and construction is nominal compared to the existing average daily intake of both facilities. As such, both of these solid waste facilities will be able to accommodate the solid waste from the proposed Project. Impacts would be less than significant and mitigation measures are not required.

g) The proposed Project would comply with all solid waste regulations (federal, State, and local). As such, no impact would occur and mitigation measures are not required.

---

12 Amador County General Plan Environmental Impact Report, Chapter 4.13 Public Services and Utilities, pg. 4.13-24, July 2016.
3.19 MANDATORY FINDINGS OF SIGNIFICANCE

<table>
<thead>
<tr>
<th>XVII. Mandatory Findings of Significance</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
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</tr>
</thead>
<tbody>
<tr>
<td>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?</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>b. Does the project have impacts that are individually limited, but cumulatively considerable? (&quot;Cumulatively considerable&quot; 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.)</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
</tbody>
</table>

Discussion/Conclusion/Mitigation

a) This IS/MND discusses potential impacts to the environment. Where potential impacts to the environment could occur mitigation measures are suggested for implementation to reduce such impacts. As such, the proposed Project would not substantially degrade the environment and impacts would be less than significant with mitigation measures.

b) The impacts of the proposed Project would be individually limited and site specific and would not be cumulatively considerable. The proposed Project would include existing bridge demolition, new bridge installation, and roadway approach work on Carbondale Road. All environmental impacts, as discussed throughout this IS/MND, that could occur with Project implementation would be reduced to a less than significant level with implementation of the suggested mitigation measures. When viewed in conjunction with other closely related, past, present, or reasonably foreseeable future projects, development of the proposed Project would not cumulatively contribute to impacts. The cumulative impact of the Project would be less than significant.

c) The purpose of the proposed Project is to replace the existing deficient bridge on Carbondale Road over Willow Creek with an improved bridge that would provide a safe crossing over the creek. The proposed Project would also include roadway approach improvements along Carbondale Road, east and west of Willow Creek. The Project would be implemented to meet American Association of State Highway and Transportation Officials standards for design speed and road/bridge width, thus improving motorists’ safety along Carbondale Road. As described throughout this IS, implementation of the proposed Project could result in temporary air quality, biology, cultural, hazards and hazardous materials, and traffic/circulation impacts as a result of
proposed Project development. Implementation of the recommended mitigation measures, compliance with County regulations, and the application of standard construction practices would ensure that the proposed Project would not result in environmental impacts that would cause substantial direct or indirect adverse impacts on human beings. This impact is considered *less than significant.*
4.0 REFERENCES


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APPENDIX A

NATURAL ENVIRONMENT STUDY, BIOLOGICAL ASSESSMENT, REVISED SECTION 5.5 AND BIOLOGICAL OPINION
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Natural Environment Study

Carbondale Road Bridge Replacement Project at Willow Creek

Amador County, California

Caltrans District 10

Federal Aid Number BRLO-5926(055)

December 2016
Natural Environment Study
STATE OF CALIFORNIA
Department of Transportation
and Amador County Department of Public Works

Prepared By: __________________________ Date: 1/6/17
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Nicole Clement, Assistant Biologist
916-630-4600
LSA Associates, Inc.

Submitted By: __________________________ Date: __________
Jered C. Reinking, PE
Senior Civil Engineer
Amador County Department of Transportation and Public Works
209-223-6429

Recommended for Approval By: __________________________ Date: __________
Dominic Vitali, District Biologist
California Department of Transportation
District 10 Environmental
209-948-3667

Approved By: __________________________ Date: __________
Julie Myrah, Branch Chief
California Department of Transportation
District 10 Environmental
209-948-7427

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Summary

The County of Amador (County), in conjunction with the California Department of Transportation (Caltrans), proposes to replace the existing two-lane bridge over Willow Creek along Carbondale Road. The existing bridge has been given a sufficiency rating of 75.4 and a status of functionally obsolete. The structure does not meet current American Association of State Highway and Transportation Officials (AASHTO) standards due to its narrow width, and the metal pipe bridge railings and lack of approach guardrail is substandard. The bridge has inadequate hydraulic capacity, with design year storms overtopping the bridge and has experienced long term scour at the abutment and pier foundations.

A Biological Study Area (BSA) was developed to inventory biological resources that could be affected by the project. The BSA includes the project footprint, all access and staging areas, and lands beyond the footprint to the edge of the road right-of-way that could potentially be affected by project construction and/or is determined necessary to inventory in order to perform an adequate analysis of project impacts. The majority of the BSA is grazed California annual grasslands interspersed with blue oak (Quercus douglasii) and interior live oak (Quercus wislienzii), open water associated with the braided channels of Willow Creek, and developed areas consisting of Carbondale Road and the existing bridge. No invasive species were identified in the BSA.

The project will result in impacts to California annual grassland, consisting of 1.58 ac of permanent impacts and 0.041 ac of temporary impacts. The project will also result in the removal of two blue oak trees (Quercus douglasii) and three small interior live oak trees.

Special status wildlife species that may occur in the BSA include pallid bat (Antrozous pallidus), grasshopper sparrow (Ammodramus savannarum), Swainson’s hawk (Buteo swainsoni), California red-legged frog (Rana draytonii) (CRLF), and California tiger salamander (Ambystoma californiense) (CTS). Nesting birds may also be present in the interior live oak community adjacent to the BSA. No special status plants are expected to occur in the BSA.

CTS is federally listed as threatened under the Federal Endangered Species Act (FESA). The proposed project may affect, and is likely to adversely affect, CTS, a species listed as threatened under FESA. The BSA does not provide suitable aquatic habitat for CTS, however, there are multiple ponds within 1.24 miles (mi) of the BSA which could provide suitable breeding habitat. Therefore, the annual grassland within the BSA is potential upland habitat for CTS. Permanent impacts, totaling 0.57 acre (ac), and temporary impacts, totaling 0.37 ac, to upland habitat for the CTS will result from project implementation. A Biological Assessment will be submitted to the United States Fish and Wildlife Service (USFWS) in support of Section 7 consultation for CTS.
The project may affect but is not likely to adversely affect CRLF, a federally listed species. The project will result in permanent impacts to potential upland habitat totaling 0.57 ac and temporary impacts to potential upland habitat totaling 0.37 ac. There will be no impacts to aquatic non-breeding habitat. Due to the lack of suitable breeding habitat in the BSA or immediate vicinity, CRLF are expected to only utilize the upland habitat for migrating between suitable breeding pools or potentially for estivation. Informal consultation with the USFWS pursuant to Section 7 of the Federal Endangered Species Act will be required.

The project will not result in beneficial impacts to any special status species, nor will the project substantially contribute to cumulative impacts for any special status species.

The project will result in permanent and temporary impacts to wetlands and non-wetland waters and is likely to require an Army Corps of Engineers (ACOE) Nationwide Permit (NWP), a Water Quality Certification from the Regional Water Quality Control Board (RWQCB), and a California Department of Fish and Wildlife (CDFW) Lake and Streambed Alteration Agreement.

Waters of the U.S. within the BSA are limited to the reach of Willow Creek and tributary drainages. Permanent impacts to wetlands within the BSA total 0.06 ac and temporary impacts total 0.11 ac. Non-wetland waters will also be impacted by the project. Permanent impacts to non-wetland waters total 0.01 ac and temporary impacts total 0.02 ac.

The proposed project includes numerous avoidance and minimization measures for special status species and habitat to reduce the potential for adverse effects.
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# List of Abbreviated Terms

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>AASHTO</td>
<td>American Association of State Highway and Transportation Officials</td>
</tr>
<tr>
<td>ACOE</td>
<td>Army Corps of Engineers</td>
</tr>
<tr>
<td>ac</td>
<td>acre(s)</td>
</tr>
<tr>
<td>BSA</td>
<td>Biological Study Area</td>
</tr>
<tr>
<td>CDFW</td>
<td>California Department of Fish and Wildlife</td>
</tr>
<tr>
<td>County</td>
<td>Amador County</td>
</tr>
<tr>
<td>Caltrans</td>
<td>California Department of Transportation</td>
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<td>CEQA</td>
<td>California Environmental Quality Act</td>
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<td>California Endangered Species Act</td>
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<td>CFGC</td>
<td>California Fish and Game Code</td>
</tr>
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<td>CNPS</td>
<td>California Native Plant Society</td>
</tr>
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<td>CNDDDB</td>
<td>California Natural Diversity Database</td>
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<td>CRLF</td>
<td>California Red-legged Frog</td>
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<td>California Tiger Salamander</td>
</tr>
<tr>
<td>CWA</td>
<td>Clean Water Act</td>
</tr>
<tr>
<td>dbh</td>
<td>Diameter at Breast Height</td>
</tr>
<tr>
<td>EFH</td>
<td>Essential Fish Habitat</td>
</tr>
<tr>
<td>ESA</td>
<td>Environmentally Sensitive Area</td>
</tr>
<tr>
<td>EO</td>
<td>Executive Order</td>
</tr>
<tr>
<td>FESA</td>
<td>Federal Endangered Species Act</td>
</tr>
<tr>
<td>ft</td>
<td>Foot/feet</td>
</tr>
<tr>
<td>MBTA</td>
<td>Migratory Bird Treaty Act</td>
</tr>
<tr>
<td>mi</td>
<td>mile(s)</td>
</tr>
<tr>
<td>MSA</td>
<td>Magnuson-Stevens Fishery Conservation and Management Act</td>
</tr>
<tr>
<td>NMFS</td>
<td>National Marine Fisheries Service</td>
</tr>
<tr>
<td>NWP</td>
<td>Nationwide Permit</td>
</tr>
<tr>
<td>OHWM</td>
<td>ordinary high water mark</td>
</tr>
<tr>
<td>PCWQCA</td>
<td>Porter-Cologne Water Quality Control Act</td>
</tr>
<tr>
<td>RWQCB</td>
<td>Regional Water Quality Control Board</td>
</tr>
<tr>
<td>USFWS</td>
<td>United States Fish and Wildlife Service</td>
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</tbody>
</table>
Chapter 1 – Introduction

The County, in conjunction with Caltrans, proposes to replace the existing two-lane Carbondale Road Bridge over Willow Creek. The project site is located in northwest Amador County, approximately 7.5 mi east of the community of Rancho Murieta (Figures 1-3). The County will serve as a lead agency for the California Environmental Quality Act (CEQA) review while Caltrans will be the lead agency for the National Environmental Policy Act.

1.1 Project History

1.1.1 PURPOSE AND NEED

The existing bridge has been given a sufficiency rating of 75.4 and a status of functionally obsolete. The structure does not meet current AASHTO standards due to its narrow width and the metal pipe bridge railings and lack of approach guardrail is substandard. The bridge has inadequate hydraulic capacity, with design year storms overtopping the bridge. Additionally, the structure has experienced long term scour at the abutment and pier foundations.

1.2 Project Description

1.2.1 PROPOSED PROJECT

Willow Creek Bridge was built in 1940 and is 36 feet (ft) long and 20 ft wide. The structure is a two-span continuous steel girder bridge with a cast-in-place, reinforced concrete deck and metal pipe railings. The bridge is founded on concrete abutments and a center pier wall, all of which were constructed directly onto the underlying rock.

The proposed project will replace the existing bridge with a new structure accommodating two 11-foot lanes, two-foot shoulders and bridge railings, resulting in an approximate bridge width of 29 ft. The new bridge will consist of an 80-foot long two-span, cast-in-place, reinforced concrete slab supported on spread footings.

The roadway alignment will remain unchanged. Along with a longer bridge, the roadway profile will be raised by four ft to provide additional hydraulic capacity. The western roadway approach will begin 90 ft east of the Forest Home Road intersection, approximately 370 ft west of the proposed bridge. The eastern approach will begin approximately 560 ft east of the proposed bridge.
Carbondale Road Bridge (26C0030) over Willow Creek Replacement Project
Federal Project No. BRLO-5926(055)

Project Location

FIGURE 1

Legend

Project Location
Carbondale Road Bridge (26C0030) over Willow Creek
Replacement Project
Federal Project No. BRLO-5926(055)

Project Vicinity on Topographic Base
LEGEND

- Biological Study Area

Carbondale Road Bridge (26C0030) over Willow Creek Replacement Project
Federal Project No. BRLO-5926(055)

Project Vicinity on Aerial Base

SOURCE: NAIP Aerial Imagery (7/2014)
I:\MKT1406\GIS\Reports\NES\NES_fig3_prj_vic_aerial.mxd (6/7/2016)
The County has prescriptive rights on Carbondale Road (i.e., no formal right of way has been established). The location and extent of right of way acquisition will be determined after environmental review is complete and the project has entered the Plans, Specifications, and Estimates phase. However, it is expected that sliver right of way acquisitions will be needed on the south side of the roadway to accommodate the higher roadway profile and increased roadway width. Temporary construction easements are also anticipated on the south to provide Contractor construction access. No utilities have been identified within the project limits.

Construction of the bridge will involve excavation for and construction of concrete abutments and a central pier supported on spread footings. Other temporary work within Willow Creek includes removal of the existing bridge, falsework erection and removal, and installation of scour countermeasures at the support locations. Willow Creek is a seasonal creek and construction is anticipated to proceed without needing to divert water away from construction activities. Construction of the roadway approaches will involve the removal of existing pavement and the placement of fill material, aggregate base and hot mix asphalt pavement. Tree removal and removal of other vegetation along the creek will be necessary for the project.

During construction, Carbondale Road will be closed to traffic and a detour route will be provided. Staging and equipment storage/laydown areas will be located on the closed portion of Carbondale Road. Construction is anticipated to begin in Spring 2018 and will have duration of approximately six months.

Preliminary project design plans are included in Appendix A.

1.2.2 NO PROJECT ALTERNATIVE

The No Project alternative would not replace the existing bridge or implement any other improvements included in the Proposed Project.

1.2.3 PROJECT IMPACT AREA

The project impact area consists of the project footprint, access and staging areas, as described in section 1.2.1. The project will result in 1.58 ac of permanent impacts and 0.041 ac of temporary impacts.
Chapter 2 – Study Methods

2.1 Regulatory Requirements

2.1.1 SPECIAL STATUS SPECIES

Special status species include plants and animals that are: 1) listed as rare, threatened, or endangered by USFWS or CDFW under State or federal endangered species acts; 2) are on formal lists as candidates for listing as threatened or endangered; 3) are on formal lists as species of concern; or 4) are otherwise recognized at the State, federal, or local level as sensitive.

2.1.1.1 Federal and California Endangered Species Acts

Under FESA, it is unlawful to “take any species listed as threatened or endangered”.

“Take” is defined as to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct.” An activity is defined as “take” even if it is unintentional or accidental. Take provisions under FESA apply only to listed fish and wildlife species under the jurisdiction of the USFWS and/or the National Oceanic & Atmospheric Administration and National Marine Fisheries Service (NMFS). Consultation with USFWS or NMFS is required if a project “may affect” a listed species.

When a species is listed, USFWS and/or NMFS, in most cases, must officially designate specific areas as critical habitat for the species. Consultation with USFWS and/or NMFS is required for projects that include a federal action or federal funding if the project may affect designated critical habitat.

Under the California Endangered Species Act (CESA), it is unlawful to “take” any species listed as rare, threatened, or endangered. Under CESA, “take” means to “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill”. CESA take provisions apply to fish, wildlife, and plant species. Take may result whenever activities occur in areas that support a listed species. Consultation with CDFW is required if a project will result in “take” of a listed species.

2.1.1.2 Magnuson-Stevens Fishery Conservation and Management Act

Under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), essential fish habitat (EFH) must be designated in every fishery management plan.

EFH includes “…those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” The MSA requires consultation with NMFS for projects that include a federal action or federal funding and may adversely modify EFH.
2.1.2 WATERS OF THE U.S. AND OTHER JURISDICTIONAL WATERS

2.1.2.1 Army Corps of Engineers

Under Section 404 of the Clean Water Act (CWA), the ACOE regulates the discharge of dredged or fill material into waters of the U.S. Waters of the U.S. are those waters that have a connection to interstate commerce, either direct via a tributary system or indirect through a nexus identified in the ACOE regulations. In non-tidal waters, the lateral limit of jurisdiction under Section 404 extends to the ordinary high water mark (OHWM) of a waterbody or, where adjacent wetlands are present, beyond the OHWM to the limit of the wetlands. The OHWM is defined as “that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area” (33 CFR 328.3). In tidal waters, the lateral limit of jurisdiction extends to the high tide line or, where adjacent wetlands are present, to the limit of the wetlands.

Wetlands

Wetlands are defined as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for a life in saturated soil conditions”.

Non-wetland Waters

Non-wetland waters essentially include any body of water, not otherwise exempted, that displays an OHWM.

2.1.2.2 Regional Water Quality Control Board

Under Section 401 of the CWA, the State Water Resources Control Board must certify all activities requiring a 404 permit. The RWQCB regulates these activities and issues water quality certifications for those activities requiring a 404 permit. In addition, the RWQCB has authority to regulate the discharge of “waste” into waters of the State pursuant to the Porter-Cologne Water Quality Control Act (PCWQCA).

2.1.2.3 California Department of Fish and Wildlife

CDFW, through provisions of Section 1602 of the California Fish and Game Code (CFGC), is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be substantially adversely affected. Streams (and rivers) are defined by the presence of a channel bed and banks, and at least an
ephemeral or intermittent flow of water. CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by CDFW.

CDFW generally includes, within the jurisdictional limits of streams and lakes, any riparian habitat present. Riparian habitat includes willows, cottonwoods, and other vegetation typically associated with the banks of a stream or lake shoreline. In most situations, wetlands associated with a stream or lake would fall within the limits of riparian habitat. Thus, defining the limits of CDFW jurisdiction based on riparian habitat will automatically include any wetland areas. Riparian communities may not fall under ACOE jurisdiction unless they are below the OHWM or classified as wetlands.

2.1.2.4 Executive Order 11990: Protection of Wetlands

Executive Order (EO) 11990 mandates leadership on the part of federal agencies to reduce loss and degradation of wetlands and to preserve and enhance the beneficial values and functions of wetlands. Each federal agency “shall avoid undertaking or providing assistance for new construction located in wetlands unless the head of the agency finds that: (1) there is no practicable alternative to such construction, and (2) that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use”.

2.1.3 MIGRATORY BIRD TREATY ACT

The Migratory Bird Treaty Act (MBTA) prohibits actions that will result in “take” of migratory birds, their eggs, feathers, or nests. “Take” is defined in the MBTA as any means or any manner to hunt, pursue, wound, kill, possess, or transport, any migratory bird, nest, egg, or part thereof.

Migratory birds are also protected, as defined in the MBTA, under Section 3513 of the CFGC.

2.1.4 CALIFORNIA FISH AND GAME CODE (BREEDING BIRDS)

Section 3503 of the CFGC prohibits the take, possession, or needless destruction of the nest or eggs of any bird, except as otherwise provided by the CFGC or other regulation.

2.1.5 EXECUTIVE ORDER 13112: INVASIVE SPECIES

Under EO 13112, an invasive species is defined as “an alien species (a species not native to a particular ecosystem) whose introduction does or is likely to cause economic and environmental harm or harm to human health”. Invasive species are determined by the Invasive Species Council.
In addition to other mandates, EO 13112 mandates federal agencies whose actions may affect the status of invasive species to "not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species".

2.1.6 EXECUTIVE ORDER 11988: FLOODPLAIN MANAGEMENT

EO 11989 mandates leadership on the part of federal agencies to minimize the adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative.

Each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities for (1) acquiring, managing, and disposing of federal lands, and facilities; (2) providing federally undertaken, financed, or assisted construction and improvements; and (3) conducting federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities.

2.2 Studies Required

Prior to conducting any field studies, the limits of the BSA were established, totaling approximately 5.06 acres (ac). The BSA consists of the project footprint, access and staging areas, and lands beyond the footprint to the edge of the road right-of-way that could potentially be affected by project construction and/or were determined necessary to inventory in order to perform an adequate analysis of project impacts (Figure 4).

The studies required to fully document the environmental conditions of the BSA included a general biological survey, habitat mapping, a CTS habitat assessment, and delineation of jurisdictional waters.

2.2.1 LITERATURE REVIEW

A list of sensitive wildlife and plant species potentially occurring within the BSA and vicinity was compiled to evaluate potential impacts resulting from project construction. Sources used to compile the list include the California Natural Diversity Data Base (CNDDB), the USFWS online special status species list, and the California Native Plant Society (CNPS) Online Edition referencing the Folsom SE, Latrobe, Fiddletown, Carbondale, Irish Hill, Amador City, Goose Creek, Ione, and Jackson United States Geological Survey 7.5-minute quadrangles. All lists are included in Appendix B.
Carbondale Road Bridge (26C0030) over Willow Creek
Replacement Project
Federal Project No. BRLO-5926(055)
Biological Study Area and Project Design

FIGURE 4
The special status species lists obtained from the CNDDB, CNPS, and USFWS were reviewed to determine which species could potentially occur within the vicinity of the BSA. The cumulative list (shown in Table 4, Section 3.2) includes numerous species representing a variety of habitat types. The list includes each species’ protection status, habitat information, status in the BSA, and supporting comments as necessary.

The determination of whether a species could potentially occur within the BSA was based on the availability of suitable habitat within and adjacent to the BSA, as well as known occurrences of the species in or adjacent to the BSA according to the CNDDB. Species requiring specific habitat not present in the vicinity of the project (e.g., vernal pools) were eliminated as potentially occurring and are not discussed further. Those species that could potentially occur in the BSA from habitat suitability or on known occurrences in or within the vicinity of the BSA are discussed in Sections 4.2 and 4.3.

2.2.2 FIELD SURVEYS

Field surveys conducted for the project included a habitat assessment for CTS.

2.2.2.1 Vegetation Mapping

Naturally occurring vegetation in the BSA was classified according to A Manual of California Vegetation, Second Edition (Sawyer, Keeler-Wolf, and Evans 2008), as appropriate. Managed or developed areas were classified according to their dominant plant species. The names of the plant species are consistent with The Jepson Manual: Vascular Plants of California, Second Edition (Baldwin, B. G., et. al., editors 2012).

2.2.2.2 Potential Jurisdictional Waters Determination and Delineation


LSA assistant biologist Stefan de Barros conducted a preliminary jurisdictional delineation on February 23, 2016. The field investigation was conducted in accordance with the ACOE Routine Approach for small areas (i.e., equal to or less than 5 acres), as described in the 1987 Manual. Data was collected for soils, hydrology, and vegetation where necessary to determine the extent of potential waters of the U.S. The limit of CDFW jurisdiction was also delineated.

Data sheets are included in Appendix C.
2.2.2.4 CTS Habitat Assessment

Two field surveys for CTS were conducted by LSA to evaluate the potential for the species to occur in the BSA. On February 4, 2015 the survey was conducted by LSA biologist Dayna Winchell and on December 1, 2015 the survey was conducted by LSA senior biologist Laura Belt (Table 1). The site assessment was prepared in accordance with the Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander, dated October 2013. The assessment is included in Appendix D.

2.3 Personnel and Survey Dates

Table 1 below provides a summary of the field surveys performed for this project.

<table>
<thead>
<tr>
<th>Date</th>
<th>Personnel</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 4, 2015</td>
<td>D. Winchell</td>
<td>Vegetation mapping, CTS habitat assessment</td>
</tr>
<tr>
<td>December 1, 2015</td>
<td>L. Belt</td>
<td>CTS habitat assessment</td>
</tr>
<tr>
<td>February 23, 2016</td>
<td>S. de Barros</td>
<td>Jurisdictional waters delineation</td>
</tr>
</tbody>
</table>

2.4 Agency Coordination and Professional Contacts

No agency coordination has occurred for this project.

2.5 Limitations That May Influence Results

The BSA has been heavily grazed by cattle making it difficult to identify hydrophytic vegetation. As such, using hydrophytic vegetation as an indicator for wetlands was omitted from the delineation. No other problems or limitations were encountered during the research, fieldwork, or document preparation that limited the results present herein.
Chapter 3 – Results: Environmental Setting

3.1 Description of the Existing Biological and Physical Conditions

3.1.1 BIOLOGICAL STUDY AREA

The BSA is located in southwestern Amador County, approximately 7.5 mi southeast of the City of Rancho Murieta. The project is located in the Irish Hill quadrangle, Township 7 North, Range 9 East, in Sections 22 and 23.

Land in the BSA consists of vegetation communities and developed areas. Vegetation communities are discussed below in the Natural Communities and Land Uses Section. The developed area within the BSA consists of the existing roadways and bridge, totaling 0.75 ac.

3.1.2 PHYSICAL CONDITIONS

The BSA lies in a largely rural area among rolling grasslands. Willow Creek and a small tributary are the only aquatic features within the BSA. Additional aquatic features in the vicinity include several stock ponds and other drainages. The dominant plant community in the BSA consists of California annual grasslands with interior live oak trees (*Quercus wislizeni*) intermixed. Land uses in the BSA are primarily for rural residences and cattle grazing purposes.

The BSA comprises approximately 5.06 ac and is at an elevation of approximately 530 ft. The terrain in the BSA is mostly flat; surrounding areas consist of gently rolling terrain.

According to U.S. Geological Survey, the BSA is located on soil designated as follows:

- Auburn silt loam, 0 to 31 percent slopes (ApD): This soil is well drained.
- Exchequer and Auburn very rocky loams, 3 to 31 percent slopes (ExD): This soil is well drained.
- Mine tailings and Riverwash (Mn): This soil is excessively drained.

The majority of land in the area is privately owned and appears to be similar to the BSA in use and vegetative characteristics.

The undeveloped areas within the BSA consist of the California annual grasslands and Willow Creek. Representative photos of the BSA are shown in Appendix E.
3.1.3 BIOLOGICAL CONDITIONS IN THE BIOLOGICAL STUDY AREA

3.1.3.1 Natural Communities and Land Uses

As noted above, vegetation communities were classified based on the descriptions in Sawyer, Keeler-Wolf, and Evans (2008), as applicable. Vegetation communities in the BSA include: California annual grassland and seasonal riverine. Natural communities comprise 4.31 ac of the BSA, as summarized in Table 2. The developed area comprises 0.75 ac. Natural communities and land uses in the BSA are shown in Figure 5.

Table 2: Natural Communities and Land Use in the BSA

<table>
<thead>
<tr>
<th>Natural Communities</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>California Annual Grassland</td>
<td>3.82</td>
</tr>
<tr>
<td>Seasonal Riverine</td>
<td>0.49</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>4.31</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developed</td>
<td>0.75</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>0.75</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5.06</strong></td>
</tr>
</tbody>
</table>

**California Annual Grasslands**

Comprising of 3.82 ac, California annual grassland is the most dominant natural community within the BSA. The California annual grassland occurs on both sides of Carbondale Road and extends throughout nearly the entire BSA. Representative plant species observed include Mediterranean barley (*Hordeum marinum*) foxtail barley (*Hordeum murinum*), wild oat (*Avena fatua*), and medusahad (*Taeniatherium caput-medusae*)

**Seasonal Riverine**

The seasonal riverine community, approximately 0.49 ac, is comprised of Willow Creek and its associated drainages. The water level fluctuates with the seasons and the plants present are mostly hydrophytic. The vegetation in Willow Creek was heavily grazed by cattle and could not be identified. However, hydric soils and hydrology indicators were observed in Willow Creek (see Section 3.1.3.6) and it was determined this area supported wetlands. Therefore, it was assumed hydrophytic vegetation was also present.
FIGURE 5

Carbondale Road Bridge (26C0030) over Willow Creek
Replacement Project
Federal Project No. BRLO-5926(055)

Natural Communities / Land Uses

LEGEND

- Biological Study Area
- Natural Communities / Land Uses - (5.06 ac)
  - California Annual Grassland - (3.82 ac)
  - Seasonal Riverine - (0.49 ac)
  - Developed - (0.75 ac)

I:\MKT1406\GIS\Reports\NES\NES_fig5_plnt_coms_landuse.mxd (6/7/2016)
3.1.3.2  Other Vegetation Communities

**Developed**

The developed area, approximately 0.75 ac, is limited to the existing roadways and bridge.

3.1.3.3  Description of Common Animal Species

The sections below discuss animal species observed and/or likely to occur within the BSA.

**Mammals**

No mammals were observed during the survey. Common species likely to occur in the BSA include California ground squirrel (*Otospermophilus beecheyi*), coyote (*Canis latrans*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), opossum (*Didelphis virginiana*), and mule deer (*Odocoileus hemionus*).

**Birds**

Bird species observed during site surveys include: northern mockingbird (*Mimus polyglottos*), yellow rumped warbler (*Setophaga coronate*), white crowned sparrow (*Zonotrichia leucophrys*), northern flicker (*Colaptes auratus*), Say’s phoebe (*Sayornis saya*), tufted titmouse (*Baeolophus bicolor*), acorn woodpecker (*Melanerpes formicivorus*), red-winged blackbird (*Agelaius phoeniceus*), western scrub jay (*Aphelocoma californica*), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), and turkey vulture (*Cathartes aura*).

Other common bird species expected to occur in the BSA include: California towhee (*Melozone crissalis*), great horned owl (*Bubo virginianus*), red-shouldered hawk (*Buteo lineatus*), band-tailed pigeon (*Columba fasciata*), western bluebird (*Sialia mexicana*), blue-gray gnatcatcher (*Polioptila caerulea*), bushtit (*Psaltriparus minimus*), cliff swallow (*Petrochelidon pyrrhonota*), barn swallow (*Hirundo rustica*), American crow (*Corvus brachyrhynchos*), and Bewick's wren (*Thryomanes bewickii*).

**Amphibians and Reptiles**

One amphibian species, Pacific chorus frog (*Pseudacris* sp.), was observed during the field surveys. Another amphibian species likely to occur in the BSA includes the California toad (*Anaxyrus boreas halophilus*). The BSA also provides habitat for CTS, a federal and State threatened species.
No reptile species were observed during the site survey. Reptile species likely to occur in the BSA include western terrestrial garter snake (*Thamnophis elegans elegans*), western rattlesnake (*Crotalus oreganus*), common gopher snake (*Pituophis catenifer*), and western fence lizard (*Sceloporus occidentalis*).

### 3.1.3.4 Invasive Species

Many non-native species have been part of the California landscape for the past 150 years. Some of these introduced species are invasive, such as oats, barley, and rye, and are present in the annual grasslands within the BSA. However, these species are primarily annual or biennial and are, at most, moderately invasive. No serious invasive species (e.g., yellow star thistle [*Centauria solstitialis*], giant reed grass [*Arundo donax*]) were observed in the BSA.

### 3.1.3.5 Migration Corridor

Wildlife movement corridors are linear habitats that function to connect two or more areas of significant wildlife habitat. These corridors may function on a local level as links between small habitat patches (e.g., streams in urban settings) or may provide critical connections between regionally significant habitats (e.g., deer movement corridors). Wildlife corridors typically include vegetation and topography that facilitate the movements of wild animals from one area of suitable habitat to another in order to fulfill foraging, breeding, and territorial needs. These corridors often provide cover and protection from predators that may be lacking in surrounding habitats. Wildlife corridors generally include riparian zones and similar linear expanses of contiguous habitat.

There is no evidence that Willow Creek is a significant migration corridor, and due to the relatively flat terrain in the BSA and vicinity, it is unlikely that the creek is a significant migration route.

### 3.1.3.6 Aquatic Resources

Aquatic Resources within the BSA include Willow Creek and a small tributary originating from a pond approximately 0.05 mi north of Carbondale Road, west of Forest Home Road. Aquatic resources in the BSA are summarized in Table 3.
Table 3: Aquatic Resources in the BSA (acres)

<table>
<thead>
<tr>
<th>Features</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Potential Wetlands</strong></td>
<td></td>
</tr>
<tr>
<td>Willow Creek and Unnamed Tributary</td>
<td>0.46</td>
</tr>
<tr>
<td><strong>Non-Wetland Waters</strong></td>
<td></td>
</tr>
<tr>
<td>Willow Creek</td>
<td>0.05</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>0.51</strong></td>
</tr>
</tbody>
</table>

The primary aquatic feature in the BSA is Willow Creek. Willow Creek is a slow moving intermittent drainage that flows from north to south through the BSA. North of the bridge, the creek has been highly disturbed due to past dredging activities. The bridge appears to serve as a bottleneck for high flows in the creek, narrowing the watercourse downstream of the bridge. Willow Creek is a moderately swift flowing perennial creek, with depths averaging 1–2 ft. The bed of Willow Creek is comprised primarily of bedrock within the BSA; Willow Creek meanders southwest until it flows into Laguna Creek and then ultimately the Mokelumne River.

Within the BSA, most of the live channel of Willow Creek supports hydrophytic vegetation. However, the area is heavily grazed by cattle rendering the vegetation unidentifiable. Hydric soils were observed at most locations within the BSA and several hydrology indicators were also observed. As a result, the majority of the live channel of Willow Creek within the BSA was determined to meet the ACOE criteria for wetlands. Areas of non-wetlands waters were also present in Willow Creek.

The tributary drainage supported only wetlands; no non-wetland waters were present.

As noted in Section 2.3, data collection occurred on February 23, 2016; the aquatic resources listed in Table 3 are areas potentially meeting ACOE criteria for wetlands and other waters of the U.S. Wetland data sheets are shown in Appendix C. Figure 6 shows the aquatic resources in the BSA, which are also summarized in Table 3.

3.2 Regional Species and Habitats and Natural Communities of Concern

Table 4 provides a list of special status species that could potentially occur in the region, and therefore in the BSA. This list was compiled as described in Section 2.2.1. A review was conducted of the specific habitats required by each species listed in Table 4, and the specific habitats and habitat conditions present in the BSA. Based on this evaluation, it was determined whether the species listed in Table 4 had potential to occur in the BSA. Special status species that were observed, or determined to potentially occur in the BSA based on availability of suitable habitat or other factors such as plucking posts,
scat, nests, dens, etc., are discussed more fully in Sections 4.2 and 4.3 of this report. Species determined unlikely to occur in the BSA based on these same factors are documented accordingly in the table and not discussed further in this report.
FIGURE 6

Carbondale Road Bridge (26C0030) over Willow Creek
Replacement Project
Federal Project No. BRLO-5926(055)
Potential Jurisdictional Waters

LEGEND
- Biological Study Area
- Data Point
- Culvert
- Potential Jurisdictional Waters - (0.51 ac)
- Non-Wetland Waters - (0.05 ac)
- Wetlands - (0.46 ac)

SOURCE: Microsoft Aerial Imagery (6/2011); Mapping - LSA (2016)
I:\MKT1406\GIS\Reports\NES\NES_fig6_juris_wats.mxd (6/7/2016)
<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Status</th>
<th>Habitat Requirements</th>
<th>Habitat Present/Absent</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Antrozous pallidus</em></td>
<td>Pallid bat</td>
<td>CSC</td>
<td>Found in variety of habitats, including grassland, chaparral, woodland, and forest. Most common in open, dry habitats with rocky areas for roosting. Roosts in caves, crevices, mines, hollow trees, buildings.</td>
<td>HP</td>
<td>Suitable foraging habitat and night roost habitat is in the BSA. See discussion in Section 4.3.1.</td>
</tr>
<tr>
<td><em>Agelaius tricolor</em></td>
<td>Tricolored blackbird</td>
<td>CSC (nesting)</td>
<td>Nests in freshwater marshes with tules or cattails, or in other dense vegetation such as thistle, blackberry thickets, etc. in close proximity to open water. Forages in a variety of habitats including pastures, agricultural fields, rice fields, and feedlots.</td>
<td>A</td>
<td>Suitable nesting habitat is not present in the BSA. Thorny/spiny vegetation for protection is not present in the BSA.</td>
</tr>
<tr>
<td><em>Ammodramus savannarum</em></td>
<td>Grasshopper sparrow</td>
<td>CSC</td>
<td>Found in open grasslands and prairies with patches of bare ground. Tends to be found in areas with shrub cover and more vegetation.</td>
<td>HP</td>
<td>Suitable foraging habitat is present in the BSA; see discussion in Section 4.3.2.</td>
</tr>
<tr>
<td><em>Aquila chrysaetos</em></td>
<td>Golden eagle</td>
<td>CA SA</td>
<td>Occurs in rolling foothills, mountain areas, sage-juniper flats, and deserts. Nests in cliffs and in large trees in open areas. Rugged, open habitats with canyons and escarpments are most commonly used for nesting.</td>
<td>A</td>
<td>Although suitable foraging habitat is present in the BSA, no suitable nesting habitat (cliffs) are present in the BSA.</td>
</tr>
<tr>
<td><em>Ardea alba</em></td>
<td>Great egret</td>
<td>CA SA</td>
<td>Found in both fresh and saltwater habitats, this species wades in shallow water to hunt fish, frogs and other small aquatic animals.</td>
<td>A</td>
<td>Although suitable foraging habitat is present, there is no suitable nesting habitat present in the BSA.</td>
</tr>
<tr>
<td><em>Ardea Herodias</em></td>
<td>Great blue heron</td>
<td>CA SA (nesting colony)</td>
<td>Colonial nester in large trees, cliffsides, and sequestered spots on marshes. Rookery sites in close proximity to foraging areas: marshes, lake margins, tide-flats, rivers and streams, wet meadows.</td>
<td>A</td>
<td>Although suitable foraging habitat is present, there is no suitable nesting habitat present in the BSA.</td>
</tr>
<tr>
<td><em>Athene cunicularia</em></td>
<td>Western burrowing owl</td>
<td>CSC</td>
<td>Burrow sites in open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, California ground squirrel.</td>
<td>A</td>
<td>Although there are two CNDDB known occurrences 7.5 mi west of the BSA, no burrows of sufficient size are present in the BSA. No signs of burrowing owl presence were observed during the site visit.</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Status</td>
<td>Habitat Requirements</td>
<td>Habitat Present/Absent</td>
<td>Rationale</td>
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</tr>
<tr>
<td><em>Buteo regalis</em></td>
<td>Ferruginous hawk</td>
<td>SWL</td>
<td>Winters in open grasslands, sagebrush flats, desert scrub, low foothills, and fringes of pinyon-juniper habitats. Mostly eats lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.</td>
<td>HP</td>
<td>Suitable habitat present in the BSA. See discussion section 4.3.3.</td>
</tr>
<tr>
<td><em>Buteo swainsoni</em></td>
<td>Swainson’s hawk</td>
<td>ST</td>
<td>Breeds in stands with few trees in juniper-sage flats, riparian areas, and oak savannahs. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.</td>
<td>HP</td>
<td>Suitable habitat is present in the BSA. See discussion in Section 4.3.4.</td>
</tr>
<tr>
<td><em>Riparia riparia</em></td>
<td>Bank swallow</td>
<td>ST</td>
<td>Lives in low areas along river, streams, and coasts. Habitat includes vertical cliffs or banks. This species exclusively eats flying or jumping insects.</td>
<td>A</td>
<td>Suitable habitat is not present in the BSA, no steep banks, cliffs, or gravel pits are located within the BSA. There are no CNDDB known occurrences within 10 miles of the BSA.</td>
</tr>
<tr>
<td><strong>Reptiles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Emys marmorata</em></td>
<td>Pacific pond turtle</td>
<td>CSC</td>
<td>Occurs in permanent or nearly permanent water sources, ponds, marshes, rivers, streams, and irrigation ditches with emergent vegetation and basking sites. Lays eggs in upland habitat consisting of sandy banks or grassy, open fields.</td>
<td>A</td>
<td>The reach of Willow Creek within the BSA does not provide a permanent water source sufficient to support Pacific pond turtle.</td>
</tr>
<tr>
<td><strong>Amphibians</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ambystoma californiense</em></td>
<td>California tiger salamander</td>
<td>FT, SC, CH</td>
<td>Most commonly found in grasslands or open woodland habitats. Live in vacant or mammal-occupied burrows (e.g., California ground squirrel, valley pocket gopher [<em>Thomomys bottae</em>]), and occasionally other underground retreats, throughout most of the year. Lays eggs on submerged stems and leaves, usually in shallow ephemeral or semi-permanent pools or ponds that fill during heavy winter rains, sometimes in permanent ponds.</td>
<td>HP</td>
<td>Suitable aquatic and upland habitat is present in the BSA. See discussion in Section 4.3.5.</td>
</tr>
<tr>
<td><em>Rana draytonii</em></td>
<td>California red-legged frog</td>
<td>FT, CSC, CH</td>
<td>Lowlands and foothills in or near permanent sources of slow moving, deep water with dense, shrubby or emergent riparian vegetation.</td>
<td>HP</td>
<td>Suitable upland habitat is present in the BSA. See discussion in section 4.3.6.</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Status</td>
<td>Habitat Requirements</td>
<td>Habitat Present/Absent</td>
<td>Rationale</td>
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</tr>
<tr>
<td><em>Spea hammondii</em></td>
<td>Western spadefoot</td>
<td>CSC</td>
<td>Occurs primarily in grassland habitats but also found in valley-foothill hardwood woodlands. Vernal pools or other seasonal water features are essential for breeding and egg laying.</td>
<td>A</td>
<td>Suitable habitat is not present in the BSA.</td>
</tr>
<tr>
<td><strong>Fish</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hypomesus transpacificus</em></td>
<td>Delta smelt</td>
<td>FT, ST</td>
<td>Sacramento-San Joaquin delta. Seasonally in Suisun bay, Carquinez strait, and San Pablo bay. Seldom found at salinities greater than 10 parts per thousand (ppt). Most often in salinities less than 2 ppt.</td>
<td>A</td>
<td>The BSA is outside the range for this species.</td>
</tr>
<tr>
<td><em>Oncorhynchus mykiss</em></td>
<td>Central valley steelhead</td>
<td>FT</td>
<td>Populations occur and spawn in the Sacramento and San Joaquin rivers and their tributaries.</td>
<td>A</td>
<td>The BSA is outside the range for this species.</td>
</tr>
<tr>
<td><strong>Invertebrates</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Andrena blennosperma</em></td>
<td>Blennosperma vernal pool andrenid bee</td>
<td></td>
<td>Found in upland areas near vernal pools.</td>
<td>A</td>
<td>Suitable habitat is not present the BSA</td>
</tr>
<tr>
<td><em>Banksula rudolphi</em></td>
<td>Rudolph’s cave harvestman</td>
<td></td>
<td>Restricted to caves. This species occurs in small caves within limestone outcropping, generally surrounded by serpentine</td>
<td>A</td>
<td>Suitable habitat is not present; there are no caves within the BSA.</td>
</tr>
<tr>
<td><em>Branchinecta lynchi</em></td>
<td>Vernal pool fairy shrimp</td>
<td>FT, CH</td>
<td>Endemic to the grasslands of the Central Valley, Central Coast Mountains and South Coast Mountains. Typically associated with small, shallow vernal pools with relatively short periods of inundation. Found in larger pools in southern extent of range.</td>
<td>A</td>
<td>Suitable habitat is not present in the BSA.</td>
</tr>
<tr>
<td><em>Branchinecta mesovallensis</em></td>
<td>Vernal pool fairy shrimp</td>
<td>FT, CH</td>
<td>Often found in small, short-lived vernal pools and grass-bottomed swales ranging from 4 to 663 square feet. Found in Sacramento, San Joaquin, Yolo, Alameda, Merced, Madera, and Fresno counties.</td>
<td>A</td>
<td>Suitable habitat is not present; the BSA is not within the known geographical range for the species.</td>
</tr>
<tr>
<td><em>Chrysis tularensis</em></td>
<td>Tulare cuckoo wasp</td>
<td>CA SA</td>
<td>Often abundant on flowers, feeding on nectar.</td>
<td>A</td>
<td>Suitable habitat is not present; there are no host flowers in the BSA for this species.</td>
</tr>
<tr>
<td><em>Desmocerus californicus dimorphus</em></td>
<td>Valley elderberry longhorn beetle</td>
<td>FT, CH</td>
<td>Occurs only in the Central Valley of California, in association with blue elderberry (<em>Sambucus mexicana</em>). Prefers branches greater than 1 in (2.5 centimeters [cm]) in diameter.</td>
<td>A</td>
<td>Suitable habitat is not present; there are no elderberry shrubs in the BSA.</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Status</td>
<td>Habitat Requirements</td>
<td>Habitat Present/Absent</td>
<td>Rationale</td>
</tr>
<tr>
<td>---------------------------------</td>
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</tr>
<tr>
<td><em>Linderiella occidentalis</em></td>
<td>California linderiella</td>
<td>CA SA</td>
<td>Occurs in seasonal pools (e.g., vernal pools) in unplowed grasslands with old alluvial soils underlain by hardpan or heavy clay or in sandstone depressions. Tolerant of wide temperature range and pool size.</td>
<td>A</td>
<td>Suitable habitat is not present in the BSA.</td>
</tr>
<tr>
<td><strong>Plants</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Arctostaphylos myrtifolia</em></td>
<td>Ione manzanita</td>
<td>List 1B.2; FT</td>
<td>Acidic sandy or clay soils, chaparral or woodland in Amador and Calaveras counties (195 – 1,902 ft.). Blooms November – March.</td>
<td>A</td>
<td>Suitable habitat is not present in the BSA.</td>
</tr>
<tr>
<td><em>Balsamorhiza macrolepis</em></td>
<td>Big-scale balsamroot</td>
<td>List 1B.2</td>
<td>Open grassy or rocky slopes; sometimes serpentine (295 – 5,100 ft.). Blooms March – June.</td>
<td>A</td>
<td>Suitable habitat is present; however, the BSA is not within the geographical range for this species, closest known occurrence is in Placer County.</td>
</tr>
<tr>
<td><em>Bryum chryseum</em></td>
<td>Brassy bryum</td>
<td>List 4.3</td>
<td>Chaparral, cismontane woodland (164 – 1,670 ft.).</td>
<td>A</td>
<td>Suitable habitat is not present; there is no chaparral habitat in the BSA.</td>
</tr>
<tr>
<td><em>Clarkia biloba ssp. brandegeeae</em></td>
<td>Brandegee’s clarkia</td>
<td>List 4.2</td>
<td>Foothill woodland, sometimes road-cuts (245 – 3,000 ft.). Blooms May – July.</td>
<td>A</td>
<td>Suitable habitat is not present, the BSA is heavily grazed and dominated by non-native grasses, therefore, this species is considered absent.</td>
</tr>
<tr>
<td><em>Clarkia virgata</em></td>
<td>Sierra clarkia</td>
<td>List 4.3</td>
<td>Yellow-pine forest, foothill woodland (1,310 – 5,300 ft.). Blooms May – August.</td>
<td>A</td>
<td>Suitable habitat is not present; the BSA is out of the elevational range for this species.</td>
</tr>
<tr>
<td><em>Claytonia parviflora ssp. grandiflora</em></td>
<td>Streambank spring beauty</td>
<td>List 4.2</td>
<td>Rocky, cismontane woodland (820 – 3,900 ft.). Blooms February – May.</td>
<td>A</td>
<td>Suitable habitat is not present; the BSA is out of elevational range for this species.</td>
</tr>
<tr>
<td><em>Crocanthemum suffrutescens</em></td>
<td>Busbee Peak rush-rose</td>
<td>List 3.2</td>
<td>Shallow soils of Ione formation in chaparral (250 – 2,200 ft.). Blooms April – August.</td>
<td>A</td>
<td>Suitable habitat is not present; there is no chaparral habitat in the BSA.</td>
</tr>
<tr>
<td><em>Downingia pusilla</em></td>
<td>Dwarf downingia</td>
<td>List 2B.2</td>
<td>Vernal lake and pool margins and other mesic areas in valley and foothill grasslands (0 – 1,400 ft.). Blooms March – May.</td>
<td>A</td>
<td>Suitable habitat is not present within the BSA.</td>
</tr>
<tr>
<td><em>Erigeron miser</em></td>
<td>Starved daisy</td>
<td>List 1B.3</td>
<td>Rocky sites (6,200 – 7,500 ft.). Blooms July – October.</td>
<td>A</td>
<td>Suitable habitat is not present; the BSA is out of elevational range for this species.</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Status</td>
<td>Habitat Requirements</td>
<td>Habitat Present/Absent</td>
<td>Rationale</td>
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</tr>
<tr>
<td><em>Eriogonum apricum var. apricum</em></td>
<td>Ione buckwheat</td>
<td>List 1B.1; FE; SE</td>
<td>Occurs in chaparral communities in clay, Ione soil (260 – 650 ft.) Blooms July – October.</td>
<td>A</td>
<td>Suitable habitat is not present; there is no chaparral habitat in the BSA.</td>
</tr>
<tr>
<td><em>Eriogonum apricum var. prostratum</em></td>
<td>Irish Hill buckwheat</td>
<td>List 1B.1; FE; SE</td>
<td>Chaparral openings; Ione soils (295 – 390 ft.). Blooms June – July.</td>
<td>A</td>
<td>Suitable habitat is not present; there is no chaparral habitat in the BSA.</td>
</tr>
<tr>
<td><em>Eryngium pinnatisectum</em></td>
<td>Tuolumne button-celery</td>
<td>List 1B.2</td>
<td>Volcanic soils in vernal pools and other mesic sites in montane woodland and lower montane coniferous forest (200 – 3,000 ft.) Blooms May – August.</td>
<td>A</td>
<td>Suitable habitat is not present; there are no volcanic soils or woodlands in the BSA.</td>
</tr>
<tr>
<td><em>Gratiola heterosepala</em></td>
<td>Boggs Lake hedge-hyssop</td>
<td>List 1B.2; SE</td>
<td>Shallow water, margins of vernal pools (0 – 5,250 ft.). Blooms April – August.</td>
<td>A</td>
<td>Suitable habitat is not present, the BSA is heavily grazed and the vernal pool feature is highly disturbed.</td>
</tr>
<tr>
<td><em>Horkelia parryi</em></td>
<td>Parry’s horkelia</td>
<td>List 1B.2</td>
<td>Open chaparral; Ione formation (260 – 3,280 ft.). Blooms April – September.</td>
<td>A</td>
<td>Suitable habitat is not present; there is no chaparral habitat in the BSA.</td>
</tr>
<tr>
<td><em>Legenere limosa</em></td>
<td>Legenere</td>
<td>List 1B.2</td>
<td>Wet areas, vernal pool (0 – 2,880 ft.). Blooms May – June.</td>
<td>A</td>
<td>Suitable habitat is not present; the BSA is heavily grazed and highly disturbed.</td>
</tr>
<tr>
<td><em>Navarretia myersii ssp. myersii</em></td>
<td>Pincushion navarretia</td>
<td>List 1B.1</td>
<td>Vernal pools (65 – 1,080 ft.). Blooms April – May.</td>
<td>A</td>
<td>Suitable habitat is not present; the BSA is heavily grazed and highly disturbed.</td>
</tr>
<tr>
<td><em>Orcuttia viscida</em></td>
<td>Sacramento Orcutt grass</td>
<td>List 1B.1; FE; SE</td>
<td>Vernal pools (98 – 320 ft.). Blooms April – July.</td>
<td>A</td>
<td>Suitable habitat is not present; the BSA is above the known elevational range for the species.</td>
</tr>
<tr>
<td><em>Perideridia bacigalupii</em></td>
<td>Bacigalupi’s yampah</td>
<td>List 4.2</td>
<td>Chaparrals, pine woodland, lower montane coniferous forest (1,400 – 3,400 ft.). Blooms June – August.</td>
<td>A</td>
<td>Suitable habitat is not present; the BSA is below the elevational range for this species.</td>
</tr>
<tr>
<td><em>Sagittaria sanfordii</em></td>
<td>Sanford’s arrowhead</td>
<td>List 1B.2</td>
<td>Ponds, ditches, marshes and swamps (0 – 2,130 ft.). Blooms May – October.</td>
<td>A</td>
<td>Suitable habitat is not present; the BSA is heavily grazed and highly disturbed.</td>
</tr>
<tr>
<td><em>Sphenopholis obtusata</em></td>
<td>Prairie wedge grass</td>
<td>List 1B.2</td>
<td>Wet meadows, streambanks, ponds (900 – 6,560 ft.). Blooms April – July.</td>
<td>A</td>
<td>Suitable habitat is not present; the BSA is below the known elevational range for this species.</td>
</tr>
<tr>
<td><em>Trichostema rubisepalum</em></td>
<td>Hernandez bluecurls</td>
<td>List 4.3</td>
<td>Gravelly streambeds (820 – 4,500 ft.). Blooms June – August.</td>
<td>A</td>
<td>Suitable habitat is not present; the BSA is below the known elevational range for this species.</td>
</tr>
</tbody>
</table>
### Sensitive Habitats

<table>
<thead>
<tr>
<th>Central Valley Drainage Hardhead/Squawfish Stream</th>
<th>Comprised of relatively undisturbed large streams with high water quality, pools of deep clear water, slow velocities, and sand-gravel-boulder substrates.</th>
<th>A</th>
<th>Habitat is not present; the BSA does not contain large streams with high water quality or pools of deep clear water.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinook Salmon EFH</td>
<td>Population occurs and spans in the Sacramento and San Joaquin rivers and their tributaries. Primarily found in the Butte, Big Chico, Deer and Mill Creeks. Adult numbers depend on pool depth, pool volume, amount of cover, and proximity to gravel.</td>
<td>A</td>
<td>Suitable habitat is not present in the BSA; the BSA is outside the range of the known EFH.</td>
</tr>
<tr>
<td>Northern Hardpan Vernal Pool</td>
<td>Seasonal wetlands that pond water for short periods during the winter and early spring due to an impermeable, subsurface layer that retards percolation.</td>
<td>A</td>
<td>Habitat is not present; the BSA does not contain an impermeable subsurface layer that retards percolation.</td>
</tr>
</tbody>
</table>

### Status Code

**Federal**
- FE: Federally listed; Endangered
- FT: Federally listed, Threatened
- FPE: Federally Proposed for Listing as Endangered elsewhere in their range.
- FPT: Federally Proposed for Listing as Threatened
- FC: Federal Candidate
- NMFS SC: National Marine Fisheries Service Species of Concern

**California Native Plant Society designations:**
- List 1A: Plants presumed extinct in California.
- List 1B: Plants rare and endangered in California and throughout their range.
- List 2: Plants rare, threatened or endangered in California but more common elsewhere in their range.
- List 3: Plants about which we need more information; a review list.
- List 4: Plants of limited distribution; a watch list

**State**
- ST: State listed; Threatened
- SE: State listed; Endangered
- SFP: State Fully Protected
- SC: State Candidate
- SWL: State Watch List
- CSC: California Species of Special Concern
- CA SA: Special Animal: General term that refers to taxa that the CNDDB is interested in tracking regardless of legal or protection status: Includes the following categories in addition to those listed above:
  - Taxa which meet the criteria for listing, even if not currently included on any list, as described in Section 15380 of the California Environmental Quality Act Guidelines.
  - Taxa that are biologically rare, very restricted in distribution, declining throughout their range, or have a critical, vulnerable stage in their life cycle that warrants monitoring.
  - Populations in California that may be on the periphery of a taxon’s range, but are threatened with extirpation in California.
  - Taxa closely associated with a habitat that is declining in California at an alarming rate (e.g., wetlands, riparian, old growth forests, desert aquatic systems, native grasslands, vernal pools, etc.)
  - Taxa designated as a special status, sensitive, or declining species by other state or federal agencies, or non-governmental organization (NGO).
Chapter 4 – Results: Biological Resources, Discussion of Impacts and Mitigation

The project will result in impacts to California annual grassland, consisting of 1.58 ac of permanent impacts and 0.041 ac of temporary impacts. The project will also result in the removal of two blue oak trees (one 6 inches diameter at breast height (dbh) and the other a multi-trunked tree, 9 inches cumulative dbh) and three small interior live oak trees that are too small to measure for dbh.

4.1 Habitats and Natural Communities of Special Concern

Natural communities of concern (i.e. riparian, wetlands, and oak woodlands) are considered sensitive under CEQA and may be regulated by CDFW pursuant to Section 1602 of the CFGC, as described in Section 2.1.2.3. Riparian communities and wetlands may also be regulated by ACOE and/or RWQCB if the community is determined to be waters of the U.S., or water of the State, as described in Sections 2.1.2.1 and 2.1.2.2. Potential permitting requirements for impacts to these resources are discussed in Section 5.4

No natural communities of concern occur in the BSA.

4.2 Special Status Plant Species

No special status plants occur in the BSA. Therefore, no impacts are expected to occur to special status plants.

4.3 Special Status Animal Species Occurrences

4.3.1 DISCUSSION OF BATS

One species of bat, the pallid bat, may be present in the BSA. It is a State species of concern and has no federal status.

Bats are nocturnal and are found in a variety of habitats. Many species forage over water; some also hunt over shrubs or meadows, within trees, and along forest edges. Some species have separate roosts for day, night, maternal, and hibernation use, whereas some species may use the same roost for more than one purpose. Bats roost in a variety of crevices, cavities, and protected sites. Roosting sites may include bridges, buildings, cliff crevices, caves, mines, and trees. Multiple species often roost together.

The pallid bat is a locally common species of low elevations, and is a yearlong resident through most of its range. It uses a wide variety of habitats from sea level up through mixed conifer forests, but is most common in open, dry habitats with rocky areas for
roosting. This bat forages among trees and shrubs and over open ground, and often takes prey on the ground. Its diet is a variety of insects and spiders, including large, hard-shelled prey, which is often carried to a perch or night roost for consumption. Caves, crevices, and sometimes hollow trees and buildings are used for day roosts. Roosts must protect bats from high temperatures. Night roosts may be in more open sites, such as porches and open buildings. Pallid bats are social, and most roost in groups of 20 or more. Maternity colonies form in early April, and may have 10 to 100 individuals. Males may roost separately or in the nursery colony.

4.3.1.1 Survey Results

There is one occurrence for the pallid bat within the search area, 2.4 miles northeast of the BSA. The seasonal riverine and California annual grasslands communities provide suitable foraging habitat for this species. In addition, the existing bridges provides potential night roost habitat for bats. No suitable day roost habitat is present on the existing bridge.

4.3.1.2 Project Impacts

The project will result in permanent impacts, totaling 0.63 ac, and temporary impacts, totaling 0.49 ac, to foraging habitat for the pallid bat. Loss of foraging habitat will occur during construction of the new roadway and bridge embankments.

The project will result in a temporary loss of night roost habitat for bats. The new bridge will provide equivalent night roost habitat so no permanent impacts will occur.

4.3.1.3 Avoidance and Minimization Efforts

The following avoidance and minimization measures are proposed to reduce any potential impacts to foraging bats:

1. Work activities shall be limited to daylight hours to minimize potential effects to foraging bats.

2. Following completion of the new bridge, all fill slopes, temporary impact and/or otherwise disturbed areas shall be revegetated with the seed mix specified in Table 5. Invasive exotic plants will be controlled to the maximum extent practicable.

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Rate (Lbs./Acre)</th>
<th>Minimum Percent Germination</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Artemisia douglasiana</em></td>
<td>Mugwort</td>
<td>2.0</td>
<td>50</td>
</tr>
</tbody>
</table>
4.3.1.4 Compensatory Mitigation

No compensatory mitigation is required with the avoidance and minimization efforts listed in Section 4.3.1.3.

4.3.1.5 Cumulative Impacts

Impacts to bats in the general vicinity of the project likely will occur through habitat loss during public works projects similar in scope to the subject project. Other projects in the region with similar impacts will also be required to minimize and/or mitigate those impacts. Considering the amount of habitat available for this species in the region relative to the amount of habitat in the BSA, and implementation of the avoidance and minimization measures detailed above, the project will not substantially contribute to cumulative effects for bats.

4.3.2 DISCUSSION OF GRASSHOPPER SPARROW

The grasshopper sparrow is a California species of special concern. This species prefers open grasslands and prairies with patches of bare ground. Nesting occurs on the ground, hidden at the base of weeds, shrubs, or clumps of grass, with an opening at the front. Primary food sources include insects (grasshoppers, beetles, caterpillars, ants, etc.) and seeds.

4.3.2.1 Survey Results

There are two CNDDB records in the search area for this species. The closest occurrence is located along approximately 6.2 mi from the BSA. The California annual grasslands throughout the BSA provide suitable habitat for this species.

4.3.2.2 Project Impacts

The project will result in permanent impacts, totaling 0.57 ac, and temporary impacts, totaling 0.37 ac to suitable habitat for the grasshopper sparrow. Loss of habitat will occur during construction of the new roadway and bridge embankments.

4.3.2.3 Avoidance and Minimization Efforts

1. Prior to any ground disturbing activities, the area shall be surveyed by a qualified biologist for the presence of nesting grasshopper sparrows within the annual

<table>
<thead>
<tr>
<th>Plant Species</th>
<th>Habitat Type</th>
<th>Percentage</th>
<th>Score</th>
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</thead>
<tbody>
<tr>
<td><em>Baccharis pilularis</em></td>
<td>Coyote brush</td>
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<tr>
<td><em>Elymus X triticum</em></td>
<td>Regreen</td>
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<tr>
<td><em>Lupinus bicolor</em></td>
<td>Bicolored lupine</td>
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</table>
grassland vegetation in the BSA. If no nesting grasshopper sparrows are observed, the project may proceed.

2. If nesting grasshopper sparrows are found within the survey area, a qualified biologist shall evaluate the potential for the project to disturb nesting activities. CDFW shall be contacted to review the evaluation and determine if the project can proceed without adversely affecting nesting activities. CDFW shall also be consulted to establish protection measures such as buffers. Disturbance of active nests shall be avoided until it is determined by a qualified biologist that nesting is complete and the young have fledged. If work is allowed to proceed, at a minimum, a qualified biologist shall be on-site during the start of construction activities during the nesting season to monitor nesting activity. The monitor shall have the authority to stop work if it is determined the project is adversely affecting nesting activities.

3. Worker environmental awareness training will be conducted by a qualified biologist for all construction personnel. This training instructs workers to recognize grasshoppers sparrows and their habitat(s).

4. Highly visible Environmentally Sensitive Area (ESA) fencing shall be placed along the limits of work to prevent unnecessary encroachment into adjacent areas. Fencing shall be maintained in good condition for the duration of construction activities.

5. Following completion of the project, all fill slopes, temporary impact and/or otherwise graded or denuded areas shall be restored to preconstruction contours (if necessary) and revegetated with the seed mix specified in Table 5. Invasive exotic plants will be controlled to the maximum extent practicable.

4.3.2.4 Compensatory Mitigation

No compensatory mitigation is required with implementation of avoidance and minimization efforts listed in Section 4.3.2.3.

4.3.2.5 Cumulative Effect

Impacts to grasshopper sparrow in the general vicinity of the project likely will occur through habitat loss during public works projects similar in scope to the subject project. Other projects in the region with similar impacts will also be required to minimize and/or mitigate those impacts. Considering the amount of habitat available for this species in the region relative to the amount of habitat in the BSA, and implementation of the avoidance and minimization measures detailed above, the project will not substantially contribute to cumulative effects for grasshopper sparrow.
4.3.3 DISCUSSION OF FERRUGINOUS HAWK

The ferruginous hawk is a species on the California Watch List with no federal status. Ferruginous hawks breed in open country, primarily prairies, plains and badlands, from eastern Washington and southern Alberta eastward to southwestern Manitoba and eastern South Dakota, southward to Arizona and the panhandle of Texas. The species winters from northern California and southern Nebraska southward to central Mexico.

4.3.3.1 Survey Results

Ferruginous hawk would only potentially occur in the BSA during the winter. There is one CNDD occurrence in the search area. This occurrence, dated 2014, is located 19 m northwest of the BSA. Suitable foraging habitat is present within the BSA and, with expected high prey density, the species may be present in the BSA.

4.3.3.2 Project Impacts

Permanent impacts, totaling 0.57 ac, and temporary impacts, totaling 0.37 ac, to ferruginous hawk suitable foraging habitat will occur as a result of the project. Loss of foraging habitat will occur during construction of the new roadway and bridge embankments. The project will not impact suitable nesting habitat but could impact nesting ferruginous hawks if this species is nesting in the BSA or vicinity during construction.

4.3.3.3 Avoidance and Minimization Efforts

1. Following completion of the new bridge, all fill slopes, temporary impact and/or otherwise disturbed areas shall be revegetated with the seed mix specified in Table 5

4.3.3.4 COMPENSATORY MITIGATION

No compensatory mitigation measures are proposed with implementation of the measures in 4.3.3.3.

4.3.3.5 CUMULATIVE EFFECTS

Impacts to ferruginous hawks in the general vicinity of the project likely will occur through habitat loss during public works projects similar in scope to the subject project. Considering the abundance of foraging habitat available for this species in the region relative to the amount of foraging habitat in the BSA, and implementation of the avoidance and minimization measure detailed above, the project will not substantially contribute to cumulative effects for ferruginous hawk.
4.3.4 DISCUSSION OF SWAINSON’S HAWK

The Swainson’s hawk is State listed as a threatened species with no formal federal status. Swainson’s hawks are long distance migrants, wintering primarily in South America, and returning north to breed. In California, Swainson’s hawks occur in the northeastern portion of the state, in the Great Basin Province, and in the Central Valley. They return to the Central Valley in mid-March to nest, and begin migrating south in August. Nests are built in the tops of large trees, often those associated with riparian habitats. They are known to forage up to 10 mi from their nest sites.

Swainson’s hawks are very social raptors and are generally found in large groups with other species. During the breeding season, Swainson’s hawks generally feed on rodents, rabbits and reptiles. However, when not breeding, their diet tends to consist mostly of insects.

4.3.4.1 Survey Results

There are three CNDDB occurrences in the search area. The closest occurrence, from 2012 is located 8.1 mi northwest of the BSA. The BSA provides suitable foraging habitat in the California annual grasslands. Suitable nesting habitat is present in the few valley oak trees adjacent to Willow Creek in the BSA. Suitable nest trees are also located in the vicinity of the BSA. The project site is located at the eastern extent of the Swainson’s hawk and while potential foraging and nesting habitat is present, this species is unlikely to occur in the BSA.

4.3.4.2 Project Impacts

Permanent impacts, totaling 0.57 ac, and temporary impacts, totaling 0.37 ac, to Swainson’s hawk suitable foraging habitat will occur as a result of the project. Loss of foraging habitat will occur during construction of the new roadway and bridge embankments. The project will not impact suitable nesting habitat but could impact nesting Swainson’s hawks if this species is nesting in the BSA or vicinity during construction.

4.3.4.3 Avoidance and Minimization Efforts

1. If work begins between February 1 and August 31, an early season preconstruction survey for nesting Swainson's hawks shall be conducted in the BSA and immediate vicinity (an approximately 0.25 mi radius) by a qualified biologist when tree foliage is relatively sparse and nests are easy to identify. A second preconstruction survey for nesting Swainson's hawks shall be conducted in the BSA and immediate vicinity (an approximately 0.25 mi radius) by a qualified biologist no more than 14 days prior to initiation of construction activities.
2. If nesting Swainson’s hawks are found within the survey area, a qualified biologist shall evaluate the potential for the project to disturb nesting activities. CDFW shall be contacted to review the evaluation and determine if the project can proceed without adversely affecting nesting activities. CDFW shall also be consulted to establish protection measures such as buffers. Disturbance of active nests shall be avoided until it is determined by a qualified biologist that nesting is complete and the young have fledged. If work is allowed to proceed, at a minimum, a qualified biologist shall be on-site during the start of construction activities during the nesting season to monitor nesting activity. The monitor shall have the authority to stop work if it is determined the project is adversely affecting nesting activities.

3. Worker environmental awareness training will be conducted by a qualified biologist for all construction personnel. This training instructs workers to recognize Swainson’s hawks and their habitat(s).

4. Highly visible ESA fencing shall be placed along the limits of work to prevent unnecessary encroachment into adjacent areas. Fencing shall be maintained in good condition for the duration of construction activities.

4.3.4.4 Compensatory Mitigation

CDFW generally recommends mitigation for loss of suitable foraging habitat for Swainson’s hawk if the subject habitat is within 10 mi of an active nest (CDFW 1994). A nest is considered active if it has been used in the last 5 years.

There is one CNDDB occurrence for an active Swainson’s hawk nest that is within 10 mi of the BSA, dated 2012. This nest is located approximately 8.1 mi northwest of the BSA. However, since the nesting record will be more than 5 years old Spring 2018 when construction is scheduled to begin, and Swainson’s hawk is unlikely to occur in the BSA, no compensation is proposed.

4.3.4.5 Cumulative Effects

Impacts to Swainson’s hawks in the general vicinity of the project likely will occur through habitat loss during public works projects similar in scope to the subject project. Other projects in the region with similar impacts will also be required to minimize and/or mitigate those impacts. Considering the abundance of foraging habitat available for this species in the region relative to the amount of foraging habitat in the BSA, and implementation of the avoidance and minimization measure detailed above, the project will not substantially contribute to cumulative effects for Swainson’s hawk.
4.3.5 DISCUSSION OF CALIFORNIA TIGER SALAMANDER

The CTS is both State and federally listed as a threatened species. Critical habitat has been designated for CTS, but the BSA is not located within designated critical habitat. The closest CTS critical habitat is Unit cv_4, which is located approximately 8.4 mi southwest of the BSA along Highway 104 in eastern Sacramento County.

CTS are large, terrestrial salamanders and are most commonly found in annual grassland habitat. They may also occur in the grassy understory of valley-foothill hardwood habitats, and uncommonly along stream courses in valley-foothill riparian habitats. They range from Sonoma, Colusa, and Yolo Counties south through the Central Valley to Tulare County, and through the Coast Range into Santa Barbara County. An isolated population also occurs in Butte County.

CTS are typically associated with vernal pools or similar habitats consisting of seasonal pools or ponds (including man-made ponds that dry out in summer) surrounded by grasslands. Adult CTS spend most of their lives underground in small mammal burrows, which are a required habitat element. CTS are relatively poor burrowers and require refuges provided by ground squirrels and other burrowing mammals. CTS estivate in burrows during the dry months. After the onset of winter rains, adult salamanders move to larger, longer lasting vernal pools and other seasonal pools to breed. Breeding season is November through February; timing is dependent on rainfall. The larval stage of CTS usually lasts 3 to 6 months. Following metamorphosis, juveniles emigrate at night from drying breeding sites up to one mile to refuge sites.

4.3.5.1 Survey Results

CTS are well documented in the vicinity of the BSA with the CNDDB documenting 31 CNDDB records of CTS in the search area. The closest record, dated 2005, is located between Laguna Creek and Ione Road, approximately 4.3 mi southwest of the BSA.

Willow Creek through the BSA is a slow moving intermittent creek that flows from north to south. North of the bridge, the creek has been highly disturbed due to past dredging activities and does not provide suitable aquatic habitat for CTS. The bridge acts as a bottleneck for high flows in the creek, narrowing the watercourse downstream of the bridge. As a result the flow downstream of the bridge would generally be too swift to provide suitable breeding habitat for CTS. Although there were small ponded areas observed south of the bridge, higher flows would cause CTS eggs to be swept downstream. Consequently, Willow Creek does not provide suitable aquatic habitat for CTS.

Numerous small to large sized ponds, which provide potential aquatic habitat for CTS, occur within 1.24 mi of the BSA. Some of the ponds are seasonal, while the larger ponds
appear to hold water all year. Four ponds, ranging from small to large, are located within 0.5 mi of the BSA. These ponds could provide aquatic habitat for CTS. A small pond associated with an adjacent property is located approximately 0.1 mi north of the BSA and could potentially provide suitable aquatic breeding habitat for CTS.

Suitable upland habitat is present in the grassland areas within and adjacent to the BSA. Numerous burrows of appropriate size were observed in the upland grassland habitat, along the sides of the road, and under the rock slope protection around the bridge.

4.3.5.2 Project Impacts

The BSA does not provide suitable aquatic habitat for CTS, however, there are multiple ponds within 1.24 mi of the BSA which could provide suitable breeding habitat. Therefore, the annual grassland within the BSA is potential upland habitat for CTS. Permanent impacts, totaling 0.57 ac, and temporary impacts, totaling 0.37 ac, to upland habitat for the CTS will result from the project. Loss of CTS upland habitat will occur during construction of the new roadway and bridge embankments.

The proposed project may affect and is likely to adversely affect CTS.

4.3.5.3 Avoidance and Minimization Efforts

The following measures are proposed to minimize effects to any CTS potentially in the vicinity:

1. Worker environmental awareness training will be conducted by a qualified biologist for all construction personnel. This training instructs workers to recognize CTS and their habitat.

2. ESA fencing shall be installed along the edge of the work limits, including staging areas. ESA fencing shall consist of orange construction fencing (or equivalent) and shall be maintained in good condition until construction is complete. In addition, silt fencing will be installed along the bottom of the ESA fencing to prevent CTS from entering the work area during construction.

3. A biological monitor approved by USFWS and CDFW shall be present during initial ground disturbing activities within CTS upland habitat.

4. If CTS are found within the area surveyed, USFWS and CDFW shall be contacted. Caltrans, as the federal lead agency, will notify USFWS. The County will be responsible for notifying CDFW.

5. All work within CTS habitat shall be conducted during the dry season (June 1 through October 31) when CTS are estivating and unlikely to enter the BSA.
6. The BSA will be surveyed for CTS if a substantial rain event (i.e., at least 0.25 inches) occurs during construction to avoid affecting salamanders that may have emerged from their burrows and relocated in the BSA (e.g., under equipment).

7. Following completion of the project, all fill slopes, temporary impact and/or otherwise graded or denuded areas shall be restored to preconstruction contours (if necessary) and revegetated with the seed mix specified in Table 5. Invasive exotic plants will be controlled to the maximum extent practicable.

4.3.5.4 Compensatory Mitigation

To offset impacts to CTS upland habitat, sufficient CTS upland habitat mitigation credits shall be purchased from a USFWS and CDFW-approved bank at a minimum 1:1 ratio.

4.3.5.5 Cumulative Effects

Impacts to CTS in the general vicinity of the project likely will occur through habitat loss during public works projects similar in scope to the subject project. Other projects in the region with similar impacts will also be required to minimize and/or mitigate those impacts. Considering the absence of suitable aquatic habitat and vast suitable upland habitat for this species in the BSA, and implementation of the avoidance and minimization measures detailed above, the project will not substantially contribute to cumulative effects for CTS.

4.3.6 DISCUSSION OF CALIFORNIA RED-LEGGED FROG

The CRLF (Rana draytonii) is a federally-listed threatened species and a State species of concern. The nearest critical habitat is Unit CAL-1, which is located approximately 17.15 mi southeast of the BSA, in the Valley Springs 7.5 minute USGS topographic quadrangle. The CRLF population in Unit CAL-1 is one of six remaining populations in the Sierra Nevada foothills.

The CRLF inhabits lowlands and foothills in or near permanent sources of water. They prefer ponds, creeks, or marshes with extensive shoreline vegetation. Intermittent streams provide suitable habitat if some surface water remains through the summer. Breeding generally occurs in ponds or stream pools that contain water through late summer and support dense, shrubby, or emergent vegetation such as overhanging willows intermixed with cattails. However, breeding habitat can be varied and may include sag ponds, lagoons, stock ponds and backwaters within streams and creeks.

CRLF use upland areas and riparian vegetation for resting, feeding, dispersal, and estivation. Riparian areas can meet all of these needs; the scope of upland habitat use is not well-understood. CRLF may spend considerable time in suitable upland areas during the summer dry period. They may use a variety of places for estivation, including small
mammal burrows, cracks at the bottom of a dry pond, spaces under boulders, rocks, and
downed trees, and agricultural features such as drains, watering troughs, and
abandoned sheds. Dispersal may occur across varying topography and vegetation type,
and during winter rain events CRLF may travel up to 2 mi between water sources. Use
of upland and riparian areas is most likely dependent on a number of factors, such as
climatic conditions, habitat suitability, and life stage.

4.3.6.1 Survey Results

There is one CNDDB record for CRLF, dated 1942, in the search area is located
approximately 10 mi northeast of the BSA.

Within the BSA, Willow Creed does not provide suitable aquatic breeding or non-
bringing habitat for CRLF. Willow Creek conveys only seasonal flows and is shallow
(less than 1-2 feet); thus this stream is not suitable aquatic habitat for CRLF.

Potential upland habitat for CRLF is present within the BSA and vicinity. The upland
habitat could be used for dispersal, possibly to potential breeding ponds in the vicinity,
but could also be used for estivation.

No CRLF were observed during surveys of the BSA.

Although there is potentially suitable upland habitat for CRLF in the BSA, the project is
located outside of the current range for CRLF and this species has not been recorded
(based on the CNDDB) in the same watershed as the BSA since 1942. Additionally, no
new populations of this species were identified near this location during recent studies
(Barry and Fellers 2013).

4.3.6.2 Project Impacts

The project will result in permanent and temporary impacts to potentially suitable upland
habitat for CRLF.

Permanent impacts, totaling 0.57 ac, and temporary impacts, totaling 0.37 ac, to upland
habitat for the CRLF will result from the project. Loss of CRLF upland habitat will occur
during construction of the new roadway and bridge embankments.

The proposed project may affect but is not likely to adversely affect CRLF.

4.3.6.3 Avoidance and Minimization Efforts

Minimization measures are consistent with the provisions of the CRLF “Programmatic
Biological Opinion for Projects Funded or Approved under the Federal Aid Program”
dated May 4, 2011, listed below.
1. A USFWS-approved biologist will survey the project site 48 hours before the onset of work activities. If any life stage of CRLF is found and these individuals are likely to be injured by work activities, the USFWS will be notified and the USFWS-approved biologist will be allowed sufficient time to move them for the site before work activities begin. The USFWS-approved biologist will relocate the CRLF the shortest distance possible to a location that contains suitable habitat and will not be affected by activities associated with the proposed project. The USFWS-approved biologist will maintain detailed records of any individuals that are moved (e.g., size, coloration, any distinguishing features, photographs [digital preferred]) to assist him or her in determining whether translocated animals are returning to the original point of capture.

2. Before any activities begin on a project, a USFWS-approved biologist will conduct a training session for all construction personnel. At a minimum, the training will include a description of CRLF and its habitat, the specific measures that are being implemented to conserve CRLF for the current project, and the boundaries within which the project may be accomplished. Brochures, books, and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions.

3. A USFWS-approved biologist will be present at the work site until all CRLFs have been removed, workers have been instructed, and disturbance of habitat has been completed. After this time, the County will designate a person to monitor on-site compliance with all conservation measures. The resume of the designated monitor will be sent to the USFWS for approval prior to monitoring. The USFWS-approved biologist will ensure that this monitor receives the training outlined in measure 4 and in the identification of CRLF. If the monitor or the USFWS-approved biologist recommends that work be stopped because CRLFs would be affected to a degree that exceeds the levels anticipated by Caltrans and the USFWS during review of the proposed action, they will notify the resident engineer (the engineer that is directly overseeing and in command of construction activities) immediately. The resident engineer will either resolve the situation by eliminating the effect immediately or require that all actions which are causing these effects be halted. If work is stopped, the USFWS will be notified as soon as is reasonably possible.

4. During project activities, all trash that may attract predators will be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris will be removed from work areas.

5. All refueling, maintenance, and staging of equipment and vehicles will occur at least 60 ft from riparian habitat or water bodies and not in a location from where a spill would drain directly toward aquatic habitat. The monitor will ensure
contamination of habitat does not occur during such operations. Prior to the onset of work, the County shall prepare a plan for prompt and effective response to any accidental spills. All workers will be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

6. To control sedimentation during and after project implementation, the County will implement BMPs outlined in any authorizations or permits, issued under the authorities of the CWA that it receives for the specific project. If BMPs are ineffective, the County will attempt to remedy the situation immediately, in consultation with the USFWS.

7. To ensure that diseases are not conveyed between work sites by the USFWS-approved biologists, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force will be followed at all times.

Additional minimization measures include:

8. Following completion of the new bridge, all temporary impact areas shall be revegetated with the native seed mix specified in Table 5. Permanently graded areas shall also be revegetated with the native seed mix specified in Table 5.

4.3.6.4 Compensatory Mitigation

No compensatory mitigation measures are proposed with implementation of the measures in 4.3.6.3.

4.3.6.5 Cumulative Impacts

Impacts to CRLF in the general vicinity of the project likely will occur through habitat loss during public works projects similar in scope to the subject project. Other projects in the region with similar impacts will also be required to minimize and/or mitigate those impacts. Considering the amount of habitat available for this species in the region relative to the amount of habitat in the BSA, and implementation of the avoidance and minimization measures detailed above, the project will not substantially contribute to cumulative impacts for CRLF.
Chapter 5 – Conclusions and Regulatory Determinations

5.1 Federal Endangered Species Act Consultation Summary

Federally listed species under jurisdiction of the USFWS that could potentially occur in the BSA include CTS and CRLF. The proposed project may affect, and is likely to adversely affect, CTS; the proposed project may affect, but is not likely to adversely affect CRLF.

Caltrans will initiate formal consultation with USFWS for this species pursuant to Section 7 of FESA. It is anticipated that USFWS will concur with the above determinations.

No federally listed species under jurisdiction of NMFS occur in the BSA.

5.2 Essential Fish Habitat Consultation Summary

There is no EFH within the BSA.

5.3 California Endangered Species Act Consultation Summary

CTS, a species listed as threatened under CESA, may be present in the BSA. Consequently, it is likely that a 2081 Incidental Take Permit will be required.

5.4 Wetlands and Other Waters Coordination Summary

5.4.1 ARMY CORPS OF ENGINEERS

Waters of the U.S. within the BSA are limited to the reach of Willow Creek and tributary drainages (Figure 5). Wetlands within the BSA total 0.46 ac and non-wetland waters, total 0.05 ac (Table 3).

The proposed project will result in both permanent and temporary impacts to waters of the U.S., as shown below in Table 6

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<th>Features</th>
<th>Permanent Impacts</th>
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<td>Non-Wetland Waters</td>
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The Waters of the U.S. within the BSA that will be affected by the project are regulated by the ACOE under Section 404 of the CWA. It is expected that proposed discharge during construction can be authorized by the ACOE using NWP 14 – Linear
Transportation Projects. In accordance with the conditions of the NWP 14, a Preconstruction Notification must be submitted to the ACOE for verification that the proposed discharges comply with the conditions of the subject NWP.

5.4.2 REGIONAL WATER QUALITY CONTROL BOARD

Discharges into Waters of the U.S. under Section 404 of the CWA also require a Water Quality Certification from the RWQCB, pursuant to Section 401 of the CWA. The RWQCB may opt to waive the water quality certification and instead issue water discharge requirements pursuant to their authority under the PCWQCA.

5.4.3 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

CDFW jurisdictional waters in the BSA, totaling 0.51 ac, include the live channel of Willow Creek and the tributary drainage. Impacts to these resources will require a Lake and Streambed Alteration Agreement from CDFW, under Section 1600-1606 of the CFGC.

5.5 Executive Order 11990 – Protection of Wetlands

The project will result in minor permanent and temporary impacts to wetlands. The project has been designed to avoid impacts, were feasible.

Based upon the above considerations, it is determined that there is no practicable alternative to the proposed construction in wetlands and that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use.

5.6 Invasive Species

To avoid the introduction of invasive species into the BSA during project construction, contract specifications shall include, at a minimum, the following measures.

1. All earthmoving equipment to be used during project construction shall be cleaned thoroughly before arrive on the project site.

2. All seeding equipment (i.e. hydroseed trucks) shall be thoroughly rinsed at least three times prior to beginning seeding work.

3. To avoid spreading any non-native invasive species already existing on-site, to off-site areas, all equipment shall be thoroughly cleaned before leaving the site.
5.7 Migratory Bird Treaty Act and California Fish and Game Code
(Breeding Birds)

Disturbance of migratory birds during their nesting season (February 1 to August 31) could result in “take” which is prohibited under the MBTA and Section 3513 of the CFGC. CFGC Section 3503 also prohibits take or destruction of bird nests or eggs.

The following seasonal work restrictions will be implemented during construction to minimize the potential for take of nesting birds:

1. If work must begin during the nesting season (February 1 to August 31), a qualified biologist shall survey all suitable nesting habitat in the BSA for presence of nesting birds. This survey shall occur no more than 10 days prior to the start of construction. If no nesting activity is observed, work may proceed as planned. If an active nest is discovered, a qualified biologist shall evaluate the potential for the proposed project to disturb nesting activities. The evaluation criteria shall include, but are not limited to, the location/orientation of the nest in the nest tree, the distance of the nest from the BSA, the line of sight between the nest and the BSA, and the feasibility of establishing no-disturbance buffers.

2. Additionally, CDFW shall be contacted to review the evaluation and determine if the project can proceed without adversely affecting nesting activities.

3. If work is allowed to proceed, a qualified biologist shall be on-site weekly during construction activities to monitor nesting activity. The biologist shall have the authority to stop work if it is determined the project is adversely affecting nesting activities.
Chapter 6 – References


Appendix B – CNDDB, USFWS, NMFS, and CNPS Database Lists
<table>
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<th>Species</th>
<th>Element Code</th>
<th>Federal Status</th>
<th>State Status</th>
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<th>State Rank</th>
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</tr>
<tr>
<td>pallid bat</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><em>Aquila chrysaetos</em></td>
<td>ABNKC22010</td>
<td>None</td>
<td>None</td>
<td>G5</td>
<td>S3</td>
<td>FP</td>
<td></td>
</tr>
<tr>
<td>golden eagle</td>
<td></td>
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<tr>
<td><em>Arctostaphylos myrtifolia</em></td>
<td>PDERI04240</td>
<td>Threatened</td>
<td>None</td>
<td>G1G2</td>
<td>S1S2</td>
<td>1B.2</td>
<td></td>
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<tr>
<td>lone manzanita</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><em>Ardea alba</em></td>
<td>ABNGA04040</td>
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<td>None</td>
<td>G5</td>
<td>S4</td>
<td></td>
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<tr>
<td>great egret</td>
<td></td>
<td></td>
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<tr>
<td><em>Ardea herodias</em></td>
<td>ABNGA04010</td>
<td>None</td>
<td>None</td>
<td>G5</td>
<td>S4</td>
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<td></td>
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<tr>
<td>great blue heron</td>
<td></td>
<td></td>
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<td><em>Athene cunicularia</em></td>
<td>ABNSB10010</td>
<td>None</td>
<td>None</td>
<td>G4</td>
<td>S3</td>
<td>SSC</td>
<td></td>
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<tr>
<td>burrowing owl</td>
<td></td>
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<tr>
<td><em>Balsamorhiza macrolepis</em></td>
<td>PDAST11061</td>
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<td>None</td>
<td>G2</td>
<td>S2</td>
<td>1B.2</td>
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<tr>
<td>big-scale balsamroot</td>
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<td></td>
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<tr>
<td><em>Bankswula rudophi</em></td>
<td>ILARA14080</td>
<td>None</td>
<td>None</td>
<td>G1</td>
<td>S1</td>
<td></td>
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<tr>
<td>Rudolph's cave harvestman</td>
<td></td>
<td></td>
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<tr>
<td><em>Branchinecta lynchi</em></td>
<td>ICBRA03030</td>
<td>Threatened</td>
<td>None</td>
<td>G3</td>
<td>S3</td>
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</tr>
<tr>
<td>vernal pool fairy shrimp</td>
<td></td>
<td></td>
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<tr>
<td><em>Branchinecta mesovallensis</em></td>
<td>ICBRA03150</td>
<td>None</td>
<td>None</td>
<td>G2</td>
<td>S2S3</td>
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<tr>
<td>midvalley fairy shrimp</td>
<td></td>
<td></td>
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<tr>
<td><em>Buteo regalis</em></td>
<td>ABNKC19120</td>
<td>None</td>
<td>None</td>
<td>G4</td>
<td>S3S4</td>
<td>WL</td>
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<tr>
<td>ferruginous hawk</td>
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<td></td>
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<tr>
<td><em>Buteo swainsoni</em></td>
<td>ABNKC19070</td>
<td>None</td>
<td>Threatened</td>
<td>G5</td>
<td>S3</td>
<td></td>
<td></td>
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<tr>
<td>Swainson's hawk</td>
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<td></td>
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<tr>
<td><em>Central Valley Drainage Hardhead/Squawfish Stream</em></td>
<td>CARA2443CA</td>
<td>None</td>
<td>None</td>
<td>GNR</td>
<td>SNR</td>
<td></td>
<td></td>
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<tr>
<td>Central Valley Drainage Hardhead/Squawfish Stream</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td><em>Chrysis tularensis</em></td>
<td>IIHYM72010</td>
<td>None</td>
<td>None</td>
<td>G1G2</td>
<td>S1S2</td>
<td></td>
<td></td>
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<tr>
<td>Tulare cuckoo wasp</td>
<td></td>
<td></td>
<td></td>
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<td><em>Clarkia biloba ssp. brandegeeae</em></td>
<td>PDONA05053</td>
<td>None</td>
<td>None</td>
<td>G4G5T4</td>
<td>S4</td>
<td>4.2</td>
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<tr>
<td>Brandegee's clarkia</td>
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<td>Species</td>
<td>Element Code</td>
<td>Federal Status</td>
<td>State Status</td>
<td>Global Rank</td>
<td>State Rank</td>
<td>Rare Plant Rank/CDFW SSC or FP</td>
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<tr>
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</tr>
</tbody>
</table>
| *Crocanthemum suffrutescens*  
Bisbee Peak rush-rose | PDCIS020F0 | None | None | G2Q | S2 | 3.2 |
| *Desmocerus californicus dimorphus*  
valley elderberry longhorn beetle | IICOL48011 | Threatened | None | G3T2 | S2 | |
| *Downingia pusilla*  
dwarf downingia | PDCAM060C0 | None | None | GU | S2 | 2B.2 |
| *Emys marmorata*  
western pond turtle | ARAAD02030 | None | None | G3G4 | S3 | SSC |
| *Eriogonum apricum var. apricum*  
lone buckwheat | PDPGN080F1 | Endangered | Endangered | G2T1 | S1 | 1B.1 |
| *Eriogonum apricum var. prostratum*  
Irish Hill buckwheat | PDPGN080F2 | Endangered | Endangered | G2T1 | S1 | 1B.1 |
| *Eryngium pinnatisectum*  
Tuolumne button-celery | PDAPI0Z0P0 | None | None | G2 | S2 | 1B.2 |
| *Erythranthe marmorata*  
Stanislaus monkeyflower | PDPHR01130 | None | None | G1 | S1 | 1B.1 |
| *Gratiola heterosepala*  
BoggsLake hedge-hyssop | PDSCR0R060 | None | Endangered | G2 | S2 | 1B.2 |
| *Halieaeus leucocephalus*  
bald eagle | ABNK10010 | Delisted | Endangered | G5 | S3 | FP |
| *Horkelia parryi*  
Parry’s horkelia | PDROS0W0C0 | None | None | G2 | S2 | 1B.2 |
| *Ione Chaparral*  
lone Chaparral | CTT37D00CA | None | None | G1 | S1.1 | |
| *Legenere limosa*  
legenere | PDCAM0C010 | None | None | G2 | S2 | 1B.1 |
| *Lepidurus packardi*  
vernal pool tadpole shrimp | ICBRA10010 | Endangered | None | G4 | S3S4 | |
| *Linderiella occidentalis*  
California linderiella | ICBRA06010 | None | None | G2G3 | S2S3 | |
| *Navaretia myersii ss. myersii*  
pincushion navarretia | PDPLM0C0X1 | None | None | G2T2 | S2 | 1B.1 |
| *Northern Hardpan Vernal Pool*  
Northern Hardpan Vernal Pool | CTT44110CA | None | None | G3 | S3.1 | |
| *Oncorhynchus mykiss irideus*  
steelhead - Central Valley DPS | AFCHA0209K | Threatened | None | G5T2Q | S2 | |
| *Orcuttia viscosa*  
Sacramento Orcutt grass | PMPOA4G070 | Endangered | Endangered | G1 | S1 | 1B.1 |
| *Rana draytonii*  
California red-legged frog | AAABH01022 | Threatened | None | G2G3 | S2S3 | SSC |
| *Riparia riparia*  
bank swallow | ABPAU08010 | None | Threatened | G5 | S2 | |
<table>
<thead>
<tr>
<th>Species</th>
<th>Element Code</th>
<th>Federal Status</th>
<th>State Status</th>
<th>Global Rank</th>
<th>State Rank</th>
<th>SSC or FP</th>
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</thead>
<tbody>
<tr>
<td>Sagittaria sanfordii</td>
<td>PMALIO40Q0</td>
<td>None</td>
<td>None</td>
<td>G3</td>
<td>S3</td>
<td>1B.2</td>
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<tr>
<td>Sanford's arrowhead</td>
<td></td>
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<tr>
<td>Spea hammondii</td>
<td>AAABF02020</td>
<td>None</td>
<td>None</td>
<td>G3</td>
<td>S3</td>
<td>SSC</td>
</tr>
<tr>
<td>western spadefoot</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sphenopholis obtusata</td>
<td>PMPOA5T030</td>
<td>None</td>
<td>None</td>
<td>G5</td>
<td>S2</td>
<td>2B.2</td>
</tr>
<tr>
<td>prairie wedge grass</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thamnophis gigas</td>
<td>ARADB36150</td>
<td>Threatened</td>
<td>Threatened</td>
<td>G2</td>
<td>S2</td>
<td></td>
</tr>
<tr>
<td>giant gartersnake</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

Record Count: 44
Consultation Code: 08ESMF00-2017-SLI-0527  
Event Code: 08ESMF00-2017-E-01019  
Project Name: Carbondale Road Bridge Replacement  

Subject: 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, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) 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 Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

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:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

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
Official Species List

Provided by:
Sacramento Fish and Wildlife Office
FEDERAL BUILDING
2800 COTTAGE WAY, ROOM W-2605
SACRAMENTO, CA 95825
(916) 414-6600

Consultation Code: 08ESMF00-2017-SLI-0527
Event Code: 08ESMF00-2017-E-01019

Project Type: TRANSPORTATION

Project Name: Carbondale Road Bridge Replacement
Project Description: MKT1406

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.
United States Department of Interior
Fish and Wildlife Service
Project name: Carbondale Road Bridge Replacement

Project Location Map:

Project Coordinates: MULTIPOLYGON (((-120.96442613899994 38.44862635732805, -120.96431191006049 38.44860499311535, -120.96428123487011 38.4490819174645, -120.96374007161921 38.44906416067055, -120.96377574437393 38.44850399969278, -120.96057153899743 38.447904476731495, -120.96069261504849 38.44869369582037, -120.96442613899994 38.44862635732805)))

Project Counties: Amador, CA
Endangered Species Act Species List

There are a total of 8 threatened or endangered species on your 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. Critical habitats listed under the Has Critical Habitat column may or may not lie within your project area. See the Critical habitats within your project area section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

<table>
<thead>
<tr>
<th>Amphibians</th>
<th>Status</th>
<th>Has Critical Habitat</th>
<th>Condition(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>California red-legged frog <em>(Rana draytonii)</em></td>
<td>Threatened</td>
<td>Final designated</td>
<td></td>
</tr>
<tr>
<td>Population: Wherever found</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>California tiger Salamander <em>(Ambystoma californiense)</em></td>
<td>Threatened</td>
<td>Final designated</td>
<td></td>
</tr>
<tr>
<td>Population: U.S.A. (Central CA DPS)</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Crustaceans</th>
<th>Status</th>
<th>Has Critical Habitat</th>
<th>Condition(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vernal Pool fairy shrimp <em>(Branchinecta lynchi)</em></td>
<td>Threatened</td>
<td>Final designated</td>
<td></td>
</tr>
<tr>
<td>Population: Wherever found</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Fishes</th>
<th>Status</th>
<th>Has Critical Habitat</th>
<th>Condition(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delta smelt <em>(Hypomesus transpacificus)</em></td>
<td>Threatened</td>
<td>Final designated</td>
<td></td>
</tr>
<tr>
<td>Population: Wherever found</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>steelhead <em>(Oncorhynchus (=salmo) mykiss)</em></td>
<td>Threatened</td>
<td>Final designated</td>
<td></td>
</tr>
<tr>
<td>Population: Northern California DPS</td>
<td></td>
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<td></td>
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| Flowering Plants                |          |                      |               |

http://ecos.fws.gov/ipac, 12/13/2016 11:24 AM
<table>
<thead>
<tr>
<th>Species</th>
<th>Status</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ione buckwheat (<em>Eriogonum apricum</em>)</td>
<td>Endangered</td>
<td>Population: Wherever found</td>
</tr>
<tr>
<td>Ione manzanita (<em>Arctostaphylos myrtifolia</em>)</td>
<td>Threatened</td>
<td>Population: Wherever found</td>
</tr>
</tbody>
</table>

**Insects**

<table>
<thead>
<tr>
<th>Species</th>
<th>Status</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valley Elderberry Longhorn beetle (<em>Desmocerus californicus dimorphus</em>)</td>
<td>Threatened</td>
<td>Final designated</td>
</tr>
</tbody>
</table>
Critical habitats that lie within your project area

There are no critical habitats within your project area.
NMFS Search Results
Quad Name  **Irish Hill**
Quad Number  **38120-D8**

**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) -

**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 -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -
**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) -

**ESA Pinnipeds**

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

**Essential Fish Habitat**

Coho EFH -
Chinook Salmon EFH -
Groundfish EFH -
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 -
NMFS Search Results
Quad Name Irish Hill
Quad Number 38120-D8

**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) -  
Eulachon (T) -  
sDPS Green Sturgeon (T) -  

**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 -  
SC Steelhead Critical Habitat -  
CCV Steelhead Critical Habitat -  
Eulachon Critical Habitat -  
sDPS Green Sturgeon Critical Habitat -  

NMFS search 12/16/2016
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) -

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

Essential Fish Habitat
Coho EFH -
Chinook Salmon EFH - X
Groundfish EFH -
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 -
Appendix C – Wetland Data Sheets
WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Carbonate Rd Bridge Replacement  City/County: Amador County  Sampling Date: 2/23/16
Applicant/Owner: Coltrans  State: CA  Sampling Point: 1
Investigator(s): Stefan de Barros  Section, Township, Range: S22, T23, R9E
Landform (hillslope, terrace, etc.):  Local relief (concave, convex, none): Concave  Slope (%):  
Subregion (LR):  Lat:  Long:  Datum:  
Soil Map Unit Name:  NWI classification: 

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)
Are Vegetation  Soil  or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes  No  
Are Vegetation  Soil  or Hydrology naturally problematic?  (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes  No</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes  No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

Remarks:

VEGETATION – Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size:_________</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
<th>Dominance Test worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td>Number of Dominant Species That Are OBL, FACW, or FAC: _________ (A)</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td>Total Number of Dominant Species Across All Strata: _________ (B)</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td>Percent of Dominant Species That Are OBL, FACW, or FAC: _________ (A/B)</td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub Stratum (Plot size:_________</th>
<th>= Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>95  Y  ☐</td>
</tr>
<tr>
<td>2.</td>
<td>5  N  ☐</td>
</tr>
<tr>
<td>3.</td>
<td>2  N  ☐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb Stratum (Plot size:_________</th>
<th>= Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Unknown gross</td>
<td>102 = Total Cover</td>
</tr>
<tr>
<td>2. Erodium sp.</td>
<td>95  Y  ☐</td>
</tr>
<tr>
<td>3. Bryophyte sp.</td>
<td>5  N  ☐</td>
</tr>
<tr>
<td>4.</td>
<td>2  N  ☐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody Vine Stratum (Plot size:_________</th>
<th>= Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>102 = Total Cover</td>
</tr>
<tr>
<td>2.</td>
<td>95  Y  ☐</td>
</tr>
</tbody>
</table>

% Bare Ground in Herb Stratum % Cover of Biotic Crust

Remarks: Did not use this criteria due to the disturbed nature of the site and delineation being conducted outside the blooming period.

US Army Corps of Engineers  Arid West – Version 2.0
**SOIL**

**Profile Description:** (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>10YR 3/6 95%</td>
<td>2.5YR 3/6 5</td>
<td>Sandy-Loam</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Location: PL=Pore Lining, M=Matrix.*

**Hydric Soil Indicators:** (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 1 cm Muck (A9)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleayed Matrix (S4)

**Indicators for Problematic Hydric Soils:**

- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleayed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

**Restrictive Layer (if present):**

- Type: Slate - Redrock
- Depth (inches): 4

**Hydric Soil Present?** Yes ☑ No __

**Remarks:**

*Redox on slate pieces*

---

**HYDROLOGY**

**Wetland Hydrology Indicators:**

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

**Secondary Indicators (2 or more required):**

- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)
- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drift Deposits (B3) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

**Field Observations:**

- Surface Water Present? Yes ☑ No __
- Water Table Present? Yes ☑ No __
- Saturation Present? (includes capillary fringe) Yes ☑ No __

**Depth (inches):** 0

**Wetland Hydrology Present?** Yes ☑ No __

**Remarks:**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Carbonado Rd Bridge Replacement  City/County: Amador County  Sampling Date: 2/23/16
Applicant/Owner: Caltrans  State: CA  Sampling Point: 1a
Investigator(s): St John de Barros  Section, Township, Range: S22, T23N, R9E
Landform (hillslope, terrace, etc.): Subregion (LRR): Lat: Long: Soil Map Unit Name: NWI classification:
Local relief (concave, convex, none): Slope (%): Datum:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)
Are Vegetation Soil  or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes  No  
Are Vegetation Soil  or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes</th>
<th>No</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks:

VEGETATION – Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: )</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
<th>Dominance Test worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td>Number of Dominant Species That Are OBL, FAC, FACW, or FAC: (A)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total Number of Dominant Species Across All Strata: (B)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Percent of Dominant Species That Are OBL, FAC, FACW, or FAC: (A/B)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub Stratum (Plot size: )</th>
<th>= Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb Stratum (Plot size: )</th>
<th>= Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.  <em>Unknown</em></td>
<td>95  y UPL</td>
</tr>
<tr>
<td>2.  Geranium dissectum</td>
<td>2  N UPL</td>
</tr>
<tr>
<td>3.  Erodium cicutarium</td>
<td>3  N UPL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody Vine Stratum (Plot size: )</th>
<th>= Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>% Bare Ground in Herb Stratum</th>
<th>% Cover of Biotic Crust</th>
</tr>
</thead>
</table>

Remarks:

Did not use this criteria due to the disturbed nature of the site and delination being conducted outside the blooming period.

US Army Corps of Engineers  Arid West – Version 2.0
SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-9</td>
<td>10 YR 3/6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>7 YR 5/8</td>
<td>C</td>
</tr>
</tbody>
</table>

Texture: Sandy-Loam w/ shale

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surfaced (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

Indicators for Problematic Hydric Soils:

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes / No

Remarks:

Shale pieces contain redox stains.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required, check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

Secondary Indicators (2 or more required)

- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Field Observations:

- Surface Water Present? Yes / No
- Water Table Present? Yes / No
- Saturation Present? Yes / No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Carbonate Rd Bridge Replacement
City/County: Amador County
Sampling Date: 2/23/2016

Applicant/Owner: Caltrans
State: VA
Sampling Point: 1b

Investigator(s): Stfan de Barras
Section, Township, Range: S22, T1N, R9E

Landform (hillside, terrace, etc.): Local relief (concave, convex, none):
Subregion (LRR): Lat: Slope (%):
Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☑ No (If no, explain in Remarks.)
Are Vegetation ☑ Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes ☑ No</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes ☑ No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes ☑ No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes ☑ No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks: Upland data points

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___________)

<table>
<thead>
<tr>
<th>No.</th>
<th>Species</th>
<th>% Cover</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Cover = ___________

Sapling/Shrub Stratum (Plot size: ___________)

<table>
<thead>
<tr>
<th>No.</th>
<th>Species</th>
<th>% Cover</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Cover = ___________

Herb Stratum (Plot size: ___________)

<table>
<thead>
<tr>
<th>No.</th>
<th>Species</th>
<th>% Cover</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Unknown grass</td>
<td>100</td>
<td>☑</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Cover = ___________

Woody Vine Stratum (Plot size: ___________)

<table>
<thead>
<tr>
<th>No.</th>
<th>Species</th>
<th>% Cover</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Cover = ___________

% Bare Ground in Herb Stratum: ___________

% Cover of Biotic Crust: ___________

Remarks: Heavily grazed by cattle.

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: ___________ (A)
Total Number of Dominant Species Across All Strata: ___________ (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: ___________ (A/B)

Prevalence Index worksheet:

Total % Cover of: Multiply by:
OBL species ___________ x 1 = ___________
FACW species ___________ x 2 = ___________
FAC species ___________ x 3 = ___________
FACU species ___________ x 4 = ___________
UPL species ___________ x 5 = ___________
Column Totals: ___________ (A) ___________ (B)

Prevalence Index = B/A = ___________

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%  
___ Prevalence Index is ≤3.0
___ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation² (Explain)

1Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☑ No ☑
<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Color (moist)</th>
<th>%</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type</th>
<th>Loc</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10</td>
<td>10YR 4/6</td>
<td>95</td>
<td>5YR 5/8</td>
<td>5</td>
<td>C</td>
<td>M</td>
<td>Sandy-Loam</td>
<td></td>
</tr>
</tbody>
</table>

**Hydric Soil Indicators:** (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipodon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

**Indicators for Problematic Hydric Soils:**

- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Redox Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Restrictive Layer (if present):**

- Type: ____________________________
- Depth (inches): ________________
- Hydric Soil Present? Yes  No

**REMARKS:**

- Remarks:

---

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
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- Inundation Visible on Aerial Imagery (B7)
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- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

**Field Observations:**

- Surface Water Present? Yes  No  Depth (inches): 0-9
- Water Table Present? Yes  No  Depth (inches): 0-9
- Saturation Present? (includes capillary fringe) Yes  No  Depth (inches): 5

Wetland Hydrology Present? Yes  No

**REMARKS:**

- Remarks:

---

US Army Corps of Engineers  
Arid West – Version 2.0
**WETLAND DETERMINATION DATA FORM – Arid West Region**

**Project/Site:** Carpaneda Rd Bridge Replacement  
**City/County:** Amador County  
**Sampling Date:** 2/23/16  
**Applicant/Owner:** Colcans  
**State:** CA  
**Sampling Point:** 2  
**Investigator(s):** Sotom de Barros  
**Section, Township, Range:** S22, T3N, R9E  
**Landform (hillslope, terrace, etc.):**  
**Local relief (concave, convex, none):**  
**Slope (%):**  
**Subregion (LRR):**  
**Lat:**  
**Long:**  
**Datum:**  
**Soil Map Unit Name:**  
**NWI classification:**  
**Are climatic / hydrologic conditions on the site typical for this time of year?** Yes ✔ No (If no, explain in Remarks.)  
**Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed?**  
**Are “Normal Circumstances” present?** Yes ✔ No  
**Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic?**  

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes ✔</th>
<th>No</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes ✔</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes ✔</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes ✔</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

**VEGETATION – Use scientific names of plants.**

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: ________ )</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
<th>Dominance Test worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Cover</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub Stratum (Plot size: ________ )</th>
<th>Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
</tr>
<tr>
<td><strong>Total Cover</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb Stratum (Plot size: ________ )</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
<th>Dominance Test worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Unknown grass</td>
<td>95</td>
<td>Y</td>
<td>UPL</td>
<td></td>
</tr>
<tr>
<td>2. Erodium puberulum</td>
<td>2</td>
<td>N</td>
<td>UPL</td>
<td></td>
</tr>
<tr>
<td>3. Geranium dissectum</td>
<td>3</td>
<td>N</td>
<td>UPL</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>8.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Cover</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody Vine Stratum (Plot size: ________ )</th>
<th>Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td><strong>Total Cover</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>% Bare Ground in Herb Stratum</th>
<th>% Cover of Biotic Crust</th>
</tr>
</thead>
</table>

**Remarks:**

*Area heavily grazed by cattle; grasses were not in bloom.*

1**Hydrophytic Vegetation Indicators:**
- Dominance Test is >50%
- Prevalence Index = 3.0
- Morphological Adaptations 1 (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation 1 (Explain)

1Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>%</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type</th>
<th>Loc</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-6</td>
<td>Loamy</td>
<td>3/2</td>
<td>40</td>
<td>7.5PR 4/6</td>
<td>30</td>
<td>C M</td>
<td></td>
<td>Silty Loam</td>
<td></td>
</tr>
</tbody>
</table>

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:** (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

**Indicators for Problematic Hydric Soils:**

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (F2)
- Other (Explain in Remarks)

**Restrictive Layer (if present):**

- Type: Shale & Quartz
- Depth (inches): 6

**Hydric Soil Present?** Yes / No

**Remarks:**

**HYDROLOGY**

**Wetland Hydrology Indicators:**

- Primary Indicators (minimum of one required; check all that apply)
  - Surface Water (A1)
  - High Water Table (A2)
  - Saturation (A3)
  - Water Marks (B1) (Nonriverine)
  - Sediment Deposits (B2) (Nonriverine)
  - Drift Deposits (B3) (Nonriverine)
  - Surface Soil Cracks (B6)
  - Inundation Visible on Aerial Imagery (B7)
  - Water-Soiled Leaves (B9)

- Secondary Indicators (2 or more required)
  - Water Marks (B1) (Riverine)
  - Sediment Deposits (B2) (Riverine)
  - Drift Deposits (B3) (Riverine)
  - Drainage Patterns (B10)
  - Dry-Season Water Table (C2)
  - Crayfish Burrows (C8)
  - Saturation Visible on Aerial Imagery (C9)
  - Shallow Aquifer (D3)
  - FAC-Neutral Test (D5)

**Field Observations:**

- Surface Water Present? Yes / No
- Water Table Present? Yes / No
- Saturation Present? Yes / No

**Wetland Hydrology Present?** Yes / No

**Remarks:**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available.
Project/Site: Carbondale Rd. Bridge Replacement  
City/County: Amador County  
Sampling Date: 2/28/16

Applicant/Owner: Calltrans  
State: CA  
Sampling Point: 2a

Investigator(s): Stafan de Borres  
Section, Township, Range: S22, T4N, R9E

Landform (hillslope, terrace, etc.):  
Local relief (concave, convex, none):  
Slope (%):  
Subregion (LRR):  
Lat:  
Long:  
Datum:  
Soil Map Unit Name:  
NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year?  
Yes  
No  
(If no, explain in Remarks.)

Are Vegetation  
Soil  
or Hydrology  
Significantly disturbed?  
Are "Normal Circumstances" present?  
Yes  
No  
(If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes</th>
<th>No</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks: Upland data point

### VEGETATION – Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: ____________)</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
<th>Dominance Test worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Dominant Species That Are OBL, FACW, or FAC:</td>
<td>(A)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Number of Dominant Species Across All Strata:</td>
<td>(B)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent of Dominant Species That Are OBL, FACW, or FAC:</td>
<td>(A/B)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub Stratum (Plot size: ____________)</th>
<th>= Total Cover</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Herb Stratum (Plot size: ____________)</th>
<th>= Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unknown grass</td>
<td>95  ✔</td>
</tr>
<tr>
<td>Erodium cicutarium</td>
<td>2  N  UPL</td>
</tr>
<tr>
<td>Geranium dissectum</td>
<td>3  N  UPL</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Woody Vine Stratum (Plot size: ____________)</td>
<td>= Total Cover</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>------------------</td>
</tr>
</tbody>
</table>

| % Bare Ground in Herb Stratum | % Cover of Biotic Crust | |
|---------------------------------|------------------------| |

Remarks: Area heavily grazed by cattle.
### SOIL

**Profile Description:** (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Color (moist)</th>
<th>%</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type¹</th>
<th>Loc²</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10</td>
<td>10PR 3/6</td>
<td>95</td>
<td>2.5PR 4/8</td>
<td>5</td>
<td>C</td>
<td>M</td>
<td>Sandy</td>
<td>Loam</td>
</tr>
</tbody>
</table>

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.
²Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:** (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epepidon (A2)
- Black Histic (A3)
- Hydrogen Sulphide (A4)
- Stratified Layers (A5)
- 1 cm Muck (A9) (LRR C)
- Depleted Below Dark Surface (A11)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

**Indicators for Problematic Hydric Soils:**

- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

**Restrictive Layer (if present):**

<table>
<thead>
<tr>
<th>Type</th>
<th>Depth (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shale</td>
<td>10</td>
</tr>
</tbody>
</table>

**Hydric Soil Present?** Yes  No

**Remarks:**

### HYDROLOGY

**Wetland Hydrology Indicators:**

**Primary Indicators (minimum of one required; check all that apply):**

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B0)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

**Secondary Indicators (2 or more required):**

- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulphide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)
- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drift Deposits (B3) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

**Field Observations:**

- Surface Water Present? Yes  No
- Water Table Present? Yes  No
- Saturation Present? Yes  No
- (includes capillary fringe)

**Depth (inches):** 0-10

**Wetland Hydrology Present?** Yes  No

**Remarks:**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

US Army Corps of Engineers

Arid West – Version 2.0
**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: **90000000**
City/County: Amador County
Sampling Date: **2/23/16**
Applicant/Owner: Catrans
State: CA
Sampling Point: 3
Investigator(s): **Stepon de Berrys**
Section, Township, Range: **S22 T23 N R9E**
Landform (hillslope, terrace, etc.): **Concave**
Local relief (concave, convex, none): **Concave**
Subregion (LRR): **Lat:**
Slope (%): **Long:**
Soil Map Unit Name: **NWI classification:**
Are climatic / hydrologic conditions on the site typical for this time of year? Yes [ ] No [ ]
Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are “Normal Circumstances” present? Yes [ ] No [ ]
Are Vegetation [ ] Soil [ ] or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes [ ] No [ ]</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes [ ] No [ ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes [ ] No [ ]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes [ ] No [ ]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

**VEGETATION – Use scientific names of plants.**

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: [ ] )</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <em>Quercus lobata</em></td>
<td>3</td>
<td>N</td>
<td>FACU</td>
</tr>
<tr>
<td>2. <em>Quercus wislizenii</em></td>
<td>7</td>
<td>N</td>
<td>FACU</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sapling/Shrub Stratum</strong> (Plot size: [ ] )</td>
<td><strong>10 = Total Cover</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Herb Stratum</strong> (Plot size: [ ] )</td>
<td><strong>Total Cover</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. <em>Juncus xiphioides</em></td>
<td>85</td>
<td>U</td>
<td>OBL</td>
</tr>
<tr>
<td>2. <em>Unknown grasses</em></td>
<td>5</td>
<td>N</td>
<td>UPL</td>
</tr>
<tr>
<td>3. <em>Tahitianrum capitatus meduseae</em></td>
<td>2</td>
<td>N</td>
<td>UPL</td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Woody Vine Stratum</strong> (Plot size: [ ] )</td>
<td><strong>92 = Total Cover</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>% Bare Ground in Herb Stratum</th>
<th>% Cover of Biotic Crust</th>
</tr>
</thead>
</table>
| **Remarks:**

*Area heavily grazed by cattle.*
### SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Color (moist)</th>
<th>%</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type</th>
<th>Loc</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10</td>
<td>10YR 3/2</td>
<td>60</td>
<td>2.5YR 4/6</td>
<td>40</td>
<td>C</td>
<td>M</td>
<td>Silty-Clay-Loam</td>
<td></td>
</tr>
</tbody>
</table>

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

### Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)
- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

### Indicators for Problematic Hydric Soils:
- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (F2)
- Other (Explain in Remarks)

### Restrictive Layer (if present):
- Type: ____________________________
- Depth (inches): ____________________

Hydric Soil Present? Yes ☑ No ___________

Remarks:

### HYDROLOGY

Wetland Hydrology Indicators:

**Primary Indicators (minimum of one required; check all that apply):**
- Surface Water (A1)
- High Water Table (A2)
- Aquatic Invertebrates (B13)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Oxidized Rhizospheres along Living Roots (C3)
- Drift Deposits (B3) (Nonriverine)
- Recent Iron Reduction in Tilled Soils (C6)
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- Water-Stained Leaves (B9)

**Secondary Indicators (2 or more required):**
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- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

**Field Observations:**
- Surface Water Present? Yes ☑ No ___________
- Water Table Present? Yes ☑ No ___________
- Saturation Present? Yes ☑ No ___________

Wetland Hydrology Present? Yes ☑ No ___________

Remarks:

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available.
WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Carbondale Rd Bridge Replacement  City/County: Amador County  Sampling Date: 2/23/16
Applicant/Owner:  State: CA  Sampling Point: 3
Investigator(s):  Section, Township, Range: S22, T23N, R9E
Landform (hillslope, terrace, etc.):  Local relief (concave, convex, none):  Slope (%): 
Subregion (LRR):  Lat:  Long:  Datum: 
Soil Map Unit Name:  NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)
Are Vegetation ☑, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐
Are Vegetation ☑, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes ☑ No ☐</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes ☑ No ☐</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes ☑ No ☐</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes ☑ No ☐</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks:

VEGETATION – Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: ____________)</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
<th>Dominance Test worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td>Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td>Total Number of Dominant Species Across All Strata: 2 (B)</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td>Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)</td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

= Total Cover

| Sapling/Shrub Stratum (Plot size: ____________) |                |                  |                  | |
|------------------------------------------------|----------------|------------------|------------------||
| 1.                                             |                |                  |                  | |
| 2.                                             |                |                  |                  | |
| 3.                                             |                |                  |                  | |
| 4.                                             |                |                  |                  | |
| 5.                                             |                |                  |                  | |

= Total Cover

<table>
<thead>
<tr>
<th>Herb Stratum (Plot size: ____________)</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
<th>Prevalence Index worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Unknown species</td>
<td>55  ☑ OPL</td>
<td></td>
<td></td>
<td>Total % Cover of: Multiply by:</td>
</tr>
<tr>
<td>2. Rumex crispus</td>
<td>40  ☑ OBL</td>
<td></td>
<td></td>
<td>OBL species 40 x 1 = 40</td>
</tr>
<tr>
<td>3. Rumex crispus</td>
<td>5   ☑ FAC</td>
<td></td>
<td></td>
<td>FACW species 5 x 2 = 10</td>
</tr>
<tr>
<td>4. Rumex crispus</td>
<td></td>
<td></td>
<td></td>
<td>FAC species 5 x 3 = 15</td>
</tr>
<tr>
<td>5. Rumex crispus</td>
<td></td>
<td></td>
<td></td>
<td>FACU species 5 x 4 = 20</td>
</tr>
<tr>
<td>6. Rumex crispus</td>
<td></td>
<td></td>
<td></td>
<td>UPL species 5 x 5 = 165</td>
</tr>
<tr>
<td>7. Rumex crispus</td>
<td></td>
<td></td>
<td></td>
<td>Column Totals: 100 (A) 220 (B)</td>
</tr>
<tr>
<td>8. Rumex crispus</td>
<td></td>
<td></td>
<td></td>
<td>Prevalence Index = B/A = 2.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody Vine Stratum (Plot size: ____________)</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
<th>Hydrophytic Vegetation Indicators:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td>Dominance Test is &gt;50%</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td>Prevalence Index is ≤3.0%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Morphological Adaptations 1 (Provide supporting data in Remarks or on a separate sheet)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Problematic Hydrophytic Vegetation 2 (Explain)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>% Bare Ground in Herb Stratum</th>
<th>% Cover of Biotic Crust</th>
</tr>
</thead>
</table>

Remarks:

Area heavily grazed by cattle.
### Soil Profile

**Profile Description:** (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>%</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type</th>
<th>Loc</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10</td>
<td>56.4%</td>
<td>H1</td>
<td>60</td>
<td>56.4%</td>
<td>H6</td>
<td>40</td>
<td>C</td>
<td>M</td>
<td>Silty Clay Loam</td>
<td></td>
</tr>
</tbody>
</table>

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Location: PL=Pore Lining, M=Matrix.

#### Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)
- Histosol (A1)
- Histic Epipedon (A2)
- Black Hist (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 1 cm Muck (A9)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)
- Sandy Redox (S5)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Redox Depressions (F8)
- Vernal Pools (F9)

#### Restrictive Layer (if present):
- Type: ____________________
- Depth (inches): ____________

#### Hydric Soil Present? Yes [ ] No [ ]

#### Remarks:

### Hydrology

#### Wetland Hydrology Indicators:

**Primary Indicators (minimum of one required; check all that apply):**
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (G1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Induration Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

**Secondary Indicators (2 or more required):**
- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)
- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drift Deposits (B3) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

#### Field Observations:

<table>
<thead>
<tr>
<th>Surface Water Present?</th>
<th>Yes [ ] No [ ] Depth (inches): ________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Table Present?</td>
<td>Yes [ ] No [ ] Depth (inches): ________</td>
</tr>
<tr>
<td>Saturation Present?</td>
<td>Yes [ ] No [ ] Depth (inches): ________</td>
</tr>
</tbody>
</table>

Wetland Hydrology Present? Yes [ ] No [ ]

#### Remarks:

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available.
WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Carbondale Rd Bridge Replacement
City/County: San Diego County
State: CA
Sampling Date: 2/23/16
Applicant/Owner: Cotrons
Investigator(s): Stefano de Barros
Section, Township, Range: S22, T37N, R4E
Landform (hillslope, terrace, etc.): Local relief (concave, convex, none):
Subregion (LRR):
Lat: Long: Datum: Soil Map Unit Name: NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes ☑ No ☐</th>
<th>Hydric Soil Present?</th>
<th>Yes ☑ No ☐</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes ☑ No ☐</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes ☑ No ☐</td>
<td>Remarks: Upland data point</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

VEGETATION – Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: _____)</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
<th>Dominance Test worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td>Number of Dominant Species That Are OBL, FACW, or FAC:</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td>Total Number of Dominant Species Across All Strata:</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td>Percent of Dominant Species That Are OBL, FACW, or FAC:</td>
</tr>
<tr>
<td>4.</td>
<td>= Total Cover</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub Stratum (Plot size: _____)</th>
<th>= Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb Stratum (Plot size: _____)</th>
<th>= Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. (Known grass)</td>
<td>100 ☑ UPL</td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody Vine Stratum (Plot size: _____)</th>
<th>= Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>% Bare Ground in Herb Stratum</th>
<th>% Cover of Biotic Crust</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks: Area heavily grazed by cattle & delineation completed outside the blooming period.

Hydrophytic Vegetation Present? Yes ☑ No ☐
### SOIL

**Profile Description:** (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-12</td>
<td>7.5YR 3/6</td>
<td>5/8YR 4/6</td>
<td>Sandy</td>
<td>Loam</td>
</tr>
</tbody>
</table>

1. Type: C = Concentration, D = Depletion, RM = Reduced Matrix, CS = Covered or Coated Sand Grains.
2. Location: PL = Pore Lining, M = Matrix.

**Hydric Soil Indicators:** (Applicable to all LRRs, unless otherwise noted.)
- Histosol (A1)  
- Histitic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Matrix (S1)
- Sandy Gleyed Matrix (S4)

Sandy Redox (S5)  
Stripped Matrix (S6)  
Loamy Mucky Mineral (F1)
Loamy Gleyed Matrix (F2)
Depleted Matrix (F3)
Redox Dark Surface (F6)
Depleted Dark Surface (F7)
Redox Depressions (F8)
Vernal Pools (F9)

**Indicators for Problematic Hydric Soils:**
- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

**Restrictive Layer (if present):**

<table>
<thead>
<tr>
<th>Type:</th>
<th>Depth (inches):</th>
</tr>
</thead>
</table>

Hydric Soil Present? Yes  
No

**Remarks:**

Big rain event occurred < 6 days from time of delineation

### HYDROLOGY

**Wetland Hydrology Indicators:**

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
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- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Primary Indicators (minimum of one required; check all that apply)  
Secondary Indicators (2 or more required)

- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drift Deposits (B3) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C6)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquifard (D3)
- FAC-Neutral Test (D5)

**Field Observations:**

- Surface Water Present? Yes  
No  
Depth (inches): 0-12

- Water Table Present? Yes  
No  
Depth (inches): 0-12

- Saturation Present? Yes  
No  
Depth (inches): >12

**Wetland Hydrology Present?** Yes  
No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**
WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Carbondale Rd Bridge Replacement  City/County: Amador County  Sampling Date: 2/23/16
Applicant/Owner: Caltrans  State: CA  Sampling Point: 4
Investigator(s): de Barros  Section, Township, Range: S22, T28; R9E
Landform (hillslope, terrace, etc.):  Local relief (concave, convex, none):  Slope (%):  
Subregion (LRR):  Lat:  Long:  Datum:  
Soil Map Unit Name:  NWI classification:  

Are climatic/hydrologic conditions on the site typical for this time of year?  Yes  No  (If no, explain in Remarks.)
Are Vegetation  Soil  or Hydrology  significantly disturbed?  Are "Normal Circumstances" present?  Yes  No  
Are Vegetation  Soil  or Hydrology  naturally problematic?  (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes  No</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes  No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes  No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes  No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks:

VEGETATION – Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: _______)</th>
<th>Absolute % Cover</th>
<th>Dominant Indicator Species?</th>
<th>Status</th>
<th>Dominance Test worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Cover = Total Cover

<table>
<thead>
<tr>
<th>Sapling/Shrub Stratum (Plot size: _______)</th>
<th>Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
</tr>
</tbody>
</table>

Total Cover = Total Cover

<table>
<thead>
<tr>
<th>Herb Stratum (Plot size: _______)</th>
<th>Absolute % Cover</th>
<th>Dominant Indicator Species?</th>
<th>Status</th>
<th>Dominance Test worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Juncus xiphoide 70  Y OBL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Taeniatherum coquet-rhodod 16 N UPL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Erodium cicutarium 8 N UPL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Glechoma declinata 10 N FACW</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Puccigar crassus 2 N FAC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Cover = Total Cover

<table>
<thead>
<tr>
<th>Woody Vine Stratum (Plot size: _______)</th>
<th>Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
</tbody>
</table>

Total Cover = Total Cover

% Bare Ground in Herb Stratum  % Cover of Biotic Crust  

Remarks:

Prevalence index worksheet:

<table>
<thead>
<tr>
<th>Total % Cover of:</th>
<th>Multiply by:</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBL species 70 x 1 = 70</td>
<td></td>
</tr>
<tr>
<td>FACC species 10 x 2 = 20</td>
<td></td>
</tr>
<tr>
<td>FAC species 7 x 3 = 6</td>
<td></td>
</tr>
<tr>
<td>FACU species 8 x 4 = 32</td>
<td></td>
</tr>
<tr>
<td>UPL species 16 x 5 = 80</td>
<td></td>
</tr>
<tr>
<td>Column Totals: 100 x 1.86</td>
<td></td>
</tr>
</tbody>
</table>

Prevalence Index = B/A = 1.86

Hydrophytic Vegetation Indicators:

Dominance Test is >50%
Prevalence Index is <3.0
- Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation (Explain)

1Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?  Yes  No
<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix Color (moist)</th>
<th>%</th>
<th>Redox Features Color (moist)</th>
<th>%</th>
<th>Type</th>
<th>Loc</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-15</td>
<td>low R 3/2</td>
<td>93</td>
<td>7.5#R 4/6</td>
<td>7</td>
<td>C</td>
<td>M</td>
<td>Silty Clay Loam</td>
<td></td>
</tr>
</tbody>
</table>

Note: C = Concentration, D = Depletion, RM = Reduced Matrix, CS = Covered or Coated Sand Grains.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRRC)
- 1 cm Muck (A9) (LRRD)
- 2 cm Muck (A10) (LRRB)
- Reduced Vertic (F16)
- Red Parent Material (TF2)
- Depleted Matrix (F3)
- Vernal Pools (F9)

Restrictive Layer (if present):

- Type: 

- Depth (Inches): 

- Hydric Soil Present? Yes ✅ No ___

Hydrology:

Wetland Hydrology Indicators:

- Surface Water (A1)
- High Water Table (A2)
- Saturated (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Water-Stained Leaves (B9)

Field Observations:

- Surface Water Present? Yes ✅ No ___ Depth (inches): 9
- Water Table Present? Yes ✅ No ___ Depth (inches): 7
- Saturation Present? Yes ✅ No ___ Depth (inches): 9

Wetland Hydrology Present? Yes ✅ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Coorabinda Rd Bridge Replacement  City/County: Anado County  Sampling Date: 7/23/16
Applicant/Owner:  State: CA  Sampling Point: 4a
Investigator(s):  Section, Township, Range: S22, T23N, R9E
Landform (hillslope, terrace, etc.): Local relief (concave, convex, rone): Slope (%): 
Subregion (LRR):  Lat:  Long:  Datum:  
Soil Map Unit Name: NWI classification: 

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are “Normal Circumstances” present? Yes  No
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes</th>
<th>No</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks:

VEGETATION – Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: ________)</th>
<th>Absolute % Cover</th>
<th>Dominant Indicator Species?</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

= Total Cover

<table>
<thead>
<tr>
<th>Sapling/Shrub Stratum (Plot size: ________)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
</tr>
<tr>
<td>2.</td>
</tr>
<tr>
<td>3.</td>
</tr>
<tr>
<td>4.</td>
</tr>
<tr>
<td>5.</td>
</tr>
</tbody>
</table>

= Total Cover

<table>
<thead>
<tr>
<th>Herb Stratum (Plot size: ________)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Teesbahium reptile-muscaae</td>
</tr>
<tr>
<td>2. Erodium cicutarium</td>
</tr>
<tr>
<td>3. Unknown grass</td>
</tr>
<tr>
<td>4.</td>
</tr>
<tr>
<td>5.</td>
</tr>
</tbody>
</table>

= Total Cover

<table>
<thead>
<tr>
<th>Woody Vine Stratum (Plot size: ________)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
</tr>
<tr>
<td>2.</td>
</tr>
</tbody>
</table>

= Total Cover

% Bare Ground in Herb Stratum % Cover of Biotic Crust

Remarks: Grasses not in bloom at time of delineation.
### Soil Profile Description

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>%</th>
<th>Redox Features</th>
<th>Texture</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-12</td>
<td>10 PR 3/4</td>
<td>100</td>
<td></td>
<td></td>
<td>Sandy Loam</td>
</tr>
</tbody>
</table>

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Location: PL=Pore Lining, M=Matrix.*

#### Hydric Soil Indicators
- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depressed Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

#### Indicator for Problematic Hydric Soils
- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

#### Restrictive Layer (if present):
- Type: 
- Depth (inches): 
- Hydric Soil Present? Yes [x] No

#### Remarks:

---

### Hydrology

#### Wetland Hydrology Indicators

<table>
<thead>
<tr>
<th>Primary Indicators (minimum of one required; check all that apply)</th>
<th>Secondary Indicators (2 or more required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Water (A1)</td>
<td>Water Marks (B1) (Riverine)</td>
</tr>
<tr>
<td>High Water Table (A2)</td>
<td>Sediment Deposits (B2) (Riverine)</td>
</tr>
<tr>
<td>Saturation (A3)</td>
<td>Drift Deposits (B3) (Riverine)</td>
</tr>
<tr>
<td>Water Marks (B1) (Nonriverine)</td>
<td>Drainage Patterns (B10)</td>
</tr>
<tr>
<td>Sediment Deposits (B2) (Nonriverine)</td>
<td>Dry-Season Water Table (C2)</td>
</tr>
<tr>
<td>Drift Deposits (B3) (Nonriverine)</td>
<td>Crayfish Burrows (C6)</td>
</tr>
<tr>
<td>Surface Soil Cracks (B6)</td>
<td>Saturation Visible on Aerial Imagery (C9)</td>
</tr>
<tr>
<td>Inundation Visible on Aerial Imagery (B7)</td>
<td>Shallow Aquitard (D3)</td>
</tr>
<tr>
<td>Water-Stained Leaves (B9)</td>
<td>FAC-Neutral Test (D5)</td>
</tr>
</tbody>
</table>

#### Field Observations
- Surface Water Present? Yes [x] No
- Water Table Present? Yes [x] No
- Saturation Present? Yes [x] No

#### Depth Observations
- Depth (inches): 0-12

#### Wetland Hydrology Present? Yes [x] No

#### Remarks:

---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Corbette Rd Bridge Replacement  City/County: Amador County  Sampling Date: 2/23/16
Applicant/Owner: Caltrans  State: CA  Sampling Point: 46
Investigator(s): Stefan de Barros  Section, Township, Range: S22, T3N, R9E
Landform (hillslope, terrace, etc.):  Local relief (concave, convex, none):  Slope (%): 10
Subregion (LRR):  Lat:  Long:  Datum:  
Soil Map Unit Name:  NWI classification:  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No  (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? Are “Normal Circumstances” present? Yes ✓ No  
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes ✓  No</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes ✓  No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes ✓  No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes ✓  No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks:

Vegetation – Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: ________)</th>
<th>Absolute % Cover</th>
<th>Dominant Indicator Species?</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

= Total Cover

<table>
<thead>
<tr>
<th>Sapling/Shrub Stratum (Plot size: ________)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
</tr>
</tbody>
</table>

= Total Cover

<table>
<thead>
<tr>
<th>Herb Stratum (Plot size: ________)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Unknown grass</td>
<td></td>
</tr>
<tr>
<td>2. Vicia villosa</td>
<td></td>
</tr>
<tr>
<td>3. Piresia rigida</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
</tr>
</tbody>
</table>

= Total Cover

<table>
<thead>
<tr>
<th>Woody Vine Stratum (Plot size: ________)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
</tbody>
</table>

= Total Cover

<table>
<thead>
<tr>
<th>% Bare Ground in Herb Stratum</th>
<th>% Cover of Biotic Crust</th>
</tr>
</thead>
</table>

Remarks:

Hydrophytic Vegetation Indicators:
- Dominance Test is >50%
- Prevalence index is ≤3.0
- Morphological Adaptations 1 (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation 1 (Explain)

1Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No  

Prevalence Index = B/A = 5

Hydrophytic Vegetation Indicators:
- Dominance Test is >50%
- Prevalence index is ≤3.0
- Morphological Adaptations 1 (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation 1 (Explain)

1Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No  

Prevalence Index = B/A = 5

Hydrophytic Vegetation Indicators:
- Dominance Test is >50%
- Prevalence index is ≤3.0
- Morphological Adaptations 1 (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation 1 (Explain)

1Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-14</td>
<td>7.5YR 4/6</td>
<td>100</td>
</tr>
</tbody>
</table>


Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

Indicators for Problematic Hydric Soils:

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

Restrictive Layer (if present):

- Type: 
- Depth (inches): 

Hydric Soil Present? Yes [ ] No [X]

Remarks: 5" - 2" Cobble

HYDROLOGY

Wetland Hydrology indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

Secondary Indicators (2 or more required)

- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Field Observations:

- Surface Water Present? Yes [X] No [ ] Depth (inches): 0-14
- Water Table Present? Yes [X] No [ ] Depth (inches): 0-14
- Saturation Present? Yes [X] No [ ] Depth (inches): >14

Wetland Hydrology Present? Yes [ ] No [X]

Remarks:
WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Warmwater Rd Bridge Replacement  City/County: Amador County  Sampling Date: 2/28/16
Applicant/Owner: Caltrans  State: CA  Sampling Point: 5
Investigator(s): Stefano de Barros  Section, Township, Range: S22, T7N, R9E
Landform (hillock, terrace, etc.):  Local relief (concave, convex, none):  Slope (%): 
Subregion (LRR):  Lat:  Long:  Datum: 
Soil Map Unit Name:  NWI classification: 

Are climatic/hydrologic conditions on the site typical for this time of year?  Yes ☑  No ☐  (If no, explain in Remarks.)
Are Vegetation, Soil or Hydrology significantly disturbed?  Are "Normal Circumstances" present?  Yes ☑  No ☐
Are Vegetation, Soil or Hydrology naturally problematic?  (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes ☑</th>
<th>No ☐</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes ☑</th>
<th>No ☐</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes ☑</td>
<td>No ☐</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes ☑</td>
<td>No ☐</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks:

VEGETATION – Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: _______ )</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
<th>Dominance Test worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>= Total Cover</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub Stratum (Plot size: _______ )</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
<th>Dominance Test worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>= Total Cover</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb Stratum (Plot size: _______ )</th>
<th>Absolute % Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.  Tussilago farfarae</td>
<td>50  ☑  OBL</td>
</tr>
<tr>
<td>2.  Thalictrum aquilegiosum</td>
<td>15  ☑  FACW</td>
</tr>
<tr>
<td>3.  Taraxacum camptothecoides</td>
<td>5   ☐  UPL</td>
</tr>
<tr>
<td>4.</td>
<td>= Total Cover</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody Vine Stratum (Plot size: _______ )</th>
<th>Absolute % Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>= Total Cover</td>
</tr>
</tbody>
</table>

% Bare Ground in Herb Stratum  % Cover of Biotic Crust

Remarks:

Prevalence Index worksheet:

Total % Cover of:

OBL species 80 x 1 = 80
FACW species 15 x 2 = 30
FAC species 10 x 3 =
FACU species 5 x 4 =
UPL species 100 x 5 = 75
Column Totals: 100 (A) 135 (B)

Prevalence Index = B/A = 1.35

Hydrophytic Vegetation Indicators:

☑ Dominance Test is >50%
☑ Prevalence Index is ≥3.0

Hydrophytic Vegetation Present?  Yes ☑  No ☐
### SOIL

**Profile Description:** (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-6</td>
<td>10%YR 3/2</td>
<td>60</td>
</tr>
</tbody>
</table>

1. **Type:** C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  
2. **Texture:**

**Hydric Soil Indicators:** (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

**Indicators for Problematic Hydric Soils:**

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

3. **Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**

**Restrictive Layer (if present):**

| Type: | Shale | Depth (inches): | 6 |

**Hydric Soil Present?** Yes ☑ No

**Remarks:**

---

### HYDROLOGY

**Wetland Hydrology Indicators:**

- **Primary Indicators (minimum of one required; check all that apply):**
  - Surface Water (A1)
  - High Water Table (A2)
  - Saturation (A3)
  - Water Marks (B1) (Nonriverine)
  - Sediment Deposits (B2) (Nonriverine)
  - Drift Deposits (B3) (Nonriverine)
  - Surface Soil Cracks (B6)
  - Inundation Visible on Aerial Imagery (B7)
  - Water-Stained Leaves (B9)

- **Secondary Indicators (2 or more required):**
  - Water Marks (B1) (Riverine)
  - Sediment Deposits (B2) (Riverine)
  - Drift Deposits (B3) (Riverine)
  - Drainage Patterns (B10)
  - Dry-Season Water Table (C2)
  - Clayey Soils (C6)
  - Saturation Visible on Aerial Imagery (C9)
  - Shallow Aquitard (D3)
  - FAC-Neutral Test (D5)

**Field Observations:**

- **Surface Water Present?** Yes ☑ No
  - Depth (inches): 0
- **Water Table Present?** Yes ☑ No
  - Depth (inches): 2
- **Saturation Present?** Yes ☑ No
  - Depth (inches): 0

**Wetland Hydrology Present?** Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**

---
**WETLAND DETERMINATION DATA FORM – Arid West Region**

**Project/Site:** Carbonate Rd Bridge Replacement  
**City/County:** Amado County  
**Sampling Date:** 2/23/16

**Applicant/Owner:** Cabrera  
**State:** CA  
**Sampling Point:** 5a

**Investigator(s):** Cabrera  
**Section, Township, Range:** S 22 T 49 N R 95

**Landform (hillslope, terrace, etc.):**  
**Local relief (concave, convex, none):**  
**Slope (%):**

**Subregion (LRR):**  
**Lat:**  
**Long:**  
**Datum:**

**Soil Map Unit Name:**  
**NWI classification:**

Are climatic / hydrologic conditions on the site typical for this time of year?  
Yes [ ]  No [X]  
(If no, explain in Remarks.)

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed?  
Are "Normal Circumstances" present?  
Yes [X]  No [ ]

Are Vegetation [ ] Soil [ ] or Hydrology [ ] naturally problematic?  
(If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes [X]  No [ ]</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes [X]  No [ ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes [X]  No [ ]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes [X]  No [ ]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**  
Upland data point

**VEGETATION – Use scientific names of plants.**

**Tree Stratum** (Plot size: [ ])

1.  
2.  
3.  
4.  

**Sapling/Shrub Stratum** (Plot size: [ ])

1.  
2.  
3.  
4.  

**Herb Stratum** (Plot size: [ ])

1. Tetracladium cuspidatum  
2. Erichromas cirrosum  
3. Unknown grass  

**Woody Vine Stratum** (Plot size: [ ])

1.  
2.  

<table>
<thead>
<tr>
<th>Dominance Test worksheet:</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Dominant Species That Are OBL, FACW, or FAC:</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Number of Dominant Species Across All Strata:</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent of Dominant Species That Are OBL, FACW, or FAC:</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Prevalence index worksheet:**

<table>
<thead>
<tr>
<th>Total % Cover of:</th>
<th>Multiply by:</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBL species</td>
<td>x 1 =</td>
</tr>
<tr>
<td>FACW species</td>
<td>x 2 =</td>
</tr>
<tr>
<td>FAC species</td>
<td>x 3 =</td>
</tr>
<tr>
<td>FACU species</td>
<td>x 4 =</td>
</tr>
<tr>
<td>UPL species</td>
<td>100 x 5 = 500</td>
</tr>
</tbody>
</table>

**Presumptive Dominance:**

1. Total: 500  
2. Percent: 10%

**Hydrophytic Vegetation Indicators:**

- Dominance Test is >50%
- Prevalence Index is ≤3.0
- Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation' (Explain)

1Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?**  
Yes [X]  No [ ]

**Remarks:**
### SOIL

**Profile Description:** (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-6</td>
<td>10YR 3/4</td>
<td>97</td>
<td>5YR 3/4</td>
<td>3</td>
</tr>
<tr>
<td>6-14</td>
<td>10YR 3/4</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6-14</td>
<td>5YR 4/6</td>
<td>40</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  
2Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Hist (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

### Indicators for Problematic Hydric Soils:

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

### Restrictive Layer (if present):

- Type: 
- Depth (inches): 
- Hydric Soil Present? Yes No

### HYDROLOGY

**Wetland Hydrology Indicators:**

**Primary Indicators (minimum of one required; check all that apply):**

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

**Secondary Indicators (2 or more required):**

- Water Marks (B1) (Riverline)
- Sediment Deposits (B2) (Riverline)
- Drift Deposits (B3) (Riverline)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

**Field Observations:**

- Surface Water Present? Yes No Depth (inches): 0-14
- Water Table Present? Yes No Depth (inches): 0-14
- Saturation Present? Yes No Depth (inches): 2-14

**Wetland Hydrology Present?** Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**
WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Carlsbad Rd Bridge Replacement
City/County: Amador County
Applicant/Owner: [Name]
State: CA
Sampling Date: 2/23/16
Investigator(s): Stefano de Barros
Section, Township, Range: 5S 2223, T4N, R9E
Landform (hillslope, terrace, etc.): 
Local relief (concave, convex, none): 
Slope (%): 
Subregion (LRR): 
Lat: 
Long: 
Datum: 
Soil Map Unit Name: 
NWI classification: 

Are climatic / hydrologic conditions on the site typical for this time of year? Yes [ ] No [X] (If no, explain in Remarks.)
Are Vegetation ________, Soil ________, or Hydrology ________ significantly disturbed? Are "Normal Circumstances" present? Yes [ ] No [X]
Are Vegetation ________, Soil ________, or Hydrology ________ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes [X] No [ ]
Hydratic Soil Present? Yes [X] No [ ]
Wetland Hydrology Present? Yes [X] No [ ]
Is the Sampled Area within a Wetland? Yes [X] No [ ]

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ________)
1. 
2. 
3. 
4. 

Sapling/Shrub Stratum (Plot size: ________)
1. 
2. 
3. 
4. 

Herb Stratum (Plot size: ________)
1. Glycine tricolorata 30 % FACW
2. Juncus xiphodes 35 % OBL
3. Scirpus atrovirens 10 % OBL
4. Carex colonica 5 % UPL
5. Unkown grass 25 % UPL

Woody Vine Stratum (Plot size: ________)
1. 

% Bare Ground in Herb Stratum ________ % Cover of Biotic Crust ________

Remarks:

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 66% (A/B)

Prevalence index worksheet:
Total % Cover of: OBL species 30 x 1 = 30
FACW species 30 x 2 = 60
FAC species 30 x 3 = 
FACU species 30 x 4 = 
UPL species 40 x 5 = 200
Column Totals: 100 (A) 290 (B)
Prevalence Index = B/A = 2.9

Hydrophytic Vegetation indicators:
Dominance Test is >50%
Prevalence Index is <3.0
Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes [X] No [ ]

Remarks:
**SOIL**

**Profile Description:** (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-12</td>
<td>10YR 3/2</td>
<td>5YR 4/6  C</td>
<td>Silty Loam</td>
</tr>
</tbody>
</table>

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Location: PL=Pore Lining, M=Matrix.*

**Hydric Soil Indicators:** (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histc Epipedon (A2)
- Black Histc (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depressed Below Dark Surface (A10)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

**Indicators for Problematic Hydric Soils:**

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (F2)
- Other (Explain in Remarks)

**Restrictive Layer (if present):**

- Type: ____________________________
- Depth (inches): __________________

**Hydric Soil Present?** Yes [ ] No [ ]

**Remarks:**

---

**HYDROLOGY**

**Wetland Hydrology Indicators:**

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

**Secondary Indicators (2 or more required):**

- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drift Deposits (B3) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Grayish Burrows (C6)
- Wetland Visible on Aerial Imagery (C9)
- Shallow Aquifer (D3)
- FAC-Neutral Test (D5)

**Field Observations:**

- Surface Water Present? Yes [ ] No [ ] Depth (inches): ____________
- Water Table Present? Yes [ ] No [ ] Depth (inches): ____________
- Saturation Present? Yes [ ] No [ ] Depth (inches): ____________ (includes capillary fringe)

**Wetland Hydrology Present?** Yes [ ] No [ ]

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**

---
WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Carbondale Rd Bridge Replacement  City/County: Amador County  Sampling Date: 2/23/16
Applicant/Owner: Galbraith  State: CA  Sampling Point: 5c
Investigator(s): Stefano Barros  Section, Township, Range: 5 22 23; TBN; R9 E
Landform (hillslope, terrace, etc.): Subregion (LRR): Local relief (concave, convex, none): Slope (%): 5
Soil Map Unit Name:  Lat: Long: Datum: NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No ☐ (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No ☐
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ✔ No ☐  Is the Sampled Area within a Wetland? Yes ✔ No ☐
Hydric Soil Present? Yes ✔ No ☐  
Wetland Hydrology Present? Yes ✔ No ☐
Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ________)

1. Quercus lobata
   Absolute % Cover: 5
   Dominant Indicator Species? Status: N FACW

D dominance Test worksheet:
   Number of Dominant Species That Are OBL, FACW, or FAC: 1
   Total Number of Dominant Species Across All Strata: 2
   Percent of Dominant Species That Are OBL, FACW, or FAC: 50%

Prevalence Index worksheet:
   Total % Cover of: Multiply by:
   OBL species 55  x 1 = 55
   FACW species 10  x 2 = 20
   FAC species  5  x 3 = 
   FACU species 55  x 4 = 20
   UPL species 55  x 5 = 
   Column Totals: 105
   Prevalence Index = B/A = 2.57

Hydrophytic Vegetation indicators:
   ☑ Dominance Test is >50%
   ☑ Prevalence Index is ≤3.0
   ☑ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
   ☑ Problematic Hydrophytic Vegetation¹ (Explain)

₁Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Sapling/Shrub Stratum (Plot size: ________)

1. __________
2. __________
3. __________
4. __________
   = Total Cover

Herb Stratum (Plot size: ________)

1. Juncus xiphoides
   Absolute % Cover: 55
   Dominant Indicator Species? Status: OBL

2. Teucrium capitatum
   Absolute % Cover: 35
   Dominant Indicator Species? Status: UPL

3. Glycine max
   Absolute % Cover: 10
   Dominant Indicator Species? Status: FACW

4. __________
5. __________
6. __________
7. __________
8. __________
   = Total Cover

Woody Vine Stratum (Plot size: ________)

1. __________
2. __________
   = Total Cover

% Bare Ground in Herb Stratum ________  % Cover of Biotic Crust ________

Remarks:
## SOIL

**Profile Description:** (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Color (moist)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Type</th>
<th>Loc</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-8</td>
<td>10YR 3/2</td>
<td>80</td>
<td>5YR 4/6</td>
<td>C</td>
<td>M</td>
<td>Silty-Lim</td>
<td></td>
</tr>
</tbody>
</table>

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 3Location: PL=Pore Lining, M=Matrix.*

**Hydric Soil Indicators:** (Applicable to all LRRs, unless otherwise noted.)

- Histoosol (A1)
- Histic Epikarst (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR C)
- Depoected Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Glyced Matrix (S4)

- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Glyed Matrix (F2)
- Deposited Matrix (F3)
- Redox Dark Surface (F6)
- Deposited Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

**Hydric Soil Present?** Yes ✓ No __

**Restrictive Layer (if present):**

- Type: Redrock - Silt
- Depth (inches): 81

**Hydrology**

**Wetland Hydrology Indicators:**

- Primary Indicators (minimum of one required; check all that apply)
  - Surface Water (A1)
  - High Water Table (A2)
  - Saturation (A3)
  - Water Marks (B1) (Nonriverine)
  - Sediment Deposits (B2) (Nonriverine)
  - Drift Deposits (B3) (Nonriverine)
  - Surface Soil Cracks (B6)
  - Inundation Visible on Aerial Imagery (B7)
  - Water-Stained Leaves (B9)

- Secondary Indicators (2 or more required)
  - Water Marks (B1) (Riverline)
  - Sediment Deposits (B2) (Riverline)
  - Drift Deposits (B3) (Riverline)
  - Drainage Patterns (B10)
  - Dry-Season Water Table (C2)
  - Crayfish Burrows (C8)
  - Saturation Visible on Aerial Imagery (C9)
  - Shallow Aquitard (D3)
  - FAC-Neutral Test (D5)

**Field Observations:**

| Surface Water Present? | Yes ✓ No | Depth (inches): 0 |
| Water Table Present?   | Yes ✓ No | Depth (inches): 2 |
| Saturation Present?    | Yes ✓ No | Depth (inches): 0 |

**Wetland Hydrology Present?** Yes ✓ No __

**Remarks:**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**
WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: **Carndonagh Rd Bridge Replacement**
City/County: **Amador County**
Sampling Date: **2/23/16**
Applicant/Owner: **Caltrans**
State: **CA**
Sampling Point: **5°0**
Investigator(s): **Stefan de Barros**
Section, Township, Range: **S22, T7N, R9E**
Landform (hillslope, terrace, etc.): 
Local relief (concave, convex, none): 
Slope (%): 
Subregion (LRR): 
Lat: 
Long: 
Datum: 
Soil Map Unit Name: 
NWI classification: 

Are climatic / hydrologic conditions on the site typical for this time of year? Yes [ ] No [ ] (If no, explain in Remarks.)
Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes [ ] No [ ]
Are Vegetation ______, Soil ______, or Hydrology ______ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes [ ] No [ ]</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes [ ] No [ ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes [ ] No [ ]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes [ ] No [ ]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks: 

Legend data point.

VEGETATION – Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: ________ )</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
<th>Dominance Test worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Quercus obtusa</td>
<td>5</td>
<td>N</td>
<td>FACU</td>
<td>Number of Dominant Species That Are OBL, FACW, or FAC: ________ (A)</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td>Total Number of Dominant Species Across All Strata: ________ (B)</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td>Percent of Dominant Species That Are OBL, FACW, or FAC: ________ (A/B)</td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Prevalence Index worksheet:

<table>
<thead>
<tr>
<th>Total % Cover of:</th>
<th>Multiply by:</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBL species</td>
<td>x 1 =</td>
</tr>
<tr>
<td>FACW species</td>
<td>x 2 =</td>
</tr>
<tr>
<td>FAC species</td>
<td>x 3 =</td>
</tr>
<tr>
<td>FACU species</td>
<td>x 4 = 500</td>
</tr>
<tr>
<td>UPL species</td>
<td>x 5 = 5000</td>
</tr>
<tr>
<td>Column Totals</td>
<td>105 (A) 520 (B)</td>
</tr>
</tbody>
</table>

Prevalence Index = B/A = 4.95

Hydrophytic Vegetation Indicators:
1. Dominance Test is >50%
2. Prevalence Index is ≥3.0
3. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
4. Problematic Hydrophytic Vegetation¹ (Explain)
5. Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Woody Vine Stratum (Plot size: ________ )

<table>
<thead>
<tr>
<th>Woody Vine Stratum (Plot size: ________ )</th>
<th>Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>100</td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
</tbody>
</table>

% Bare Ground in Herb Stratum  % Cover of Biotic Crust

Remarks: 
Grasses not in bloom at time of delineation.

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
### SOIL

**Profile Description:** (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>%</th>
<th>Redox Features</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type¹</th>
<th>Loc²</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-14</td>
<td></td>
<td>7.5 PR 4/6</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sandy</td>
<td>Loam</td>
</tr>
</tbody>
</table>

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:** (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

**Indicators for Problematic Hydric Soils:**

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

**Restrictive Layer (if present):**

**Type:**

- Depth (inches): 

**Hydric Soil Present?**

- Yes
- No

**Remarks:**

### HYDROLOGY

**Wetland Hydrology Indicators:**

<table>
<thead>
<tr>
<th>Primary Indicators (minimum of one required; check all that apply)</th>
<th>Secondary Indicators (2 or more required)</th>
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<tr>
<td>Surface Water (A1)</td>
<td>Water Marks (B1) (Riverine)</td>
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<td>High Water Table (A2)</td>
<td>Sediment Deposits (B2) (Riverine)</td>
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<tr>
<td>Saturation (A3)</td>
<td>Drainage Patterns (B10)</td>
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<td>Water Marks (B1) (Nonriverine)</td>
<td>Biotic Crust (B12)</td>
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<tr>
<td>Sediment Deposits (B2) (Nonriverine)</td>
<td>Aquatic Invertebrates (B13)</td>
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<tr>
<td>Drift Deposits (B3) (Nonriverine)</td>
<td>Oxidized Rhizospheres along Living Roots (C3)</td>
</tr>
<tr>
<td>Surface Soil Cracks (B6)</td>
<td>Presence of Reduced Iron (C4)</td>
</tr>
<tr>
<td>Inundation Visible on Aerial Imagery (B7)</td>
<td>Recent Iron Reduction in Tilled Soils (C6)</td>
</tr>
<tr>
<td>Water-Stained Leaves (B9)</td>
<td>Thin Muck Surface (C7)</td>
</tr>
<tr>
<td>(includes capillary fringe)</td>
<td>Other (Explain in Remarks)</td>
</tr>
</tbody>
</table>

**Field Observations:**

- Surface Water Present? Yes
- Water Table Present? Yes
- Saturation Present? Yes

**Depth (inches):**

- 0-14

**Wetland Hydrology Present?**

- Yes
- No

**Remarks:**
Appendix D – CTS Habitat Assessment
SITE ASSESSMENT FOR CALIFORNIA TIGER SALAMANDER

CARBONDALE ROAD BRIDGE REPLACEMENT PROJECT

AMADOR, CALIFORNIA

10-AMADOR-0-CR

FEDERAL PROJECT NO. BRLO-5926(055)

May 2016
SITE ASSESSMENT FOR CALIFORNIA TIGER SALAMANDER

CARBONDALE ROAD BRIDGE REPLACEMENT PROJECT

AMADOR, CALIFORNIA

10-AMADOR-0-CR

FEDERAL PROJECT NO. BRLO-5926(055)

Prepared for:
Amador Public Works Department
810 Court Street
Jackson, California 95642

For Submittal to:
U.S. Fish and Wildlife Service
2800 Cottage Way, Suite W-2605
Sacramento, California 95825

California Department of Fish and Wildlife
North Central Region
1701 Nimbus Road
Rancho Cordova, California 95670

May 2016
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A: RESUME FOR LAURA BELT
B: REPRESENTATIVE PHOTOS OF WILLOW CREEK
1.0 INTRODUCTION

1.1 PURPOSE OF ASSESSMENT
This report presents an assessment of the status of the California tiger salamander (*Ambystoma californiense*) (CTS) and potential habitat for this species on the Carbondale Road Bridge Replacement project (hereafter, assessment area) and vicinity. This assessment was prepared by Laura Belt, Senior Wildlife Biologist with LSA Associates, Inc. (LSA) on behalf of Amador County Public Works Department.

This assessment follows the protocols outlined in the U.S. Fish and Wildlife Service (USFWS) Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander (October 2003). Accordingly, for CTS, this assessment describes the habitats within 1.24 miles of the area. The assessment also evaluates the potential for CTS to occur in the project area.

1.2 ASSESSMENT AREA
The assessment area is located within western Amador County, approximately 7.5 miles (mi) east of the community of Rancho Murieta. Carbondale Road crosses Willow Creek approximately 5 mi west of Highway 124 (Figures 1 and 2). Carbondale Road is a narrow two-lane road and generally runs east to west. The existing bridge is a narrow two-lane crossing over Willow Creek.

The project lies in a rural residential area among rolling hills. From the assessment area, Willow Creek flows southwest, drains into Laguna Creek approximately 4.5 mi downstream, and then meanders through the valley until it drains into Cosumnes River, approximately 25 mi southwest of the of the assessment area. Numerous small to medium sized ponds are located in the general vicinity. Plant communities at the assessment area consist of annual grassland with interspersed interior live oaks (*Quercus wislienzi*).

For the purpose of this report, an assessment area for the project was established. The assessment area consists of an area that would include the project footprint, existing roadways, cut/fill slopes, access and staging areas, and all lands beyond the footprint that could potentially be affected by project construction and/or were determined necessary to inventory in order to perform an adequate analysis. The assessment area comprises approximately 5 acres and is at an elevation of approximately 530 feet. The majority of the land in the area is privately owned and appears to be similar to the project area in use and vegetative characteristics.
Carbondale Road Bridge (26C0030) over Willow Creek
Rehabilitation Project
Federal Project No. BRLO-5926(055)

Regional Location

Project Location
2.0 PROJECT DESCRIPTION

The project site is located in northwest Amador County. Willow Creek Bridge is located along Carbondale Road, about a mile south of Hwy 16 and just east of Forest Home Road. Carbondale Road is a rural two-lane local road, with nine-foot wide lanes and no shoulders. Willow Creek Bridge was built in 1940 and is 36 feet long and 20 feet wide. The structure is a two-span continuous steel girder bridge with a cast-in-place, reinforced concrete deck and metal pipe railings. The bridge is founded on concrete abutments and a center pier wall, all of which were constructed directly onto the underlying rock.

The existing bridge has been given a sufficiency rating of 75.4 and a status of functionally obsolete. The structure does not meet current AASHTO standards due to its narrow width and the metal pipe bridge railings and lack of approach guardrail is substandard. The bridge has inadequate hydraulic capacity, with design year storms overtopping the bridge. Additionally, the structure has experienced long term scour at the abutment and pier foundations.

The proposed project will replace the existing bridge with a new structure accommodating two 11-foot lanes, two-foot shoulders and bridge railings, resulting in an approximate bridge width of 29 feet. The new bridge will consist of a 60-foot long single-span, cast-in-place, post-tensioned concrete slab supported on spread footings.

The roadway alignment will remain unchanged. Along with a longer bridge, the roadway profile will be raised by four feet to provide additional hydraulic capacity. The western roadway approach will begin 90 feet east of the Forest Home Road intersection, approximately 370 feet west of the proposed bridge. The eastern approach will begin 560 feet east of the proposed bridge. Sliver right of way acquisitions will be needed on both sides of the roadway to accommodate the higher roadway profile and increased roadway width. Temporary construction easements (TCEs) are also anticipated to provide Contractor construction access. No utilities have been identified within the project limits.

Construction of the bridge will involve excavation for and construction of concrete abutments supported on spread footings. Other temporary work within Willow Creek includes removal of the existing bridge, falsework erection and removal, and installation of scour countermeasures at the support location. Willow Creek is a seasonal creek and construction is anticipated to proceed without needing to divert water away from construction activities. Construction of the roadway approaches will involve the removal of existing pavement and the placement of fill material, aggregate base and hot mix asphalt pavement. Tree removal and removal of other vegetation along the creek will be necessary for the project.

During construction, Carbondale Road may be closed to traffic and, if so, a detour route will be provided. Construction is anticipated to begin in Spring 2018 and will have a duration of approximately 6 months.
3.0 ASSESSMENT

LSA biologist Laura Belt visited the assessment area and its vicinity on December 1, 2015. Prior to the area visit, Ms. Belt reviewed aerial photographs of the area to identify ponds, and other features that could potentially provide aquatic habitat for CTS. During the visit, Ms. Belt surveyed the entire assessment area, and mapped all potentially suitable aquatic habitats for CTS. Most lands in the vicinity of the project are privately owned, and consequently, were inaccessible. Therefore, potential habitat on private lands was mapped using aerial photographs or through visual examination from existing public roads.

3.1 CALIFORNIA TIGER SALAMANDER

3.1.1 Regional Status

CTS occurs from Sonoma, Colusa, and Yolo Counties south through the Central Valley to Tulare County, and through the Coast Range into Santa Barbara County. An isolated population also occurs in Butte County. Western Amador County is located within the current range of the CTS (CDFG 2011b).

CTS occurs in grasslands and oak savannah communities from sea level to approximately 2,000 feet elevation in the Central Valley and Sierra Nevada foothills. In the Central Valley Geographic Region, CTS records are predominantly located in the grasslands on the valley floor, with only a few occurrences at higher elevations in oak savannah.

The assessment area is located at approximately 530 feet elevation, in an area of annual grassland with intermixed live oak trees. The land immediately surrounding the bridge is designated as rural residential and agricultural areas.

The project area is not located within designated critical habitat for CTS. The nearest critical habitat is Unit cv-3, which is located in the Goose Creel and Clay 7.5-minute USGS topographic quadrangles, approximately 8.5 mi southwest of the project area.

3.1.2 Documented Occurrences

There are no records of CTS within 3.1 mi of the project area. The closest CNDDB record is approximately 4.5 mi southwest of the project area, dated 2005. Figure 3 shows records for CTS in the vicinity of the project area.
FIGURE 3

Carbondale Road Bridge (26C0030) over Willow Creek Rehabilitation Project
Federal Project No. BRLO-5926(F55)

California Tiger Salamander
CNDDB Occurrence Records

LEGEND
- Project Area
- 10mi_radius
- California Tiger Salamander

SOURCE: Basemap - USGS Topographic Imagery; Mapping - CNDDB (1/2015)
I:\MKT1406\GIS\assess_fig3-cts_cnddb.mxd (12/1/2015)
3.1.3 Potential Habitat on the Assessment Area and Within a 1.24 Mile Radius

CTS require burrows in upland habitat for the majority of the year, in addition to aquatic breeding habitat. Upland habitat favored by this species is generally open grassland or savannahs, and in the Central Valley/Sierra Nevada Foothills, at elevations below 2,000 feet. CTS cannot dig their own burrows and, consequently, are largely dependent on the presence of fossorial mammals such as ground squirrels, though CTS can also utilize cracks or crevices in the ground. Breeding habitat consists of natural ephemeral pools, stock ponds, and other small, artificial water bodies, particularly those that dry up in summer.

3.1.3.1. Potential Aquatic Habitat

Willow Creek is a slow moving intermittent creek that flows from north to south through the assessment area. North of the bridge, the creek has been highly disturbed due to past dredging activities and does not provide suitable aquatic habitat for CTS. The bridge appears to serve as a bottleneck for high flows in the creek, narrowing the watercourse downstream of the bridge. As a result, the flow downstream of the bridge would generally be too swift to provide suitable breeding habitat for CTS. Although there were small ponded areas observed south of the bridge, higher flows would cause CTS eggs to be swept downstream. Consequently, Willow Creek does not provide suitable aquatic habitat for CTS.

Numerous small to large sized ponds, which provide potential aquatic habitat for CTS, occur within 1.24 mi of the assessment area. Some of the ponds are seasonal, while the larger ponds appear to hold water all year. Four ponds, ranging from small to large, are located within 0.5 mi of the project area. These ponds could provide aquatic habitat for CTS. A small pond associated with an adjacent property is located approximately 0.1 mi north of the project area and could potentially provide suitable aquatic breeding habitat for CTS. Although LSA could not access all of the ponds, LSA surveyed the ponds where access was granted. The ponds appeared to provide suitable habitat for CTS. Additionally there were no sign of CTS predators (i.e. bullfrog or fish).

Although no suitable aquatic habitat is present in the assessment area, there are numerous ponds located within a 1.24 mi radius that provide potential aquatic habitat for CTS.

Figure 4 illustrates the distribution of potential aquatic habitat for CTS within a 1.24 mi radius of the assessment area.

3.1.3.2. Potential Upland Habitat

Suitable upland habitat is present in the grassland areas within and adjacent to the assessment area. Numerous burrows of appropriate size were observed in the upland grassland habitat, along the sides of the road, and under the rock slope protection around the bridge.

Suitable upland habitat is present in and within 1.24 mi of the assessment area.
FIGURE 4

Carbondale Road Bridge (26C0030) over Willow Creek
Rehabilitation Project
Federal Project No. BRLO-926(055)
Potential California Tiger Salamander
Aquatic Habitat Within 1.24-Mile of the Carbondale Road Bridge
4.0 RESULTS

4.1 CALIFORNIA TIGER SALAMANDER

The findings of this report are that CTS have the potential to occur in the assessment area as well as the vicinity of the project. The assessment area is located within the current range of the species; approximately 8.5 mi northeast of designated critical habitat. There are no occurrences within 3.1 mi of the assessment area; however, there is a documented occurrence approximately 4.5 mi southwest of the assessment area.

There is no suitable aquatic habitat for CTS in the assessment area. Willow Creek is an intermittent stream that does not provide suitable breeding habitat for CTS. However, there are multiple ponds within 1.24 mi, including one less than 0.1 mi of the assessment area, which could provide suitable breeding habitat. Although not all ponds were accessible to survey, the features that were surveyed were determined to be potentially suitable aquatic breeding habitat for CTS.

Suitable upland habitat is also present in the assessment area and the vicinity. Potentially suitable burrows were observed in the annual grassland, road shoulders, and around the bridge.

Based on the findings, CTS could be present in the upland habitat in the assessment area and vicinity throughout the year.
5.0 REFERENCES


APPENDIX A

RESUME FOR LAURA BELT
LAURA BELT
SENIOR WILDLIFE BIOLOGIST

EXPERTISE
Wildlife Surveys
Special Status Species Surveys
Biological Construction Monitoring
Environmental Assessment

EDUCATION
California State University, Bakersfield. Bachelor of Science Degree in General Biology, 1989.

PROFESSIONAL AFFILIATIONS
The Wildlife Society
The Audubon Society

CERTIFICATIONS AND TRAINING

Trained to conduct protocol surveys for San Joaquin kit fox, Mojave ground squirrel, western burrowing owl, Swainson’s hawk, tricolored blackbird, California red-legged frog, California tiger salamander, foothill-yellow legged frog, spadefoot toad, San Francisco garter snake, giant garter snake, pacific pond turtle, valley elderberry longhorn beetle, and vernal pool fairy shrimp and vernal pool tadpole shrimp (vernal pool branchiopods) and associated habitats.

PROFESSIONAL RESPONSIBILITIES
Ms. Belt has a diverse background as a wildlife biologist, which includes more than 20 years of experience in conducting habitat and wildlife surveys. Ms. Belt is responsible for, conducting biological surveys and construction monitoring of developments, road work and bridge replacement projects, preparation of biological assessments, preparation of 401, 404 and 1600 application material, mitigation plans, and other environmental documentation.

Ms. Belt is also on the Fish and Wildlife Service List of Authorized Individuals to conduct activities with vernal pool tadpole and fairy shrimp (vernal pool branchiopods) and California tiger salamander (CTS), as per LSA’s Recovery Permit. The following highlights her survey and construction monitoring experience.

PROJECT EXPERIENCE

State Route 65 Project 2000-2015
Lincoln, Placer County, California
Assisted Caltrans in the preparation of environmental documents for construction of 13 mile roadway, and 17 bridge crossings. Mapped the location of special status species and native trees. Prepared Environmental Awareness training materials and conducted training for construction personnel, and monitored the installation of ESA fence to protect creeks, seasonal wetlands, and elderberry shrubs (valley elderberry longhorn beetle habitat). Conducted annual surveys for nesting Swainson’s hawk and other nesting birds.

Sacramento County, California
Assisted aggregate mining project with expansion permitting and special status species surveys, biological reports, and a habitat mitigation plan that was incorporated into the County Environmental Impact Report. Monitored 110-acre mitigation sites. Protected species included giant garter snake, Swainson’s hawk, Cooper’s hawk, burrowing owl, white-tailed kite, loggerhead shrike, and pacific pond turtle. Monitoring included, created riparian and seasonal marsh habitats, vernal pools and hydrology, and vernal pool branchiopods at Preserve and Enhancement Sites.

Cosumnes River Boulevard/I-5 Interchange Project
Sacramento County, California
Conducted preconstruction and construction monitoring for giant garter snake, nesting Swainson’s hawks and burrowing owls at the connector for the State Route 99 corridor to I-5. Prepared Environmental Awareness training materials and monitored ground disturbing activities for permit compliance.
LAURA BELT  
SENIOR WILDLIFE BIOLOGIST

PROFESSIONAL EXPERIENCE

PROJECT EXPERIENCE (CONTINUED)
Natomas Interstate 80 Bicycle/Pedestrian Bridge Project  
Sacramento County, California
Conducted preconstruction and construction monitoring for new bicycle/pedestrian bridge across Interstate 80. Prepared Environmental Awareness training materials and conducted training for giant garter snake and other special status species. Monitored the installation of ESA fencing and construction activities for giant garter snake, pacific pond turtle, Swainson’s hawks, western burrowing owl and other nesting birds for permit compliance.

State Route 70/Feather River Boulevard Improvement Project  
Yuba County, California
Conducted preconstruction and construction monitoring surveys for listed species, including giant garter snake, and nesting birds, including nesting Swainson’s hawks. Prepared Environmental Awareness training materials and conducted training for construction personnel, and monitored ground disturbing activities for permit compliance.

Cranmore/Garmire Road Bridge Replacement Project  
Sutter County, California
Conducted pre-construction and construction monitoring for giant garter snake, burrowing owl, Swainson’s hawk and other nesting birds on the Tisdale Bypass at the Sacramento River and Sutter Mutual Water Company Main Canal. Monitored Swainson’s hawks nesting on the Bypass. Prepared Environmental Awareness training materials and conducted training for construction personnel and monitored project for permit compliance. Documented the occurrence of a juvenile giant garter snake on site during construction activities and submitted documentation to CDFW and USF&WS in accordance with permit conditions.

North County Corridor New State Route 108  
Stanislaus County, California
Assisted in conducting overall biological assessment for new 18 mile roadway corridor in northern Stanislaus County. Conducted protocol surveys for vernal pool branchiopods, CTS and associated habitats.

Northstar Solar Generation Tie Line, Switching Station and Related Facilities Project  
Fresno County, California
Conducted protocol surveys for western burrowing owl. Prepared Environmental Awareness training materials and conducted training for personnel, and monitored ground disturbing activities for permit compliance.
PROJECT EXPERIENCE (CONTINUED)

Potrero Hills Landfill Study Site
Solano County, California
Conducted protocol surveys for listed vernal pool branchiopods, and CTS at 1,400 acre Study Site. Identified listed vernal pool branchiopods in the seasonal features on the mitigation site. Assisted in trapping and relocation of CTS, including determining age of salamanders prior to relocation. Dip-netted and seined seasonal ponds. Identified life stages of CTS, including egg, larvae, metamorph, and adult male and female CTS.

State Route 26 Road Improvement Project, Valley Springs
San Joaquin/Calaveras Counties, California
Conducted preconstruction and construction monitoring for CTS and nesting birds, associated with 3.0 mile road realignment and widening in the vicinity of seasonal wetlands. Prepared Environmental Awareness training materials and conducted training for construction personnel. Documented the occurrence of western spade foot toad and a total of 4 adult CTS, and notified Caltrans, CDFW and USF&WS in accordance with permit conditions.
APPENDIX B

REPRESENTATIVE PHOTOS OF WILLOW CREEK
Looking downstream at Willow Creek.

Looking north to the Carbondale Road Bridge.

Looking at the adjacent stock pond.

Looking at Willow Creek and surrounding upland habitat.

APPENDIX B

Carbondale Road Bridge Replacement Project
Federal Project No. BRLO-5926(055)

Representative Photos
Appendix E – Representative Photos
Representative Photos

Carbondale Road Bridge facing south.

Wetland and drainage facing west.

Looking east along Carbondale Road Bridge.

Carbondale Road Bridge and surrounding habitat facing south.

Carbondale Road Bridge facing south.
Looking downstream at Willow Creek.

Looking north to the Carbondale Road Bridge.

Looking at the adjacent stock pond.

Looking at Willow Creek and surrounding upland habitat.
Carbondale Road Bridge Replacement Project  BA

Biological Assessment

Amador County, California
Caltrans District 10
Federal Aid Number BRLO-5926(055)

August 2017
Biological Assessment

Amador County, California
Caltrans District 10
Federal Aid Number BRLO-5926(055)

August 2017

Prepared By: [Signature] Date: 8-25-17
Mike Trueblood (Senior Biologist)
Anna Van Zuuk (Assistant Biologist/Botanist)
(916) 772-7450
LSA
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Consultant

Submitted By: [Signature] Date: 8/29/17
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Senior Civil Engineer
Amador County Department of Transportation and Public Works
Authorized Local Agency Representative

Approved By: [Signature] Date: 8/31/17
Julie Myrah, Chief
(209) 948-7427
Caltrans District 10 Environmental
1976 E. Martin Luther King Jr. Boulevard
Stockton CA, 95205

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<table>
<thead>
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<th>Abbreviation</th>
<th>Full Form</th>
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<tr>
<td>AASHTO</td>
<td>American Association of State Highway and Transportation Officials</td>
</tr>
<tr>
<td>ACOE</td>
<td>Army Corps of Engineers</td>
</tr>
<tr>
<td>ac</td>
<td>acre(s)</td>
</tr>
<tr>
<td>BSA</td>
<td>Biological Study Area</td>
</tr>
<tr>
<td>CDFW</td>
<td>California Department of Fish and Wildlife</td>
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<td>County</td>
<td>Amador County</td>
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<td>California Natural Diversity Database</td>
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<td>CRLF</td>
<td>California Red-legged Frog</td>
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<td>CTS</td>
<td>California Tiger Salamander</td>
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<tr>
<td>CWA</td>
<td>Clean Water Act</td>
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<td>EFH</td>
<td>Essential Fish Habitat</td>
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<td>ESA</td>
<td>Environmentally Sensitive Area</td>
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<td>EO</td>
<td>Executive Order</td>
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<td>FESA</td>
<td>Federal Endangered Species Act</td>
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<td>Federal Highway Administration</td>
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<td>ft</td>
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<td>IPaC</td>
<td>Information for Planning and Consultation</td>
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<td>MBTA</td>
<td>Migratory Bird Treaty Act</td>
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<td>mi</td>
<td>mile(s)</td>
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<td>MSFCMA</td>
<td>Magnuson-Stevens Fishery Conservation and Management Act</td>
</tr>
<tr>
<td>NMFS</td>
<td>National Marine Fisheries Service</td>
</tr>
<tr>
<td>OHWM</td>
<td>ordinary high water mark</td>
</tr>
<tr>
<td>RWQCB</td>
<td>Regional Water Quality Control Board</td>
</tr>
<tr>
<td>USC</td>
<td>United States Code</td>
</tr>
<tr>
<td>USFWS</td>
<td>United States Fish and Wildlife Service</td>
</tr>
</tbody>
</table>
Glossary

**ACTION (1):** Any highway construction, reconstruction, rehabilitation, repair, or improvement undertaken with Federal-aid highway funds or FHWA approval.

**ACTION (2):** A highway or transit project proposed for FHWA or FTA funding. It also includes activities such as joint and multiple use permits, changes in access control, etc., which may or may not involve a commitment of federal funds (23 CFR 771.107[b]).

**BEST MANAGEMENT PRACTICE (BMP):** Any program, technology, process, operating method, measure, or device that controls, prevents, removes or reduces pollution.

**DESIGN:** The type of facility identified by the project, e.g., freeway, expressway, arterial highway, grade-separated highway, reserved right-of-way rail transit, mixed-traffic rail transit, exclusive busway, etc.

**DIAMETER AT BREAST HEIGHT (DBH):** Diameter of tree measured 4 feet, 6 inches (1.4 meters) from ground level.

**DIRECT EFFECTS:** Effects that are caused by an action and occur at the same time and place as the action.

**ENDANGERED:** Plant or animal species that are in danger of extinction throughout all or a significant portion of its range.

**EROSION:** The wearing away of the land surface by running water, wind, ice, or other geological agents.

**FALSEWORK:** A temporary frame to support a structure during construction.

**FEDERAL HIGHWAY ADMINISTRATION (FHWA):** The Federal agency within the U.S. Department of Transportation responsible for administering the Federal-aid Highway Program and the Motor Carrier Safety Program.

**HABITAT:** Place where a plant or animal lives.

**HABITAT PROTECTION:** Ensuring appropriate uses of land to maintain and optimize species habitat values.

**HYDRIC SOIL:** Soil subject to saturation or inundation.

**INDIRECT EFFECTS:** Effects that are caused by an action and occur later in time, or at another location, yet are reasonably foreseeable.

**MIGRATION:** Intentional, directional, and usually seasonal movement of animals between two regions or habitats; involves departure and return of the same individual.

**MITIGATION BANK:** Large blocks of land preserved, restored, and enhanced for the purpose of consolidating mitigation and/or mitigating in advance for projects that take listed species.

**NATIONAL ENVIRONMENTAL POLICY ACT (NEPA):** Enacted in 1969, NEPA requires all federal agencies to consider environmental factors through a systematic interdisciplinary approach before
committing to a course of action. The NEPA process is an overall framework for the environmental evaluation of federal actions.

**PROJECT (FHWA):** 23 Code of Federal Regulations §1.2 defines a project as an undertaking by a State highway department for highway construction, including preliminary engineering, acquisition of rights-of-way and actual construction, or for highway planning and research, or for any other work or activity to carry out the provisions of the Federal laws for the administration of Federal-aid for highways.

**REVEGETATION:** Planting of indigenous plants to replace natural vegetation that is damaged or removed as a result of highway construction projects or permit requirements.

**RIGHT-OF-WAY:** A general term denoting land, property, or interest therein, usually in a strip acquired for or devoted to transportation purposes.

**RIPARIAN:** Along banks of rivers and streams; riverbank forests are often called gallery forests.

**RUDERAL:** Disturbed area with a prevalence of introduced weedy species. Ruderal habitats are associated with unpaved highway shoulders and weedy areas around and between dwellings and other structures.

**SCOUR:** Erosion caused by moving water.

**STORM WATER POLLUTION PREVENTION PLAN (SWPPP):** A SWPPP is prepared to evaluate sources of discharges and activities that may affect storm water runoff, and implement measures or practices to reduce or prevent such discharges.

**THREATENED:** A species that is likely to become endangered in the foreseeable future in the absence of special protection.

**WATERSHED:** The area of land that drains into a specific waterbody.

**WATERS OF THE UNITED STATES:** As defined by the United States Army Corps of Engineers (ACOE) in 33 CFR 328.3(a):

1. All waters that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce, including any such waters:
   (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
   (ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
   (iii) Which are used or could be used for industrial purposes by industries in interstate commerce;
4. All impoundment of waters otherwise defined as waters of the United States under this
definition;
5. Tributaries of waters identified in paragraphs 1-4;
6. The territorial seas;
7. Wetlands adjacent to waters (waters that are not wetlands themselves) identified in paragraphs 1-6.

**WETLAND**: Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.
Executive Summary

The purpose of this biological assessment is to provide technical information and to review the proposed project in sufficient detail to determine to what extent the proposed project may affect threatened, endangered, or proposed species. The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration (FHWA), has prepared this biological assessment under its assumption of responsibility at 23 United States Code (USC) 327(a)(2)(A). The biological assessment is also prepared in accordance with 50 CFR 402, legal requirements found in Section 7 (a)(2) of the Endangered Species Act (16 U.S.C. 1536(c)) and with FHWA and Caltrans regulation, policy and guidance. The document presents technical information upon which later decisions regarding project effects are developed.

The County of Amador (County), in conjunction with Caltrans, proposes to replace the existing two-lane bridge over Willow Creek along Carbondale Road. The existing bridge has been given a sufficiency rating of 75.4 and a status of functionally obsolete. The structure does not meet current American Association of State Highway and Transportation Officials (AASHTO) standards due to its narrow width, and the metal pipe bridge railings and lack of approach guardrail is substandard. The bridge has inadequate hydraulic capacity, with design year storms overtopping the bridge and has experienced long term scour at the abutment and pier foundations.

The majority of the Action Area, totaling 5.06 acres (ac), is grazed California annual grasslands interspersed with blue oak (Quercus douglasii) and interior live oak (Quercus wislienzii), open water associated with the braided channels of Willow Creek, and developed areas consisting of Carbondale Road and the existing bridge. No invasive species were identified in the Action Area.

Federally listed wildlife species that may occur in the Action Area include California red-legged frog (Rana draytonii) (CRLF) and California tiger salamander (Ambystoma californiense) (CTS). The project may affect but is not likely to adversely affect CRLF; the project may affect and is likely to adversely affect CTS. There are no additional federally listed plants or wildlife species on the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) list that are expected to occur in the Action Area. Additionally, the proposed project will have no effect to any fish species or essential fish habitat (EFH) that were listed on the National Marine Fisheries Service (NMFS) species list. The project will have no effect on any other federally listed species.

CRLF is federally listed as threatened under the Federal Endangered Species Act (FESA). The project will result in permanent impacts to potential upland habitat totaling 0.57 ac and temporary impacts to potential upland habitat totaling 0.37 ac. There will be no impacts to aquatic non-breeding habitat. Due to the lack of suitable breeding habitat in the Action Area or immediate vicinity, CRLF are expected to only utilize the upland habitat for migrating between
suitable breeding pools or potentially for estivation. These impacts are expected to be reduced through the implementation of avoidance and minimization measures listed in this document. No compensation for project effects to CRLF are proposed, as the proposed project is not expected to result in “take” of this species.

CTS is federally listed as threatened under the FESA. The Action Area does not provide suitable aquatic habitat for CTS, however, there are multiple ponds within 1.24 miles (mi) of the Action Area which could provide suitable breeding habitat. Therefore, the annual grassland within the Action Area is potential upland habitat for CTS. Permanent impacts, totaling 0.57 ac, and temporary impacts, totaling 0.37 ac, to upland habitat for CTS will result from project implementation. To offset impacts to CTS upland habitat, sufficient CTS upland habitat mitigation credits shall be purchased from a USFWS-approved bank at a minimum 1:1 ratio. The purchase of mitigation credits will be in conjunction with implementation of the avoidance and minimization measures listed in this document.
Chapter 1. Introduction

1.1. Purpose and Need of the Proposed Action

The existing bridge has been given a sufficiency rating of 75.4 and a status of functionally obsolete. The structure does not meet current AASHTO standards due to its narrow width and the metal pipe bridge railings and lack of approach guardrail is substandard. The bridge has inadequate hydraulic capacity, with design year storms overtopping the bridge. Additionally, the structure has experienced long term scour at the abutment and pier foundations.

1.2. Threatened, Endangered, Proposed Threatened or Proposed Endangered Species, Critical Habitat

An updated species list was provided by USFWS via the IPaC Trust Inventory (2017) and NMFS Google Earth Species list (2017) for the Action Area of this project (Appendix A). The following listed and proposed species and/or designated critical habitats (also shown in Table 1) were identified on the updated federal species list and were considered during this analysis:

Wildlife:
- California red-legged frog (CRLF) (*Rana draytonii*) – Threatened
- California tiger salamander (CTS) (*Ambystoma californiense*) – Threatened
- Central Valley steelhead (*Oncorhynchus mykiss*) – Threatened
- Delta Smelt (*Hypomesus transpacificus*) – Threatened
- Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) – Threatened
- Vernal pool fairy shrimp (*Branchinecta lynchi*) – Threatened

Plants:
- Ione buckwheat (*Eriogonum apricum var. apricum*) – Endangered
- Ione manzanita (*Arctostaphylos myrtifolia*) – Threatened
- Irish Hill buckwheat (*Eriogonum apricum var. prostratum*) – Endangered
- Sacramento Orcutt grass (*Orcuttia viscida*) – Endangered

Table 1 includes an evaluation of the specific habitats required by each species listed above, and the specific habitats and habitat conditions present in the Action Area. Based on the evaluation in this document, it was determined whether the species had potential to occur in the Action Area. Federally listed species that were observed, or determined to potentially occur in the Action Area based on availability of suitable habitat or other factors such as plucking posts, scat, nests, dens, etc., are discussed more fully in Chapter 4 this report. Federally listed species determined unlikely to occur in the Action Area based on these same factors are documented accordingly in the table and not discussed further in this report.
### Table 1: Federally-Listed Species Potentially Occurring in the Action Area

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>Status</th>
<th>Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>California red-legged frog</td>
<td><em>Rana draytonii</em></td>
<td>Threatened</td>
<td>May Affect, Not Likely to Adversely Affect</td>
</tr>
<tr>
<td>California tiger salamander</td>
<td><em>Ambystoma californiense</em></td>
<td>Threatened</td>
<td>May Affect, Likely to Adversely Affect</td>
</tr>
<tr>
<td>Central Valley steelhead</td>
<td><em>Oncorhynchus mykiss</em></td>
<td>Threatened</td>
<td>No Effect</td>
</tr>
<tr>
<td>Delta Smelt</td>
<td><em>Hypomesus transpacificus</em></td>
<td>Threatened</td>
<td>No Effect</td>
</tr>
<tr>
<td>Valley elderberry longhorn</td>
<td><em>Desmocerus californicus dimorphus</em></td>
<td>Threatened</td>
<td>No Effect</td>
</tr>
<tr>
<td>Vernal pool fairy shrimp</td>
<td><em>Branchinecta lynchi</em></td>
<td>Threatened</td>
<td>No Effect</td>
</tr>
<tr>
<td>Ione buckwheat</td>
<td><em>Eriogonum apricum var. apricum</em></td>
<td>Threatened</td>
<td>No Effect</td>
</tr>
<tr>
<td>Ione manzanita</td>
<td><em>Arctostaphylos myrtifolia</em></td>
<td>Endangered</td>
<td>No Effect</td>
</tr>
<tr>
<td>Irish Hill buckwheat</td>
<td><em>Eriogonum apricum var. prostratum</em></td>
<td>Endangered</td>
<td>No Effect</td>
</tr>
<tr>
<td>Sacramento Orcutt grass</td>
<td><em>Orcuttia viscida</em></td>
<td>Endangered</td>
<td>No Effect</td>
</tr>
</tbody>
</table>

Two of the listed species, CRLF and CTS, have a determination of May Affect. The Proposed Action May Affect, and is Not Likely to Adversely Affect CRLF and May Affect, and is Likely to Adversely Affect CTS. All other species have a No Effect determination.

**Candidate Species**

There are no candidate species on the lists provided by USFWS or NMFS for the Action Area.

**Critical Habitat**

The Proposed Action addressed within this document does not fall within any critical habitat.

### 1.3. Consultation History

No consultation had been undertaken at the time this document was prepared.
1.4. **Description of Proposed Action**

1.4.1. **Project Summary**

1.4.1.1. **Existing Bridge**
Willow Creek Bridge was built in 1940 and is 36 feet (ft) long and 20 ft wide. The structure is a two-span continuous steel girder bridge with a cast-in-place, reinforced concrete deck and metal pipe railings. The bridge is founded on concrete abutments and a center pier wall, all of which were constructed directly onto the underlying rock.

1.4.1.2. **Replacement Bridge**
The proposed project will replace the existing bridge with a new structure accommodating two 11 ft lanes, 2 ft shoulders and bridge railings, resulting in an approximate bridge width of 29 ft. The new bridge will consist of an 80 ft long two-span, cast-in-place, reinforced concrete slab supported on spread footings.

The roadway alignment will remain unchanged. Along with a longer bridge, the roadway profile will be raised by 4 ft to provide additional hydraulic capacity. The western roadway approach will begin 90 ft east of the Forest Home Road intersection, approximately 370 ft west of the proposed bridge. The eastern approach will begin approximately 560 ft east of the proposed bridge.

1.4.1.3. **Utility Relocation**
No utilities have been identified within the project limits.

1.4.1.4. **Right-Of-Way**
The County has prescriptive rights on Carbondale Road (i.e., no formal right of way has been established). The location and extent of right of way acquisition will be determined after environmental review is complete and the project has entered the Plans, Specifications, and Estimates phase. However, it is expected that sliver right of way acquisitions will be needed on the south side of the roadway to accommodate the higher roadway profile and increased roadway width. Temporary construction easements are also anticipated on the south to provide Contractor construction access.

1.4.1.5. **Detour Route**
During construction, Carbondale Road will be closed to traffic and a detour route will be provided. Staging and equipment storage/laydown areas will be located on the closed portion of Carbondale Road.

1.4.1.6. **De-watering/In water work**
Construction of the bridge will involve excavation for and construction of concrete abutments and a central pier supported on spread footings. Other temporary work within Willow Creek includes removal of the existing bridge, falsework erection and removal, and installation of scour
countermeasures at the support locations. Willow Creek is a seasonal creek and construction is anticipated to proceed without needing to divert water away from construction activities.

1.4.1.7. CONSTRUCTION SEQUENCE/SCHEDULE AND TIMING
Construction is anticipated to be between June 1 and October 31, and will have a duration of approximately 6 months.

Preliminary project design plans are included in Appendix B.

1.4.2. Authorities and Discretion
The County proposes to replace the existing bridge on Carbondale Road over Willow Creek (Bridge No. 26C0030). The project is funded primarily by the federal-aid Highway Bridge Program administered by the FHWA through Caltrans Local Assistance. The replacement bridge will meet current applicable County, AASHTO, and Caltrans design criteria and standards.

1.4.2.1. FEDERAL ENDANGERED SPECIES ACTS
Under the FESA, it is unlawful to “take any species listed as threatened or endangered”. “Take” is defined as to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct.” An activity is defined as “take” even if it is unintentional or accidental. Take provisions under FESA apply only to listed fish and wildlife species under the jurisdiction of the USFWS and/or NMFS. Consultation with USFWS or NMFS is required if a project “may affect” a listed species.

When a species is listed, the USFWS and/or the NMFS, in most cases, must officially designate specific areas as critical habitat for the species. Consultation with USFWS and/or the NMFS is required for projects that include a federal action or federal funding if the project may affect designated critical habitat.

1.4.2.2. MAGNUSON STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT
Under the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), EFH must be designated in every fishery management plan. EFH includes “…those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” The MSFCMA requires consultation with NMFS for projects that include a federal action or federal funding and may adversely modify EFH.

1.4.2.3. WATERS OF THE U.S. AND OTHER JURISDICTIONAL WATERS
Army Corps of Engineers

Under Section 404 of the Clean Water Act (CWA), the United States Army Corps of Engineers (ACOE) regulates the discharge of dredged or fill material into waters of the U.S. Waters of the U.S. are those waters that have a connection to interstate commerce, either direct via a tributary
system or indirect through a nexus identified in the ACOE regulations. In non-tidal waters, the lateral limit of jurisdiction under Section 404 extends to the ordinary high water mark (OHWM) of a waterbody or, where adjacent wetlands are present, beyond the OHWM to the limit of the wetlands. The OHWM is defined as “that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area” (33 CFR 328.3). In tidal waters, the lateral limit of jurisdiction extends to the high tide line or, where adjacent wetlands are present, to the limit of the wetlands.

**Wetlands.** Wetlands are defined as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for a life in saturated soil conditions”.

**Non-wetland Waters.** Non-wetland waters essentially include any body of water, not otherwise exempted, that displays an OHWM.

**Executive Order 11990: Protection of Wetlands**

Executive Order (EO) 11990 mandates leadership on the part of federal agencies to reduce loss and degradation of wetlands and to preserve and enhance the beneficial values and functions of wetlands. Each federal agency “shall avoid undertaking or providing assistance for new construction located in wetlands unless the head of the agency finds that (1) there is no practicable alternative to such construction, and (2) that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use.”

**1.4.2.4. Migratory Bird Treaty Act**

The Migratory Bird Treaty Act (MBTA) prohibits actions that will result in “take” of migratory birds, their eggs, feathers, or nests. “Take” is defined in the MBTA as any means or any manner to hunt, pursue, wound, kill, possess, or transport, any migratory bird, nest, egg, or part thereof. Migratory birds are also protected, as defined in the MBTA, under Section 3513 of the CFGC.

**1.4.2.5. Executive Order 13112: Invasive Species**

Under EO 13112, an invasive species is defined as “an alien species (a species not native to a particular ecosystem) whose introduction does or is likely to cause economic and environmental harm or harm to human health”. Invasive species are determined by the Invasive Species Council.

In addition to other mandates, EO 13112 mandates federal agencies whose actions may affect the status of invasive species to “not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species”.

Carbondale Bridge Replacement Project BA
1.4.2.6. EXECUTIVE ORDER 11988: FLOODPLAIN MANAGEMENT
EO 11989 mandates leadership on the part of federal agencies to minimize the adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative.

Each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities for (1) acquiring, managing, and disposing of federal lands, and facilities; (2) providing federally undertaken, financed, or assisted construction and improvements; and (3) conducting federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities.

1.4.3. Project Location
The project is located in southwestern Amador County, approximately 7.5 mi southeast of the City of Rancho Murieta (Figures 1–3). The project is located in the Irish Hill quadrangle, Township 7 North, Range 9 East, in Sections 22 and 23.

1.4.4. Define Action Area
The Action Area, totaling 5.06 ac, consists of the project footprint, access and staging areas, and lands beyond the footprint to the edge of the road right-of-way that could potentially be affected by project construction and/or were determined necessary to inventory in order to perform an adequate analysis of project impacts (Figure 4). Potential noise, visual, and water quality effects were considered during development of the Action Area.

1.4.5. Conservation Measures
1.4.5.1. PROJECT DESIGN MODIFICATIONS FOR AVOIDANCE AND MINIMIZATION FOR CRLF AND CTS
1. All work associated with the proposed project shall be conducted between June 1 and October 31, which is within the seasonal window to minimize effects to CTS.

2. Before any construction related activities begin, a qualified biologist will conduct a training session for all construction personnel. This training instructs workers to recognize CRLF, CTS and their habitats.

3. Highly visible Environmentally Sensitive Area (ESA) fencing shall be placed along the limits of work to prevent unnecessary encroachment into surrounding areas. Fencing shall be maintained in good condition for the duration of construction activities.

4. A qualified biological monitor shall be present during all ground disturbing activities.

5. Following completion of the new bridge, all fill slopes, temporary impact and/or otherwise disturbed areas shall be revegetated with the native seed mix specified in Table 2.
Permanently graded areas shall also be revegetated with the native seed mix specified in Table 2.

### Table 2: Native Species Mix

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Rate (Lbs./Acre)</th>
<th>Minimum Percent Germination</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Artemisia douglasiana</em></td>
<td>Mugwort</td>
<td>2.0</td>
<td>50</td>
</tr>
<tr>
<td><em>Baccharis pilularis</em></td>
<td>Coyote brush</td>
<td>1.0</td>
<td>40</td>
</tr>
<tr>
<td><em>Elymus X triticum</em></td>
<td>Regreen</td>
<td>10.0</td>
<td>80</td>
</tr>
<tr>
<td><em>Eschscholzia californica</em></td>
<td>California poppy</td>
<td>2.0</td>
<td>70</td>
</tr>
<tr>
<td><em>Lupinus bicolor</em></td>
<td>Bicolored lupine</td>
<td>4.0</td>
<td>80</td>
</tr>
</tbody>
</table>
Carbondale Road Bridge (26C0030) over Willow Creek Replacement Project
Federal Project No. BRLO-5926(055)

Project Location

SOURCE: ESRI Street Map (2017)
I:\MKT1406\GIS\Reports\B\BA\fig1_proj_loc.mxd (3/23/2017)
LEGEND

Action Area - (5.06 ac)

Carbondale Road Bridge (26C0030) over Willow Creek
Replacement Project
Federal Project No. BRLO-5926(055)
Project Vicinity on Topographic Base
Carbondale Road Bridge (26C0030) over Willow Creek Replacement Project
Federal Project No. BRLO-5926(055)
Project Vicinity on Aerial Base
Carbondale Road Bridge (26C0030) over Willow Creek
Replacement Project
Federal Project No. BRLO-5926(055)
Biological Study Area and Project Design

LEGEND

- Action Area - (5.06 ac)
- Project Design

FIGURE 4

I:\MKT1406\GIS\Reports\BA\BA_fig4_1_bsa_design.mxd (3/23/2017)
1.4.5.2. **Species Specific Avoidance/Minimization Measures or BMPs from the USFWS/NOAA Fisheries BA Checklists for California Red-Legged Frog**

The following measures will be taken to reduce adverse effects to CRLF and their habitat:

1. A USFWS-approved biologist will survey the project site 48 hours before the onset of work activities. If any life stage of CRLF is found and these individuals are likely to be injured by work activities, the USFWS will be notified and the USFWS-approved biologist will be allowed sufficient time to move them for the site before work activities begin. The USFWS-approved biologist will relocate the CRLF the shortest distance possible to a location that contains suitable habitat and will not be affected by activities associated with the proposed project. The USFWS-approved biologist will maintain detailed records of any individuals that are moved (e.g., size, coloration, any distinguishing features, photographs [digital preferred]) to assist him or her in determining whether translocated animals are returning to the original point of capture.

2. Before any activities begin on a project, a USFWS-approved biologist will conduct a training session for all construction personnel. At a minimum, the training will include a description of CRLF and its habitat, the specific measures that are being implemented to conserve CRLF for the current project, and the boundaries within which the project may be accomplished. Brochures, books, and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions.

3. A USFWS-approved biologist will be present at the work site until all CRLFs have been removed, workers have been instructed, and disturbance of habitat has been completed. After this time, the County will designate a person to monitor on-site compliance with all conservation measures. The resume of the designated monitor will be sent to the USFWS for approval prior to monitoring. The USFWS-approved biologist will ensure that this monitor receives training in the identification of CRLF. If the monitor or the USFWS-approved biologist recommends that work be stopped because CRLFs would be affected to a degree that exceeds the levels anticipated by Caltrans and the USFWS during review of the proposed action, they will notify the resident engineer (the engineer that is directly overseeing and in command of construction activities) immediately. The resident engineer will either resolve the situation by eliminating the effect immediately or require that all actions which are causing these effects be halted. If work is stopped, the USFWS will be notified as soon as is reasonably possible.

4. During project activities, all trash that may attract predators will be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris will be removed from work areas.
5. All refueling, maintenance, and staging of equipment and vehicles will occur at least 60 ft from riparian habitat or water bodies and not in a location from where a spill would drain directly toward aquatic habitat. The monitor will ensure contamination of habitat does not occur during such operations. Prior to the onset of work, the County shall prepare a plan for prompt and effective response to any accidental spills. All workers will be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

6. To control sedimentation during and after project implementation, the County will implement BMPs outlined in any authorizations or permits, issued under the authorities of the CWA that it receives for the specific project. If BMPs are ineffective, the County will attempt to remedy the situation immediately, in consultation with the USFWS.

7. To ensure that diseases are not conveyed between work sites by the USFWS-approved biologists, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force will be followed at all times.

8. Following completion of the new bridge, all temporary impact areas shall be revegetated with the native seed mix specified in Table 2. Permanently graded areas shall also be revegetated with the native seed mix specified in Table 2.

1.4.5.3. SPECIES SPECIFIC AVOIDANCE/MINIMIZATION MEASURES OR BMPs FOR CALIFORNIA TIGER SALAMANDER

The following measures are proposed to minimize effects to any CTS potentially in the vicinity:

1. Worker environmental awareness training will be conducted by a qualified biologist for all construction personnel. This training instructs workers to recognize CTS and their habitat.

2. ESA fencing shall be installed along the edge of the work limits, including staging areas. ESA fencing shall consist of orange construction fencing (or equivalent) and shall be maintained in good condition until construction is complete. In addition, silt fencing will be installed along the bottom of the ESA fencing to prevent CTS from entering the work area during construction.

3. A biological monitor approved by USFWS shall be present during initial ground disturbing activities within CTS upland habitat.

4. If CTS are found within the area surveyed, USFWS shall be contacted. Caltrans, as the federal lead agency, will notify USFWS.

5. All work within CTS habitat shall be conducted during the dry season (June 1 through October 31) when CTS are estivating and unlikely to enter the Action Area.
6. The Action Area will be surveyed for CTS if a substantial rain event (i.e., at least 0.25 inches) occurs during construction to avoid affecting salamanders that may have emerged from their burrows and relocated in the Action Area (e.g., under equipment).

7. Following completion of the project, all fill slopes, temporary impact and/or otherwise graded or denuded areas shall be restored to preconstruction contours (if necessary) and revegetated with the seed mix specified in Table 2. Invasive exotic plants will be controlled to the maximum extent practicable.

1.4.6. **Interrelated and interdependent Actions**

There are no interrelated or interdependent actions associated with the Proposed Action.
Chapter 2. Study Methods

2.1. Summary

2.1.1. Field Surveys
The studies required to fully document the environmental conditions of the Action Area included a general biological survey, vegetation mapping, delineation of jurisdictional waters, and a habitat assessment for CTS.

2.1.1.1. General Biological Survey/Vegetation Mapping
A general biological survey of the Action Area was conducted by LSA biologist Dayna Winchell on February 4, 2015. Naturally occurring vegetation in the Action Area was classified according to A Manual of California Vegetation, Second Edition (Sawyer, Keeler-Wolf, and Evans 2008), as appropriate. Managed or developed areas were classified according to their dominant plant species. The names of the plant species are consistent with The Jepson Manual: Vascular Plants of California, Second Edition (Baldwin, B. G., et. al., editors 2012).

Wildlife species observed during the survey were identified and recorded. During this survey, the Action Area was also surveyed for potential habitat to support special status plants.

2.1.1.2. Potential Jurisdictional Waters Determination and Delineation
Potential waters of the U.S. in the Action Area were delineated in accordance with the 1987 ACOE Wetland Delineation Manual, the September 2008 Regional Supplement - Arid West Region, and the ACOE Regulatory Guidance Letter 08-02 regarding Preliminary Jurisdictional Delineations (June 2008).

LSA assistant biologist Stefan de Barros conducted a preliminary jurisdictional delineation on February 23, 2016. The field investigation was conducted in accordance with the ACOE Routine Approach for small areas (i.e., equal to or less than 5 acres), as described in the 1987 Manual. Data was collected for soils, hydrology, and vegetation where necessary to determine the extent of potential waters of the U.S. The limit of California Department of Fish and Wildlife (CDFW) jurisdiction was also delineated. Wetland data forms are included in Appendix C.

2.1.1.3. California Tiger Salamander Habitat Assessment
Two field surveys for CTS were conducted by LSA to evaluate the potential for the species to occur in the Action Area. On February 4, 2015 the survey was conducted by LSA biologist Dayna Winchell and on December 1, 2015 the survey was conducted by LSA senior biologist Laura Belt (Table 3). The site assessment was prepared in accordance with the Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander, dated October 2013. The assessment is included in Appendix D.
2.2. Personnel and Survey Dates

Table 3 below provides a summary of the field surveys performed for this project.

Table 3: Survey Dates and Personnel

<table>
<thead>
<tr>
<th>Date</th>
<th>Task</th>
<th>Personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 4, 2015</td>
<td>Vegetation mapping, CTS habitat assessment</td>
<td>D. Winchell</td>
</tr>
<tr>
<td>December 1, 2015</td>
<td>CTS habitat assessment</td>
<td>L. Belt</td>
</tr>
<tr>
<td>February 23, 2016</td>
<td>Jurisdictional waters delineation</td>
<td>S. de Barros</td>
</tr>
</tbody>
</table>

2.3. Resource Agency Coordination and Professional Contacts

Current species lists were obtained from USFWS and NMFS for the Action Area of this project, as described in Section 1.2. The lists are included in Appendix A. In addition, Caltrans sent a letter to the USFWS on August 16, 2016 requesting technical assistance regarding the status of CTS in the Action Area. USFWS responded to Caltrans on August 24 via email and confirmed that potential habitat for CTS is present in the Action Area. Documentation of the technical assistance is included in Appendix E.

2.4. Limitations and Assumptions that may Influence Results

The Action Area has been heavily grazed by cattle making it difficult to identify hydrophytic vegetation. As such, using hydrophytic vegetation as an indicator for wetlands was omitted from the delineation. No other problems or limitations were encountered during the research, fieldwork, or document preparation that limited the results present herein.
Chapter 3. Environmental Baseline

The Environmental Baseline describes the setting in which the project will occur and includes the effects from past and present Federal, State, private actions; proposed Federal projects with completed section 7 consultations; and contemporaneous State or private actions with consultation in progress. The environmental baseline also considers non-permitted actions (i.e., other nonfederal actions occurring within the Action Area).

3.1. Habitat Conditions in the Action Area

3.1.1. Natural Communities
As noted in Section 2.1.1.1, vegetation communities were classified based on the descriptions in Sawyer, Keeler-Wolf, and Evans (2008), as applicable. Vegetation communities in the Action area include: California annual grassland and seasonal riverine. Natural communities comprise 4.31 acres (ac) of the Action Area, as summarized in Table 4. The developed area comprises 0.75 ac. Natural communities and land uses in the Action Area are shown in Figure 5.

Representative photos of the Action Area can be found in Appendix F.

Table 4: Natural Communities and Land Uses in the Action Area (acres)

<table>
<thead>
<tr>
<th>Community / Land Uses</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Communities</td>
<td></td>
</tr>
<tr>
<td>California Annual Grassland</td>
<td>3.82</td>
</tr>
<tr>
<td>Seasonal Riverine</td>
<td>0.49</td>
</tr>
<tr>
<td><strong>Subtotal Natural Communities</strong></td>
<td>4.31</td>
</tr>
<tr>
<td>Other Vegetation / Land Uses</td>
<td></td>
</tr>
<tr>
<td>Developed</td>
<td>0.75</td>
</tr>
<tr>
<td><strong>Subtotal Other Vegetation / Land Uses</strong></td>
<td>0.75</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>5.06</td>
</tr>
</tbody>
</table>
LEGEND

- Action Area - (5.06 ac)
- Natural Communities / Land Uses - (5.06 ac)
  - California Annual Grassland - (3.82 ac)
  - Seasonal Riverine - (0.49 ac)
  - Developed - (0.75 ac)

I:\MKT1406\GIS\Reports\BA\BA_fig5_plnt_coms_landuse.mxd (3/23/2017)

FIGURE 5

Carbondale Road Bridge (26C0030) over Willow Creek
Replacement Project
Federal Project No. BRLO-5926(055)
Natural Communities / Land Uses
3.1.1.1. **California Annual Grassland**
Comprising 3.82 ac, California annual grassland is the dominant natural community within the Action Area. The California annual grassland occurs on both sides of Carbondale Road and extends throughout nearly the entire Action Area. Representative plant species observed include Mediterranean barley (*Hordeum marinum*), foxtail barley (*Hordeum murinum*), wild oat (*Avena fatua*), and medusahead (*Taeniatherium caput-medusae*).

3.1.1.2. **Seasonal Riverine**
The seasonal riverine community, approximately 0.49 ac, is comprised of Willow Creek and its associated drainages. The water level fluctuates with the seasons and the plants present are mostly hydrophytic. The vegetation in Willow Creek was heavily grazed by cattle and could not be identified. However, hydric soils and hydrology indicators were observed in Willow Creek (see Section 2.4) and it was determined this area supported wetlands. Therefore, it was assumed hydrophytic vegetation was also present.

3.1.2. **Other Vegetation/Land Use Communities**
Other vegetation communities/land uses within the Action Area, totaling 0.75 ac, include developed land.

3.1.2.1. **Developed**
The developed area, approximately 0.75 ac, is limited to the existing roadways and bridge.

3.2. **Describe the Action Area**
As noted in Section 1.4.4, the Action Area totals 5.06 ac and consists of the project footprint, access and staging areas, and lands beyond the footprint to the edge of the road right-of-way that could be directly or indirectly affected by the Proposed Action. Potential noise, visual, and water quality effects were considered during development of the Action Area.

Natural communities and other vegetation types/land uses in the Action Area are described above in Section 3.1.1 and 3.1.2.

3.2.1. **Common Animal Species**
The sections below discuss animal species observed and/or likely to occur within the Action Area.

3.2.1.1. **Mammals**
No mammals were observed during the survey. Common species likely to occur in the Action Area include California ground squirrel (*Otospermophilus beecheyi*), coyote (*Canis latrans*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), opossum (*Didelphis virginiana*), and mule deer (*Odocoileus hemionus*).
3.2.1.2. BIRDS

Bird species observed during site surveys include: northern mockingbird (*Mimus polyglottos*), yellow rumped warbler (*Setophaga coronate*), white crowned sparrow (*Zonotrichia leucophrys*), northern flicker (*Colaptes auratus*), Say’s phoebe (*Sayornis saya*), tufted titmouse (*Baeolophus bicolor*), acorn woodpecker (*Melanerpes formicivorus*), red-winged blackbird (*Agelaius phoeniceus*), western scrub jay (*Aphelocoma californica*), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), and turkey vulture (*Cathartes aura*).

Other common bird species expected to occur in the Action Area include: California towhee (*Melospiza crissalis*), great horned owl (*Bubo virginianus*), red-shouldered hawk (*Buteo lineatus*), band-tailed pigeon (*Columba fasciata*), western bluebird (*Sialia mexicana*), blue-gray gnatcatcher (*Polioptila caerulea*), bushtit (*Psaltriparus minimus*), cliff swallow (*Petrochelidon pyrrhonota*), barn swallow (*Hirundo rustica*), American crow (*Corvus brachyrhynchos*), and Bewick’s wren (*Thryomanes bewickii*).

3.2.1.3. AMPHIBIANS AND REPTILES

One amphibian species, Pacific chorus frog (*Pseudacris* sp.), was observed during the field surveys. Another amphibian species likely to occur in the Action Area is the California toad (*Anaxyrus boreas halophilus*). The Action Area also provides habitat for CTS, a federal threatened species.

No reptile species were observed during the site survey. Reptile species likely to occur in the Action Area include western terrestrial garter snake (*Thamnophis elegans elegans*), western rattlesnake (*Crotalus oreganus*), common gopher snake (*Pituophis catenifer*), and western fence lizard (*Sceloporus occidentalis*).

3.2.2. Migration Corridors

Wildlife movement corridors are linear habitats that function to connect two or more areas of significant wildlife habitat. These corridors may function on a local level as links between small habitat patches (e.g., streams in urban settings) or may provide critical connections between regionally significant habitats (e.g., deer movement corridors). Wildlife corridors typically include vegetation and topography that facilitate the movements of wild animals from one area of suitable habitat to another in order to fulfill foraging, breeding, and territorial needs. These corridors often provide cover and protection from predators that may be lacking in surrounding habitats. Wildlife corridors generally include riparian zones and similar linear expanses of contiguous habitat.

There is no evidence that Willow Creek is a significant migration corridor, and due to the relatively flat terrain in the Biological Study Area (BSA) and vicinity, it is unlikely that the creek is a significant migration route.
3.2.3. Aquatic Resources

Aquatic Resources within the Action Area include Willow Creek and a small tributary originating from a pond approximately 0.05 mi north of Carbondale Road, west of Forest Home Road. Aquatic resources in the Action Area are summarized in Table 5.

The primary aquatic feature in the Action Area is Willow Creek. Willow Creek is a slow moving intermittent drainage that flows from north to south through the Action Area. North of the bridge, the creek has been highly disturbed due to past dredging activities. The bridge appears to serve as a bottleneck for high flows in the creek, narrowing the watercourse downstream of the bridge. Willow Creek is a moderately swift flowing perennial creek, with depths averaging 1–2 ft. The bed of Willow Creek is comprised primarily of bedrock within the Action Area; Willow Creek meanders southwest until it flows into Laguna Creek and then ultimately the Mokelumne River.

Within the Action Area, most of the live channel of Willow Creek supports hydrophytic vegetation. However, the area is heavily grazed by cattle rendering the vegetation unidentifiable. Hydric soils were observed at most locations within the Action Area and several hydrology indicators were also observed. As a result, the majority of the live channel of Willow Creek within the Action Area was determined to meet the ACOE criteria for wetlands. Areas of non-wetlands waters were also present in Willow Creek.

The tributary drainage supported only wetlands; no non-wetland waters were present.

As noted in Section 2.2, data collection occurred on February 23, 2016; the aquatic resources listed in Table 5 are areas potentially meeting ACOE criteria for wetlands and other waters of the U.S. Wetland data forms are included in Appendix C. Figure 6 shows the aquatic resources in the Action Area, which are also summarized in Table 5.

<table>
<thead>
<tr>
<th>Features</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential Wetlands</td>
<td></td>
</tr>
<tr>
<td>Willow Creek and Unnamed Tributary</td>
<td>0.46</td>
</tr>
<tr>
<td>Non-Wetland Waters</td>
<td></td>
</tr>
<tr>
<td>Willow Creek</td>
<td>0.05</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>0.51</strong></td>
</tr>
</tbody>
</table>

The aquatic resources within the Action Area described above are expected to be under the jurisdiction of ACOE, Regional Water Quality Control Board (RWQCB), and CDFW.
Carbondale Road Bridge (26C0030) over Willow Creek Replacement Project
Federal Project No. BRLO-5926(055)
Potential Jurisdictional Waters

FIGURE 6

LEGEND

- Action Area - (5.06 ac)
- Data Point
- Culvert
- Potential Jurisdictional Waters - (0.51 ac)
- Non-Wetland Waters - (0.05 ac)
- Wetlands - (0.46 ac)

SOURCE: Microsoft Aerial Imagery (6/2011); Mapping - LSA (2016)
I:\MKT1406\GIS\Reports\BA\BA_fig6_juris_wats.mxd (3/23/2017)
3.2.4. Topographic features
The terrain in the Action Area is mostly flat and is at an elevation of approximately 530 ft. Surrounding areas consist of gently rolling terrain. Land uses in the Action Area are primarily for rural residences and cattle grazing purposes.

3.2.5. Soils
According to U.S. Geological Survey, the Action Area is located on soil designated as follows:

- Auburn silt loam, 0 to 31 percent slopes (ApD): This soil is well drained.
- Exchequer and Auburn very rocky loams, 3 to 31 percent slopes (ExD): This soil is well drained.
- Mine tailings and Riverwash (Mn): This soil is excessively drained.
Chapter 4. Federally-Listed/Proposed Species and Designated Critical Habitat within Action Area

4.1. California red-legged frog

4.1.1. Discussion of Species
The CRLF (*Rana draytonii*) was federally listed as threatened under the Endangered Species Act on May 23, 1996. Critical habitat for this species was designated on March 17, 2010, and the Final Recovery Plan for the CRLF was released on September 12, 2002.

Historically, CRLF occupied an estimated 20 percent of the California land area, ranging from central Mendocino County and western Tehama County south in the California Coast Range to northern Baja California, Mexico. In the Sierra Nevada Mountains, CRLF occupied portions of the western slopes from Shasta County south to Tulare County (Barry and Fellers 2013). This species is largely absent from the California Central Valley. The majority of these populations have been nearly eliminated due to fragmentation and development, with only a few known drainages in the Sierra Nevada foothills that support this species. Additionally, much of the Sierra Nevada range is unsurveyed, particularly on private lands, leaving the true status in this region largely unknown (USFWS 2002). The new research from Barry and Fellers (2013) has determined that the current distribution of this species has declined very little since the 1960s. Additionally, they discovered seven new probable breeding populations and three new single-specimen occurrences in non-breeding habitat in the Sierra Nevada Mountains.

The CRLF is a secretive, scarce and cryptic species that is adapted to spend most of their lives in and near sheltered, slow moving or still waterbodies such as ponds, pools, marshes, springs, streams and reservoirs. The optimal habitat for this species is deep pools with emergent and overhanging vegetation, and banks containing numerous refugia locations that could conceal adult frogs. However, CRLF have also been found in perennial creeks. These habitat adaptations make detection difficult for this species.

Accessibility to sheltering habitat is essential for the survival of this species and can be a factor limiting population numbers and distribution. Sheltering habitat includes pool depth of 1 m (3 ft) or more, rodent burrows, and crevices in rock slabs. The latter two could also provide suitable estivation habitat during periods of inactivity (late summer to early winter).

This species generally has little movement away from streamside habitats for seasonal or migration movements, although it is assumed that CRLF males will defend a space for sexual display during the breeding season (March through July); home range information is currently unknown, possibly large for dispersing juveniles but smaller for adults. The adult CRLF have a highly variable diet consuming aquatic and terrestrial insects, crustaceans, snails, worms, fish,
tadpoles, smaller frogs and small mammals. Open grasslands and seeps are preferable foraging habitat for this species.

4.1.2. Survey Results
Within the Action Area, Willow Creek does not provide suitable aquatic breeding or non-breeding habitat for CRLF. Willow Creek conveys only seasonal flows and is shallow (less than 1-2 feet); thus this stream is not suitable aquatic habitat for CRLF. Potential upland habitat for CRLF is present within the Action Area and vicinity. The upland habitat could be used for dispersal, possibly to potential breeding ponds in the vicinity, but could also be used for estivation. Based on the record searches and the survey results, CRLF could occur in the vicinity, but are not likely to occur in the Action Area.

4.1.3. Status of Designated Critical Habitat in the Action Area for Species
The Action Area is located in the County of Amador which is located within the historic range of CRLF per the Recovery Plan for the California red-legged frog (Rana draytonii) (USFWS 2002); although, the Action Area is not located within designated critical habitat for CRLF. The nearest critical habitat is Unit CAL-1 (Calaveras County), which is located approximately 18 mi southeast of the Action Area.

The closest California Natural Diversity Database (CNDDB) record (#1377), dated 1942, is located in the area near the mouth of the north fork of the Cosumnes River, just north of the confluence with the middle fork of the Cosumnes River between Enterprise and Nashville, approximately 10 mi northeast of the Action Area. There are no other CRLF occurrences within 10 mi of the Action Area. Although there is potentially suitable upland habitat for CRLF in the Action Area, the project is located outside of the current range for CRLF and this species has not been recorded (based on the CNDDB) in the same watershed as the Action Area since 1942. Additionally, no new populations of this species were identified near this location during recent studies (Barry and Fellers 2013).

4.2. California Tiger Salamander

4.2.1. Discussion of Species
The CTS (Ambystoma californiense) is federally listed as threatened under the Endangered Species Act. Critical habitat has been designated for CTS, but the Action Area is not located within designated critical habitat. The closest CTS critical habitat is Unit cv_3, which is located approximately 8.4 mi southwest of the Action Area along Highway 104 in eastern Sacramento County.

CTS are large, terrestrial salamanders and are most commonly found in annual grassland habitat. They may also occur in the grassy understory of valley-foothill hardwood habitats, and uncommonly along stream courses in valley-foothill riparian habitats. They range from Sonoma,
Carbondale Bridge Replacement Project BA

Colusa, and Yolo Counties south through the Central Valley to Tulare County, and through the Coast Range into Santa Barbara County. An isolated population also occurs in Butte County.

CTS are typically associated with vernal pools or similar habitats consisting of seasonal pools or ponds (including man-made ponds that dry out in summer) surrounded by grasslands. Adult CTS spend most of their lives underground in small mammal burrows, which are a required habitat element. CTS are relatively poor burrowers and require refuges provided by ground squirrels and other burrowing mammals. CTS estivate in burrows during the dry months. After the onset of winter rains, adult salamanders move to larger, longer lasting vernal pools and other seasonal pools to breed. Breeding season is November through February; timing is dependent on rainfall. The larval stage of CTS usually lasts 3 to 6 months. Following metamorphosis, juveniles emigrate at night from drying breeding sites up to one mile to refuge sites.

4.2.2. Survey Results
CTS are well documented in the vicinity of the Action Area, with the CNDDB documenting 31 records of CTS in the search area. The closest record, dated 2005, is located between Laguna Creek and Ione Road, approximately 4.3 mi southwest of the Action Area.

Willow Creek through the Action Area is a slow moving intermittent creek that flows from north to south. North of the bridge, the creek has been highly disturbed due to past dredging activities and does not provide suitable aquatic habitat for CTS. The bridge acts as a bottleneck for high flows in the creek, narrowing the watercourse downstream of the bridge. As a result the flow downstream of the bridge would generally be too swift to provide suitable breeding habitat for CTS. Although there were small ponded areas observed south of the bridge, higher flows would cause CTS eggs to be swept downstream. Consequently, Willow Creek does not provide suitable aquatic habitat for CTS. However, numerous small to large sized ponds, which provide potential aquatic habitat for CTS, occur within 1.24 mi of the Action Area. Some of the ponds are seasonal, while the larger ponds appear to hold water all year. Four ponds, ranging from small to large, are located within 0.5 mi of the Action Area. These ponds could provide aquatic habitat for CTS. A small pond associated with an adjacent property is located approximately 0.1 mi north of the Action Area and could potentially provide suitable aquatic breeding habitat for CTS.

Suitable upland habitat is present in the grassland areas within and adjacent to the Action Area. Numerous burrows of appropriate size were observed in the upland grassland habitat, along the sides of the road, and under the rock slope protection around the bridge.

4.2.3. Status of Designated Critical Habitat in the Action Area for Species
Designated critical habitat for CTS is not present in the Action Area. The closest CTS critical habitat is Unit cv_3 (Sacramento County), which is located approximately 8.4 mi southwest of the Action Area along Highway 104.
Numerous CNDDB records document the presence of CTS in the vicinity of the Action Area. Willow Creek does not provide suitable aquatic habitat for CTS, however numerous small to large sized ponds occur within 1.24 mi and provide potential aquatic habitat. Suitable upland habitat is present in the grassland areas within and adjacent to the Action Area.
5.1. Deconstruct Action

5.1.1. Construction Scenario (Summary)

5.1.1.1. Replacement Bridge
The replacement bridge will consist of an 80-ft long two-span, cast-in-place, reinforced concrete slab supported on spread footings, accommodating two 11 ft lanes, 2 ft shoulders and bridge railings, resulting in an approximate bridge width of 29 ft.

5.1.1.2. Utility Relocation
No utilities have been identified within the project limits.

5.1.1.3. Right-Of-Way
The County has prescriptive rights on Carbondale Road (i.e., no formal right of way has been established). The location and extent of right of way acquisition will be determined after environmental review is complete and the project has entered the Plans, Specifications, and Estimates phase. However, it is expected that sliver right of way acquisitions will be needed on the south side of the roadway to accommodate the higher roadway profile and increased roadway width. Temporary construction easements are also anticipated on the south to provide Contractor construction access.

5.1.1.4. Detour Route
During construction, Carbondale Road will be closed to traffic and a detour route will be provided. Staging and equipment storage/laydown areas will be located on the closed portion of Carbondale Road.

5.1.1.5. Dewatering/In-Water Work
Construction of the bridge will involve excavation for and construction of concrete abutments and a central pier supported on spread footings. Other temporary work within Willow Creek includes removal of the existing bridge, falsework erection and removal, and installation of scour countermeasures at the support locations. Willow Creek is a seasonal creek and construction is anticipated to proceed without needing to divert water away from construction activities.

5.1.1.6. Impacts Discussion
The project will result in permanent and temporary impacts to potentially suitable upland habitat for CRLF and CTS. Permanent impacts, totaling 0.57 ac, and temporary impacts, totaling 0.37 ac, to upland habitat for the CRLF and CTS will result from the project. Loss of upland habitat will occur during construction of the new roadway and bridge embankments.
The project will not impact suitable aquatic habitat for CRLF or CTS.

5.1.2. Stressors from Project Actions
Stressors induce an adverse response in an organism by any physical, chemical, or biological alteration of the environment (or resource) that can lead to a response from the individual. Stressors can act directly on an individual, or indirectly through effects to a resource.

5.1.2.1. California Red-Legged Frog
Construction would result in the removal of California annual grassland habitat. Construction would result in increased human activity - pedestrian and mechanical.

5.1.2.2. California Tiger Salamander
Construction would result in the removal of California annual grassland habitat. Construction would result in increased human activity - pedestrian and mechanical.

5.1.3. Project Operation and Maintenance
Operation and maintenance activities for the new bridge would be minimal and primarily limited to the new bridge and approach roadway sections. With the exception of monitoring and/or remediation of erosion control measures, it is not expected that these activities would require work within any native vegetation. Consequently, operation and maintenance activities for the proposed action will not substantially affect CRLF or CTS upland habitat.

5.2. Exposure to Stressors from the Action
Exposures are defined as the interaction of the species, their resources, and the stressors that result from the project action.

5.2.1. California Red-Legged Frog
CRLF could experience a loss of potential upland habitat as a result of construction related disturbance and vegetation removal. Construction activities could also expose CRLF to increased human activity. CRLF individuals within the Action Area may relocate and be at risk of increased predation.

5.2.2. California Tiger Salamander
CTS could experience a loss of suitable upland habitat as a result of construction related disturbance and vegetation removal. Construction activities could also expose CTS to increased human activity.

5.3. Response to the Exposure

5.3.1. California Red-Legged Frog
Construction would result in increased human activity - pedestrian and mechanical - that could result in disturbance of upland habitat and directly affect CRLF that may be present in the work.
area. Construction related disturbance during excavation and grading activities will also result in a temporary loss of vegetative cover, increasing susceptibility of CRLF to predation.

The project will result in permanent impacts to CRLF upland habitat, totaling 0.57 ac, and temporary impacts totaling 0.37 ac as a result of construction of the new roadway and bridge embankments.

5.3.2. California Tiger Salamander

Construction related disturbance and increased human activity – pedestrian and mechanical – would result in disturbance of upland habitat and directly affect CTS that may be present in the work area. Construction activities will also result in the removal of small mammal burrows, limiting the available habitat for CTS.

The project will result in permanent impacts to CTS upland habitat, totaling 0.57 ac, and temporary impacts totaling 0.37 ac as a result of construction of the new roadway and bridge embankments

Since construction activities will occur between June 1 and October 31, during the dry season estivation period, CTS would only be impacted if individuals are present in the Action Area during construction.

5.4. Effects of the Action

Effect is a description of the manner in which the action may affect any listed species or critical habitat and an analysis of any cumulative effect (50 CFR 402.02). The effect of the action is the consequence (behavioral, physical, or physiological) of a response to a stressor.

5.4.1. California Red-Legged Frog

Direct and indirect effects from construction related disturbance and increased human activity could make it more difficult for CRLF to move through the work area. This could result in behavioral changes as individuals would have to adjust to utilizing different upland areas, potentially decreasing access to important habitat for movement, estivation, etc. Similar indirect effects could also occur from vegetation removal; these effects would persist following the completion of construction until the revegetation reestablishes. The conservation measures described in Sections 1.4.5 and 5.5 would decrease the severity of these effects.

5.4.2. California Tiger Salamander

Indirect effects to CTS from construction related disturbance could decrease the ability of individuals to utilize the Action Area. This could result in behavioral changes as individuals would have to adjust to utilizing different upland areas, potentially decreasing access to important habitat for movement, estivation, etc. Direct and indirect effects to CTS from removal of annual grassland vegetation could result in a slight decrease in the population due to the loss
of individuals and/or habitat. The conservation measures described in Sections 1.4.5 and 5.5 would decrease the severity of these effects.

5.5. **Conservation Measures and Compensation Proposal**

5.5.1. **Conservation Measures**

5.5.1.1. **California Red-Legged Frog**

The following measures will be taken to reduce adverse effects to CRLF and their habitat:

1. A USFWS-approved biologist will survey the project site 48 hours before the onset of work activities. If any life stage of CRLF is found and these individuals are likely to be injured by work activities, the USFWS will be notified and the USFWS-approved biologist will be allowed sufficient time to move them from the site before work activities begin. The USFWS-approved biologist will relocate the CRLF the shortest distance possible to a location that contains suitable habitat and will not be affected by activities associated with the proposed project. The USFWS-approved biologist will maintain detailed records of any individuals that are moved (e.g., size, coloration, any distinguishing features, photographs [digital preferred]) to assist him or her in determining whether translocated animals are returning to the original point of capture.

2. Before any activities begin on a project, a USFWS-approved biologist will conduct a training session for all construction personnel. At a minimum, the training will include a description of CRLF and its habitat, the specific measures that are being implemented to conserve CRLF for the current project, and the boundaries within which the project may be accomplished. Brochures, books, and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions.

3. A USFWS-approved biologist will be present at the work site until all CRLFs have been removed, workers have been instructed, and disturbance of habitat has been completed. After this time, the County will designate a person to monitor on-site compliance with all conservation measures. The resume of the designated monitor will be sent to the USFWS for approval prior to monitoring. The USFWS-approved biologist will ensure that this monitor receives training in the identification of CRLF. If the monitor or the USFWS-approved biologist recommends that work be stopped because CRLFs would be affected to a degree that exceeds the levels anticipated by Caltrans and the USFWS during review of the proposed action, they will notify the resident engineer (the engineer that is directly overseeing and in command of construction activities) immediately. The resident engineer will either resolve the situation by eliminating the effect immediately or require that all actions which are causing these effects be halted. If work is stopped, the USFWS will be notified as soon as is reasonably possible.
4. During project activities, all trash that may attract predators will be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris will be removed from work areas.

5. All refueling, maintenance, and staging of equipment and vehicles will occur at least 60 ft from riparian habitat or water bodies and not in a location from where a spill would drain directly toward aquatic habitat. The monitor will ensure contamination of habitat does not occur during such operations. Prior to the onset of work, the County shall prepare a plan for prompt and effective response to any accidental spills. All workers will be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

6. To control sedimentation during and after project implementation, the County will implement BMPs outlined in any authorizations or permits, issued under the authorities of the CWA that it receives for the specific project. If BMPs are ineffective, the County will attempt to remedy the situation immediately, in consultation with the USFWS.

7. To ensure that diseases are not conveyed between work sites by the USFWS-approved biologists, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force will be followed at all times.

8. Following completion of the new bridge, all temporary impact areas shall be revegetated with the native seed mix specified in Table 2. Permanently graded areas shall also be revegetated with the native seed mix specified in Table 2.

5.5.1.2. CALIFORNIA TIGER SALAMANDER
The following measures are proposed to minimize effects to any CTS potentially in the vicinity:

1. Worker environmental awareness training will be conducted by a qualified biologist for all construction personnel. This training instructs workers to recognize CTS and their habitat.

2. ESA fencing shall be installed along the edge of the work limits, including staging areas. ESA fencing shall consist of orange construction fencing (or equivalent) and shall be maintained in good condition until construction is complete. In addition, silt fencing will be installed along the bottom of the ESA fencing to prevent CTS from entering the work area during construction.

3. A biological monitor approved by USFWS shall be present during initial ground disturbing activities within CTS upland habitat.

4. If CTS are found within the area surveyed, USFWS shall be contacted. Caltrans, as the federal lead agency, will notify USFWS.
5. All work within CTS habitat shall be conducted during the dry season (June 1 through October 31) when CTS are estivating and unlikely to enter the Action Area.

6. The Action Area will be surveyed for CTS if a substantial rain event (i.e., at least 0.25 inches) occurs during construction to avoid affecting salamanders that may have emerged from their burrows and relocated in the Action Area (e.g., under equipment).

7. Following completion of the project, all fill slopes, temporary impact and/or otherwise graded or denuded areas shall be restored to preconstruction contours (if necessary) and revegetated with the seed mix specified in Table 2. Invasive exotic plants will be controlled to the maximum extent practicable.

5.5.2. Compensation

5.5.2.1. California Red-legged Frog

The project will result in permanent impacts to potentially suitable upland habitat for CRLF. Permanent impacts, totaling 0.57 ac, and temporary impacts, totaling 0.37 ac, will occur during construction of the new roadway and bridge embankments. The implementation of the avoidance and minimization measures in Section 5.5.1 will be sufficient to avoid impacts to the CRLF. No compensation for project effects to CRLF is proposed, as the proposed project is not expected to result in “take” of this species.

5.5.2.2. California Tiger Salamander

The project will result in permanent impacts to potential upland habitat for CTS. Permanent impacts, totaling 0.57 ac, and temporary impacts, totaling 0.37 ac, will occur during construction of the new roadway and bridge embankments. To offset impacts to CTS upland habitat, sufficient CTS upland habitat mitigation credits shall be purchased from a USFWS-approved bank at a minimum 1:1 ratio. The purchase of mitigation credits will be in conjunction with implementation of the avoidance and minimization measures in Section 5.5.1.

5.6. Effects of Interrelated and Interdependent Actions/Conclusions and Determination

Interrelated Actions – actions that are part of a larger action and depend on the larger action for their justification [50 CFR §402.02] (i.e., this project would not occur “but for” a larger project). Interrelated actions are typically associated with the proposed action. Interrelated actions are those that are part of a larger action and depend on the larger action for their justification.

Interdependent Actions – actions having no independent utility apart from the proposed action. [50 CFR §402.02]. Interdependent actions are those that have no independent utility apart from the action under consideration.
The proposed action would not result in direct or indirect effects to CRLF or CTS as a result of interrelated or interdependent actions as none are associated with the proposed action.

5.7. Cumulative Effects

Cumulative effects include the effects of future state, tribal, local or private actions that are reasonably certain to occur in the Action Area described in this Biological Assessment. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to Section 7 of the FESA.

Effects to CRLF and CTS in the general vicinity of the project likely will occur through habitat loss during public works projects similar in scope to the subject project. Direct and indirect effects to CRLF and CTS would be similar to those described in Section 5.4.1 and 5.4.2, respectively. Other projects in the region with similar effects would also be required to minimize and/or mitigate those effects, with measures similar to those described in Section 5.5. Consequently, the proposed action would not substantially contribute to cumulative effects for CRLF or CTS.

5.8. Determination

5.8.1. Species and Critical Habitat Determination

5.8.1.1. No Effect

A no effect determination was made for the following species. No consultation is required.

- Central Valley Steelhead DPS
- Delta smelt
- Valley elderberry longhorn beetle
- Vernal pool fairy shrimp
- Ione buckwheat
- Ione manzanita
- Irish Hill buckwheat
- Sacramento Orcutt grass

5.8.1.2. May Affect-Not Likely To Adversely Affect

A may affect-not likely to adversely affect determination was made for the following species. Informal consultation is required.

- California red-legged frog

5.8.1.3. May Adversely Modify

None of the listed species received a may adversely modify determination. No consultation is required.
5.8.1.4. **MAY AFFECT-LIKELY TO ADVERSELY AFFECT**
A may affect-likely to adversely affect determination was made for the following species. Formal consultation is required.

- California tiger salamander

5.8.2. **Discussion Supporting Determination**

5.8.2.1. **NO EFFECT SPECIES**
None of the species listed above under Section 5.8.1.1 occur in the Action Area. Therefore, the Proposed Action will have no effect to these species.

5.8.2.2. **CALIFORNIA RED-LEGGED FROG**
The Proposed Action would result in direct and indirect impacts to CRLF during construction as a result of temporary changes to habitat conditions and following construction during the loss of suitable habitat. The conservation measures described in Sections 1.4.5 and 5.5 include measures that will avoid and minimize these effects during construction. Based on this information, the Proposed Action may affect but is not likely to adversely affect CRLF.

5.8.2.3. **CALIFORNIA TIGER SALAMANDER**
The Proposed Action would result in direct and indirect impacts to CTS during construction as a result of temporary changes to habitat conditions and following construction due to loss of suitable habitat. The conservation measures described in Sections 1.4.5 and 5.5 include measures that will avoid and minimize these effects during construction. The measures also include compensation that will offset these effects through transplanting and purchasing credits at an approved mitigation bank. Based on this information, the Proposed Action may affect and is likely to adversely affect CTS.
Chapter 6. Literature Cited


Consultation Code: 08ESMF00-2017-SLI-1485
Event Code: 08ESMF00-2017-E-03690
Project Name: MKT 1406

Subject: 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, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) 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 Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

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:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

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
Official Species List

Provided by: Sacramento Fish and Wildlife Office
FEDERAL BUILDING
2800 COTTAGE WAY, ROOM W-2605
SACRAMENTO, CA 95825
(916) 414-6600

Consultation Code: 08ESMF00-2017-SLI-1485
Event Code: 08ESMF00-2017-E-03690

Project Type: BRIDGE CONSTRUCTION / MAINTENANCE

Project Name: MKT 1406
Project Description: Carbondale Bridge Replacement

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.
Project Location Map:

**Project Coordinates:** MULTIPOLYGON (((-120.96102365105756 38.44758430908533, -120.96455660675923 38.448244283836345, -120.96445341736995 38.448603305725165, -120.96091908575337 38.447943073997294, -120.96102365105756 38.44758430908533)))

**Project Counties:** Amador, CA
Endangered Species Act Species List

There are a total of 8 threatened or endangered species on your 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. Critical habitats listed under the Has Critical Habitat column may or may not lie within your project area. See the Critical habitats within your project area section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

<table>
<thead>
<tr>
<th>Amphibians</th>
<th>Status</th>
<th>Has Critical Habitat</th>
<th>Condition(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>California red-legged frog (<em>Rana draytonii</em>)</td>
<td>Threatened</td>
<td>Final designated</td>
<td></td>
</tr>
<tr>
<td>Population: Wherever found</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>California tiger Salamander (<em>Ambystoma californiense</em>)</td>
<td>Threatened</td>
<td>Final designated</td>
<td></td>
</tr>
<tr>
<td>Population: U.S.A. (Central CA DPS)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Crustaceans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vernal Pool fairy shrimp (<em>Branchinecta lynchii</em>)</td>
</tr>
<tr>
<td>Population: Wherever found</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fishes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delta smelt (<em>Hypomesus transpacificus</em>)</td>
</tr>
<tr>
<td>Population: Wherever found</td>
</tr>
<tr>
<td>steelhead (<em>Oncorhynchus (=salmo) mykiss</em>)</td>
</tr>
<tr>
<td>Population: Northern California DPS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flowering Plants</th>
</tr>
</thead>
</table>

https://ecos.fws.gov/ipac, 03/21/2017  09:30 AM
<table>
<thead>
<tr>
<th>Species</th>
<th>Status</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ione buckwheat (<em>Eriogonum apricum</em>)</td>
<td>Endangered</td>
<td></td>
</tr>
<tr>
<td>Population: Wherever found</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ione manzanita (<em>Arctostaphylos myrtifolia</em>)</td>
<td>Threatened</td>
<td></td>
</tr>
<tr>
<td>Population: Wherever found</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Insects</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Valley Elderberry Longhorn beetle</td>
<td>Threatened</td>
<td>Final designated</td>
</tr>
<tr>
<td>(<em>Desmocerus californicus dimorphus</em>)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population: Wherever found</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Critical habitats that lie within your project area

There are no critical habitats within your project area.
Quad Name: Irish Hill
Quad Number: 38120-D8

**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) -

**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 -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

**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) -

**ESA Pinnipeds**

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

**Essential Fish Habitat**

Coho EFH -
Chinook Salmon EFH - X
Groundfish EFH -
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 -
WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Carbonate Rd Bridge Replacement  
City/County: Amador County  
Sampling Date: 2/23/16

Applicant/Owner: Colte  
State: CA  
Sampling Point: 

Investigator(s): Stefan de Barros  
Section, Township, Range: S22, 23, T7N, R9E 

Landform (hillslope, terrace, etc.): Concave  
Local relief (concave, convex, none): Concave  
Slope (%): 

Subregion (LRR):  
Lat:  
Long:  
Datum:  

Soil Map Unit Name:  
NWI classification:  

Are climatic / hydrologic conditions on the site typical for this time of year?  
Yes ☑ No  
(If no, explain in Remarks.)

Are Vegetation ☑ Soil  
Hydrology significantly disturbed?  
Are "Normal Circumstances" present?  
Yes ☑ No  
(If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes ☑ No</th>
<th>Is the Sampled Area</th>
<th>Yes ☑ No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes ☑ No</td>
<td>within a Wetland?</td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes ☑ No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks:

VEGETATION – Use scientific names of plants.

| Tree Stratum (Plot size:__________) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet:
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td>Number of Dominant Species That Are OBL, FACW, or FAC:</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td>Total Number of Dominant Species Across All Strata:</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td>Percent of Dominant Species That Are OBL, FACW, or FAC:</td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub Stratum (Plot size:__________)</th>
<th>Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb Stratum (Plot size:__________)</th>
<th>Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Unknown grass</td>
<td>95</td>
</tr>
<tr>
<td>2. Ereodium Altissimum</td>
<td>5</td>
</tr>
<tr>
<td>3. Bryophyte sp.</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody Vine Stratum (Plot size:__________)</th>
<th>Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>% Bare Ground in Herb Stratum</td>
<td></td>
</tr>
<tr>
<td>% Cover of Biotic Crust</td>
<td></td>
</tr>
</tbody>
</table>

Remarks:

Did not use this criteria due to the disturbed nature of the site and delineation being conducted outside the blooming period.

US Army Corps of Engineers

Arid West – Version 2.0
**SOIL**

**Profile Description:** (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>%</th>
<th>Redox Features</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type</th>
<th>Loc</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>LOYSR 3/6</td>
<td>95</td>
<td>2.5</td>
<td>URY 3/6</td>
<td>5</td>
<td>C</td>
<td>M</td>
<td>Sandy-Loam</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. |
| Location: PL=Pore Lining, M=Matrix. |

**Hydric Soil Indicators:** (Applicable to all LRRs, unless otherwise noted.)
- Histosol (A1) Sandy Redox (S5)
- Histis Epipedon (A2) Stripped Matrix (S6)
- Black Histic (A3) Loamy Mucky Mineral (F1)
- Hydrogen Sulfide (A4) Loamy Glyzed Matrix (F2)
- Stratified Layers (A5) (LRR C) Depleted Matrix (F3)
- 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6)
- Depleted Below Dark Surface (A11) Depleted Dark Surface (F7)
- Thick Dark Surface (A12) Redox Depressions (F8)
- Sandy Mucky Mineral (S1) Vernal Pools (F9)
- Sandy Glyzed Matrix (S4)

**Restrictive Layer (if present):**
- Type: Slate - Redrock
- Depth (inches): 4

**Hydric Soil Present?** Yes [ ] No [ ]

**Remarks:**
- Redox on slate pieces

---

**HYDROLOGY**

**Wetland Hydrology Indicators:**
- Primary Indicators (minimum of one required; check all that apply)
  - Surface Water (A1)
  - High Water Table (A2)
  - Saturation (A3)
  - Water Marks (B1) (Nonriverine)
  - Sediment Deposits (B2) (Nonriverine)
  - Drift Deposits (B3) (Nonriverine)
  - Surface Soil Cracks (B6)
  - Inundation Visible on Aerial Imagery (B7)
  - Water-Stained Leaves (B9)

- Secondary Indicators (2 or more required)
  - Salt Crust (B11)
  - Biotic Crust (B12)
  - Aquatic Invertebrates (B13)
  - Hydrogen Sulfide Odor (C1)
  - Oxidized Rhizospheres along Living Roots (C3)
  - Presence of Reduced iron (C4)
  - Recent iron Reduction in Tilled Soils (C6)
  - Thin Muck Surface (C7)
  - Other (Explain in Remarks)

**Field Observations:**
- Surface Water Present? Yes [ ] No [ ] Depth (inches): 0
- Water Table Present? Yes [ ] No [ ] Depth (inches): 3
- Saturation Present? Yes [ ] No [ ] Depth (inches): 0

**Wetland Hydrology Present?** Yes [ ] No [ ]

**Remarks:**

---

US Army Corps of Engineers  
Arid West – Version 2.0
WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Caribou Creek Bridge Replacement  
City/County: Amador County  
Sampling Date: 2/23/16

Applicant/Owner: Caltrans  
State: CA  
Sampling Point: la

Investigator(s):  
Section, Township, Range: S22, T32N, R9E

Landform (hillslope, terrace, etc.):  
Local relief (concave, convex, none):  
Slope (%):  

Subregion (LRR):  
Lat:  
Long:  
Datum:  

Soil Map Unit Name: NWI classification:  

Are climatic / hydrologic conditions on the site typical for this time of year? Yes [ ] No [x]  
(If no, explain in Remarks.)  

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes [ ] No [x]  
(If needed, explain any answers in Remarks.)  

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes [ ] No [x]</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes [ ] No [ ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes [x] No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes [x] No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks:

VEGETATION – Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: ______)</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

= Total Cover

<table>
<thead>
<tr>
<th>Sapling/Shrub Stratum (Plot size: ______)</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3.</td>
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<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

= Total Cover

<table>
<thead>
<tr>
<th>Herb Stratum (Plot size: ______)</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Unknown species</td>
<td>95 [ ] 3 [ ] UPL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Ceratostigma</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Erodium esculentum</td>
<td>8 N UPL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>100 = Total Cover</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody Vine Stratum (Plot size: ______)</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>4.</td>
<td></td>
<td></td>
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<td>5.</td>
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<td></td>
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<tr>
<td>6.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

= Total Cover

% Bare Ground in Herb Stratum ______ % Cover of Biotic Crust ______

Remarks: Did not use this criteria due to the disturbed nature of the site and delimitation being conducted outside the blooming period.
### SOIL

**Profile Description:** (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Color (moist)</th>
<th>%</th>
<th>Color (most)</th>
<th>%</th>
<th>Type</th>
<th>Loc</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-9</td>
<td>10SR 3/6</td>
<td>93</td>
<td>5SR 5/8</td>
<td>7</td>
<td>C</td>
<td>M</td>
<td>Sandy-Loam w/ shale</td>
<td></td>
</tr>
</tbody>
</table>

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.*

**Hydric Soil Indicators:** (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Hist (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surfacing (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Matrix (S1)
- Sandy Gleyed Matrix (S4)

**Indicators for Problematic Hydric Soils:**

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

**Restrictive Layer (if present):**

- Type: 
- Depth (inches): 

**Hydric Soil Present?** Yes / No

**Remarks:**

Shale pieces contain redox stains.

### HYDROLOGY

**Wetland Hydrology Indicators:**

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

**Secondary Indicators (2 or more required):**

- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drift Deposits (B3) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

**Field Observations:**

- Surface Water Present? Yes / No
- Water Table Present? Yes / No
- Saturation Present? Yes / No

**Remarks:**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available.
WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Carbondale Rd Bridge Replacement  City/County: Amador County  Sampling Date: 2/13/2016
Applicant/Owner: Caltrans  State: CA  Sampling Point: 10
Investigator(s): Stancic de Barras  Section, Township, Range: S22, T7N, R9E
Landform (hillslope, terrace, etc.):  Local relief (concave, convex, none):  Slope (%): 
Subregion (LR):  Lat:  Long:  Datum: 
Soil Map Unit Name:  NWI classification: 
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☑ No  (If no, explain in Remarks.)
Are Vegetation ☑ Soil disturbed? or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No  
Are Vegetation ☑ Soil ☑ or Hydrology ☑ naturally problematic?  (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes ☑ No</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes ☑ No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes ☑ No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes ☑ No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks: Upland data points

VEGETATION – Use scientific names of plants.

Tree Stratum  (Plot size: ) Absolute % Cover Dominant Species? Indicator Status
1. ____________________________________________
2. ____________________________________________
3. ____________________________________________
4. ____________________________________________

= Total Cover

 Sapling/Shrub Stratum  (Plot size: )
1. ____________________________________________
2. ____________________________________________
3. ____________________________________________
4. ____________________________________________
5. ____________________________________________
6. ____________________________________________

= Total Cover

 Herb Stratum  (Plot size: )
1. Unknown green  100 ☑
2. ____________________________________________
3. ____________________________________________
4. ____________________________________________
5. ____________________________________________
6. ____________________________________________
7. ____________________________________________
8. ____________________________________________
9. ____________________________________________

= Total Cover

 Woody Vine Stratum  (Plot size: )
1. ____________________________________________
2. ____________________________________________

= Total Cover

% Bare Ground in Herb Stratum  % Cover of Biotic Crust

Remarks: Heavily grazed by cattle.

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: _________ (A)
Total Number of Dominant Species Across All Strata: _________ (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: _________ (A/B)

Prevalence Index worksheet:
Total % Cover of: Multiply by:
OBL species x 1 =
FACW species x 2 =
FAC species x 3 =
FACU species x 4 =
UPL species x 5 =
Column Totals: _________ (A) _________ (B)

Prevalence Index = B/A = _________

Hydrophytic Vegetation Indicators:
☐ Dominance Test is >50%
☐ Prevalence Index is ≤3.0
☐ Morphological Adaptations 1 (Provide supporting data in Remarks or on a separate sheet)
☐ Problematic Hydrophytic Vegetation 2 (Explain)

1Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☑ No

---

US Army Corps of Engineers  Arid West – Version 2.0
## Soil Profile Description

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>%</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type</th>
<th>Loc</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10</td>
<td>LOYR</td>
<td>4/6</td>
<td>95</td>
<td>5/8</td>
<td>5</td>
<td>C</td>
<td>M</td>
<td>Sandy-Loam</td>
<td></td>
</tr>
</tbody>
</table>

**Type:** C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  **Location:** PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulphide (A4)
- Stratified Layers (A5)
- 1 cm Muck (A9)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

**Indicators for Problematic Hydric Soils**

- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

### Restrictive Layer (if present):

<table>
<thead>
<tr>
<th>Type:</th>
<th>Depth (inches):</th>
<th>Hydric Soil Present?</th>
</tr>
</thead>
</table>

**Remarks:**

### Hydrology

#### Wetland Hydrology Indicators

<table>
<thead>
<tr>
<th>Primary Indicators (minimum of one required; check all that apply)</th>
<th>Secondary Indicators (2 or more required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Water (A1)</td>
<td>Water Marks (B1) (Riverine)</td>
</tr>
<tr>
<td>High Water Table (A2)</td>
<td>Sediment Deposits (B2) (Riverine)</td>
</tr>
<tr>
<td>Saturation (A3)</td>
<td>Drift Deposits (B3) (Riverine)</td>
</tr>
<tr>
<td>Water Marks (B1) (Nonriverine)</td>
<td>Drainage Patterns (B10)</td>
</tr>
<tr>
<td>Sediment Deposits (B2) (Nonriverine)</td>
<td>Oxidized Rhizospheres along Living Roots (C3)</td>
</tr>
<tr>
<td>Drift Deposits (B3) (Nonriverine)</td>
<td>Presence of Reduced iron (C4)</td>
</tr>
<tr>
<td>Surface Soil Cracks (B6)</td>
<td>Recent Iron Reduction in Tilled Soils (C6)</td>
</tr>
<tr>
<td>Inundation Visible on Aerial Imagery (B7)</td>
<td>Thin Muck Surface (C7)</td>
</tr>
<tr>
<td>Water-Stained Leaves (B9)</td>
<td>Other (Explain in Remarks)</td>
</tr>
</tbody>
</table>

**Field Observations:**

- Surface Water Present? Yes  No  Depth (inches): 0-9
- Water Table Present? Yes  No  Depth (inches): 0-9
- Saturation Present? Yes  No  Depth (inches): 0-9

**Wetland Hydrology Present?** Yes  No

**Remarks:**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Carpinteria Rd Bridge Replacement  City/County: Amador County  Sampling Date: 2/23/16
Applicant/Owner: Caltrans  State: CA  Sampling Point: 2
Investigator(s): Stefan de Barros  Section, Township, Range: S22, T3N, R9E
Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Slope (%):
Subregion (LRR): Long: Lat: Datum: Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No (If no, explain in Remarks.)
Are Vegetation Soil _____, or Hydrology _____ significantly disturbed? Are “Normal Circumstances” present? Yes  No
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes ✔</td>
<td>No</td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes ✔</td>
<td>No</td>
</tr>
</tbody>
</table>

| Remarks: |

<table>
<thead>
<tr>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

VEGETATION – Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum  (Plot size: _________)</th>
<th>Absolute  % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
<th>Dominance Test worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Number of Dominant Species That Are OBL., FACW, or FAC: _________ (A)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total Number of Dominant Species Across All Strata: _________ (B)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Percent of Dominant Species That Are OBL, FACW, or FAC: _________ (A/B)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub Stratum (Plot size: _________)</th>
<th>Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb Stratum (Plot size: _________)</th>
<th>Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>Erodium oantaricum</strong></td>
<td>2</td>
</tr>
<tr>
<td>2. <strong>Geranium dissectum</strong></td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody Vine Stratum (Plot size: _________)</th>
<th>Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>% Bare Ground in Herb Stratum</th>
<th>% Cover of Biotic Crust</th>
</tr>
</thead>
</table>

| Remarks: |  |

[Handwritten note: Area heavily grazed by cattle & grasses were not in bloom.]

US Army Corps of Engineers  Arid West – Version 2.0
**SOIL**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-6</td>
<td>10PR 3/4</td>
<td>7.5PR 4/6</td>
</tr>
<tr>
<td></td>
<td>90</td>
<td>10</td>
</tr>
</tbody>
</table>

**TYPE**: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. **Location**: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators**: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Historic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Silty Loam

**Indicators for Problematic Hydric Soils**:

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (F12)
- Other (Explain in Remarks)

**Restrictive Layer (if present)**

- Type: Shale (Quartz)
- Depth (inches): 6

**Hydric Soil Present?** Yes / No

**Remarks**

---

**HYDROLOGY**

**Wetland Hydrology Indicators**:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

Secondary Indicators (2 or more required)

- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C8)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drift Deposits (B3) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

**Field Observations**

- Surface Water Present? Yes / No
- Water Table Present? Yes / No
- Saturation Present? Yes / No

**Wetland Hydrology Present?** Yes / No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks**

---

US Army Corps of Engineers

Arid West – Version 2.0
<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: __________)</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
<th>Dominance Test worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td>Number of Dominant Species That Are OBL, FACW, or FAC: (A)</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td>Total Number of Dominant Species Across All Strata: (B)</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td>Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)</td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
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<thead>
<tr>
<th>Sapling/Shrub Stratum (Plot size: __________)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<td>2.</td>
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<td>3.</td>
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<tr>
<td>4.</td>
</tr>
<tr>
<td>5.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb Stratum (Plot size: __________)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Unknown grass</td>
</tr>
<tr>
<td>2. Erodium cicutarium</td>
</tr>
<tr>
<td>3. Geranium dissectum</td>
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<tr>
<td>4.</td>
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<tr>
<td>5.</td>
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<td>6.</td>
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<td>7.</td>
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<tr>
<td>8.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody Vine Stratum (Plot size: __________)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<tr>
<td>2.</td>
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<td></td>
</tr>
</tbody>
</table>

% Bare Ground in Herb Stratum _____  % Cover of Biotic Crust _____

Remarks: Area heavily grazed by cattle.
### SOIL

**Profile Description:** (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type</th>
<th>Loc</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10</td>
<td>10PR 3/6</td>
<td>95</td>
<td>2.5PR 4/8</td>
<td>C</td>
<td>M</td>
<td>Sandy Loam</td>
</tr>
</tbody>
</table>

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:** (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Historic Eppipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

Indicators for Problematic Hydric Soils:

- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Redox Dark Surface (F6)
- Depleted Matrix (F3)
- Redox Depressions (F8)
- Vernal Pools (F9)

**Restrictive Layer (if present):**

- Type: Sand
- Depth (inches): 10

**Hydric Soil Present?** Yes ✔ No

**Remarks:**

### HYDROLOGY

**Wetland Hydrology Indicators:**

- Primary Indicators (minimum of one required; check all that apply)
  - Surface Water (A1)
  - High Water Table (A2)
  - Saturation (A3)
  - Water Marks (B1) (Nonriverine)
  - Sediment Deposits (B2) (Nonriverine)
  - Drift Deposits (B3) (Nonriverine)
  - Surface Soil Cracks (B9)
  - Inundation Visible on Aerial Imagery (B7)
  - Water-Stained Leaves (B9)

- Secondary Indicators (2 or more required)
  - Salt Crust (B11)
  - Biotic Crust (B12)
  - Aquatic Invertebrates (B13)
  - Hydrogen Sulfide Odor (C1)
  - Oxidized Rhizospheres along Living Roots (C3)
  - Presence of Reduced Iron (C4)
  - Recent Iron Reduction in Tilled Soils (C6)
  - Thin Muck Surface (C7)
  - Other (Explain in Remarks)
  - Water Marks (B1) (Riverine)
  - Sediment Deposits (B2) (Riverine)
  - Drift Deposits (B3) (Riverine)
  - Drainage Patterns (B10)
  - Dry-Season Water Table (C2)
  - Crayfish Burrows (C8)
  - Saturation Visible on Aerial Imagery (C9)
  - Shallow Aquillard (D3)
  - FAC-Neutral Test (D5)

**Field Observations:**

- Surface Water Present? Yes ✔ No
- Water Table Present? Yes ✔ No
- Saturation Present? Yes ✔ No
  (includes capillary fringe)

**Depth (inches): 0-10**

**Wetland Hydrology Present?** Yes ✔ No ✔

**Remarks:**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**

US Army Corps of Engineers

Arid West – Version 2.0
**WETLAND DETERMINATION DATA FORM – Arid West Region**

**Project/Site:** Carbonade Rd Bridge Replacement  
**City/County:** Amador County  
**Sampling Date:** 2/23/16

**Applicant/Owner:** Cathans  
**State:** CA  
**Sampling Point:** 3

**Investigator(s):** Stefan de Berras  
**Section, Township, Range:** S22 T23S R9E

**Landform (hillslope, terrace, etc.):**  
**Local relief (concave, convex, none):** Concave  
**Slope (%):**

**Subregion (LRR):**  
**Lat:**  
**Long:**  
**Datum:**

**Soil Map Unit Name:**  
**NWI classification:**

**Are climatic / hydrologic conditions on the site typical for this time of year?**  
**Yes**  
**No**  
**(If no, explain in Remarks.)

**Are Vegetation**  
**Soil**  
**Hydrology**  
**Significantly disturbed?**  
**Are “Normal Circumstances” present?**  
**Yes**  
**No**  
**(If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS** – Attach site map showing sampling point locations, transects, important features, etc.

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes</th>
<th>No</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

---

**VEGETATION** – Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size:_)</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
<th>Dominance Test worksheet:</th>
<th>prevailance index worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <em>Quercus lobata</em></td>
<td>3</td>
<td>N</td>
<td>FACU</td>
<td>Number of Dominant Species That Are OBL, FACW, or FAC:</td>
<td>Multiply by:</td>
</tr>
<tr>
<td>2. <em>Quercus wislizenii</em></td>
<td>7</td>
<td>N</td>
<td>FACU</td>
<td>1 (A)</td>
<td>OBL species:</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>FACW species:</td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>FAC species:</td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
<td>Total Number of Dominant Species Across All Strata:</td>
<td>1 (B)</td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td></td>
<td></td>
<td>Percent of Dominant Species That Are OBL, FACW, or FAC:</td>
<td>100 (A/B)</td>
</tr>
<tr>
<td>Sapling/Shrub Stratum (Plot size:_)</td>
<td>10 = Total Cover</td>
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<td>1.</td>
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<tr>
<td>Herb Stratum (Plot size:_)</td>
<td>85 = Total Cover</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. <em>Juncus xiphoides</em></td>
<td></td>
<td></td>
<td>OBL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Unknown grasses</td>
<td>5</td>
<td>N</td>
<td>UPL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. <em>Taeniatherum caput-medusae</em></td>
<td>2</td>
<td>N</td>
<td>UPL</td>
<td></td>
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<td>4.</td>
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<td>8.</td>
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</tr>
<tr>
<td>Woody Vine Stratum (Plot size:_)</td>
<td>92 = Total Cover</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
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<td>2.</td>
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</tr>
</tbody>
</table>

**Hydrophytic Vegetation Indicators:**  
**Dominance Test is >50%**  
**Prevalence Index is ≥3.0**

□ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
□ Problematic Hydrophytic Vegetation (Explain)

**Remarks:**

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

% Bare Ground in Herb Stratum  
% Cover of Biotic Crust  

**Remarks:**

*Area heavily grazed by cattle.*
**SOIL**

**Profile Description:** (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Color (moist)</th>
<th>% Color (moist)</th>
<th>%</th>
<th>Type</th>
<th>Loc</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10</td>
<td>104R 3/2</td>
<td>60</td>
<td>254R 4/6</td>
<td>40</td>
<td>C</td>
<td>M</td>
<td>Silty-Clay-Loam</td>
</tr>
</tbody>
</table>

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Location: PL=Porous Lining, M=Matrix.

**Hydric Soil Indicators:** (Applicable to all LRRs, unless otherwise noted.)

- Histic Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 1 cm Muck (A9)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

**Indicators for Problematic Hydric Soils:**

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (T12)
- Other (Explain in Remarks)

**Restrictive Layer (if present):**

<table>
<thead>
<tr>
<th>Type:</th>
<th>Depth (inches):</th>
<th>Hydric Soil Present?</th>
<th>Yes ✓</th>
<th>No No</th>
</tr>
</thead>
</table>

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
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- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

**Field Observations:***

- Surface Water Present? Yes ✓ No
- Water Table Present? Yes ✓ No
- Saturation Present? Yes ✓ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

---

US Army Corps of Engineers

Arid West – Version 2.0
WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Taste Hills Bridge Replacement  
City/County: Ada County  
Sampling Date: 2/23/16

Applicant/Owner:  
State: CO  
Sampling Point: 3

Investigator(s):  
Section, Township, Range: 5 22 23 N 9 E

Landform (hillslope, terrace, etc.):  
Local relief (concave, convex, none):  
Slope (%): 

Subregion (LRR):  
Lat:  
Long:  
Datum:  

Soil Map Unit Name:  
NWI classification:  

Are climatic / hydrologic conditions on the site typical for this time of year? Yes [ ] No [ ] (If no, explain in Remarks.)

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed?  
Are "Normal Circumstances" present? Yes [ ] No [ ]  
Are Vegetation [ ] Soil [ ] or Hydrology [ ] naturally problematic?  
(If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes [ ] No [ ]</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes [ ] No [ ]</th>
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</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes [ ] No [ ]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes [ ] No [ ]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks:

VEGETATION – Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: __________)</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<td>4.</td>
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</tbody>
</table>

= Total Cover

<table>
<thead>
<tr>
<th>Sapling/Shrub Stratum</th>
<th>(Plot size: __________)</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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</tbody>
</table>

= Total Cover

<table>
<thead>
<tr>
<th>Herb Stratum</th>
<th>(Plot size: __________)</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Unknown guess</td>
<td>55 y</td>
<td>OBL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Juncus effusus</td>
<td>40 y</td>
<td>OBL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Rumex crispus</td>
<td>5 N</td>
<td>FAC</td>
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</table>

= Total Cover

<table>
<thead>
<tr>
<th>Woody Vine Stratum</th>
<th>(Plot size: __________)</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<tr>
<td>2.</td>
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</tbody>
</table>

= Total Cover

<table>
<thead>
<tr>
<th>% Bare Ground in Herb Stratum</th>
<th>% Cover of Biotic Crust</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks:

Area heavily grazed by cattle.

US Army Corps of Engineers
Arid West – Version 2.0
**SOIL**

**Profile Description:** (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>%</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type</th>
<th>Loc</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10</td>
<td></td>
<td>56/48 H/1</td>
<td>60</td>
<td>SPR 4/6</td>
<td>40</td>
<td>C</td>
<td>M</td>
<td>Silty Clay Loam</td>
<td></td>
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</tbody>
</table>

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  Location: PL=Pore Lining, M=Matrix.*

**Hydric Soil Indicators:** (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 1 cm Muck (A9)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

**Indicators for Problematic Hydric Soils:**

- Sandy Redox (S5)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

**Restrictive Layer (if present):**

- Type: ____________________
- Depth (inches): __________
- Hydric Soil Present? Yes ✓ No ___

**Remarks:**

---

**HYDROLOGY**

**Wetland Hydrology Indicators:**

<table>
<thead>
<tr>
<th>Primary Indicators (minimum of one required; check all that apply)</th>
<th>Secondary Indicators (2 or more required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Water (A1)</td>
<td>Water Marks (B1) (Riverine)</td>
</tr>
<tr>
<td>✓ High Water Table (A2)</td>
<td>Sediment Deposits (B2) (Riverine)</td>
</tr>
<tr>
<td>✓ Saturation (A3)</td>
<td>Drift Deposits (B3) (Riverine)</td>
</tr>
<tr>
<td>Water Marks (G1) (Nonriverine)</td>
<td>Drainage Patterns (B10)</td>
</tr>
<tr>
<td>Sediment Deposits (B2) (Nonriverine)</td>
<td>Dry-Season Water Table (C2)</td>
</tr>
<tr>
<td>Drift Deposits (B3) (Nonriverine)</td>
<td>Crayfish Burrows (C8)</td>
</tr>
<tr>
<td>Surface Soil Cracks (B6)</td>
<td>Saturation Visible on Aerial Imagery (C9)</td>
</tr>
<tr>
<td>Inundation Visible on Aerial Imagery (B7)</td>
<td>Shallow Aquitard (D3)</td>
</tr>
<tr>
<td>Water-Stained Leaves (B9)</td>
<td>FAC-Neutral Test (D5)</td>
</tr>
</tbody>
</table>

**Field Observations:**

- Surface Water Present? Yes ✓ No ___ Depth (inches): __________
- Water Table Present? Yes ✓ No ___ Depth (inches): __________
- Saturation Present? Yes ✓ No ___ Depth (inches): __________

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**

---

US Army Corps of Engineers  Arid West – Version 2.0
**WETLAND DETERMINATION DATA FORM – Arid West Region**

**Project/Site:** Cartersdale Rd Bridge Replacement  
**City/County:** San Diego County  
**Sampling Date:** 2/23/16  
**Applicant/Owner:** Coltrans  
**State:** CA  
**Investigator(s):** Stefan de Barros  
**Section, Township, Range:** S22 T7N R4E  
**Landform (hillslope, terrace, etc.):** Local relief (concave, convex, none):  
**Subregion (L.R.R.):**  
**Lat:**  
**Long:**  
**Datum:**  
**Soil Map Unit Name:**  
**NWI classification:**  
**Are climatic / hydrologic conditions on the site typical for this time of year?** Yes [ ] No [ ]  
(If no, explain in Remarks.)  
**Are Vegetation, Soil, or Hydrology significantly disturbed?**  
**Are "Normal Circumstances" present?** Yes [ ] No [ ]  
(If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS** - Attach site map showing sampling point locations, transects, important features, etc.

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes [ ] No [ ]</th>
<th>Hydric Soil Present?</th>
<th>Yes [ ] No [ ]</th>
<th>Wetland Hydrology Present?</th>
<th>Yes [ ] No [ ]</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes [ ] No [ ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remarks:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**VEGETATION** – Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: _________)</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
<th>Dominance Test worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td>Number of Dominant Species That Are OBL, FACW, or FAC: _________ (A)</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td>Total Number of Dominant Species Across All Strata: _________ (B)</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td>Percent of Dominant Species That Are OBL, FACW, or FAC: _________ (A/B)</td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>= Total Cover</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub Stratum (Plot size: _________)</th>
<th></th>
<th></th>
<th>= Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td>= Total Cover</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>= Total Cover</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb Stratum (Plot size: _________)</th>
<th></th>
<th>= Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. [Unknown grass] 100 Y UPL</td>
<td></td>
<td>= Total Cover</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
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<tr>
<td>4.</td>
<td></td>
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<tr>
<td>5.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>= Total Cover</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody Vine Stratum (Plot size: _________)</th>
<th>= Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>= Total Cover</td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>= Total Cover</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>% Bare Ground in Herb Stratum</th>
<th>% Cover of Biotic Crust</th>
</tr>
</thead>
</table>

**Remarks:**

*Area heavily grazed by cattle & delineation completed outside the blooming period.*

---

**Hydrophytic Vegetation Indicators:**

- Dominance Test is >50%
- Prevalence Index is ≤3.0
- Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation² (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

--

US Army Corps of Engineers  
Arid West – Version 2.0
## SOIL

**Profile Description:** (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Color (moist)</th>
<th>%</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type</th>
<th>Loc</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-12</td>
<td>7.5YR 3/6</td>
<td>90</td>
<td>5YR 4/6</td>
<td>10</td>
<td>C</td>
<td>M</td>
<td>Sandy</td>
<td>Loam</td>
</tr>
</tbody>
</table>

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Location: PL=Pore Lining, M=Matrix.*

**Hydric Soil Indicators:** (Applicable to all LRRs, unless otherwise noted.)
- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depressed Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

**Indicators for Problematic Hydric Soils:**
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Redox Depressions (F8)
- Vernal Pools (F9)

**Restrictive Layer (if present):**
- Type: ____________________________
- Depth (inches): __________________

**Hydric Soil Present?** Yes □ No □

**Remarks:**

> Big rain event occurred < 6 days from time of delineation

## HYDROLOGY

**Wetland Hydrology Indicators:**

<table>
<thead>
<tr>
<th>Primary Indicators (minimum of one required; check all that apply)</th>
<th>Secondary Indicators (2 or more required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Water (A1)</td>
<td>Water Marks (B1) (Riverine)</td>
</tr>
<tr>
<td>High Water Table (A2)</td>
<td>Sediment Deposits (B2) (Riverine)</td>
</tr>
<tr>
<td>Saturation (A3)</td>
<td>Drift Deposits (B3) (Riverine)</td>
</tr>
<tr>
<td>Water Marks (B1) (Nonriverine)</td>
<td>Drainage Patterns (B10)</td>
</tr>
<tr>
<td>Sediment Deposits (B2) (Nonriverine)</td>
<td>Oxidized Rhizospheres along Living Roots (C3)</td>
</tr>
<tr>
<td>Drift Deposits (B3) (Nonriverine)</td>
<td>Presence of Reduced Iron (C4)</td>
</tr>
<tr>
<td>Surface Soil Cracks (B8)</td>
<td>Recent Iron Reduction in Tilled Soils (C6)</td>
</tr>
<tr>
<td>Inundation Visible on Aerial Imagery (B7)</td>
<td>Thin Muck Surface (C7)</td>
</tr>
<tr>
<td>Water-Stained Leaves (B9)</td>
<td>Other (Explain in Remarks)</td>
</tr>
</tbody>
</table>

**Field Observations:**
- Surface Water Present? Yes □ No □ Depth (inches): 0-12
- Water Table Present? Yes □ No □ Depth (inches): 0-12
- Saturation Present? Yes □ No □ Depth (inches): >12

Wetland Hydrology Present? Yes □ No □

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**

---

US Army Corps of Engineers

Arid West – Version 2.0
### WETLAND DETERMINATION DATA FORM – Arid West Region

**Project/Site:** Carondele Rd Bridge Replacement  
**City/County:** Amador County  
**Sampling Date:** 2/23/16

**Applicant/Owner:** Caltrans  
**State:** CA  
**Sampling Point:** 4

**Investigator(s):** Stan de Barros  
**Section, Township, Range:** 522, 23; T2N; R9E

**Landform (hillslope, terrace, etc.):**  
**Local relief (concave, convex, none):**  
**Slope (%):**

**Subregion (LRR):**  
**Lat:**  
**Long:**  
**Datum:**

**Soil Map Unit Name:**  
**NWI classification:**

**Are climatic / hydrologic conditions on the site typical for this time of year?**  
Yes [ ] No [ ] (If no, explain in Remarks.)

**Are Vegetation ______, Soil ______ or Hydrology ______ significantly disturbed?**  
Are "Normal Circumstances" present?  
Yes [ ]  
No [ ]

**Are Vegetation ______, Soil ______ or Hydrology ______ naturally problematic?**  
(If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes [ ]</th>
<th>No [ ]</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes [ ]</th>
<th>No [ ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes [ ]</td>
<td>No [ ]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes [ ]</td>
<td>No [ ]</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

### VEGETATION – Use scientific names of plants.

#### Tree Stratum (Plot size: __________)

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Indicator Species?</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Cover</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Sapling/Shrub Stratum (Plot size: __________)

<table>
<thead>
<tr>
<th>Sapling/Shrub Stratum</th>
<th>Absolute % Cover</th>
<th>Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td>= Total Cover</td>
</tr>
</tbody>
</table>

#### Herb Stratum (Plot size: __________)

<table>
<thead>
<tr>
<th>Herb Stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Indicator Species?</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Rumex crispus</td>
<td>70</td>
<td>Y</td>
<td>OBL</td>
</tr>
<tr>
<td>2. Actinidia arguta</td>
<td>10</td>
<td>N</td>
<td>UPL</td>
</tr>
<tr>
<td>3. Erodium cicutarium</td>
<td>8</td>
<td>N</td>
<td>UPL</td>
</tr>
<tr>
<td>4. Trifolium repens</td>
<td>10</td>
<td>N</td>
<td>FAC</td>
</tr>
<tr>
<td>5. Solidago canadensis</td>
<td>2</td>
<td>N</td>
<td>FAC</td>
</tr>
</tbody>
</table>

#### Woody Vine Stratum (Plot size: __________)

<table>
<thead>
<tr>
<th>Woody Vine Stratum</th>
<th>Absolute % Cover</th>
<th>Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td>= Total Cover</td>
</tr>
</tbody>
</table>

**% Bare Ground in Herb Stratum ______  % Cover of Biotic Crust ______

**Remarks:**

**Hydrophytic Vegetation Indicators:**

- Dominance Test is >50%
- Prevalence Index is ≥3.0

1. Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>%</th>
<th>Redox Features</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type</th>
<th>Loc</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-15</td>
<td>ULYR 3/2</td>
<td>93</td>
<td></td>
<td>7.5YR 4/6</td>
<td>7</td>
<td></td>
<td>C</td>
<td>M</td>
<td>Silty Clay Loam</td>
<td></td>
</tr>
</tbody>
</table>

^Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:** (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histose Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulphide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

**Hydric Soil Present?** Yes ✓ No

**Hydrology**

**Wetland Hydrology Indicators:**

<table>
<thead>
<tr>
<th>Primary Indicators (minimum of one required: check all that apply)</th>
<th>Secondary Indicators (2 or more required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Surface Water (A1)</td>
<td>Water Marks (B1) (Riverine)</td>
</tr>
<tr>
<td>✓ High Water Table (A2)</td>
<td>Sediment Deposits (B2) (Riverine)</td>
</tr>
<tr>
<td>✓ Saturation (A3)</td>
<td>Aquatic Invertebrates (B13)</td>
</tr>
<tr>
<td>✓ Water Marks (B1) (Nonriverine)</td>
<td>Hydrogen Sulphide Odor (C1)</td>
</tr>
<tr>
<td>✓ Sediment Deposits (B2) (Nonriverine)</td>
<td>Oxidized Rhizospheres along Living Roots (C3)</td>
</tr>
<tr>
<td>✓ Drift Deposits (B3) (Nonriverine)</td>
<td>Presence of Reduced Iron (C4)</td>
</tr>
<tr>
<td>✓ Surface Soil Cracks (B6)</td>
<td>Recent Iron Reduction in Tilled Soils (C8)</td>
</tr>
<tr>
<td>✓ Water-Stained Leaves (B9)</td>
<td>Thin Muck Surface (C7)</td>
</tr>
<tr>
<td>✓ Field Observations:</td>
<td>Other (Explain in Remarks)</td>
</tr>
<tr>
<td>Surface Water Present? Yes ✓ No Depth (inches): 0</td>
<td>Wetland Hydrology Present? Yes ✓ No</td>
</tr>
<tr>
<td>Water Table Present? Yes ✓ No Depth (inches): 9</td>
<td></td>
</tr>
<tr>
<td>Saturation Present? (includes capillary fringe) Yes ✓ No Depth (inches): 7</td>
<td></td>
</tr>
</tbody>
</table>

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Cortland Ave Bridge Replacement  City/County: Anza District  Sampling Date: 7/23/16
Applicant/Owner:  State: CA  Sampling Point: 4a
Investigator(s):  Section, Township, Range: S23 T45N R9E
Landform (hilsllope, terrace, etc.):  Local relief (concave, convex, rone):  Slope (%): 
Subregion (LRR):  Lat:  Long:  Datum: 
Soil Map Unit Name:  NWI classification: 
Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)
Are vegetation______, soil______, or hydrology______ significantly disturbed? Are "Normal Circumstances" present? Yes  No 
Are vegetation______, soil______, or hydrology______ naturally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes  No</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes  No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes  No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes  No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks:

VEGETATION – Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: ______________)</th>
<th>Absolute % Cover</th>
<th>Dominant Indicator Species?</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Cover

<table>
<thead>
<tr>
<th>Sapling/Shrub Stratum (Plot size: ______________)</th>
<th>Absolute % Cover</th>
<th>Dominant Indicator Species?</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td></td>
<td></td>
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<td>3.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Cover

<table>
<thead>
<tr>
<th>Herb Stratum (Plot size: ______________)</th>
<th>Absolute % Cover</th>
<th>Dominant Indicator Species?</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tephroseris caput-medusae</td>
<td>50  Y  UPL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Erodium cicutarium</td>
<td>5  N  UPL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Unknown grass</td>
<td>45  Y  UPL</td>
<td></td>
<td></td>
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<td>4.</td>
<td></td>
<td></td>
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<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Cover

<table>
<thead>
<tr>
<th>Woody Vine Stratum (Plot size: ______________)</th>
<th>Absolute % Cover</th>
<th>Dominant Indicator Species?</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Cover

<table>
<thead>
<tr>
<th>% Bare Ground in Herb Stratum</th>
<th>% Cover of Biotic Crust</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks:

Grasses not in bloom @ time of delineation.
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-12</td>
<td>109R 3/4</td>
<td>100</td>
</tr>
</tbody>
</table>

Texture: Sandy Loam

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)
- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

Indicators for Problematic Hydric Soils:
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Redox Depressions (F8)

Restrictive Layer (if present):
- Type: 
- Depth (inches): 
- Hydric Soil Present? Yes [ ] No [x]

Remarks:

Hydrology

Wetland Hydrology Indicators:
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

Secondary Indicators (2 or more required):
- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- FAC-Neutral Test (D5)

Field Observations:
- Surface Water Present? Yes [ ] No [x] Depth (inches): 0-12
- Water Table Present? Yes [ ] No [x] Depth (inches): 0-12
- Saturation Present? Yes [ ] No [x] Depth (inches): >12

Wetland Hydrology Present? Yes [ ] No [x]

Remarks:
**WETLAND DETERMINATION DATA FORM – Arid West Region**

**Project/Site:** Carbonate Rd Bridge Replacement  
**City/County:** Amador County  
**Sampling Date:** 2/23/16

**Applicant/Owner:** Cemex  
**State:** CA  
**Sampling Point:** 4

**Investigator(s):** Stefan de Barros  
**Section, Township, Range:** S 22, T 33, R 9 E

**Landform (hillslope, terrace, etc.):**  
**Local relief (concave, convex, none):**  
**Slope (%):**

**Subregion (LRR):**  
**Lat:**  
**Long:**  
**Datum:**  
**Soil Map Unit Name:**  
**NWI classification:**

**Are climatic / hydrologic conditions on the site typical for this time of year?** Yes [ ] No [ ]  
(If no, explain in Remarks.)

**Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed?**  
**Are "Normal Circumstances" present?** Yes [ ] No [ ]

**Are Vegetation ______, Soil ______, or Hydrology ______ naturally problematic?**  
(If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes [ ] No [ ]</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes [ ] No [ ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes [ ] No [ ]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes [ ] No [ ]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:** Upload data point

**VEGETATION – Use scientific names of plants.**

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: _________)</th>
<th>Absolute % Cover</th>
<th>Dominant Indicator Species?</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
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<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>= Total Cover</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub Stratum (Plot size: _________)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2.</td>
<td></td>
<td></td>
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<td>3.</td>
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<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>= Total Cover</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb Stratum (Plot size: _________)</th>
<th>% Cover</th>
<th>Species?</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Unknown grass</td>
<td>80</td>
<td>?</td>
<td>UPL</td>
</tr>
<tr>
<td>2. Vicia villosa</td>
<td>10</td>
<td>N</td>
<td>UPL</td>
</tr>
<tr>
<td>3. Bresea nigra</td>
<td>10</td>
<td>N</td>
<td>UPL</td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
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<tr>
<td>6.</td>
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<tr>
<td>7.</td>
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</tr>
<tr>
<td>8.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>= Total Cover</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody Vine Stratum (Plot size: _________)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>= Total Cover</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>% Bare Ground in Herb Stratum</th>
<th>% Cover of Biotic Crust</th>
</tr>
</thead>
</table>

**Remarks:**

**Hydrophytic Vegetation Indicators:**

- Dominance Test is >50%
- Prevalence index is ≤3.0¹
- Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation ¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes [ ] No [ ]
### SOIL

**Profile Description:** (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-14</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Color (moist)**: 75VR 4/6 100
- **Texture**: Sandy Loam

**Hydric Soil Indicators:** (Applicable to all LRRs, unless otherwise noted.)
- Histosol (A1)
- Histie Epipedon (A2)
- Black Histie (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

**Indicators for Problematic Hydric Soils:**
- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

**Restrictive Layer (if present):**
- Type: 
- Depth (inches): 
- Hydric Soil Present? Yes [ ] No [ ]

**Remarks:**

- **5th - 2" Cobble**

### HYDROLOGY

**Wetland Hydrology Indicators:**
- Primary Indicators (minimum of one required; check all that apply)
  - Surface Water (A1)
  - High Water Table (A2)
  - Saturation (A3)
  - Water Marks (B1) (Nonriverine)
  - Sediment Deposits (B2) (Nonriverine)
  - Drift Deposits (B3) (Nonriverine)
  - Surface Soil Cracks (B6)
  - Inundation Visible on Aerial Imagery (B7)
  - Water-Stained Leaves (B9)

- Secondary Indicators (2 or more required)
  - Water Marks (B1) (Riverine)
  - Sediment Deposits (B2) (Riverine)
  - Drift Deposits (B3) (Riverine)
  - Drainage Patterns (B10)
  - Dry-Season Water Table (C2)
  - Clayey Burrows (C8)
  - Shallow Aquitard (D3)
  - FAC-Neutral Test (D5)

**Field Observations:**
- **Surface Water Present?** Yes [ ] No [ ] Depth (inches): 0-14
- **Water Table Present?** Yes [ ] No [ ] Depth (inches): 0-14
- **Saturation Present?** Yes [ ] No [ ] Depth (inches): >14

**Wetland Hydrology Present?** Yes [ ] No [ ]

**Remarks:**

- Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available.
WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Escalade Rd Bridge Replacement  City/County: Amador County  Sampling Date: 2/28/16
Applicant/Owner: Calltrans  State: CA  Sampling Point: 5
Investigator(s): Stefano de Barros  Section, Township, Range: S22,T3N,R9E
Landform (hillslope, terrace, etc.):  Local relief (concave, convex, none):  Slope (%):  
Subregion (LRR):  Lat:  Long:  Datum:  
Soil Map Unit Name:  NWI classification:  

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No  
Are Vegetation, Soil, or Hydrology significantly disturbed?  Are “Normal Circumstances” present? Yes ✓ No  
Are Vegetation, Soil, or Hydrology naturally problematic?  (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes ✓ No</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes ✓ No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes ✓ No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes ✓ No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks:

VEGETATION – Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: _________)</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
<th>Dominance Test worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td>Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td>Total Number of Dominant Species Across All Strata: 1 (B)</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td>Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)</td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

= Total Cover

<table>
<thead>
<tr>
<th>Sapling/Shrub Stratum (Plot size: _________)</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>2.</td>
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<tr>
<td>3.</td>
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<tr>
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<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

= Total Cover

<table>
<thead>
<tr>
<th>Herb Stratum (Plot size: _________)</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
<th>Prevalence Index worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Juncus xiphioides</td>
<td>80 Y OBL</td>
<td></td>
<td></td>
<td>Multiply by:</td>
</tr>
<tr>
<td>2. Juncus effusus</td>
<td>15 N FACW</td>
<td></td>
<td></td>
<td>OBL species 80 x 1 = 80</td>
</tr>
<tr>
<td>3. Thalictrum cephalanthus</td>
<td>5 N UPL</td>
<td></td>
<td></td>
<td>FACW species 15 x 2 = 30</td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
<td>FAC species ...</td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
<td>FACU species ...</td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td></td>
<td></td>
<td>UPL species ...</td>
</tr>
<tr>
<td>7.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

= Total Cover

<table>
<thead>
<tr>
<th>Woody Vine Stratum (Plot size: _________)</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
<th>Prevalence Index worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td>Multiply by:</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

= Total Cover

% Bare Ground in Herb Stratum _________  % Cover of Biotic Crust _________

Remarks:

Hydrophytic Vegetation Indicators:
✓ Dominance Test is >50%
✓ Prevalence Index is ≥3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No
### SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-6</td>
<td>10 YR 3/2</td>
<td>60</td>
<td>5 YR 4/6</td>
<td>40</td>
</tr>
</tbody>
</table>

**Hydric Soil Indicators:** (Applicable to all LRRs, unless otherwise noted.)
- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

**Restrictive Layer (if present):**
- Type: Shale
- Depth (inches): 6

**Hydric Soil Present?** Yes ☑ No

**Hydrology**

**Wetland Hydrology Indicators:**
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

**Secondary Indicators (2 or more required):**
- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drift Deposits (B3) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

**Field Observations:**
- Surface Water Present? Yes ☑ No
- Water Table Present? Yes ☑ No
- Saturation Present? Yes ☑ No

**Wetland Hydrology Present?** Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
### WETLAND DETERMINATION DATA FORM – Arid West Region

**Project/Site:** Carbonado Rd Bridge Replacement  
**City/County:** Avonlea County  
**Sampling Date:** 2/23/16  
**Applicant/Owner:** Caltrans  
**State:** CA  
**Investigator(s):** [Signature]  
**Section, Township, Range:** S22, T23, R9S  
**Landform (hillslope, terrace, etc.):**  
**Local relief (concave, convex, none):**  
**Slope (%):**  
**Subregion (LRR):**  
**Lat:**  
**Long:**  
**Datum:**  
**Soil Map Unit Name:**  
**NWI classification:**  
**Are climatic / hydrologic conditions on the site typical for this time of year?** Yes [ ] No [ ]  
(If no, explain in Remarks.)  
**Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed?**  
Are “Normal Circumstances” present? Yes [ ] No [ ]  
(If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes [ ] No [ x ]</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes [ ] No [ x ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes [ ] No [ x ]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes [ ] No [ x ]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

**Upland data point**

### VEGETATION – Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: _________)</th>
<th>Absolute % Cover</th>
<th>Dominant Indicator Species?</th>
<th>Status</th>
<th>Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sapling/Shrub Stratum (Plot size: _________)**

| 1.                                 |                  |                             |        |                                                                                                  |
| 2.                                 |                  |                             |        |                                                                                                  |
| 3.                                 |                  |                             |        |                                                                                                  |
| 4.                                 |                  |                             |        |                                                                                                  |

**Herb Stratum (Plot size: _________)**

<table>
<thead>
<tr>
<th>1. <em>Teucrium capitatum</em></th>
<th>20 N</th>
<th>UPL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. <em>Erodium cicutarium</em></td>
<td>20 N</td>
<td>UPL</td>
</tr>
<tr>
<td>3. Unknown grass</td>
<td>10 N</td>
<td>UPL</td>
</tr>
</tbody>
</table>

**Woody Vine Stratum (Plot size: _________)**

| 1.                                 |                  |                             |        |                                                                                                  |
| 2.                                 |                  |                             |        |                                                                                                  |

**% Bare Ground in Herb Stratum _________ % Cover of Biotic Crust _________**

**Remarks:**

---

1. *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.*
### SOIL

**Profile Description:** (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Color (moist)</td>
<td>%</td>
</tr>
<tr>
<td>0-6</td>
<td>1YR 3/4</td>
<td>97</td>
</tr>
<tr>
<td>6-14</td>
<td>1YR 3/4</td>
<td>60</td>
</tr>
<tr>
<td>6-14</td>
<td>5YR 4/6</td>
<td>40</td>
</tr>
</tbody>
</table>

1^Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  2^Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:** (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR C)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

**Indicators for Problematic Hydric Soils:**

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

**Restrictive Layer (if present):**

- Type: __________________________
- Depth (inches): __________________________
- Hydric Soil Present? Yes [ ] No [ ]
- Remarks: __________________________

### HYDROLOGY

**Wetland Hydrology Indicators:**

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

**Secondary Indicators (2 or more required):**

- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

**Field Observations:**

- Surface Water Present? Yes [ ] No [ ] Depth (inches): 0-14
- Water Table Present? Yes [ ] No [ ] Depth (inches): 0-14
- Saturation Present? Yes [ ] No [ ] Depth (inches): >14

Wetland Hydrology Present? Yes [ ] No [ ]

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:** __________________________
WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Gharbadele Rd Bridge Replacement  City/County: Amador County  Sampling Date: 2/23/16
Applicant/Owner: Catonna  State: CA  Sampling Point: 5b
Investigator(s): Stefan de Barros  Section, Township, Range: S28, T4N, R9E
Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Slope (%): 
Subregion (LRR): Lat: Long: Datum:  
Soil Map Unit Name: NWI classification: 
Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes  No
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes  No</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes  No</th>
</tr>
</thead>
</table>

Hydric Soil Present? Yes  No
Wetland Hydrology Present? Yes  No

Remarks:

VEGETATION – Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size:        )</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
<th>Dominance Test worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td>Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td>Total Number of Dominant Species Across All Strata: 3 (B)</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td>Percent of Dominant Species That Are OBL, FACW, or FAC: 66% (A/B)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub Stratum (Plot size: )</th>
<th>Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>= Total Cover</td>
</tr>
<tr>
<td>5.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb Stratum (Plot size:        )</th>
<th>Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <em>Glyceria declinata</em></td>
<td>30  FACW</td>
</tr>
<tr>
<td>2. <em>Judawia xiphodes</em></td>
<td>30  OBL</td>
</tr>
<tr>
<td>3. <em>Juncus nigrescens</em></td>
<td>10  UPL</td>
</tr>
<tr>
<td>4. <em>Cyperus dissectus</em></td>
<td>5   UPL</td>
</tr>
<tr>
<td>5. <em>Drimia gross</em></td>
<td>25  UPL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody Vine Stratum (Plot size:  )</th>
<th>Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>= Total Cover</td>
</tr>
</tbody>
</table>

% Bare Ground in Herb Stratum  % Cover of Biotic Crust  

Remarks:

Hydrophytic Vegetation indicators:
- Dominance Test is >50%
- Prevalence Index is ≥30%
- Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation (Explain)

1Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
### Profile Description:
(Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-12</td>
<td>10 YR 3/2</td>
<td>60</td>
</tr>
</tbody>
</table>

**Hydric Soil Indicators:** (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Hist (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depressed Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

**Indicators for Problematic Hydric Soils:**

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

**Restrictive Layer (if present):**

- Type: 
- Depth (inches): 

**Hydric Soil Present?** Yes **No**

**Remarks:**

---

### HYDROLOGY

### Wetland Hydrology Indicators:

**Primary indicators (minimum of one required; check all that apply):**

- Surface Water (A1)
- High Water Table (A2)
- Water Mark (B1) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

**Secondary Indicators (2 or more required):**

- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

**Field Observations:**

- Surface Water Present? Yes **No**
- Water Table Present? Yes **No**
- Saturation Present? Yes **No**

**Wetland Hydrology Present?** Yes **No**

**Remarks:**

---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**
**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Carbondale Rd Bridge Replacement  
City/County: Amador County  
Sampling Date: 2/23/16

Applicant/Owner: Caltrans  
State: CA  
Sampling Point: 5c

Investigator(s): Stefanie Barros  
Section, Township, Range: S 22, T 3, R 29 E

Landform (hillslope, terrace, etc.):  
Local relief (concave, convex, none):  
Slope (%):  

Subregion (LRR):  
Lat:  
Long:  
Datum:  

Soil Map Unit Name:  
NWI classification:  

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☑ No  
(If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed?  
Are "Normal Circumstances" present? Yes ☑ No  
(If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes ☑ No</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes ☑ No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes ☑ No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes ☑ No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks:

### VEGETATION – Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: _______)</th>
<th>Absolute % Cover</th>
<th>Dominant Indicator Species? Status</th>
<th>Dominance Test worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Quercus lobata</td>
<td>5</td>
<td>N</td>
<td>1 (A)</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub Stratum (Plot size: _______)</th>
<th>Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>5</td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb Stratum (Plot size: _______)</th>
<th>Absolute % Cover</th>
<th>Dominant Indicator Species? Status</th>
<th>Prevalence Index worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Juncus xerophites</td>
<td>55</td>
<td>Y</td>
<td>55 x 1 = 55 (A)</td>
</tr>
<tr>
<td>2. Tetragonia caput-medusae</td>
<td>35</td>
<td>Y</td>
<td>20 x 2 = 40 (B)</td>
</tr>
<tr>
<td>3. Glycyrrhiza inflatae</td>
<td>10</td>
<td>N</td>
<td>17 x 5 = 85 (A)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody Vine Stratum (Plot size: _______)</th>
<th>Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>100</td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
</tbody>
</table>

% Bare Ground in Herb Stratum _______  % Cover of Biotic Crust _______

Remarks:

---

Hydrophytic Vegetation Indicators:

- Dominance Test is >50%
- Prevalence Index is ≥3.0
  - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
  - Problematic Hydrophytic Vegetation (Explain)

1Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
## SOIL

### Profile Description:
(Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-8</td>
<td>10YR 3/2</td>
<td>S5R 4/6 20 C M</td>
<td>Silty-Loam</td>
<td></td>
</tr>
</tbody>
</table>

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Location: PL=Pore Lining, M=Matrix.*

### Hydric Soil Indicators:
(Applicable to all LRRs, unless otherwise noted.)

- Histic (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depeted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Glyedyed Matrix (S4)

- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Glyedyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Redox Depressions (F8)
- Vernal Pools (F9)

### Restrictive Layer (if present):

- Redrock - 8"  

### Hydric Soil Present?
Yes ✓ No □

### HYDROLOGY

#### Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

Secondary Indicators (2 or more required)

- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drift Deposits (B3) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

#### Field Observations:

- Surface Water Present? Yes ✓ No □ Depth (inches): 2"  
- Water Table Present? Yes ✓ No □ Depth (inches):  
- Saturation Present? Yes ✓ No □ Depth (inches):  

Wetland Hydrology Present? Yes ✓ No □

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Carbondale Rd Bridge Replacement  City/County: Amador County  Sampling Date: 2/23/16
Applicant/Owner: Caltrans  State: CA  Sampling Point: 5d
Investigator(s): Stefan de Barros  Section, Township, Range: 522, 23, J7N, R9E
Landform (hillside, terrace, etc.): ___________________________ Local relief (concave, convex, none): ___________________________ Slope (%):
Subregion (LRR): ___________________________ Lat: ___________________________ Long: ___________________________ Datum: ___________________________
Soil Map Unit Name: ___________________________ NWI classification: ___________________________

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed?  Are “Normal Circumstances” present? Yes  No
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes</th>
<th>No ✓</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes</th>
<th>No ✓</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes</td>
<td>No ✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes</td>
<td>No ✓</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks:

Upload data point.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____________)

<table>
<thead>
<tr>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Quercus obtus</td>
<td>5</td>
<td>KI FACU</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>5 = Total Cover</td>
<td></td>
</tr>
</tbody>
</table>

Sapling/Shrub Stratum (Plot size: ____________)

<table>
<thead>
<tr>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>5 = Total Cover</td>
<td></td>
</tr>
</tbody>
</table>

Herb Stratum (Plot size: ____________)

<table>
<thead>
<tr>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Erodium</td>
<td>10</td>
<td>N UPL</td>
</tr>
<tr>
<td>2. Unknown grass</td>
<td>90</td>
<td>Y UPL</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>100</td>
<td>= Total Cover</td>
</tr>
</tbody>
</table>

Woody Vine Stratum (Plot size: ____________)

<table>
<thead>
<tr>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>100</td>
<td>= Total Cover</td>
</tr>
</tbody>
</table>

% Bare Ground in Herb Stratum ____________  % Cover of Biotic Crust ____________

Remarks:

Grasses not in bloom at time of delineation.
<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-14</td>
<td>75HR 4/6 100</td>
<td>Sandy Redox (S5)</td>
<td>Loamy Mucky Mineral (F1)</td>
<td>Sandy Loam</td>
</tr>
</tbody>
</table>

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)
- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depressed Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

Indicators for Problematic Hydric Soils:
- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

Restrictive Layer (if present):
- Type: 
- Depth (inches): 
- Hydric Soil Present? Yes No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

<table>
<thead>
<tr>
<th>Primary Indicators (minimum of one required; check all that apply)</th>
<th>Secondary Indicators (2 or more required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Water (A1)</td>
<td>Water Marks (B1) (Riverine)</td>
</tr>
<tr>
<td>High Water Table (A2)</td>
<td>Sediment Deposits (B2) (Riverine)</td>
</tr>
<tr>
<td>Saturation (A3)</td>
<td>Drainage Patterns (B10)</td>
</tr>
<tr>
<td>Water Marks (B1) (Nonriverine)</td>
<td>Dry-Season Water Table (C2)</td>
</tr>
<tr>
<td>Sediment Deposits (B2) (Nonriverine)</td>
<td>Crayfish Burrows (C8)</td>
</tr>
<tr>
<td>Drift Deposits (B3) (Nonriverine)</td>
<td>Saturation Visible on Aerial Imagery (C9)</td>
</tr>
<tr>
<td>Surface Soil Cracks (B6)</td>
<td>Shallow Aquiflard (D3)</td>
</tr>
<tr>
<td>Inundation Visible on Aerial Imagery (B7)</td>
<td>FAC-Neutral Test (D5)</td>
</tr>
<tr>
<td>Water-Stained Leaves (B9)</td>
<td></td>
</tr>
</tbody>
</table>

Field Observations:
- Surface Water Present? Yes No ✓ Depth (inches): 0-14
- Water Table Present? Yes No ✓ Depth (inches): 0-14
- Saturation Present? Yes No ✓ Depth (inches): 0-14

Wetland Hydrology Present? Yes No ✓

Remarks:

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available.
SITE ASSESSMENT FOR CALIFORNIA TIGER SALAMANDER

CARBONDALE ROAD BRIDGE REPLACEMENT PROJECT

AMADOR, CALIFORNIA

10-AMADOR-0-CR

FEDERAL PROJECT NO. BRLO-5926(055)

May 2016
SITE ASSESSMENT FOR
CALIFORNIA TIGER SALAMANDER

CARBONDALE ROAD BRIDGE REPLACEMENT PROJECT

AMADOR, CALIFORNIA

10-AMADOR-0-CR

FEDERAL PROJECT NO. BRLO-5926(055)

Prepared for:
Amador Public Works Department
810 Court Street
Jackson, California 95642

For Submittal to:
U.S. Fish and Wildlife Service
2800 Cottage Way, Suite W-2605
Sacramento, California 95825

California Department of Fish and Wildlife
North Central Region
1701 Nimbus Road
Rancho Cordova, California 95670

May 2016
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A: RESUME FOR LAURA BELT
B: REPRESENTATIVE PHOTOS OF WILLOW CREEK
1.0 INTRODUCTION

1.1 PURPOSE OF ASSESSMENT
This report presents an assessment of the status of the California tiger salamander (Ambystoma californiense) (CTS) and potential habitat for this species on the Carbondale Road Bridge Replacement project (hereafter, assessment area) and vicinity. This assessment was prepared by Laura Belt, Senior Wildlife Biologist with LSA Associates, Inc. (LSA) on behalf of Amador County Public Works Department.

This assessment follows the protocols outlined in the U.S. Fish and Wildlife Service (USFWS) Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander (October 2003). Accordingly, for CTS, this assessment describes the habitats within 1.24 miles of the area. The assessment also evaluates the potential for CTS to occur in the project area.

1.2 ASSESSMENT AREA
The assessment area is located within western Amador County, approximately 7.5 miles (mi) east of the community of Rancho Murieta. Carbondale Road crosses Willow Creek approximately 5 mi west of Highway 124 (Figures 1 and 2). Carbondale Road is a narrow two-lane road and generally runs east to west. The existing bridge is a narrow two-lane crossing over Willow Creek.

The project lies in a rural residential area among rolling hills. From the assessment area, Willow Creek flows southwest, drains into Laguna Creek approximately 4.5 mi downstream, and then meanders through the valley until it drains into Cosumnes River, approximately 25 mi southwest of the of the assessment area. Numerous small to medium sized ponds are located in the general vicinity. Plant communities at the assessment area consist of annual grassland with interspersed interior live oaks (Quercus wislienzi).

For the purpose of this report, an assessment area for the project was established. The assessment area consists of an area that would include the project footprint, existing roadways, cut/fill slopes, access and staging areas, and all lands beyond the footprint that could potentially be affected by project construction and/or were determined necessary to inventory in order to perform an adequate analysis. The assessment area comprises approximately 5 acres and is at an elevation of approximately 530 feet. The majority of the land in the area is privately owned and appears to be similar to the project area in use and vegetative characteristics.
Carbondale Road Bridge (26C0030) over Willow Creek
Rehabilitation Project
Federal Project No. BRLO-5926(055)
Project Vicinity on Topographic Base
Carbondale Road Bridge (26C0030) over Willow Creek
Rehabilitation Project
Federal Project No. BRLO-5926(055)
Regional Location
2.0 PROJECT DESCRIPTION

The project site is located in northwest Amador County. Willow Creek Bridge is located along Carbondale Road, about a mile south of Hwy 16 and just east of Forest Home Road. Carbondale Road is a rural two-lane local road, with nine-foot wide lanes and no shoulders. Willow Creek Bridge was built in 1940 and is 36 feet long and 20 feet wide. The structure is a two-span continuous steel girder bridge with a cast-in-place, reinforced concrete deck and metal pipe railings. The bridge is founded on concrete abutments and a center pier wall, all of which were constructed directly onto the underlying rock.

The existing bridge has been given a sufficiency rating of 75.4 and a status of functionally obsolete. The structure does not meet current AASHTO standards due to its narrow width and the metal pipe bridge railings and lack of approach guardrail is substandard. The bridge has inadequate hydraulic capacity, with design year storms overtopping the bridge. Additionally, the structure has experienced long term scour at the abutment and pier foundations.

The proposed project will replace the existing bridge with a new structure accommodating two 11-foot lanes, two-foot shoulders and bridge railings, resulting in an approximate bridge width of 29 feet. The new bridge will consist of a 60-foot long single-span, cast-in-place, post-tensioned concrete slab supported on spread footings.

The roadway alignment will remain unchanged. Along with a longer bridge, the roadway profile will be raised by four feet to provide additional hydraulic capacity. The western roadway approach will begin 90 feet east of the Forest Home Road intersection, approximately 370 feet west of the proposed bridge. The eastern approach will begin 560 feet east of the proposed bridge. Sliver right of way acquisitions will be needed on both sides of the roadway to accommodate the higher roadway profile and increased roadway width. Temporary construction easements (TCEs) are also anticipated to provide Contractor construction access. No utilities have been identified within the project limits.

Construction of the bridge will involve excavation for and construction of concrete abutments supported on spread footings. Other temporary work within Willow Creek includes removal of the existing bridge, falsework erection and removal, and installation of scour countermeasures at the support location. Willow Creek is a seasonal creek and construction is anticipated to proceed without needing to divert water away from construction activities. Construction of the roadway approaches will involve the removal of existing pavement and the placement of fill material, aggregate base and hot mix asphalt pavement. Tree removal and removal of other vegetation along the creek will be necessary for the project.

During construction, Carbondale Road may be closed to traffic and, if so, a detour route will be provided. Construction is anticipated to begin in Spring 2018 and will have a duration of approximately 6 months.
3.0 ASSESSMENT

LSA biologist Laura Belt visited the assessment area and its vicinity on December 1, 2015. Prior to the area visit, Ms. Belt reviewed aerial photographs of the area to identify ponds, and other features that could potentially provide aquatic habitat for CTS. During the visit, Ms. Belt surveyed the entire assessment area, and mapped all potentially suitable aquatic habitats for CTS. Most lands in the vicinity of the project are privately owned, and consequently, were inaccessible. Therefore, potential habitat on private lands was mapped using aerial photographs or through visual examination from existing public roads.

3.1 CALIFORNIA TIGER SALAMANDER

3.1.1 Regional Status

CTS occurs from Sonoma, Colusa, and Yolo Counties south through the Central Valley to Tulare County, and through the Coast Range into Santa Barbara County. An isolated population also occurs in Butte County. Western Amador County is located within the current range of the CTS (CDFG 2011b).

CTS occurs in grasslands and oak savannah communities from sea level to approximately 2,000 feet elevation in the Central Valley and Sierra Nevada foothills. In the Central Valley Geographic Region, CTS records are predominantly located in the grasslands on the valley floor, with only a few occurrences at higher elevations in oak savannah.

The assessment area is located at approximately 530 feet elevation, in an area of annual grassland with intermixed live oak trees. The land immediately surrounding the bridge is designated as rural residential and agricultural areas.

The project area is not located within designated critical habitat for CTS. The nearest critical habitat is Unit cv-3, which is located in the Goose Creel and Clay 7.5-minute USGS topographic quadrangles, approximately 8.5 mi southwest of the project area.

3.1.2 Documented Occurrences

There are no records of CTS within 3.1 mi of the project area. The closest CNDDB record is approximately 4.5 mi southwest of the project area, dated 2005. Figure 3 shows records for CTS in the vicinity of the project area.
FIGURE 3

Carbondale Road Bridge (26C0030) over Willow Creek
Rehabilitation Project
Federal Project No. BRLO-5926(055)

California Tiger Salamander
CNDDDB Occurrence Records
3.1.3 Potential Habitat on the Assessment Area and Within a 1.24 Mile Radius

CTS require burrows in upland habitat for the majority of the year, in addition to aquatic breeding habitat. Upland habitat favored by this species is generally open grassland or savannahs, and in the Central Valley/Sierra Nevada Foothills, at elevations below 2,000 feet. CTS cannot dig their own burrows and, consequently, are largely dependent on the presence of fossorial mammals such as ground squirrels, though CTS can also utilize cracks or crevices in the ground. Breeding habitat consists of natural ephemeral pools, stock ponds, and other small, artificial water bodies, particularly those that dry up in summer.

3.1.3.1. Potential Aquatic Habitat

Willow Creek is a slow moving intermittent creek that flows from north to south through the assessment area. North of the bridge, the creek has been highly disturbed due to past dredging activities and does not provide suitable aquatic habitat for CTS. The bridge appears to serve as a bottleneck for high flows in the creek, narrowing the watercourse downstream of the bridge. As a result, the flow downstream of the bridge would generally be too swift to provide suitable breeding habitat for CTS. Although there were small ponded areas observed south of the bridge, higher flows would cause CTS eggs to be swept downstream. Consequently, Willow Creek does not provide suitable aquatic habitat for CTS.

Numerous small to large sized ponds, which provide potential aquatic habitat for CTS, occur within 1.24 mi of the assessment area. Some of the ponds are seasonal, while the larger ponds appear to hold water all year. Four ponds, ranging from small to large, are located within 0.5 mi of the project area. These ponds could provide aquatic habitat for CTS. A small pond associated with an adjacent property is located approximately 0.1 mi north of the project area and could potentially provide suitable aquatic breeding habitat for CTS. Although LSA could not access all of the ponds, LSA surveyed the ponds where access was granted. The ponds appeared to provide suitable habitat for CTS. Additionally there were no sign of CTS predators (i.e. bullfrog or fish).

Although no suitable aquatic habitat is present in the assessment area, there are numerous ponds located within a 1.24 mi radius that provide potential aquatic habitat for CTS.

Figure 4 illustrates the distribution of potential aquatic habitat for CTS within a 1.24 mi radius of the assessment area.

3.1.3.2. Potential Upland Habitat

Suitable upland habitat is present in the grassland areas within and adjacent to the assessment area. Numerous burrows of appropriate size were observed in the upland grassland habitat, along the sides of the road, and under the rock slope protection around the bridge.

Suitable upland habitat is present in and within 1.24 mi of the assessment area.
Potential California Tiger Salamander Aquatic Habitat Within 1.24-Mile of the Carbondale Road Bridge

Carbondale Road Bridge (26C0030) over Willow Creek Rehabilitation Project
Federal Project No. BRLO-3926055

Legend:
- Project Area
- 1.24-Mile Radius
- Aquatic Habitat

FIGURE 4

Carbondale Road Bridge (26C0030) over Willow Creek Rehabilitation Project
Federal Project No. BRLO-3926055
Potential California Tiger Salamander Aquatic Habitat Within 1.24-Mile of the Carbondale Road Bridge
4.0 RESULTS

4.1 CALIFORNIA TIGER SALAMANDER

The findings of this report are that CTS have the potential to occur in the assessment area as well as the vicinity of the project. The assessment area is located within the current range of the species; approximately 8.5 mi northeast of designated critical habitat. There are no occurrences within 3.1 mi of the assessment area; however, there is a documented occurrence approximately 4.5 mi southwest of the assessment area.

There is no suitable aquatic habitat for CTS in the assessment area. Willow Creek is an intermittent stream that does not provide suitable breeding habitat for CTS. However, there are multiple ponds within 1.24 mi, including one less than 0.1 mi of the assessment area, which could provide suitable breeding habitat. Although not all ponds were accessible to survey, the features that were surveyed were determined to be potentially suitable aquatic breeding habitat for CTS.

Suitable upland habitat is also present in the assessment area and the vicinity. Potentially suitable burrows were observed in the annual grassland, road shoulders, and around the bridge.

Based on the findings, CTS could be present in the upland habitat in the assessment area and vicinity throughout the year.
5.0 REFERENCES


APPENDIX A

RESUME FOR LAURA BELT
LAURA BELT
SENIOR WILDLIFE BIOLOGIST

EXPERTISE
Wildlife Surveys
Special Status Species Surveys
Biological Construction Monitoring
Environmental Assessment

EDUCATION
California State University, Bakersfield. Bachelor of Science Degree in General Biology, 1989.

PROFESSIONAL AFFILIATIONS
The Wildlife Society
The Audubon Society

CERTIFICATIONS AND TRAINING

Trained to conduct protocol surveys for San Joaquin kit fox, Mojave ground squirrel, western burrowing owl, Swainson’s hawk, tricolored blackbird, California red-legged frog, California tiger salamander, foothill-yellow legged frog, spadefoot toad, San Francisco garter snake, giant garter snake, pacific pond turtle, valley elderberry longhorn beetle, and vernal pool tadpole shrimp (vernal pool branchiopods) and associated habitats.

PROFESSIONAL RESPONSIBILITIES
Ms. Belt has a diverse background as a wildlife biologist, which includes more than 20 years of experience in conducting habitat and wildlife surveys. Ms. Belt is responsible for conducting biological surveys and construction monitoring of developments, road work and bridge replacement projects, preparation of biological assessments, preparation of 401, 404 and 1600 application material, mitigation plans, and other environmental documentation.

Ms. Belt is also on the Fish and Wildlife Service List of Authorized Individuals to conduct activities with vernal pool tadpole and fairy shrimp (vernal pool branchiopods) and California tiger salamander (CTS), as per LSA’s Recovery Permit. The following highlights her survey and construction monitoring experience.

PROJECT EXPERIENCE
State Route 65 Project 2000-2015
Lincoln, Placer County, California
Assisted Caltrans in the preparation of environmental documents for construction of 13 mile roadway, and 17 bridge crossings. Mapped the location of special status species and native trees. Prepared Environmental Awareness training materials and conducted training for construction personnel, and monitored the installation of ESA fence to protect creeks, seasonal wetlands, and elderberry shrubs (valley elderberry longhorn beetle habitat). Conducted annual surveys for nesting Swainson’s hawk and other nesting birds.

Sacramento County, California
Assisted aggregate mining project with expansion permitting and special status species surveys, biological reports, and a habitat mitigation plan that was incorporated into the County Environmental Impact Report. Monitored 110-acre mitigation sites. Protected species included giant garter snake, Swainson’s hawk, Cooper’s hawk, burrowing owl, white-tailed kite, loggerhead shrike, and pacific pond turtle. Monitoring included, created riparian and seasonal marsh habitats, vernal pools and hydrology, and vernal pool branchiopods at Preserve and Enhancement Sites.

Cosumnes River Boulevard/I-5 Interchange Project
Sacramento County, California
Conducted preconstruction and construction monitoring for giant garter snake, nesting Swainson’s hawks and burrowing owls at the connector for the State Route 99 corridor to I-5. Prepared Environmental Awareness training materials and monitored ground disturbing activities for permit compliance.
PROFESSIONAL EXPERIENCE

Senior Wildlife Biologist,
LSA Associates, Inc.,
Rocklin CA, 2000-Present.

Wildlife Assistant,
California Department of
Fish and Wildlife
Headquarters, Sacramento
CA, and Wildlife Research
Assistant, United States
Geological Survey, Western
Ecological Research Center,

PROJECT EXPERIENCE (CONTINUED)

Natomas Interstate 80 Bicycle/Pedestrian Bridge Project
Sacramento County, California
Conducted preconstruction and construction monitoring for new bicycle/pedestrian bridge across Interstate 80. Prepared Environmental Awareness training materials and conducted training for giant garter snake and other special status species. Monitored the installation of ESA fencing and construction activities for giant garter snake, pacific pond turtle, Swainson’s hawks, western burrowing owl and other nesting birds for permit compliance.

State Route 70/Feather River Boulevard Improvement Project
Yuba County, California
Conducted preconstruction and construction monitoring surveys for listed species, including giant garter snake, and nesting birds, including nesting Swainson’s hawks. Prepared Environmental Awareness training materials and conducted training for construction personnel, and monitored ground disturbing activities for permit compliance.

Cranmore/Garmire Road Bridge Replacement Project
Sutter County, California
Conducted pre-construction and construction monitoring for giant garter snake, burrowing owl, Swainson’s hawk and other nesting birds on the Tisdale Bypass at the Sacramento River and Sutter Mutual Water Company Main Canal. Monitored Swainson’s hawks nesting on the Bypass. Prepared Environmental Awareness training materials and conducted training for construction personnel and monitored project for permit compliance. Documented the occurrence of a juvenile giant garter snake on site during construction activities and submitted documentation to CDFW and USF&WS in accordance with permit conditions.

North County Corridor New State Route 108
Stanislaus County, California
Assisted in conducting overall biological assessment for new 18 mile roadway corridor in northern Stanislaus County. Conducted protocol surveys for vernal pool branchiopods, CTS and associated habitats.

Northstar Solar Generation Tie Line, Switching Station and Related Facilities Project
Fresno County, California
Conducted protocol surveys for western burrowing owl. Prepared Environmental Awareness training materials and conducted training for personnel, and monitored ground disturbing activities for permit compliance.
LAURA BELT  
SENIOR WILDLIFE BIOLOGIST

PROJECT EXPERIENCE (CONTINUED)

**Potrero Hills Landfill Study Site**  
**Solano County, California**  
Conducted protocol surveys for listed vernal pool branchiopods, and CTS at 1,400 acre Study Site. Identified listed vernal pool branchiopods in the seasonal features on the mitigation site. Assisted in trapping and relocation of CTS, including determining age of salamanders prior to relocation. Dip-netted and seined seasonal ponds. Identified life stages of CTS, including egg, larvae, metamorph, and adult male and female CTS.

**State Route 26 Road Improvement Project, Valley Springs**  
**San Joaquin/Calaveras Counties, California**  
Conducted preconstruction and construction monitoring for CTS and nesting birds, associated with 3.0 mile road realignment and widening in the vicinity of seasonal wetlands. Prepared Environmental Awareness training materials and conducted training for construction personnel. Documented the occurrence of western spade foot toad and a total of 4 adult CTS, and notified Caltrans, CDFW and USF&WS in accordance with permit conditions.
APPENDIX B

REPRESENTATIVE PHOTOS OF WILLOW CREEK
APPENDIX B

Carbondale Road Bridge Replacement Project
Federal Project No. BRLO-5926(055)

Representative Photos

Looking downstream at Willow Creek.

Looking north to the Carbondale Road Bridge.

Looking at the adjacent stock pond.

Looking at Willow Creek and surrounding upland habitat.
August 16, 2016

Ms. Jennifer Norris
Field Supervisor
United States Fish and Wildlife Service
2800 Cottage Way, Room W-2605
Sacramento, California 95825

Dear Ms. Norris,

The California Department of Transportation (Caltrans) requests technical assistance from the U.S. Fish and Wildlife Service (USFWS) regarding the status of California tiger salamander (CTS) at the Carbondale Road over Willow Creek Bridge Replacement Project in Amador County. Attached for review is a CTS habitat assessment prepared for the subject project in accordance with the USFWS Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander (October 2003).

The project is located within western Amador County, approximately 7.5 miles (mi) east of the community of Rancho Murieta. Carbondale Road crosses Willow Creek approximately 5 mi west of Highway 124.

The proposed project will replace the existing bridge with a new bridge that is approximately nine feet wider. The roadway alignment will remain unchanged. Construction will have a duration of approximately 6 months.

Willow Creek is a slow moving intermittent stream that flows from north to south through the project site. Willow Creek does not provide suitable aquatic habitat for CTS within the project site. However, there are numerous ponds within 1.24 mi of the project site, four of which are within 0.5 mi of the project site, that provide potential aquatic habitat for CTS. Some of the ponds are seasonal, while the larger ponds appear to hold water all year.

Suitable CTS upland habitat is present in the grassland areas within and adjacent to the project site. Numerous burrows of appropriate size, that could provide estivation refugia for CTS, were observed in the upland grassland habitat, along the sides of roads, and within rock slope protection under the bridge.

Based on the habitat assessment, Caltrans is requesting technical assistance regarding the presence of CTS within the project area and whether protocol level surveys should be used to support a negative finding.

Sincerely,

JULIE MYRAH
Environmental Chief

Enclosure: BRLO 5926 (055) CTS Habitat Assessment

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"
Hi Dom,

Looks like habitat to me also. Given the proximity of the potential breeding pond and upland habitat in the project area, rather than continuing to survey for individuals, I would recommend assuming presence at the site and moving forward with consultation. As you know, the survey protocol requires breeding season surveys, which cannot confirm the absence of the species on site, especially with the limited amount of water we've had in the last few years. Additionally, the individual conducting surveys would need a valid 10(a)(1)(A) for the work. Even if these all were completed, it would not negate presence, but may confirm it. Let me know if you have any further questions, I look forward to working with you on this project.

Best,

Desirae M.W. Watson, M.S.
Fish and Wildlife Biologist
Endangered Species Division-Forest
U.S. Fish & Wildlife Service
2800 Cottage Way W-2605
Sacramento, CA 95825
916-414-6653

On Thu, Aug 18, 2016 at 8:25 AM, Nagano, Chris <chris_nagano@fws.gov> wrote:

Hi Desirae - can you help Dominic? Thnx s/Chris

---------- Forwarded message ----------
From: Nagano, Chris <chris_nagano@fws.gov>
Date: 17 August 2016 at 22:02
Subject: Fwd: CTS technical assistance
To: Chris N <charliesaito22@gmail.com>

---------- Forwarded message ----------
From: Vitali, Dominic@DOT <Dominic.Vitali@dot.ca.gov>
Date: 17 August 2016 at 15:09
Subject: CTS technical assistance
To: "Nagano, Chris" <chris_nagano@fws.gov>

Hi Chris,
I have an Amador County bridge replacement project, not sure if this one goes to you. Caltrans is requesting technical assistance / recommendation for CTS at the project site. I sent hard copies of the habitat assessment and letter in the mail today.

Thank you!

Dominic Vitali
California Department of Transportation
District 10 Environmental Biologist
Division of Planning, Local Assistance & Environmental
1976 E. Dr. Martin Luther King Jr. Blvd.
Stockton, Ca 95205
(209) 948-3667

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Representative Photos

Carbondale Road Bridge facing south.

Wetland and drainage facing west.

Looking east along Carbondale Road Bridge.

Carbondale Road Bridge facing south.

Carbondale Road Bridge and surrounding habitat facing south.
Looking downstream at Willow Creek.

Looking north to the Carbondale Road Bridge.

Looking at the adjacent stock pond.

Looking at Willow Creek and surrounding upland habitat.
5.5 Conservation Measures and Compensation Proposal

5.5.1 Conservation Measures

5.5.1.1 CALIFORNIA RED-LEGGED FROG

The following measures will be taken to reduce adverse effects to CRLF and their habitat:

1. Before any activities begin on a project, a USFWS-approved biologist will conduct a training session for all construction personnel. At a minimum, the training will include a description of CRLF and its habitat, the specific measures that are being implemented to conserve CRLF for the current project, and the boundaries within which the project may be accomplished. Brochures, books, and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions.

2. If any CRLF are observed in the project work limits during construction, work will immediately stop, the CRLF will be allowed to move out of harm’s way on its own accord, and the Service will be contacted within 24 hours to reinitiate consultation.

3. During project activities, all trash that may attract predators will be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris will be removed from work areas.

4. All refueling, maintenance, and staging of equipment and vehicles will occur at least 60 ft from riparian habitat or water bodies and not in a location from where a spill would drain directly toward aquatic habitat. The monitor will ensure contamination of habitat does not occur during such operations. Prior to the onset of work, the County shall prepare a plan for prompt and effective response to any accidental spills. All workers will be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

5. To control sedimentation during and after project implementation, the County will implement BMPs outlined in any authorizations or permits, issued under the authorities of the CWA that it receives for the specific project. If BMPs are ineffective, the County will attempt to remedy the situation immediately, in consultation with the USFWS.

6. To ensure that diseases are not conveyed between work sites by the USFWS-approved biologists, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force will be followed at all times.
7. Following completion of the new bridge, all temporary impact areas shall be revegetated with the native seed mix specified in Table 2. Permanently graded areas shall also be revegetated with the native seed mix specified in Table 2.

5.5.1.2 CALIFORNIA TIGER SALAMANDER
The following measures are proposed to minimize effects to any CTS potentially in the vicinity:

1. Worker environmental awareness training will be conducted by a qualified biologist for all construction personnel. This training instructs workers to recognize CTS and their habitat.

2. ESA fencing shall be installed along the edge of the work limits, including staging areas. ESA fencing shall consist of orange construction fencing (or equivalent) and shall be maintained in good condition until construction is complete. In addition, silt fencing will be installed along the bottom of the ESA fencing to prevent CTS from entering the work area during construction.

3. A biological monitor approved by USFWS shall be present during initial ground disturbing activities within CTS upland habitat.

4. Prior to commencing site disturbance, including vegetation and/or ground disturbance, a Service-approved biologist(s) will be identified to monitor implementation of biological mitigation measures. Caltrans will send the credentials of the biologist(s) to the Service at least 4 weeks prior to the start of work. The Service-approved biologist will be present during all project activities requiring ground disturbance or vegetation removal within the construction area, including installation and removal of temporary fencing.

5. A qualified biologist shall conduct a preconstruction clearance survey for California tiger salamander within 48 hours prior to any ground disturbance within the project work limits. These surveys will consist of walking the project work limits and action area, and investigating all potential cover sites for CTS. This includes examining mammal burrows, appropriately sized soil cracks. If CTS or other listed species are found within the construction work area, the individual will be allowed to voluntarily move outside of the work area on its own. The biologist will contact the Service for further guidance as soon as possible (within 24 hours). CTS shall not be captured or handled without joint authorization from the Service and California Department of Fish and Wildlife.

6. If a California tiger salamander is encountered in the action area during construction, work activities within 50 feet of the individual shall cease immediately and the resident engineer and Service-approved biologist shall be notified. Based on the
professional judgment of the Service-approved biologist, if project activities can be conducted without killing or injuring the animal, it may be left at the location of discovery and monitored by the Service-approved biologist. The individual shall be monitored until it leaves the action area on its own accord, unless the situation poses an imminent risk of injury or mortality to the individual(s). The biologist shall contact the Service as soon as possible for further guidance.

7. To avoid entrapment of wildlife, all excavated steep-walled holes or trenches more than one foot deep will be provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each workday. If escape ramps cannot be provided, then holes or trenches will be covered with plywood or similar materials. The trenches will be thoroughly inspected for the presence of federally listed species at the beginning of each workday.

8. If CTS are found within the area surveyed, USFWS shall be contacted. Caltrans, as the federal lead agency, will notify USFWS.

9. All work within CTS habitat shall be conducted during the dry season (June 1 through October 31) when CTS are estivating and unlikely to enter the Action Area.

10. The Action Area will be surveyed for CTS if a substantial rain event (i.e., at least 0.25 inches) occurs during construction to avoid affecting salamanders that may have emerged from their burrows and relocated in the Action Area (e.g., under equipment).

11. Following completion of the project, all fill slopes, temporary impact and/or otherwise graded or denuded areas shall be restored to preconstruction contours (if necessary) and revegetated with the seed mix specified in Table 2. Invasive exotic plants will be controlled to the maximum extent practicable.

5.5.2 Conservation Measures

5.5.2.1 CALIFORNIA RED-LEGGED FROG
No change.

5.5.2.2 CALIFORNIA TIGER SALAMANDER
The project will result in permanent impacts to potential upland habitat for CTS. Permanent impacts, totaling 0.57 ac, and temporary impacts, totaling 0.37 ac, will occur during construction of the new roadway and bridge embankments. To offset impacts to CTS upland habitat, sufficient CTS upland habitat mitigation credits shall be purchased from a USFWS-approved bank at a minimum 3:1 ratio for permanent impacts and a 1:1 ratio for temporary impacts. The purchase of mitigation credits will be in conjunction with implementation of the avoidance and minimization measures in Section 5.5.1.
Ms. Julie Myrah  
Chief, District 10 Environmental  
Department of Transportation  
P.O. Box 2048  
Stockton, California 95201

Subject: Formal Consultation on the Carbondale Road Bridge Replacement Project in Amador County, California

Dear Ms. Myrah:

This letter is in response to the California Department of Transportation’s (Caltrans) September 6, 2017, request for initiation of formal consultation with the U.S. Fish and Wildlife Service (Service) on the proposed Carbondale Bridge Replacement Project (proposed project) in Amador County, California. Your request was received by the Service on September 12, 2017. At issue are the proposed project’s effects on the federally-threatened Central California Distinct Population Segment of California tiger salamander (*Ambystoma californiense*, CTS) and the federally-threatened California red-legged frog (*Rana draytonii*, CRLF). The proposed project is not within designated or proposed critical habitat for any federally-listed species. 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).

The federal action on which we are consulting is the proposed bridge replacement along Carbondale Road over Willow Creek. Project components include bridge demolition, construction of the new bridge, and corresponding roadway improvements. The project work limits cover approximately 5.06 acres. Pursuant to 50 CFR 402.12(j), you submitted a biological assessment for our review and requested concurrence with the findings presented therein. These findings conclude that the proposed project may affect, and is likely to adversely affect CTS and may affect, but is not likely to adversely affect CRLF.

In considering your request, we based our evaluation on the following: (1) the September 6, 2017, letter to the Service from Caltrans initiating formal consultation; (2) the *Carbondale Road Bridge Replacement Project Biological Assessment* (Biological Assessment) prepared by Caltrans and received by the Service on September 12, 2017; (3) email and telephone correspondence between Caltrans and the Service; and (4) other information available to the Service.

Caltrans determined that the proposed project may affect, but is not likely to adversely affect California red-legged frog. The Service concurs with this determination. The only likely use of the project area would be for frog dispersal, but permanent impacts to the creek are small in size, and the proposed project would not result in a decreased functionality of dispersal habitat. Additionally, restricting in-creek work to the dry season will reduce the chance of encountering a dispersing frog.
to a discountable level. Finally, the proposed avoidance and minimization measures in the Biological Assessment and as amended in email correspondence on October 4, 2017, will prevent potential adverse to effects to CRLF.

The remainder of this document provides our biological opinion on the effects of the proposed project on CTS.

Consultation History

March 21, 2017  The Service provided a Species List to Caltrans for the proposed project.

September 12, 2017  The Service received a letter initiating formal consultation and the Carbondale Bridge Replacement Project Biological Assessment.

September 18, 2017 - October 23, 2017  The Service and Caltrans exchanged several emails and phone calls regarding the consultation.

BIOLOGICAL OPINION

Description of the Action

The purpose of this project is to replace the existing structurally deficient Carbondale Road Bridge over Willow Creek (Bridge No. 26C0030) in order to improve public safety. The proposed action is located along Carbondale Road near the intersection with Forest Home Road, 7.5 miles southeast of the city of Rancho Murieta in Amador County. The County plans to replace the existing bridge (built in 1940) due to its narrow width and inadequate hydraulic capacity. The new bridge will be approximately 80 ft. long and 29 ft. wide, and consist of a two-span, cast-in-place, reinforced concrete slab supported on spread footings. Along with a longer bridge, the roadway profile will be raised by 4 ft. to provide additional hydraulic capacity. Construction will require excavation areas for the abutments and central pier totaling 10 ft. by 31 ft.

The proposed action will replace the existing bridge along the same horizontal alignment. The western roadway approach will begin 90 ft. east of the Forest Home Road intersection, approximately 370 ft. west of the bridge. The eastern approach will begin approximately 560 ft. east of the bridge. At the new bridge, the roadway will be widened to a maximum of 70 ft., and then tapered back to the existing roadway width (approximately 30 ft.). Fill will be brought in to raise the roadway profile. Scour countermeasures (rock slope protection) will be installed at the support locations. All construction activities will be completed during the summer/early fall months when the creek is dry, and no water diversion is anticipated.

A traffic detour will be provided and construction staging areas will be located on the closed portion of the roadway approaches. Anticipated construction equipment will include a bulldozer, excavator, loader, and water truck for soil manipulation, clearing, and grubbing. A dump truck will be required for fill distribution. Roadway improvements and reconstruction will involve standard equipment such as a grader, roller, and asphalt concrete paver. Overall, project construction activities are anticipated to occur in 2018 and will be completed in a single season (about 5 months).
Conservation Measures

Caltrans has proposed the following measures in the Biological Assessment and amended in email correspondence on October 4, 2017, to reduce potential impacts to CTS:

1. Prior to the start of construction, all construction personnel shall participate in an environmental awareness training conducted by a qualified biologist regarding special-status species and sensitive habitats present in the proposed project work limits. At a minimum, the training will include a description of listed species and their habitat within the action area; an explanation of the status of these species and protection under state and federal laws; the avoidance and minimization measures to be implemented to reduce or avoid take; communication and work stoppage procedures in case a listed species is observed within the action area; and an explanation of the environmentally sensitive areas’ wildlife exclusion fencing and the importance of maintaining these structures.

2. Prior to commencing site disturbance, including vegetation and/or ground disturbance, a Service-approved biologist(s) will be identified to monitor implementation of biological mitigation measures. Caltrans will send the credentials of the biologist(s) to the Service at least 4 weeks prior to the start of work. The Service-approved biologist will be present during all project activities requiring ground disturbance or vegetation removal within the construction area, including installation and removal of temporary fencing.

3. Environmentally sensitive area fencing will be established to confine access routes and construction areas to the minimum area necessary to complete construction, and minimize the impact to habitat. The exact location of the fencing shall be determined by the resident engineer coordinating with the biologist, with the goal of protecting sensitive biological habitat and water quality.

4. Before any ground-disturbing activities occur, the County shall prepare and implement a Stormwater Pollution Prevention Plan that outlines Best Management Practices (BMPs), including erosion control and construction wastewater containment measures, to protect water quality within impacted areas of Willow Creek. All refueling, storage, servicing, and maintenance of equipment will occur at least 60 feet from aquatic habitat.

5. A qualified biologist shall conduct a preconstruction clearance survey for CTS within 48 hours prior to any ground disturbance within the project work limits, or after a substantial rain event (≥0.25 inches). These surveys will consist of walking the project work limits and action area, and investigating all potential cover sites for CTS. This includes examining mammal burrows and appropriately sized soil cracks with the aid of a scope. If CTS or other listed species are found within the construction work area, the individual will be allowed to voluntarily move outside of the work area on its own. The biologist will contact the Service for further guidance as soon as possible (within 24 hours). CTS shall not be captured or handled without joint authorization from the Service and California Department of Fish and Wildlife.

6. If a CTS is encountered in the action area during construction, work activities within 50 feet of the individual shall cease immediately and the resident engineer and Service-approved biologist shall be notified. Based on the professional judgment of the Service-approved biologist, if project activities can be conducted without killing or injuring the animal, it may be left at the location of discovery and monitored by the Service-approved biologist. The individual shall be monitored until it leaves the action area on its own accord, unless the situation poses an
imminent risk of injury or mortality to the individual(s). The biologist shall contact the Service as soon as possible for further guidance.

7. To avoid entrapment of wildlife, all excavated steep-walled holes or trenches more than one foot deep will be provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each workday. If escape ramps cannot be provided, then holes or trenches will be covered with plywood or similar materials. The trenches will be thoroughly inspected for the presence of federally-listed species at the beginning of each workday.

8. All ground-disturbing activities in Willow Creek associated with construction of the project will be restricted to the dry season (June 1 and October 31) to avoid the period when listed amphibians could be actively dispersing.

9. During project activities, all trash that may attract predators will be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris will be removed from work areas.

10. All temporarily disturbed areas will be returned to pre-project conditions upon completion of construction, and revegetated with appropriate native species.

11. To offset permanent effects to CTS, suitable habitat will be created, restored, or set aside in perpetuity at a ratio of 3:1 for permanent effects (0.57 acre) and 1:1 for temporary effects (0.37 acre). Caltrans proposes to purchase Service-approved conservation bank credits to preserve CTS upland habitat.

**Action Area**

The action area is defined in 50 CFR § 402.02, as “all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action.” For the proposed project, the action area encompasses 5.06 acres including the project footprint, access, and staging areas.

**Analytical Framework for the Jeopardy Determination**

Section 7(a)(2) of the Endangered Species Act requires that federal agencies ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of listed species. “Jeopardize the continued existence of” means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species (50 CFR § 402.02).

The jeopardy analysis in this biological opinion considers the effects of the proposed federal action, and any cumulative effects, on the rangewide survival and recovery of the listed species. It relies on four components: (1) the *Status of the Species*, which describes the rangewide condition of the species, the factors responsible for that condition, and its survival and recovery needs; (2) the *Environmental Baseline*, which analyzes the condition of the species in the action area, the factors responsible for that condition, and the relationship of the action area to the survival and recovery of the species; (3) the *Effects of the Action*, which determines the direct and indirect impacts of the proposed federal action and the effects of any interrelated or interdependent activities on the species; and (4) the *Cumulative Effects*, which evaluates the effects of future, non-federal activities in the action area on the species.
Status of the Species

For the most recent comprehensive assessment of the species’ range-wide status, please refer to the 2017 Recovery Plan for the Central California Distinct Population Segment of the California Tiger Salamander (Service 2017) and the 2014 5-Year Review (Service 2014). No change in the species’ listing status was recommended in the 2014 5-year review. Since that time, actions have been implemented that have resulted in additional adverse effects to the species. In association with those actions, conservation measures have been implemented for the purpose of minimizing those adverse effects and in some cases, restoring or enhancing CTS habitat. While there have been continued losses of Central CTS habitat throughout the four draft recovery units, to date no project has proposed a level of effects for which the Service has issued a biological opinion of jeopardy for the species.

Environmental Baseline

The action area is not located within designated critical habitat for central CTS (Service 2005). The nearest critical habitat is Unit CV-3, located approximately 8.4 miles southwest of the action area. The project is located within the known range of CTS and suitable upland habitat is present in the action area. There are 7 reported occurrences of CTS within 10 miles of the action area. The nearest occurrence is approximately 4.3 miles southwest of the action area and none are documented within the action area.

Within the project site and surrounding area, suitable CTS upland dispersal and refugia habitat is abundant as annual grassland (3.82 acres). During two habitat assessment surveys conducted in 2015, numerous burrows of appropriate size for CTS were found within the grassland habitat, along the sides of the road, and under the rock slope protection around the bridge. Vegetation near the burrows is grazed heavily and would not appear to be a dispersal obstacle to CTS movement.

The biological assessment identified numerous (>30) potential aquatic habitats within a 1.24 miles buffer surrounding the project site. Four ponds are located within 0.5 miles of the project area, including one less than 0.1 miles from the project area. Although not all ponds were accessible due to private property restrictions, the features that were surveyed were determined to be potentially suitable aquatic breeding habitat for CTS, and lacked obvious signs of predators such as bullfrogs. These areas are connected to the project site by abundant suitable dispersal habitat, primarily grasslands.

Based on the habitat suitability within the action area and the presence of suitable breeding habitat within dispersal distance to the action area, the Service is reasonably certain that CTS occur within the action area.

Effects of the Action

If CTS are present during project implementation, individual juvenile or adult salamanders could be disturbed, injured, or killed by project related activities associated with staging, bridge demolition, construction, and roadway repaving. Because there is no potential breeding habitat in the action area, the proposed action is not expected to directly affect CTS eggs or larvae.

Mortality or injury of CTS could occur by crushing by construction equipment, especially equipment use that results in ground disturbance, such as grading, trenching, and excavating. Additionally, individuals in underground refugia could become trapped or crushed through the temporary placement of soil stockpiles or materials. However, the possibility of take would be avoided or minimized through implementation of Conservation Measures, including preconstruction surveys.
for CTS by a Service-approved biologist. The proposed action would occur primarily during the summer months when individuals are more likely to be underground and less likely to be dispersing to and from breeding sites. Therefore, vehicle strikes or crushing of dispersing individuals are unlikely. Although the end of the project period does overlap with the beginning of the rainy season, the construction should be nearly finished by this time so ground disturbing activities would be minimal.

If gas, oil, grease, or other hazardous materials were to leak from vehicles or equipment, CTS could be directly or indirectly exposed to these hazardous materials, which could result in injury or mortality. However, construction BMP’s would prevent the leaking of hazardous materials, thereby avoiding this impact.

Construction noise, vibration, and increased human activity may interfere with normal behaviors – feeding, sheltering, dispersal, and other essential behaviors of CTS – resulting in avoidance of areas that have suitable habitat but intolerable levels of disturbance. The proposed project will disturb approximately 0.94 acre of upland CTS habitat (0.37 acre temporarily, 0.57 acre permanently). CTS may be displaced if project activities cause individuals to emerge from their upland refugia outside of typical movement periods. Loss of dispersal and refugia habitat could also indirectly affect CTS in the future if individuals would have to travel over longer distances to find suitable habitat. Such displacement could make individuals more susceptible to desiccation, predation, exposure, and starvation.

As noted previously in the Description of the Action section, Caltrans has committed to provide compensatory habitat for CTS as a condition of the action. This compensatory habitat is intended to minimize the effect on the species of the proposed project’s anticipated incidental take, resulting from habitat loss and degradation described above. The compensatory habitat proposed will be in the form of credits purchased at an appropriate Service-approved conservation bank.

This component of the action will have the effect of protecting and managing lands for the species’ conservation in perpetuity. The compensatory lands will provide suitable habitat commensurate with or better than habitat lost as a result of the proposed project. Providing this compensatory habitat as part of a relatively large, contiguous block of conserved land may contribute to other recovery efforts for the species.

**Cumulative Effects**

Cumulative effects include the effects of future State, Tribal, local, or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act. During this consultation, the Service did not identify any future non-federal actions that are reasonably certain to occur in the action area of the proposed project.

**Conclusion**

After reviewing the current status of CTS, the environmental baseline for the action area, the effects of the proposed Carbondale Road Bridge Replacement Project, and the cumulative effects, it is the Service’s biological opinion that the Carbondale Road Bridge Replacement Project, as proposed, is not likely to jeopardize the continued existence of the CTS. The Service reached this conclusion because the project-related effects to the species, when added to the environmental baseline and analyzed in consideration of all potential cumulative effects, will not rise to the level of precluding
recovery or reducing the likelihood of survival of the species based on the following: (1) the proposed project has been designed to minimize adverse effects to individual CTS and maintain habitat components important to the species; (2) the effects to CTS suitable habitat are small and discrete, relative to the entire range of the species; and (3) Caltrans will partially offset habitat loss with the purchase of CTS habitat credits at a Service-approved conservation bank.

**INCIDENTAL TAKE STATEMENT**

Section 9 of the Act and federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harass is defined by Service regulations at 50 CFR 17.3 as an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Harm is defined by the same regulations as an act which actually kills or injures wildlife. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary, and must be undertaken by Caltrans so that they become binding conditions of any grant or permit issued to the applicant, as appropriate, for the exemption in section 7(o)(2) to apply. Caltrans has a continuing duty to regulate the activity covered by this incidental take statement. If Caltrans (1) fails to assume and implement the terms and conditions or (2) fails to require the applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, Caltrans must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement [50 CFR §402.14(i)(3)].

**Amount or Extent of Take**

The Service anticipates that incidental take of CTS will be difficult to detect or quantify because this species spends the majority of its life underground in small mammal burrows. CTS are only above ground for limited periods during nighttime rain events in the fall and winter, and spend only short periods of their lives in breeding ponds. Because the proposed project involves excavation in upland habitat with small mammal burrows, take is most likely to occur to CTS while underground in such burrows. Finding an injured or dead CTS is unlikely due to their relatively small body size, and any injured or dead CTS will likely remain underground or be mixed with large amounts of dirt scooped up by heavy equipment, making observations of injured or dead CTS by a biological monitor difficult. No baseline survey data exists for the project area so the Service is unable to estimate how many CTS could be taken as a result of the proposed project. Because of this, the Service is authorizing take incidental to the proposed action as: (1) the harassment of all CTS within the 5.06-acre action area; and (2) the injury or mortality of no more than five adult or juvenile CTS. The Service assumes that if more than five injured or dead CTS are detected, then the burrows in the proposed project area likely have many more CTS. In that event, Caltrans should reinitiate with the Service and develop additional conservation measures to minimize adverse effects to CTS within the proposed project area.
Upon implementation of the following reasonable and prudent measures, incidental take of CTS associated with the Carbondale Road Bridge Replacement Project will become exempt from the prohibitions described in section 9 of the Act. No other forms of take are exempted under this opinion.

**Effect of the Take**

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the species.

**Reasonable and Prudent Measures**

All necessary and appropriate measures to avoid or minimize effects on the CTS resulting from implementation of this project have been incorporated into the project’s proposed conservation measures. Therefore, the Service believes the following reasonable and prudent measure is necessary and appropriate to minimize incidental take of the CTS:

1. All conservation measures, as described in the biological assessment and restated in this biological opinion, shall be fully implemented and adhered to. Further, this reasonable and prudent measure shall be supplemented by the terms and conditions below.

**Terms and Conditions**

In order to be exempt from the prohibitions of section 9 of the Act, Caltrans must ensure compliance with the following terms and conditions, which implement the reasonable and prudent measure described above. These terms and conditions are nondiscretionary.

1. Caltrans shall ensure the conservation measures of this biological opinion are implemented for the proposed project.

2. Caltrans shall ensure all personnel associated with this project are made aware of the conservation measures and the responsibility to fully implement them.

**Monitoring**

In order to monitor whether the amount or extent of incidental take anticipated from implementation of the project is approached or exceeded, Caltrans shall adhere to the following reporting requirements. Should this anticipated amount or extent of incidental take be exceeded, Caltrans must immediately reinitiate formal consultation as per 50 CFR 402.16.

a. For those components of the action that will result in habitat degradation or modification whereby incidental take in the form of harm is anticipated, Caltrans shall provide a precise accounting of the total acreage of habitat impacted to the Service after completion of construction. The update will be sent to the Service’s Sacramento Fish and Wildlife Office’s (SFWO) Division Chief of the Sierra/Cascades Division.

b. When direct encounters between listed species and project works and their equipment occurs (such as discovery of a killed individual, etc.) Caltrans shall report the encounter to SFWO’s Division Chief of the Sierra/Cascades Division within 24 hours of the encounter.
c. If injured or killed CTS or other listed species are found, Caltrans shall follow the following steps: injured CTS shall be cared for by a licensed veterinarian or other qualified person such as a biologist possessing a valid section 10(a)(1)(A) permit for this species; dead individuals must be placed in a sealed plastic bag with the date, time, location of discovery, and the name of the person who found the animal; the carcass will be kept in a freezer and held in a secure location. Caltrans will provide the information on the incident within 24 hours to the SFWO's Division Chief of the Sierra/Cascades Division.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. The Service recommends the following actions:

1. Caltrans should consider collaborating in surveys across the Sierra Nevada foothills for listed species such as CTS and CRLF to enhance data on their occurrences and distribution.

2. Roadways can constitute a major barrier to critical wildlife movement. Therefore, Caltrans should consider incorporating safe wildlife crossings in design plans.

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

REINITIATION—CLOSING STATEMENT

This concludes formal consultation on the Carbondale Road Bridge Replacement Project. As provided in 50 CFR §402.16, reinitiation of formal consultation is required and shall be requested by the federal agency or by the Service where discretionary federal agency involvement or control over the action has been retained or is authorized by law and:

(a) If the amount or extent of taking specified in the incidental take statement is exceeded;
(b) If 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;
(c) If 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 the biological opinion; or
(d) If a new species is listed or critical habitat designated that may be affected by the identified action.
If you have any questions regarding this biological opinion, please contact Becky Kirby, Fish and Wildlife Biologist by email at rebecca_kirby@fws.gov or by phone at (916) 414-6495, or Rick Kuyper, Sierra/Cascades Division Chief by e-mail at richard_kuyper@fws.gov; by phone at (916) 414-6621 or at the letterhead address.

Sincerely,

Jennifer M. Norris, Ph.D.
Field Supervisor

cc:
Dominic Vitali, Caltrans District 10, Stockton, California
Literature Cited

