Natural Environment Study

El Camino Real at Santa Margarita Creek Bridge Replacement,
San Luis Obispo County, California

El Camino Real between Santa Margarita Road and Asuncion Road

Existing Bridge No. 49C0310

BRLS-5949 (131)

February 2018

Caltrans
CALIFORNIA DEPARTMENT OF TRANSPORTATION

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STATE OF CALIFORNIA
Department of Transportation
and
County of San Luis Obispo Department of Public Works

Prepared By: _____ Date: 2-9-18
Jon Claxton, Natural Resources Team Leader
(805) 543-7095 x6813
1422 Monterey Street, San Luis Obispo, CA 93401
SWCA Environmental Consultants

Prepared By: _____ Date: 2/14/18
Kate Ballantyne, Division Manager
(805) 788-2765
County Government Center, Room 207
San Luis Obispo, CA 93408
County of San Luis Obispo

Recommended for Approval By: _____ Date: 3/9/2018
Michaela Robbins, District Biologist
(805) 549-3019
Central Region Environmental Division
Caltrans District 5

Approved By: _____ Date: 3-18-18
Randy LaVack, Senior Environmental Planner
(805) 594-3182
Central Region Environmental Division
Caltrans District 5

Summary

The County of San Luis Obispo Department of Public Works (County) is proposing to replace the existing El Camino Real Bridge (Bridge Number 49C0310) and its approaches. The El Camino Real Bridge is located approximately 2.6 miles north of Santa Margarita in San Luis Obispo County, California. The El Camino Real Bridge spans Santa Margarita Creek on El Camino Real between the intersections of Santa Margarita Road and Asuncion Road. The original steel truss bridge at this location was built in the early 1900s and was structurally modified in 1937. The existing bridge is an approximately 81-foot-long, five-span steel stringer structure with a concrete deck and metal beam guard rails on steel posts. It has four steel girders on concrete abutments that support two lanes of traffic, striped shoulders, and a Class 2 bike lane. El Camino Real is classified as a major collector route and is crossed by more than 5,000 vehicles per day on average. Through numerous bridge inspections, the California Department of Transportation (Caltrans) determined that the bridge remains eligible for replacement due to its scour condition and advanced age. The primary purpose of the project is to improve public safety by replacing the existing bridge with a new bridge that provides standard roadway widths and adjusting the current roadway alignment, while attempting to minimize overall impacts.

The proposed project will closely maintain the existing horizontal alignment of the route and will install the new bridge at the same location as the existing. The proposed replacement bridge will be 140 feet long and will have an improved clear deck width of 60.5 feet between the railings to accommodate a traffic lane in each direction, a center turn lane for safety, and combined shoulders/bike lanes.

The proposed bridge will be constructed in two phases around the existing bridge, which will be used to maintain traffic during the first construction phase. Partial removal of the existing bridge is proposed, while portions of the new bridge are built on either side of the existing bridge. After the first phase of bridge construction is completed, traffic will be shifted outside and onto the newly constructed bridge structures. Once traffic is moved, the remaining components of the existing bridge will be removed and the last bridge phase will be built to connect the two outer bridge structures together. Once bridge construction is completed, traffic will be shifted into its final configuration. During bridge construction, temporary falsework will be placed within the Santa Margarita Creek channel. Santa Margarita Creek will be temporarily diverted through the project site and dewatering of any existing pools will occur. Construction of the bridge pier foundation elements, removal of existing bridge foundations, and placement of rock slope protection (RSP) around the north abutment will also occur. The substructural components of the project will be conducted during the dry season when flows within the stream are at seasonal lows. Implementation of the project will also include improvements to

approximately 700 feet of the roadway on both sides of the bridge, asphalt-concrete paving, utility relocations, development to accommodate the post-construction stormwater management requirements, and revegetation efforts associated with the required mitigation.

Arroyo willow thicket, Fremont cottonwood forest, and valley oak woodland are sensitive natural communities observed within the project site during the biological field surveys. Other vegetative communities observed on-site include: coast live oak woodland, disturbed annual brome grassland, agricultural land, and ruderal habitat. Adjacent lands surrounding the project site include agriculture, roadside ruderal areas, riparian areas, valley oak woodland, coast live oak woodland, and residential land. Santa Margarita Creek, which is a tributary to the Salinas River, falls under the jurisdiction of several resource agencies and it is designated critical habitat for South-Central California Coast steelhead (*Oncorhynchus mykiss irideus*). Due to the anticipated impacts of the project to jurisdictional areas, the County will coordinate with the pertinent resource agencies to obtain the necessary authorizations and permits to implement the project.

Four special-status plant species and 15 special-status wildlife species were determined to have potential to occur in the project site. Although suitable habitat is present for 15 special-status wildlife species, no special-status wildlife species were observed in the on-site during the biological field surveys. Formal habitat assessments were conducted for California red-legged frog (*Rana draytonii*) and least Bell's vireo (*Vireo bellii pusillus*) to determine whether or not protocol-level surveys for these species were warranted. Protocol-levels surveys for these two species are not required, as this has been confirmed by United States Fish and Wildlife Service. Five focused botanical surveys were conducted during the appropriate flowering period for the special-status plant species with potential to occur within the project site. No special-status plant species were observed on-site during the seasonally-timed botanical surveys. Santa Margarita Creek provides suitable habitat for South-Central California Coast steelhead. The County assumes the presence of this species on-site based on the existing habitat conditions and previously documented occurrences in the immediate vicinity. This species may use the reach of the stream within the project site as a movement corridor and it may also provide suitable breeding and/or rearing habitat. A Biological Opinion from the United States Fish and Wildlife Service and the National Oceanic and Atmospheric Administration Fisheries will be obtained to address potential project related impacts to steelhead and its designated critical habitat. Avoidance and minimization measures are included to reduce the potential project related impacts to jurisdictional areas, sensitive habitat types, sensitive wildlife species, and nesting birds.

With regards to invasive species, a total of 26 invasive plant species as identified by the California Invasive Plant Council (Cal-IPC) Inventory were observed within the BSA. Avoidance and minimization measures have been included to address this issue. Non-

native vegetation will be removed in accordance with Executive Order 13112 (Invasive Species) and in accordance with the *Programmatic Biological Opinion for Projects Funded or Approved under the Federal Highway Administration's Federal Aid Program* (United States Fish and Wildlife Service [USFWS] 2011). However, due to the presence of invasive species near open water habitat, it is likely that herbicides may need to be utilized within 60 feet of these open water surfaces in order to effectively remove invasive species that are particularly difficult to remove by hand. Herbicides would not be the primary method of removal, as feasible. A high threat of invasive wildlife was not observed. Measures have been included to require eradication of invasive non-native semi-aquatic species such as bullfrog or crayfish.

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1 - Introduction

The purpose of this Natural Environment Study (NES) is to provide the technical information necessary to review the proposed El Camino Real Bridge Replacement Project (project) in order to determine the extent that it may affect special-status biological resources. The environmental review, consultation, and any other actions required by applicable federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to United States Code (USC) Title 23, Section 327 and the Memorandum of Understanding dated December 23, 2016, and executed by FHWA and Caltrans.

Project History

The original El Camino Real steel truss bridge, located approximately 2.6 miles north of Santa Margarita in San Luis Obispo County, California (refer to Figures 1 and 2), was built in the early 1900s. U.S. Highway 101 was realigned in 1930 and the original bridge was structurally modified as part of the project. The original steel truss members were separated and the existing bridge was constructed from the truss members and additional concrete structures. The existing bridge is approximately 81 feet long and has four steel truss piers on concrete footings. Seasonal high flow events within Santa Margarita Creek caused a substantial amount of scour at the sandstone foundation of the pier footings and the stability of the bridge is severely compromised. The County conducted a scour remediation project for the bridge in 2012. However, it did not permanently resolve the scour issues and the problem persisted. The existing bridge has been inspected numerous times and it remains eligible for replacement based on the severity of the scour issues and its advancing age.

Implementation of the proposed project will increase public safety foremost by resolving the scour issues and deterioration of the existing bridge. Installation a new, longer modern bridge will increase safety for motorists because the new bridge will conform to the current structural and geometric standards. The project includes reconstruction of the roadway approaches to provide the appropriate standard roadway transitions and will incorporate left turn channelization at Asuncion and Santa Margarita roads, which will increase public safety along this entire portion of the roadway. Refer to Appendix A for Project Plans and Appendix B for Photo Documentation.

Figure 1: Project Vicinty Map

Figure 2: Project Location Map

Project Description

The County proposes to replace the existing El Camino Real Bridge (Bridge Number 49C0310) over Santa Margarita Creek and to improve the roadway approaches with FHWA funding from the federal Highway Bridge Program (HBP). Caltrans is the lead agency for the project with its FHWA delegated authority. The existing bridge is hydraulically inadequate and prone to undermining of the foundations via scour. The steel structural members of the existing bridge are corroded and have been classified as fracture critical by Caltrans.

The project goals include: 1) replace the deteriorating, hydraulically inadequate bridge; 2) accommodate a consistent 55 miles per hour (mph) posted speed corridor; 3) maintain traffic during construction; and, 4) add a new center turn-lane for improved safety.

In order to minimize the need for right of way acquisition, the proposed design will follow the existing alignment as much as possible while implementing some design improvements according to the project design criteria, which is a combination of *American Association of State Highway and Transportation Officials (AASHTO) - A Policy on Geometric Design of Highways and Streets 6th Edition and Local San Luis Obispo County Design Standards*. Implementation of the project will occur in two phases, so that through traffic can be maintained and at least one lane of traffic within the roadway will remain open during construction. During phase one, traffic will be shifted over to one side and a portion of the existing bridge will be demolished. Then a portion of the new bridge will be built immediately adjacent to the existing. One of the approaches will also be constructed during this stage of the project. Traffic will be shifted over onto the newly constructed bridge for phase two of the project and the same series of activities will occur on the opposite side—demolition of a portion of the existing, construction of a new section of the bridge immediately adjacent to the demolished segment, and construction of the other approach. The newly constructed portions on each side of the existing bridge will be wide enough to accommodate a single lane of traffic.

Temporary shoring along the roadway near the proposed bridge abutments, as well as near the vicinity of the existing utility bridge that is parallel to the existing traffic bridge, is anticipated to separate traffic from construction excavation. Once these phases are complete, the remaining middle sections of the existing bridge will be removed and the middle section of the new bridge will be installed in the same bridge alignment.

Caltrans has concurred with the proposed bridge structured type which will be designed to *AASHTO LRFD 6th Edition with California Amendments*. The new bridge will be a cast-in-place (CIP) pre-stressed (PS) concrete slab type bridge, approximately 140 feet

long with three unequal spans (42 feet, 58.5 feet, and 39.5 feet), and a structure depth of two feet to clear the hydraulic opening of the creek.

The new bridge will have an improved clear deck width of 60.5 feet between the railings to accommodate three 12-foot vehicle lanes, plus eight-foot shoulders and additional width for staging. Due to the extensive history of scour on-site, the new bridge design includes cast-in-drilled-hole (CIDH) piles under each column extension. Given the exposed sandstone at the site, driven piles cannot be used. Installation of the CIDH piles will require contractor equipment access within the creek channel to drill these foundations. Installation of the cast-in-place pre-stressed concrete slab will require installation of temporary falsework within the creek channel.

Four sets of columns and piles will support the new structure. Two sets would be located at the existing location of the abutments on the creek banks and another two sets would be located within the creek channel. The sets in the creek channel will consist of seven two-foot-diameter columns spaced approximately eight to 10 feet apart. Each column will be supported on a four-foot CIDH pile. The abutments will be supported on two-foot CIDH piles.

The contractor will need access into the creek channel to install the temporary falsework and CIDH piles and to remove the existing bridge. Access may be achieved by temporarily diverting water through or around the work area and constructing a temporary access path down into the creek channel. Water diversion may use a combination of cofferdams, pipes, sand bags, and temporary fill. If a temporary culvert or diversion dam is required, which is unlikely given the ephemeral hydrology of the stream, it will be sized appropriately to facilitate fish passage during construction. However, this component is not expected. Isolated plunge pools will be dewatered and any resident fish will be captured and relocated prior to dewatering.

The primary temporary access would be located on the north bank. Access from the southern bank would be limited to maintain the natural rock formations on the south bank. The temporary access path would traverse the creek bank, enter the channel, and extend under the proposed and existing bridges. The contractor may place clean crushed rock into the creek in order to create the temporary path and construct the CIDH piles, as well as provide level surfaces to place pads for construction of temporary falsework. Temporary fill associated with the creek diversion and the access path would be removed after construction is complete. This project is anticipated to span over two construction seasons and the contractor will be required to remove the diversion system as well as temporary fill within the creek channel at the completion of first construction season. These materials would be placed again at the beginning of the second season.

Ungrouted rock slope protection (RSP) will be placed around the abutments along the banks to prevent potential erosion. Based on the current project goals and plans, RSP

would be placed immediately below the bridge abutments and extend beyond the bridge rails on the northeast, northwest, and southeast banks. The RSP would range from 2.5 feet thick to 4.5 feet thick and include 0.25-ton material. Where feasible, the RSP will be backfilled with native soil and willow cuttings from willow stakes collected on-site will be installed between the rocks.

In order to accommodate the wider bridge and middle turn lane between Santa Margarita Road and Asuncion Road the north and south bridge approaches require modification. The horizontal alignment will matching the existing roadway but will have corrected super elevation and a raised vertical profile to accommodate the hydraulic requirements of Santa Margarita Creek.

The southern approach will consist of approximately 1,200 feet of new roadway in order to conform to back to the existing roadway. Intersections at both Walnut Avenue and Asuncion Road will be reconstructed to conform to the new roadway. The intersection of Asuncion Road will require relocation to the south to allow for the new bridge construction. Approximately 230 feet of Asuncion Road will be realigned in order to match the grade and super elevation of El Camino Real.

The northern approach will consist of approximately 930 feet of new roadway in order to conform to the existing roadway. The intersection of Santa Margarita Road will also require reconstruction along with several driveways within this section of roadway.

It is anticipated that some temporary widening will be required to handle and maintain traffic at all stages during construction. Temporary pavement that is required outside of the final roadway width will be removed once it is no longer needed and restored to the preconstruction conditions.

Removal of any native habitat types would be mitigated on-site to the extent feasible as described within the Habitat Mitigation and Monitoring Plan (HMMP). Mitigation for the removal of oak trees will also be included within the plan. A conceptual plan will be created for agency review during the permitting process and the plan will be finalized prior to acquiring any necessary permits.

Extensive utility coordination and some utility relocations are anticipated for the project and it will also require post-construction stormwater mangement. Due to the size and impacts of the project and that it falls within the municipal separate storm sewer (MS4) limits of the state National Pollutant Discharge Elimination System, the post-construction stormwater requirements apply. To accommodate for these requirements, several stormwater treatment areas are included with the project.

2 - Study Methods

Regulatory Requirements

The proposed project will require federal, state, and local regulatory authorizations for construction. These authorizations may be issued in the form of legal permits, agreements, or other forms of environmental review. Authorizations will likely include requirements for environmental compliance with the Federal Endangered Species Act (FESA), Sections 404 and 401 of the Clean Water Act (CWA), and Section 1602 of the California Fish and Game Code (CFG Code), which will be enforced through construction monitoring, documentation, and reporting. Prior to commencement of work, authorizations from these agencies must be secured.

FEDERAL POLICIES AND REGULATIONS

National Environmental Policy Act (NEPA)

NEPA directs "a systematic, interdisciplinary approach" to planning and decision-making and requires environmental statements for "major federal actions significantly affecting the quality of the human environment." Implementing regulations by the Council on Environmental Quality (Code of Federal Regulations [CFR] Title 40, Parts 1500–1508) requires federal agencies to identify and assess reasonable alternatives to proposed actions that will restore and enhance the quality of the human environment and avoid or minimize adverse environmental impacts. Federal agencies are directed to emphasize significant environmental issues in project planning and to integrate impact studies required by other environmental laws and Executive Orders into the NEPA process.

Federal Endandered Species Act (FESA)

FESA of 1973 provides legal protection for plant and animal taxa that are in danger of extinction and classified as either threatened or endangered, candidate species and/or designated critical habitat. Section 7 of FESA requires federal agencies to make a finding on federal actions as to the potential to jeopardize the continued existence of any listed species and/or critical habitat potentially affected by the action, including the approval by an agency of a public or private action, such as issuance of a United States Army Corps of Engineers (USACE) permit under CWA Section 404. As part of its NEPA assignment of federal responsibilities by FHWA, effective October 1, 2012 and pursuant to 23 USC 326, Caltrans is acting as the lead federal agency for Section 7 of the federal Endangered Species Act (FESA).

Section 9 of FESA protects federally listed plant and animal species from unlawful "take," which is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." The United States Fish

and Wildlife Service (USFWS) regulates activities that may result in take of federally endangered or threatened species, or candidate species. Project related activities that could result in impacts, such as take, to listed species would require any involved federal agencies to consult with USFWS to determine the extent of impacts to listed species. Project related activities that could result in impacts, such as take, to listed marine fish species would require any involved federal agencies to consult with the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries) to determine the extent of impacts to listed marine fish species.

If there is the potential for a project to impact federally listed species and/or designated critical habitat, and there is a federal nexus, a Biological Assessment must be prepared by the applicant and submitted to the federal lead agency involved with the project. The Biological Assessment is a study analyzing specific effects on species listed under the FESA. The Biological Assessment would likely include certain recommended measures prior to construction, including, but not limited to: 1) surveying and mapping any locations where listed species are observed; 2) surveys for listed plant species during the appropriate time periods (blooming season); 3) avoidance/minimization measures for special-status plant species; 4) pre-construction surveys for special-status animal species during the appropriate time periods (protocol surveys); and 5) avoidance/minimization measures for special-status animal species.

Due to the potential for federally listed species to occur within the project site, Section 7 consultation with USFWS and NOAA Fisheries will be conducted prior to construction. The documentation submitted to these agencies is typically a Biological Assessment. Upon review of a Biological Assessment, USFWS and/or NOAA Fisheries may issue a federal Biological Opinion and Incidental Take Statement that includes provisions for legal take, provided that specific mitigation measures are employed for construction.

Federal Migratory Bird Treaty Act (MBTA)

The federal Migratory Bird Treaty Act of 1918 (MBTA) protects migratory birds, including their eggs, nests, and feathers. The MBTA was originally drafted to end the commercial trade in bird feathers popular in the latter part of the 1800s. The MBTA is enforced by USFWS and potential impacts to species protected under this law may be evaluated by USFWS during the consultation process.

Section 404 of the Clean Water Act (CWA)

USACE regulatory jurisdiction under Section 404 of the CWA extends to work in, over, and under waters of the United States that results in a discharge of dredged or fill materials within USACE jurisdiction. Under Section 404, USACE regulates traditional navigable waters, wetlands adjacent to traditional navigable waters, relatively permanent non-navigable tributaries that typically flow year-round or have a continuous flow at least seasonally (typically three months), and wetlands that directly abut relatively permanent

tributaries. USACE will determine jurisdiction over waters that are non-navigable tributaries that do not typically flow year-round or have continuous flow at least seasonally, wetlands adjacent to such tributaries, and wetlands adjacent to but that do not directly abut a relatively permanent, non-navigable tributary, only after making a significant nexus finding.

USACE jurisdiction over non-tidal waters of the United States extends laterally to the Ordinary High Water Mark (OHWM) with the presence of bed and bank, or beyond the OHWM to the limit of any adjacent wetlands, if present (33 CFR 328.4). USACE jurisdiction over non-tidal waters typically extends upstream to the point where the OHWM is no longer perceptible. The OHWM is defined in 33 CFR 328.3 as:

> *"that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.*

Section 401 of the Clean Water Act (CWA)

Section 401 of the CWA functions to ensure that federally permitted activities comply with the federal CWA and other state-mandated water quality laws. Section 401 is implemented through a review process that is conducted by the State Regional Water Quality Control Board (RWQCB) and is typically triggered by the Section 404 permitting process. The RWQCB issues a Water Quality Certification via the 401 process that a proposed project complies with applicable effluent limitations, water quality standards, and other conditions of state law. Evaluating the effects of the proposed project on both water quality and quantity (runoff) falls under the jurisdiction of the RWQCB. Any activities within the project area that have the potential to result in a need for a permit from the USACE would also require a RWQCB Section 401 Water Quality Certification.

Executive Order 11990 – Protection of Wetlands

Executive Order 11990 established a national policy to avoid adverse impacts on wetlands whenever there is a practicable alternative. The United States Department of Transportation (DOT) promulgated DOT Order 5660.1A in 1978 to comply with this direction. Impacts on wetlands must be identified and alternatives that avoid wetlands must be considered for projects that receive federal funding. If wetland impacts cannot be avoided, then practicable measures to minimize the impacts must be included. This must be documented in a specific Wetlands Only Practicable Alternative Finding.

As an additional requirement, opportunities for early public involvement must be provided for projects that have potential to affect wetlands. FHWA provides technical

assistance (Technical Advisory 6640.8A) and reviews environmental documents for compliance.

Executive Order 13112 – Invasive Species

The National Invasive Species Council (NISC) was established by Executive Order 13112 to ensure that federal programs and activities prevent and control invasive species and that these efforts are coordinated, effective, and efficient. The NISC is co-chaired by the Secretaries of Commerce, Agriculture, and the Interior. Executive Order 13112 defines invasive species as "…an alien (or non-native) species whose introduction does, or is likely to cause economic or environmental harm or harm to human health."

STATE POLICIES AND REGULATIONS

California Enviromental Quality Act (CEQA)

Guidance for determining impacts under CEQA is based on the State CEQA Guidelines. Using these guidelines, project related activities will have a significant impact on biological resources if they would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife (CDFW) or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFW or USFWS;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA;
- Interfere substantially with the movement of any resident or migratory species of wildlife, wildlife corridors, or wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources; and/or,
- Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved state, regional, or local HCP.

California Endangered Species Act (CESA)

The CESA ensures legal protection for plants, listed as rare, threatened, or endangered, and wildlife, listed as threatened or endangered. CDFW regulates activities that may result in the "take" of such species. The CESA definition of "take" is limited to direct take

such as hunting, shooting, capturing and does not include the broad "harm" and "harassment" definitions within the federal law. CDFW also maintains a list of California Species of Special Concern (SSC) based on limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. Under state law, CDFW is empowered to review projects for their potential to affect state listed species, SSC, and their habitats. CDFW has authority during the CEQA process to review potential constraints to rare plant species and require mitigation to reduce the level of significance to insignificant levels. Plant species listed by the California Native Plant Society (CNPS), that qualify as sensitive and warrant listing are typically also considered under CEQA. These include California Rare Plant Rank Lists 1A, 1B, and 2 plant species.

California Fish and Game Code Section 1600

Pursuant to Sections 1600–1616 of the CFG Code, CDFW regulates diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake. This jurisdiction includes dry washes that carry water ephemerally during storm events. The California Code of Regulations (CCR) Title 14, Section 1.72 defines a stream as:

> *"[A] stream is a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation."*

The term "stream," which includes creeks and rivers, is defined in 14 CCR 1.72 as:

> *"a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation."*

In addition, the term stream can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife (CDFW 1994).

The limits of CDFW jurisdiction are defined in the CFG Code as:

> *"the bed, channel or bank of any river, stream or lake designated by the department in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit."*

In practice, CDFW usually extends its jurisdictional limit to the top of a stream/lake bank, or outer edge of the riparian vegetation, whichever is wider. CDFW can be expected to take jurisdiction over areas that have evidence of a cut bank and channel, or evidence of historical flows, to the point where no of bed and bank features are present.

Other CFG Code Sections

CFG Code Section 3503 include provisions to protect the nests and eggs of birds. Sections 3511, 4700, 5050, and 5515 include provisions to protect Fully Protected species, such as: 1) prohibiting take or possession "at any time" of the species listed in the statute, with few exceptions; 2) stating that "no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to "take" a species that has been designated as Fully Protected; and 3) stating that no previously issued permits or licenses for take of these species "shall have any force or effect" for authorizing take or possession. CDFW is unable to authorize incidental take of "fully protected" species when activities are proposed in areas inhabited by those species.

LOCAL POLICIES AND REGULATIONS

The County is the lead agency responsible for conducting the CEQA environmental review for public works projects. Because the project would be conducted through the FHWA Local Assistance Program, Caltrans with its federally-designated authority will provide technical oversight throughout the environmental review process. This NES also satisfies the requirements for NEPA because of the federal funding nexus.

The project site is within the Salinas River Sub Area of the North County Planning Area. The North County Planning Area (Chapter 22.94) does not contain specific policies for road or bridge projects. However, standard Caltrans and County Best Management Practices (BMPs) are applicable to the project. The County maintains specific standards for the replacement of native oak trees (*Quercus* spp.) and riparian vegetation that is removed during project activities. .

San Luis Obispo County General Plan

The San Luis Obispo County General Plan includes the federal, state, and local statutes, ordinances, and policies that govern the conservation of biological resources that must be considered by the County during the environmental review process. The Conservation and Open Space Element of the San Luis Obispo County General Plan (County of San Luis Obispo 2010) provides for a variety of land uses that ensure future growth, while simultaneously providing for the conservation of agricultural and natural resources.

Conservation and Open Space Element

- **Section 1.10**, "General Provisions," of the Element provides goals, policies, and implementation measures for discretionary projects.
    - Section 1.10.5 – Threatened and Endangered Species
        - **Policy 27.** Threatened or endangered plant and wildlife species shall be protected in accordance with state and federal laws.
        - **Policy 28.** County shall work closely with state and federal agencies to assure that discretionary project avoid or minimize impacts to fish, wildlife, and botanical resources.
        - **Policy 29.** County will seek cooperative efforts with local, state, and federal agencies to protect listed threatened and endangered plant and wildlife species through the use of conservation plans and other methods promoting management and conservation of habitat lands.
        - **Policy 30.** County will promote public awareness of endangered species laws to help educate property owners and the development community of local, state, and federal programs concerning endangered species conservation issues.
        - **Policy 31.** Under the provisions of CEQA, the County, as lead agency, will solicit comments from the CDFW and USFWS when an environmental document (Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report) is prepared
        - **Policy 32.** Riparian areas will be managed in accordance with USACE and CDFW rules and regulations to enhance the drainage, flood control, biological, recreational, and other beneficial uses while acknowledging existing land use patterns.
        - **Implementation Measure Q.** Discretionary projects shall consider effects to biological resources as required by CEQA.
        - **Implementation Measure R.** Consult and consider the comments from responsible and trustee wildlife agencies when reviewing a discretionary project subject to CEQA.
        - **Implementation Measure S.** Pursue the development and implementation of conservation programs with state and federal wildlife agencies for property owners desiring streamlined endangered species mitigation programs.

Studies Required

This NES was completed in a manner consistent with the Caltrans guidelines, as referenced in the Caltrans Standard Environmental Reference (SER). In order to satisfy the requirements of federal and state regulatory laws and to conduct the required CEQA analysis, seasonally timed botanical surveys and a formal wetland assessment of the project site and vicinity were conducted (refer to Table 1). Botanical Surveys were conducted in accordance with CDFW *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities* (CDFW 2009); and the USFWS *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants* (USFWS 1996).

Prior to conducting any field surveys, SWCA performed a literature and database review to determine which sensitive species have been documented within the vicinity of the project. This included a five-mile radius query of the California Natural Diversity Database (CNDDB), CNPS Electronic Inventory, and review of environmental documents that have been prepared for other projects in the general area. SWCA also obtained a species list from USFWS and NMFS (refer to Appendix C), which reaffirmed the CNDDB records and augmented the number of species for consideration.

Focused habitat assessments for California red-legged frog (*Rana draytonii*) and least Bell's vireo (*Vireo bellii pusillus*) were conducted for the project to determine if protocol level field surveys were warranted. In addition to the focused habitat assessments, reconnaissance surveys for wildlife were also conducted in conjunction with botanical and jurisdictional waters assessment surveys. A comprehensive list of plant and wildlife species observed within the project site during the surveys was compiled (refer to Appendix D).

Personnel and Survey Dates

Table 1 below summarizes the survey efforts conducted within the project site.

Table 1: Survey Tasks, Dates, and Personnel

Study or Survey	Dates	Personnel
Botanical Survey	May 24 & August 9, 2011	County Environmental Division
Protocol California Red-legged Frog Survey (Day)	April 28, June 29, & July 25, 2011	County Environmental Division
Protocol California Red-legged Frog Surveys (Night)	April 28, May 31, June 13, June 29, & July 25, 2011	County Environmental Division
Botanical Survey	March 10 & April 16, 2015	Travis Belt, Michaela Koenig
General Wildlife Survey	January 26 & April 21, 2014 March 10 & April 16, 2015	Jackie Hancock, John Moule
California red-legged frog Habitat Assessment	April 21, 2014	John Moule
Least Bell's Vireo Habitat Assessment	January 26, 2014	Jackie Hancock
Wetland and Waters Assessment	May 11, 2015	Travis Belt, Michaela Koenig
Botanical Survey	April 20, 2017	Keith Miller, Kristie Scarazzo

Agency Coordination and Professional Contacts

The following is a chronological summary of agency coordination and correspondence:

- **May 15, 2014:** The County (Katie Drexhage) and Caltrans received a response from the USFWS Ventura office (Julie Vanderwier) regarding the least Bell's vireo habitat assessment.
- **May 27, 2014:** Caltrans (Tom Edell) received a response from the USFWS (Julie Vanderwier) on the California red-legged frog (CRLF) habitat assessment.
- **July 17, 2014:** John Moule (SWCA Biologist) submitted a request, via the USFWS online IPaC species list system, for an official USFWS species list for the project area. The official list was delivered via email the same day.
- **July 7, 2015:** John Moule (SWCA Biologist) submitted a request, via the USFWS online IPaC species list system, for an updated official USFWS species list for the project area.
- **July 6, 2017:** Jon Claxton (SWCA Biologist) submitted a request, via the USFWS online IPaC species list system, for an updated official USFWS species list for the project area.
- **October 31, 2017:** Jon Claxton (SWCA Biologist) submitted a request, via the USFWS online IPaC species list system, for an updated official USFWS species list for the project area.

- **December 1, 2017:** Jon Claxton (SWCA Biologist submitted a request via email to NMFS for an official species list.

Limitations That May Influence Results

Sensitive plant species with the potential to occur in the project site may be annual species that may be difficult to detect following seasons of abnormal rainfall, or during those times of the year when particular species do not typically flower. The botanical surveys conducted in support of this NES were timed to accommodate the flowering periods of the species considered in this document. The floristic surveys were comprehensive and all plant species encountered during the surveys were identified to the lowest possible taxonomic level, which is required for accurate identification and reporting. Several other focused biological surveys were conducted on-site, over a relatively long time period, such that staff gained a high level of familiarity with the floristic composition on-site.

Sensitive wildlife species with the potential to occur in the project site may be cryptic (difficult to detect) or transient, migratory species. The population size and locations of sensitive species may fluctuate through time. Because of this, the data collected for this NES represents a “snap shot” in time and may not reflect actual future conditions.

The existing bridge and trees within the project site were inspected for nesting birds. However, even though no nesting birds were observed, birds may establish nests within the project limits prior to the onset of construction. Nesting bird surveys are time sensitive and are often repeated several times before the onset of construction activities; especially if construction will occur during the typical nesting bird season (February 1 to September 1).

3 - Results: Environmental Setting

Description of the Existing Biological and Physical Conditions

BIOLOGICAL STUDY AREA

The biological study area (BSA) includes all areas that could be potentially impacted by the project plus a buffer to accommodate any changes to the project limits and design that may occur during project development (refer to Figure 2). For the purposes of this report, the BSA includes an approximately 0.5-mile section of roadway along El Camino Real Road, between Santa Margarita Road and Asuncion Road. The BSA limits along the roadway are consistent with the County right-of-way (ROW), which is 100 feet wide along El Camino Real and includes portions of an agricultural parcel that would be acquired for the proposed curve correction. The BSA also includes areas beyond the County ROW at the bridge location and around intersections and driveways that connect with El Camino Real within the outer project limits. Adjacent parcels are owned by private farmers, a private convalescent hospital, and private residences. Biological observations within these portions of the BSA were made from the County ROW because permission to access these properties was not obtained or deemed necessary for the purposes of this study.

The BSA is approximately 11.6 acres in size. The dominant natural communities within the BSA were characterized using the California Manual of Vegetation (Sawyer et al. 2009). The natural community classification was cross referenced with the CNDDB to determine which natural communities are recognized as sensitive by CDFW. The vegetation communities observed within the BSA include: ruderal/developed, annual brome grassland, coast live oak woodland, valley oak woodland, arroyo willow thicket, and Fremont cottonwood forest (refer to Figures 3 and 4). Approximately 0.41 acre of riparian habitat (classified as either arroyo willow thicket or Fremont cottonwood forest) and approximately 0.71 acre of oak woodlands (classified as coast live oak woodland and valley oak woodland) adjacent to the riparian areas were mapped within the BSA. Appendix B includes representative photos of the BSA.

PHYSICAL CONDITIONS

The BSA is located within the Santa Margarita Valley, which is bounded by Cuesta Ridge to the southwest and Granite Ridge to the northeast. Elevational range within the BSA is approximately 915 (279 meters) to 930 feet (283 meters) above mean sea level. The historic average annual precipitation for the region is approximately 14.69 inches. The historic average annual temperature ranges from 31 degrees Fahrenheit in December to 92 degrees Fahrenheit in August (Intellicast 2016).

Figure 3: Habitat Impact Map – Bridge Detail

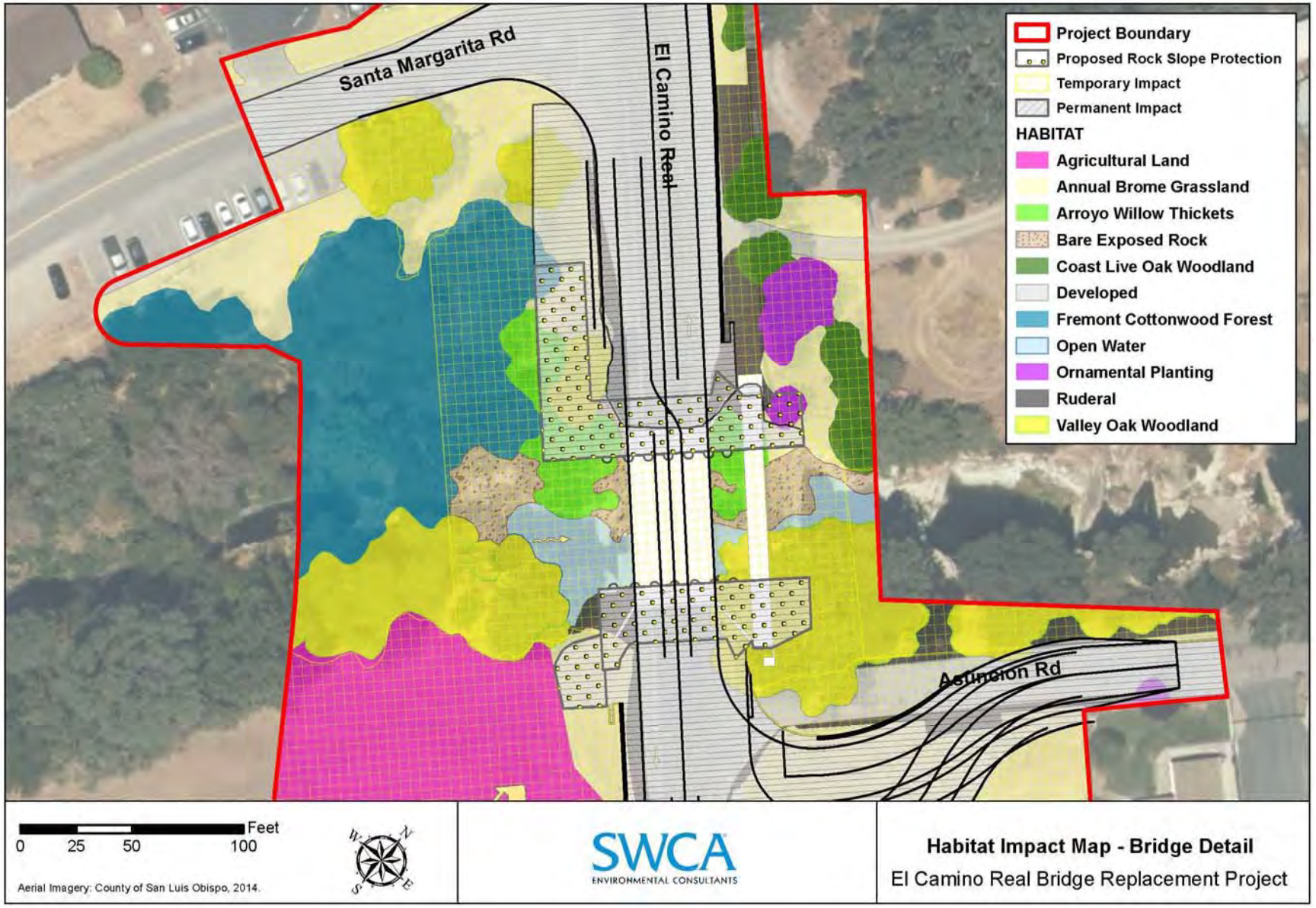
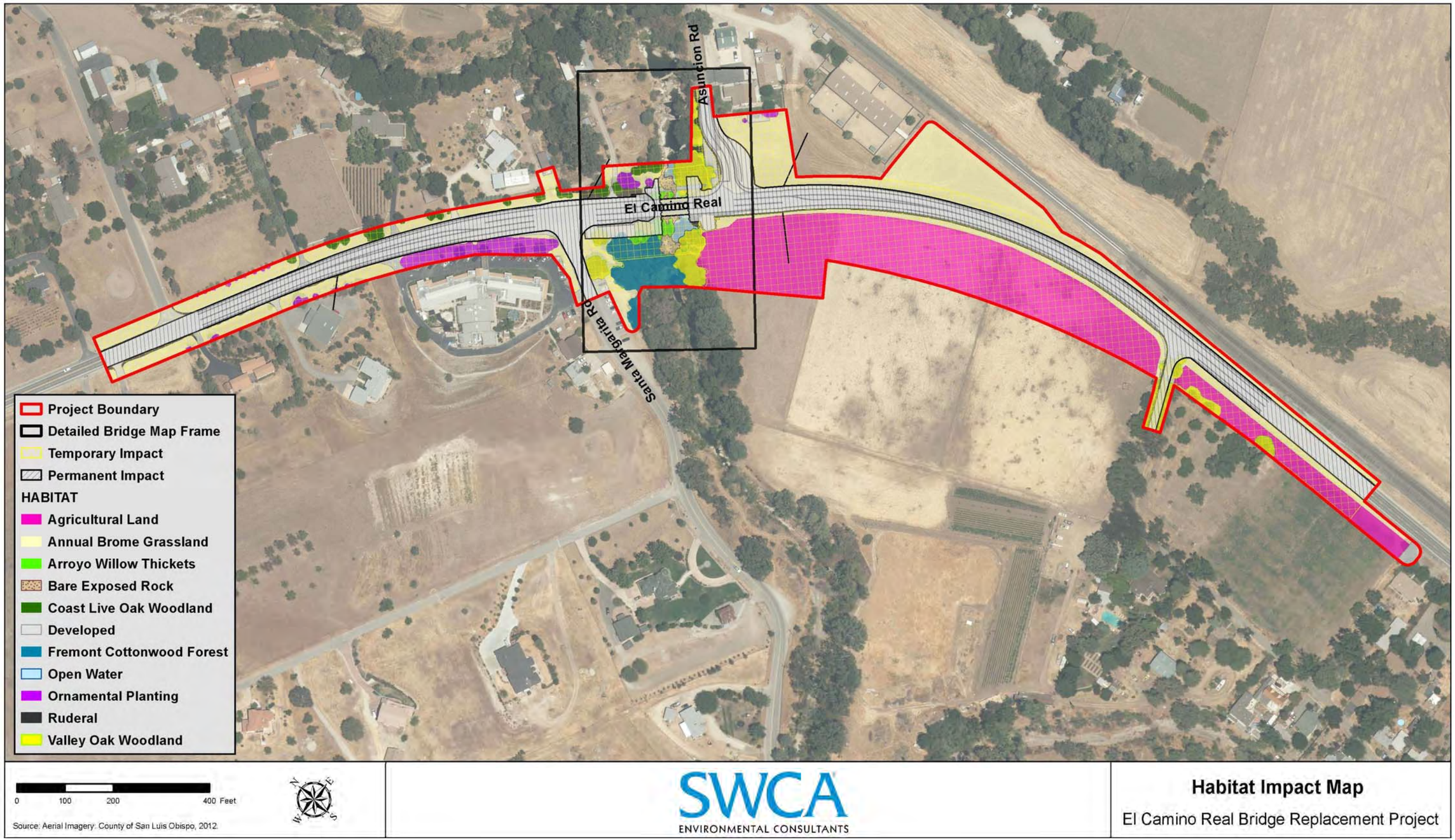


Figure 4: Habitat Impact Map



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Soil Conditions

The United States Department of Agriculture Natural Resources Conservation Service (NRCS) Web Soil Survey maps three soil series within the BSA (NRCS 2015; refer to Figure 5). The Hanford and Greenfield fine sandy loams are shown to occur on the terrace to the north and northwest of the creek. Still clay loams are shown to occur on the terrace to the south and southeast of Santa Margarita Creek. The San Andreas-Arujo complex is mapped in the most northern portion of the BSA along El Camino Real. The Santa Margarita Creek channel is characterized as having large areas of exposed sandstone bedrock that have been cut into by annual high-velocity waters forming a series of large and deep plunge pools. The three soil mapping units within the BSA are described in greater detail below.

Hanford and Greenfield Mapping Unit

The Hanford and Greenfield fine sandy loams (Mapping Unit 148) is mapped on the terrace to the northwest of the creek. This map unit is an undifferentiated unit that can include soils from the Hanford or Greenfield soil series.

Soils in the Hanford series tend to be gently sloping, deep, well drained, and formed on stream bottoms, floodplains, and alluvial fans. These soils have low erodibility and low shrink-swell characteristics. Soils in the Greenfield series tend to be steeply to very steeply sloping and moderately drained. Greenfield soils are coarse textured alluvium derived from granitic and mixed rock sources and have low erodibility and low shrink-swell characteristics.

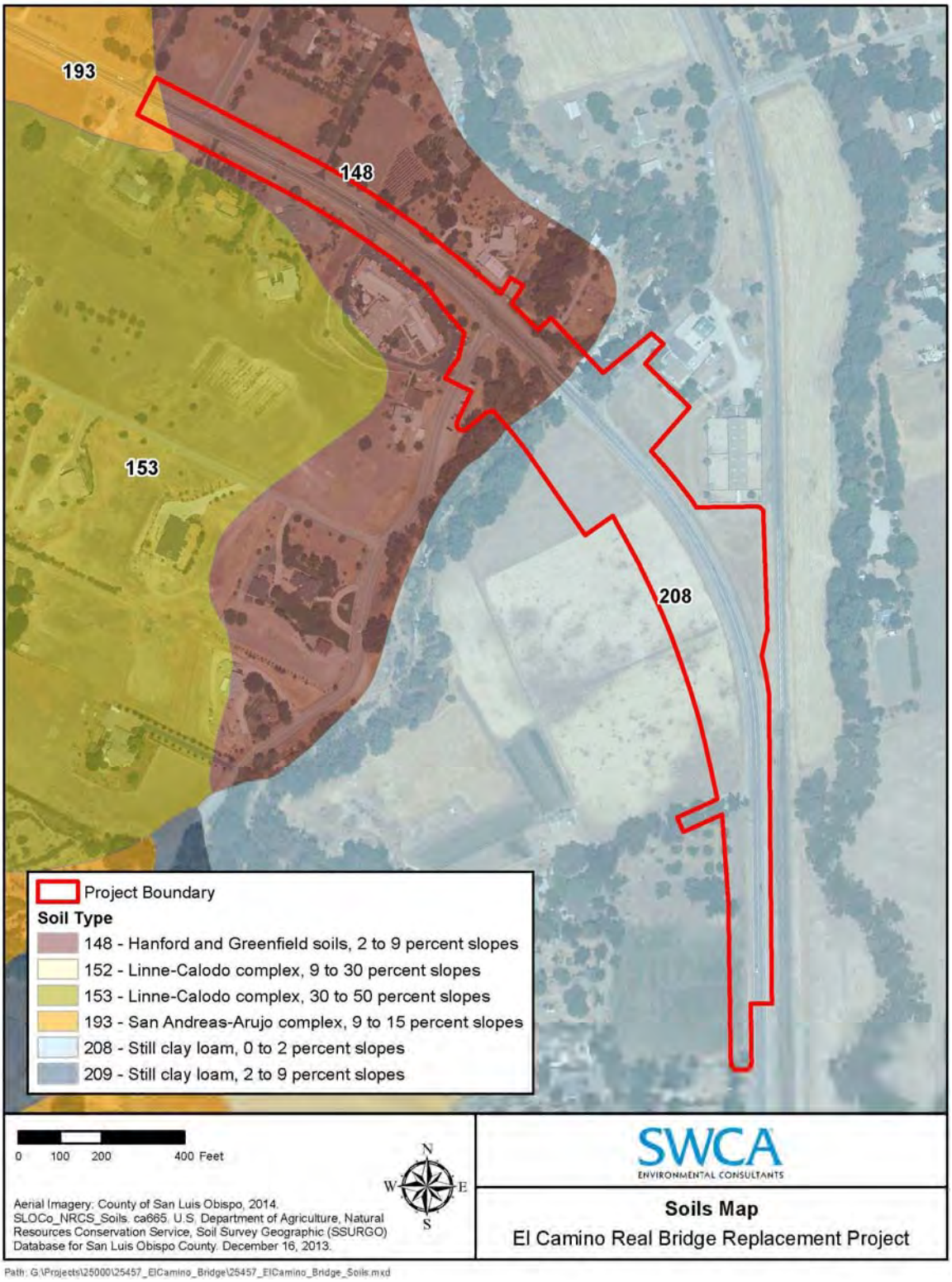
Still Clay Loam (0 to 2 percent slopes)

Still clay loam (Mapping Unit 208) is mapped on the terrace to the southeast of Santa Margarita Creek. Still clay loam is a deep, nearly level soil that is well drained. Still clay loam is formed in alluvium derived from sedimentary rocks. The soil has moderate erodibility and moderate shrink-swell characteristics.

San Andreas-Arujo Complex (9 to 15 percent slopes)

San Andreas-Arujo complex (Mapping Unit 193) is mapped along El Camino Real in the northern portion of the BSA. The San Andreas-Arujo complex consists of well drained, moderately deep soils that formed from weathered, soft sandstone and igneous and metamorphic rock. San Andreas and Arujo soils are found on uplands, hills, and mountainous uplands and have slopes of nine to 75 percent.

Figure 5: Soil Mapping Units within and adjacent to the Biological Study Area



Hydrologic Resources

Santa Margarita Creek is an intermittent creek that originates in the Santa Lucia range near Cuesta Pass. It follows U.S. Highway 101 (US 101) north, makes a confluence with Tassajara Creek, and then passes under US 101 near the State Route (SR) 58 intersection. The creek enters the wide and flat portion of the Santa Margarita Valley near the town of Santa Margarita, where it joins Yerba Buena Creek and flows north to the BSA. The portion of creek from Cuesta Pass to approximately 0.25 miles before the BSA is typically dry in the summer and fall. Within the BSA, Santa Margarita Creek enters an area of uplifted sandstone bedrock about 300 feet before the bridge. The BSA is within the Salinas River watershed, which drains into the Pacific Ocean approximately 115 miles north, near the town of Castroville. At this location, the creek is perennial and flows year-round because the existing ground water cannot completely penetrate the bedrock and must flow over the underlying rock. The layers of sandstone are angled upward at about 45 degrees and set perpendicular to the bank. Over time, the creek has carved a series of plunge pools between layers of sandstone.

Upstream of the bridge, the riparian corridor is approximately 200 feet wide. The active creek channel is approximately 20 feet wide. Prior to passing under the bridge structure, the creek enters the first plunge pool within the BSA. The first upstream pool is approximately 60 feet in diameter and about 4.8 feet deep. This pool supported dark, stagnant water with minimal vegetative cover along the banks, which is the general condition observed at most of the plunge pools on-site. The pool is lined with exposed sandstone bedrock. It is unknown if woody debris occurs at the bottom of the pool due to lack of suitable water clarity.

In general, the area directly beneath the bridge is considered highly disturbed due to recreational impacts. Concrete walls, footings, and scour repairs, including additional concrete and grout, under the bridge have been painted with graffiti (refer to Appendix B). Several rope swings hanging from tree limbs indicate frequent human activities and swimming within the plunge pools during summer months. Foot trails adjacent to the creek shoreline are abundant in the area. A moderate amount of trash was also observed under the bridge.

The riparian corridor on the upstream side of the bridge is less confined and has a more developed vegetation community. While the south bank upstream was not much wider than the south bank downstream of the bridge, it supported more trees and a thicker understory (refer to Appendix B, Photo 5). The most expansive portion of riparian vegetation was present along the upstream northern bank.

Downstream of the bridge, the channel continues to flow into several additional plunge pools. The riparian corridor narrows to a width of approximately 100 feet and the channel becomes more incised. The first downstream pool is approximately 100 feet

wide and 6.5 feet deep and flanked by steep, narrow banks. Exposed sandstone bedrock is also visible along the pool margins and at the footings of the bridge (refer to Appendix B, Photo 6). Continuing downstream there are two more pools with similar vegetative characteristics and structure, both approximately 70 feet wide and roughly four feet deep (refer to Appendix B, Photo 4).

As Santa Margarita Creek continues north, it passes under railroad tracks and makes a confluence with Trout Creek approximately 0.5 mile north of the El Camino Real Bridge. At dry times of the year, the creek becomes intermittent to completely dry at this location and remains dry all the way north to its confluence with the Salinas River.

BIOLOGICAL CONDITIONS IN THE BIOLOGICAL STUDY AREA

Natural Communities

The dominant vegetation communities present within the BSA are Fremont cottonwood forest, arroyo willow thicket, valley oak woodland, coast live oak woodland, annual brome grassland, and ruderal/developed habitat. Each of these natural communities are described in greater detail below

Fremont Cottonwood Forest

Fremont Cottonwood Forest (*Populus fremontii Forest Alliance*; CDFW CA Code: 61.130.00) is described by Sawyer et al. (2009) as occurring on floodplains, along low-gradient rivers, along perennial or seasonally intermittent streams, in valleys with a dependable subsurface water supply that varies considerably during the year. The Fremont cottonwood forest falls within the Holland (1986) description of southern cottonwood willow riparian forest (CNDDB CTT61330CA) as it is recognized as a natural community of special concern by the CDFW. The USFWS Wetland Inventory (1996 national list) recognizes Fremont cottonwood as a FACW plant. This alliance generally occurs adjacent to river and creek channels, within seasonally flooded arroyos, and in topographic depressions close to ground water. This community consists of forested stream-side riparian vegetation, varying from open to closed canopies (Holland 1986).

Along the Santa Margarita Creek riparian corridor the Fremont cottonwood forest is co-dominant in the tree canopy with boxelder (*Acer negundo*), California black walnut, coast live oak, red willow (*Salix laevigata*), and arroyo willow (*Salix lasiolepis*). Dominant shrubs within the Fremont cottonwood forest community in the BSA consists of American dogwood, poison oak (*Toxicodendron diversilobum*), virgin's bower (*Clematis ligusticifolia*), snowberry (*Symphoricarpos mollis*), and scattered coyote bushes and mulefat. Fremont cottonwood forest intergrades with valley oak woodland along the southwestern banks and with coast live oak woodland along the northeastern banks of Santa Margarita Creek. Within the BSA, approximately 14,810 square feet (ft^2) (0.34 acre) of Fremont cottonwood forest was mapped.

Arroyo Willow Thicket

Arroyo willow thicket (*Salix lasiolepis* Woodland Alliance; CDFW CA Code: 61.201.00) is described by Sawyer et al. (2009) as being dominated by arroyo willow (*Salix lasiolepis*) or co-dominant in the in the tall shrub or low tree canopy. Along Santa Margarita Creek, the arroyo willow thicket occurs with California black walnut (*Juglans californica*) saplings, American dogwood (*Cornus sericea*), mulefat (*Baccharis salicifolia*), coyote bush (*Baccharis pilularis*), and California blackberry (*Rubus ursinus*). The arroyo willow thicket may have an open, tall shrub canopy or a closed, continuous tree canopy reaching up to approximately 26 feet (eight meters) in height. Along the central coast, arroyo willows grow on seasonally or intermittently flooded sites and are typically shrubby and multi-branched (Sawyer et al. 2009). The arroyo willow thicket associated with Santa Margarita Creek falls within the Holland (1986) description of central coast riparian scrub and is recognized by the CNDDB (CTT63200CA) as a natural community of special concern. The USFWS Wetland Inventory (2014 national list) recognizes arroyo willow as a Facultative Wetland (FACW) plant, meaning it usually occurs in wetlands, but may occur in non-wetlands.

Within the BSA, the arroyo willow thicket is restricted to open areas within the Santa Margarita Creek riparian corridor and is bordered by Fremont cottonwood forest, valley oak woodland, annual brome grassland, and ruderal habitat. Evidence of frequent disturbance from seasonal flooding was observed within this habitat type and it appears to be in a transition state because the vegetation is rebounding. Approximately 3,250 ft^2 (0.07 acre) of arroyo willow thicket was mapped within the BSA.

Valley Oak Woodland

Valley Oak Woodland (*Quercus lobata* Woodland Alliance; CNDDB: CTT71130CA; CDFW Ca Code: 71.040.00) is described by Sawyer et al. (2009) as being dominated by valley oaks (*Quercus lobata*). Valley oak woodlands are often found in valley bottoms, lower slopes, and summit valleys that may be seasonally flooded. Soils within this community type are alluvial or residual. Trees canopies may reach heights up to 98 feet (30 meters). Shrub layers may be open to intermittent and herbaceous layers often have grassland components.

Within the BSA, remnants of valley oak woodland stands are present along the southern banks of Santa Margarita Creek and along the southern portion of the BSA along El Camino Real. Within the BSA, wildlife species observed in the valley oak woodland are similar to those described above in the description of coast live oak woodland and annual brome grassland. Approximately 25,264 ft^2 (0.58 acre) of valley oak woodland was mapped within the BSA.

Coast Live Oak Woodland

Coast live oak woodland (*Quercus agrifolia* Woodland Alliance: CNDDB: CTT71160CA; CDFW CA Code: 71.060.00) is described by Sawyer et al. (2009) as being dominated by coast live oak (*Quercus agrifolia*) with scattered foothill pine (*Pinus sabiniana*) in the tree canopy. Although not a natural community of special concern, California Public Resources Code Section 21083.4 (Senate Bill 1334) directs counties to evaluate and mitigate for impacts to oak woodlands when reviewing projects under CEQA.

Within the BSA, the coast live oak woodland is located mostly on the northern banks of Santa Margarita Creek riparian corridor. The coast live oak woodland has areas of open grassland and ruderal habitat understory as well as a thick scrub layer in other areas. Coast live oak woodland provides suitable habitat for a wide range of wildlife species. Coast live oak woodland is utilized by many nesting birds and is breeding habitat for many mammals and herpatofauna. Within the BSA, mule deer (*Odocoileus hemionus*), striped skunk (*Mephitis mephitis*) were observed within the coast live oak woodland. Acorn woodpeckers (*Melanerpes formicivorus*), bushtits (*Psaltriparus minimus*), ash-throated flycatchers (*Myiarchus cinerascens*), orange-crowned warbler (*Oreothlypis celata*), Bewick's wren (*Thryomanes bewickii*), Anna's hummingbird (*Calypte anna*), oak titmouse (*Baeolophus inornatus*), and violet-green swallow (*Tachycineta thalassina*) were observed foraging and utilizing the coast live oak woodland.

Within the BSA, native shrubs that occur in association with coast live oak woodland include California rose (*Rosa californica*), elderberry (*Sambucus nigra* ssp. *caerulea*), coffee berry (*Frangula californica*), snowberry (*Symphoricarpos mollis*), and poison oak. Grasses and forbs associated with annual brome grassland are common within the understory. Other plant species observed within the understory of this community include geranium (*Geranium dissectum, G. molle, and G. rotundifolium*), Italian thistle (*Carduus pycnocephalus*), common fiddleneck (*Amsinckia intermedia*), and purple vetch (*Vicia villosa*). Approximately 5,662 ft^2 (0.13 acre) of coast live oak woodland was mapped within the BSA.

Annual Brome Grassland

Annual brome grassland (*Bromus Herbaceous Semi-Natural Alliance*: CDFW California [CA] Code: 42.026.00) is prevalent within the BSA. Plant species within this habitat type are primarily non-native and naturalized grasses. This habitat type provides limited resources for wildlife and is utilized primarily by species tolerant of human activities. The disturbed condition of these lands greatly reduces their habitat value and ability to sustain sensitive plants or diverse wildlife assemblages. Annual brome grassland may provide shelter for reptiles and small mammals. An American kestrel (*Falco sparverius*) was observed foraging in this habitat during the field surveys, along with ground foraging bird species such as western meadowlarks (*Sturnella neglecta*). Annual brome grassland provides little cover for wildlife, yet numerous species do forage, and several

species breed, in this habitat. Small mammals such as California ground squirrel, deer mice (*Peromyscus maniculatus*), and Botta's pocket gophers (*Thomomys bottae*) are common residents in annual grasslands in central California. Larger mammals such as coyote (*Canis latrans*) occasionally forage in these areas as well. A variety of bird species use annual grasslands as foraging habitat including mourning dove (*Zenaida macroura*), western meadowlark (*Sturnella neglecta*), and western kingbird (*Tyrannus verticalis*).

Within the BSA, annual brome grassland is dominated by red brome (*Bromus madritensis* var. *rubens*) and rip-gut brome grasses (*B. diandrus*), with a large component of wild oats (*Avena barbata* and *A. fatua*), foxtail barley (*Hordeum murinum*), and filaree. Other plant species identified within this habitat type include ruderal species such as black mustard, yellow star-thistle, and cheeseweed (*Malva parviflora*). Native wildflowers such as miniature lupine (*Lupinus bicolor*) and sky lupine and (*L. nanus*), elegant clarkia (*Clarkia unguiculata*), western vervain (*Verbena lasiostachys*), and American lotus (*Acmispon americanus*) compose the herbaceous layer within this habitat type (refer to Appendix D for a complete list of species observed). Approximately 3.6 acres of annual brome grassland were mapped within the project BSA.

Ruderal/Developed

Ruderal/developed habitat occurs in areas that are regularly disturbed by human activities. Since this is not a native habitat, it is not described by Holland (1986) or Sawyer et al. (2009). Non-native species such as black mustard (*Brassica nigra*), filaree (*Erodium* spp.), yellow star-thistle (*Centaurea solstitialis*), and non-native grasses are the dominant species observed within this habitat type. Other plant species observed in the ruderal habitat on-site include ripgut brome (*Bromus diandrus*), foxtail barley (*Hordeum murinum*), and tocalote (*Centaurea melitensis*).

Within the BSA, ruderal habitat has been altered by past land use practices, development, ground disturbance, and recreational activities. Vegetative cover is generally low due to disturbance and there is a high percentage of bare soil. For the purposes of this habitat description and calculations, the description of ruderal habitat has been lumped with areas that are completely developed as they both offer limited habitat value.

Although, the ruderal/developed areas within the BSA provide low habitat value for most wildlife species, wildlife such as California ground squirrels (*Otospermophilus beecheyi*) thrive in disturbed areas. Cleared areas with minimal human traffic are used by reptiles as basking areas. Birds may also use cleared areas for dusting and for obtaining gravel needed in their digestion. Additionally, nearby debris or buildings may be used for roosting and nesting sites.

Ruderal/developed habitat is found within the County ROW. Considering the low habitat value of this vegetation type, and that much of it is subjected to frequent disturbances, ruderal/developed areas of the BSA have virtually no potential to support special-status species. These areas, however, can be used during dispersal and for movement during foraging to and from adjacent habitats. Approximately 15,681 ft^2 (0.36 acres) of ruderal/developed habitat was mapped within the project BSA.

Steelhead Critical Habitat

The portion of Santa Margarita Creek within the BSA is designated as critical habitat for the South-Central California Coast steelhead DPS. Final ruling on critical habitat for the South-Central California Coast steelhead DPS was established by NOAA Fisheries on September 2, 2005 (70 CFR 52488–52627). The primary constituent elements identified by the USFWS as essential for the conservation of the species are those sites and habitat components that support one or more life stages, including:

1. Freshwater spawning sites with water quantity and quality conditions and substrate supporting spawning, incubation and larval development.
2. Freshwater rearing sites with water quantity and floodplain connectivity to form and maintain physical habitat conditions and support juvenile growth and mobility; water quality and forage supporting juvenile development; and natural cover such as shade, submerged and overhanging large wood, log jams and beaver dams, aquatic vegetation, large rocks and boulders, side channels, and undercut banks.
3. Freshwater migration corridors free of obstruction with water quantity and quality conditions and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels, and undercut banks supporting juvenile and adult mobility and survival.
4. Estuarine areas free of obstruction with water quality, water quantity, and salinity conditions supporting juvenile and adult physiological transitions between fresh- and saltwater; natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels; and juvenile and adult forage, including aquatic invertebrates and fishes, supporting growth and maturation
5. Near shore marine areas free of obstruction with water quality and quantity conditions and forage, including aquatic invertebrates and fishes, supporting growth and maturation; and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels.

Potential impacts to steelhead designated critical habitat that may result from project implementation include relatively small amounts of permanent and temporary loss of vegetation and other minor modifications to the stream channel. Santa Margarita Creek functions as steelhead migration habitat and may possibly provide spawning or rearing habitat. Any tree removals required for project implementation may have an indirect

effect on water quality and temperatures (depending on the distance from the waterline) because trees and other surrounding vegetation function to shade the stream and filter sediments.

Invasive Species

A total of 26 invasive plant species as identified by the California Invasive Plant Council (Cal-IPC) Inventory were observed within the BSA (refer to Table 2 below). Of these, four non-native plant species have a Cal-IPC category rating of High. The four species ranked as High include red brome, yellow star-thistle, Himalayan blackberry (*Rubus armeniacus*), and fennel (*Foeniculum vulgare*). Fifteen plant species were observed within the BSA with a Cal-IPC category rating of Moderate and nine species were observed with a category rating of Limited. Table 2 below provides a summary of the invasive species observed on-site during the field surveys.

Table 2: Plants Observed in the BSA that are Included in the Cal-IPC Inventory

Scientific Name	Common Name	Cal-IPC Rating	Relative Density within the BSA
Avena barbarta	slender wild oat	Moderate	Low/Sparse
Brassica nigra	black mustard	Moderate	Low/Sparse
Bromus diandrus	rip-gut brome	Moderate	Moderate/Sparse
Bromus madritensis ssp. *rubens*	red brome	High	Moderate/Sparse
Carduus pycnocephalus	Italian thistle	Moderate	Low/Sparse
Centaurea melitensis	tocalote	Moderate	Low/Sparse
Centaurea solstitialis	yellow star-thistle	High	Moderate/Sparse
Cirsium vulgare	bull thistle	Moderate	Low/Sparse
Conium maculatum	poison hemlock	Moderate	Low/Sparse
Cynodon dactylon	Bermuda grass	Moderate	Low/Sparse
Erodium cicutarium	red-stemmed filaree	Limited	Low/Sparse
Festuca myuros	rattail fescue	Moderate	Low/Sparse
Festuca perennis	Italian rye grass	Moderate	Low/Sparse
Foeniculum vulgare	sweet fennel	High	Moderate/Sparse
Geranium dissectum	cutleaf geranium	Limited	Low/Sparse
Hirschfeldia incana	wild mustard	Moderate	Low/Sparse
Hordeum murinum	foxtail barley	Moderate	Low/Sparse
Hypochaeris glabra	smooth cat's ear	Limited	Low/Sparse
Medicago polymorpha	bur clover	Limited	Moderate/Sparse
Plantago lanceolata	English plantain	Limited	Low/Sparse
Polypogon monspeliensis	rabbitsfoot grass	Limited	Low/Sparse
Rubus armeniacus	Himalayan blackberry	High	Low/Sparse

Scientific Name	Common Name	Cal-IPC Rating	Relative Density within the BSA
Rumex crispus	curly dock	Limited	Low/Sparse
Silybum marianum	milk thistle	Limited	Low/Sparse
Stipa miliacea	smilo grass	Limited	Low/Sparse
Vinca major	periwinkle	Moderate	Moderate/Dense

Habitat Connectivity

The California Essential Habitat Connectivity (CEHC) Project was queried for Essential Habitat Connectivity, which provides the best available data regarding important areas for maintaining connectivity between large blocks of land for wildlife corridor purposes (CDFW 2010). These important areas are referred to as Essential Connectivity Areas (ECA). According to the existing data, the project site is located adjacent to the Salinas River Riparian Corridor (CC17), which is considered a Landscape Linkage as defined by the California Missing Linkages Project (a contributing study to the CEHC) by Penrod et al (2001). ECAs are only intended to be a broad scale representation of areas that provide essential connectivity. It is expected that additional linkages will be identified as new data becomes available for various species. For the purposes of this analysis, it is reasonable to assume that the riparian corridor within the project site may be used by wildlife as a movement corridor on a smaller scale. The Santa Margarita Creek riparian corridor provides habitat for several aquatic species including two special status species—CRLF and steelhead. Steelhead are known to utilize Santa Margarita Creek as a fish passageway. Many other non-sensitive terrestrial and aquatic wildlife species likely use the Santa Margarita Creek riparian corridor for migration and habitat connectivity.

Regional Species and Habitats and Natural Communities of Concern

REGIONAL SPECIES AND HABITATS OF CONCERN

“Regional species” and “habitats of concern,” as used within this NES, are terms synonymous with “special-status” or “sensitive” species and habitats. Special-status species include taxa that are: 1) federally or state listed as endangered, threatened, or rare; 2) candidates for federal or state listing as endangered, threatened or rare; 3) proposed for federal or state listing as endangered, threatened, or rare; or 4) considered special concern species by the federal government (i.e., former USFWS Federal Species of Concern) and the CDFW (i.e., SSC species), or those that appear on the CNDDB Special Animals List (CDFW 2015). Sensitive species also include taxa afforded protection or considered sensitive under various laws (e.g., NEPA, CEQA, MBTA) or under Sections 3503 and 3503.5 of the CFG Code (e.g., nesting birds), and those taxa recognized as locally important or sensitive by the CNPS (CNPS 2001,

CDFW 2015). Sensitive natural communities/habitats include those that are regulated or considered sensitive by federal, state, and/or local agencies or NEPA/CEQA. The known occurrences of sensitive species and sensitive habitats have been inventoried and mapped, to varying degrees of accuracy, by the CNDDB (CDFW 2015). The natural communities considered for this analysis are included in Table 3.

Regional Plant Species of Concern

The CNDDB, CNPS, and USFWS species lists obtained for the project indicate 75 special-status plant taxa (federally listed, state listed, and/or CNPS List 1B, 2, or 4) as occurring within Santa Margarita United States Geological Survey (USGS) 7.5 minute quadrangle and surrounding quadrangles (Templeton, Creston, Shedd Canyon, Atascadero, Wilsons Corner, San Luis Obispo, Lopez Mtn., and Santa Margarita Lake, California). To further refine this list of species, a five-mile radius query was conducted, resulting in 19 special-status plant taxa being documented in the area (refer to Figure 6). Species outside of the five-mile radius were not evaluated further because the BSA is located outside of their known geographic ranges and they are therefore considered unlikely to occur.

The federal species list obtained for the project from the USFWS cites three federally listed plant species as having potential to occur (USFWS 2015). The names and legal status of the special-status plant taxa considered for this analysis are included in Table 4, as well as a general description of the habitat requirements for each species, and whether suitable habitat is present or absent in the BSA. The rationale section summarizes the potential for each to occur within the BSA or to be affected by the project.

Regional Animal Species of Concern

A total of 15 special-status animal taxa (federally listed, state listed, California Fully Protected, SSC, CNDDB Special Animals, protected by the MBTA, and/or CFG Code) are documented in the CNDDB (CDFW 2015) as occurring within a five-mile radius of the BSA (refer to Figure 7).

The federal species list obtained for the project generated by the USFWS includes five federally endangered animal species (USFWS 2015). The “other nesting birds” category, was also included in this analysis, which was added for the numerous species of birds with potential for occurrence in the BSA that are protected by the MBTA and CFG Code Sections 3503 and 3503.5. The names and legal status of each of these special-status animal taxa are identified in Table 5, as well as a general description of the habitat requirements for each, whether suitable habitat is present or absent in the BSA, and the potential for each to occur within the BSA or be affected by the project.

Table 3: Natural Communities Potentially Occurring or Known to Occur in the Project Area

Common Name	General Habitat Description	Habitat Present/ Absent	Rationale
Arroyo Willow Thicket (Central Coast Riparian Scrub (Holland 1986))	A scrubby streamside thicket, varying from open to impenetrable, dominated by any of several willows. This early seral community may succeed to any of several riparian woodland or forest types absent severe flooding disturbance. Relatively fine-grained sand and gravel bars that are closed to river channels and therefore close to ground water.	P	**Present:** Arroyo willow thicket was observed within the BSA.
Fremont Cottonwood Forest (Central Coast Cottonwood Sycamore Riparian Forest (Holland 1986))	Moderately closed broadleafed riparian forests dominated Fremont cottonwood, with lesser amounts of coast live oaks. Understories may be dense thickets of shrubby willows, mulefat and stinging nettle.	P	**Present:** Fremont cottonwood forest was observed within the BSA.
Cattail Marsh (Coastal and Valley Freshwater Marsh (Holland 1986))	Dominated by perennial, emergent monocots to 4–5 meters tall. Often forming completely closed canopies. Tule rush and cattail dominated types and their environmental and floristic distinctions require clarification. Quiet sites (lacking significant current) permanently flooded by fresh water (rather than brackish, alkaline, or variable). Prolonged saturation permits accumulation of deep, peaty soils.	A	**No Potential to Occur:** Cattail Marsh was observed upstream of the BSA. No impacts to this natural community are proposed.
Sargent Cypress Woodland (Northern Interior Cypress Forest (Holland 1986))	Closed-cone coniferous forest. These stands may be as much as 15 meters tall, but usually are lower. On dry, rocky, sterile, often ultramafic soils, frequently associated with serpentine soils.	A	**No Potential to Occur:** Cypress woodland was not observed with the BSA.
Serpentine Bunchgrass	Native grassland on serpentine soils.	A	**No Potential to Occur:** Native grassland was not observed within the BSA.

Common Name	General Habitat Description	Habitat Present/ Absent	Rationale
Valley Oak Woodland (Valley Oak Woodland (Holland 1986)	Open cismontane woodland forming a grassy-understory savannahs rather than a closed woodland. Often valley oaks are the only tree present. This winter-deciduous species is California's largest broad-leaved tree, with mature individuals reaching 15–35 meters. Most stands consist of open-canopy growth form trees and seldom exceed 30-40% absolute cover (CNDDB: CTT71130CA).	HP	**Present:** Valley oak woodland was observed within the BSA.
Steelhead – South-Central California Coast DPS	South-Central California Coast steelhead streams are streams known to support spawning populations of South-Central California Coast steelhead and that are within the South-Central California Coast steelhead DPS, from Monterey to San Luis Obispo Counties.	HP	**Present:** Steelhead critical habitat occurs within the BSA.

General References:

RareFind 5 five-mile radius search from BSA: (CNDDB accessed October 2017).

Absent [A] - no habitat present and no further work needed;
Habitat Present [HP] -habitat is, or may be present. The species may be present.
Critical Habitat Present [CP] critical habitat is present. The species may be present.
Present [P] - the species is present.

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Figure 6: CNDDB Map – Botanical Occurrences within a 5-Mile Radius

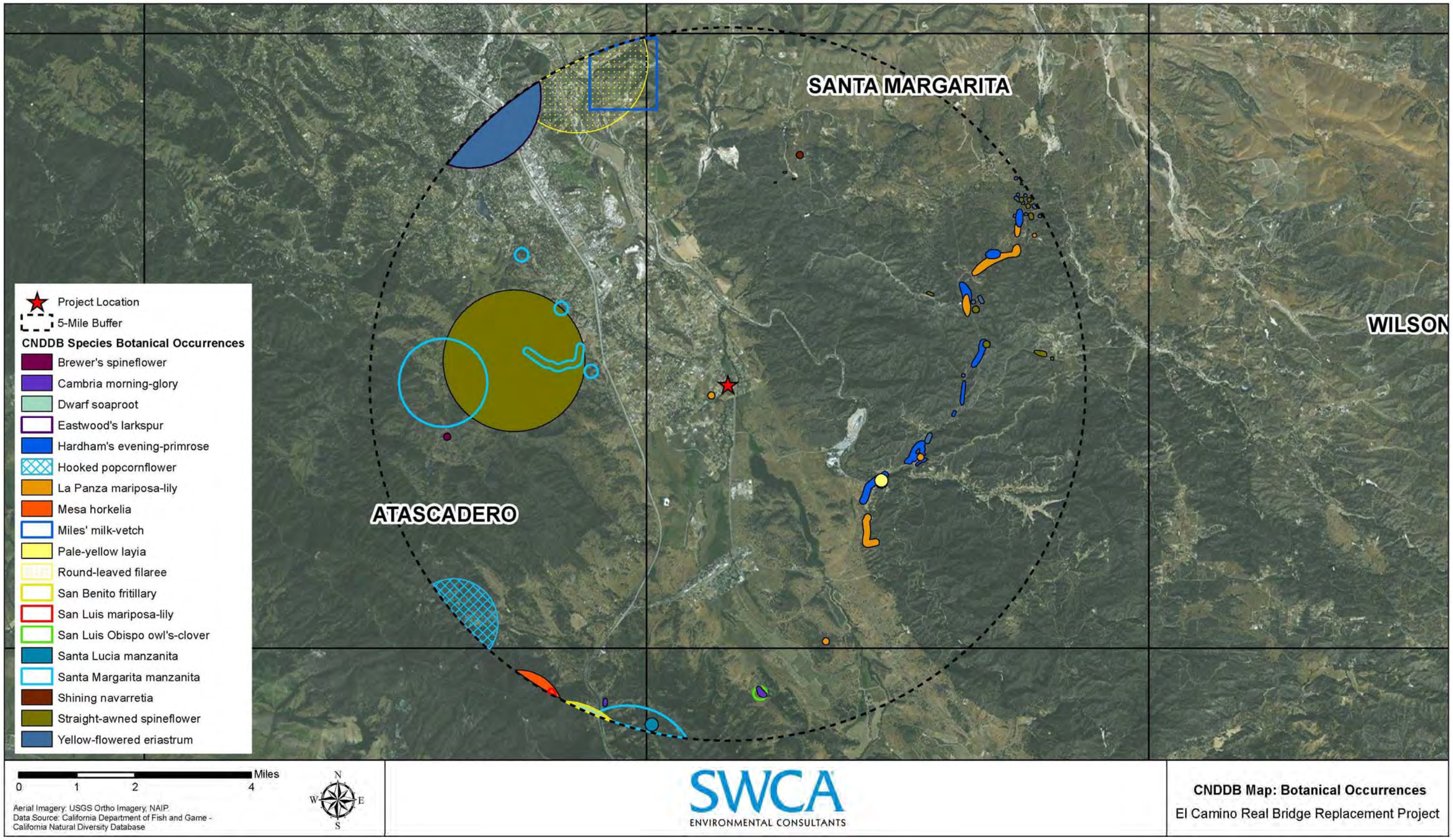

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Table 4: Special-status Plant Species Evaluated for Potential Occurrence

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/ Absent	Rationale
Santa Lucia manzanita	*Arctostaphylos luciana*	--/--/1B.2	Perennial evergreen shrub that occurs in chaparral and cismontane woodlands with shale outcrops between 350–850 meters. Typical blooming period is between December–March.	A	**No Potential to Occur:** The BSA is outside the documented range for this species. No manzanita species were observed in the BSA.
Santa Margarita manzanita	*Arctostaphylos pilosula*	--/--/1B.2	Perennial evergreen shrub that occurs in closed-cone coniferous forest, chaparral. Shale outcrops & slopes; reported growing on decomposed granite or sandstone between 170–1100 meters. Typical blooming period is between December–March.	A	**No Potential to Occur:** The BSA is within the documented range for this species. No manzanita species were observed in the BSA.
marsh sandwort	*Arenaria paludicola*	FE/--/1B.1	Perennial stoloniferous herb that occurs in sandy openings, associated with marshes and swamps. Typical blooming period is May to August.	A	**No Potential to Occur:** There are no known occurrences of this species within 10 miles of the BSA. The BSA does not support sandy soils or suitable habitat types for this species. Species is only known from two natural occurrences: Black Lake Canyon and Oso Flaco lake. Species was not observed during the springtime floristic surveys.
Miles' milk-vetch	*Astragalus didymocarpus* var. *milesianus*	--/--/1B.2	Annual herb that occurs in coastal scrub on clay soils between 20–90 meters. Typical blooming period is between March–July.	A	**No Potential to Occur:** The BSA does not support suitable habitat for this species. Species was not observed during the springtime floristic surveys.

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/ Absent	Rationale
Round-leaved filaree	*California macrophylla*	--/--/1B.1	Annual herb that occurs in cismontane woodland, valley and foothill grassland on clay soils between 15–1,200 meters. Typical blooming period is between March–May.	HP	**Potential to Occur/Species Absent:** The BSA does support marginally suitable habitat for this species. Species was not observed during the springtime floristic surveys.
San Luis Obispo mariposa-lily	*Calochortus obispoensis*	--/--/1B.3	Annual herb that occurs in chaparral, coastal scrub, valley and foothill grassland. Often in serpentine grassland between 50–730 meters. Typical blooming period is between May–July.	A	**No Potential to Occur:** The BSA does not support the serpentines soils. Species was not observed during the springtime floristic surveys.
La Panza mariposa lily	*Calochortus simulans*	--/--/1B.3	Annual herb that occurs in chaparral, cismontane woodlands, lower montane coniferous forest, valley and foothill grassland; often in sandy, granitic, or serpentine soils between 395–1,100 meters. Typical blooming period is between April–May.	HP	**Potential to Occur/Species Absent:** The BSA the does not support serpentines or granitic soils. Cismontane and grassland habitat present. Species was not observed during the springtime floristic surveys.
Cambria morning-glory	*Calystegia subacaulis* ssp. *Episcopalis*	--/--/4.2	Annual herb that occurs in chaparral, cismontane woodland between 60–500 meters. Typical blooming period is between April–June.	A	**No Potential to Occur:** The BSA is outside the documented range for this species. Species was not observed during the springtime floristic surveys.
California jewelflower	*Caulanthus californicus*	FE/--/1B.1	Annual herb that occurs in sandy soils, in chenopod scrub, pinyon and juniper woodland, valley and foothill grassland between 61 and 1000 meters. Typical blooming period is between February and May.	A	**No Potential to Occur:** The BSA does not support sandy soils or suitable habitat types for this species. Species has not been documented within 10 miles of the project site. Species was not observed during the springtime floristic surveys.

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/ Absent	Rationale
Hardham's evening-primrose	*Camissonia hardhamiae*	--/--/1B.2	Annual herb that occurs in sandy, decomposed carbonate soils. Especially in disturbed or burned areas among chaparral and cismontane woodland between 140–945 meters. Typical blooming period is between March–May.	A	**No Potential to Occur:** The BSA the does not support decomposed carbonate soils. Species was not observed during the springtime floristic surveys.
San Luis Obispo owls clover	*Castilleja densiflora* ssp. *Obispoensis*	--/--/1B.2	Annual herb that occurs in valley and foothill grassland between 10–215 meters. Typical blooming period is between March–May.	HP	**Potential to Occur/Species Absent:** The BSA is within the documented range for this species. Grassland habitat present. Species was not observed during the springtime floristic surveys.
Dwarf soaproot	*Chlorogalum pomeridianum* var. *minus*	--/--/1B.2	Perennial bulbiferous herb that occurs in chaparral habitats with serpentine soils between 305–1000 meters. Typical blooming period is between May–August.	A	**No Potential to Occur:** The BSA is outside the known range for this species and does not support serpentine soils. Species was not observed during the springtime floristic surveys.
purple amole	*Chlorogalum purpureum*	FT/--/1B.1	Perennial bulbiferous herb that occurs in gravelly, clay soils within chaparral, cismontane woodland, valley and foothill grassland	A	**No potential to Occur:** There are no known occurrences of this species within 10 miles of the BSA. This species is only known to occur from Fort Hunter Liggett to Camp Roberts. Species was not observed during springtime floristic surveys.

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/ Absent	Rationale
Brewer's spineflower	*Chorizanthe breweri*	--/--/1B.3	Annual herb that occurs in chaparral, cismontane woodland, coastal scrub, closed-cone coniferous forest. Rocky or gravelly serpentine sites usually in barren areas between 45–800 meters. Typical blooming period is between April–August.	A	**No Potential to Occur:** The BSA does not support serpentine soils. Species was not observed during the springtime floristic surveys.
Straight-awned spineflower	*Chorizanthe rectispina*	--/--/1B.3	Annual herb that occurs in chaparral, cismontane woodland and coastal scrub. Often on granite in chaparral between 355–1,035 meters. Typical blooming period is between April–July.	HP	**Potential to Occur/Species Absent:** The BSA does not support granitic soils. Cismontane woodland present. Species was not observed during the springtime floristic surveys.
Eastwood's larkspur	*Delphinium parryi ssp. eastwoodiae*	--/--/1B.2	Perennial herb that occurs in chaparral, valley and foothill grassland on serpentine soils in openings between 75–500 meters. Typical blooming period is between April–May.	A	**No Potential to Occur:** The BSA does not support serpentine soils. Species was not observed during the springtime floristic surveys.
Yellow-flowered eriastrum	*Eriastrum luteum*	--/--/1B.2	Annual herb that occurs in broad-leafed upland forest, chaparral, and cismontane woodland on sandy or gravelly soils between 290–1,000 meters. Typical blooming period is between May–June.	A	**No Potential to Occur:** The BSA is within the documented range of this species. Species was not observed during the springtime floristic surveys.
San Benito fritillary	*Fritillaria viridea*	--/--/1B.2	Perennial bulbiferous herb that occurs in chaparral on serpentine slopes between 200–1525 meters. Typical blooming period is between March–May.	A	**No Potential to Occur:** The BSA is outside documented range of this species and does not support serpentine soils. Species was not observed during the springtime floristic surveys.

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/ Absent	Rationale
Mesa horkelia	*Horkelia cuneata* ssp. *puberula*	--/--/1B.1	Perennial herb that occurs in chaparral, cismontane woodlands, coastal scrub; on sandy or gravelly sites between 70–810 meters. Typical blooming period is between February–September.	HP	**Potential to Occur/Species Absent:** The BSA contains sandy or gravelly soils. Cismontane woodland is present. However, Species was not observed during the springtime floristic survey.
Pale-yellow layia	*Layia heterotricha*	--/--/1B.1	Annual herb that occurs in cismontane woodland, pinyon-juniper woodland, valley and foothill grassland. Alkaline or clay soils; open areas between 270–1,365 (2,675) meters. Typical blooming period is between March–June.	HP	**Potential to Occur/Species Absent:** The BSA contains some clay soils but does not support alkaline soils. Cismontane and grasslands present. Species was not observed during the springtime floristic surveys.
Spreading navarretia	*Navarretia fossalis*	FT/ST/1B.1	Annual herb that occurs in vernal pools, chenopod scrub, marshes and swamps, playas. San Diego hardpan and San Diego claypan vernal pools; in swales and vernal pools, often surrounded by other habitat types between 30–665 meters. Typical blooming period is between April–July.	A	**No Potential to Occur:** The BSA does not support vernal pool habitat. Species was not observed during the springtime floristic survey.
Shining navarretia	*Navarretia nigelliformis* ssp. *Radians*	--/--/1B.2	Annual herb that occurs in cismontane woodland, valley and foothill grassland, vernal pools. Apparently in grassland, and not necessarily in vernal pools between 200–1,000 meters. Typical blooming period is between March–July.	A	**No Potential to Occur:** The BSA is outside documented range of this species and it does not support vernal pool habitat. Species was not observed during the springtime floristic surveys.

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/ Absent	Rationale
Hooked popcornflower	*Plagiobothrys uncinatus*	--/--/1B.1	Annual herb that occurs in occurs in chaparral, cismontane woodland, and valley and foothill grassland with sandy soils between 300–760 meters. Typical blooming period is between April–May.	HP	**Potential to Occur/Species Absent:** The BSA contains clay soils and grassland habitat. Species was not observed during the springtime floristic surveys.

General References:

RareFind 5 search for 5-mile radius from BSA: (CNDDB accessed: October 2017).

CalFlora [web application]. 2015. Berkeley, California: The Calflora Database [a non-profit organization]. Available: http://www.calflora.org/ (Accessed: May, 2015).

IpaC – Information, Planning, and Conservation System online USFWS. Available: http://ecos.fws.gov/ipac/ (Accessed: July 2014 and July 2015

Absent [A] - no habitat present and no further work needed; Habitat Present [HP] -habitat is, or may be present, the species may be present; Present [P] - the species is present; Critical Habitat [CH] - project footprint is located within a designated critical habitat unit, but does not necessarily mean that appropriate habitat is present.

Status Codes: No Status (--);Federal Endangered (FE); Federal Threatened (FT); Federal Proposed (FP); Federal Proposed Endangered (FPE); Federal Proposed Threatened (FPT); State Endangered (SE); State Threatened (ST); State Rare (SR); California Native Plant Society (CNPS): Rare, threatened, or endangered in California and elsewhere (Rank 1B); Rare, threatened, or endangered in California, but more common elsewhere (Rank 2); Plants that about which more information is needed (Rank 3); A watch list plant of limited distribution (Rank 4); Threat Code: Seriously endangered I California (over 80% of occurrences threatened / high degree and immediacy of threat) (.1); Fairly endangered in California (20-80% occurrences threatened) (.2); Not very endangered I California (<20% of occurrences threatened or no current threats known) (.3).

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Figure 7: CNDDB Map – Animal Occurrences within a 5-Mile Radius

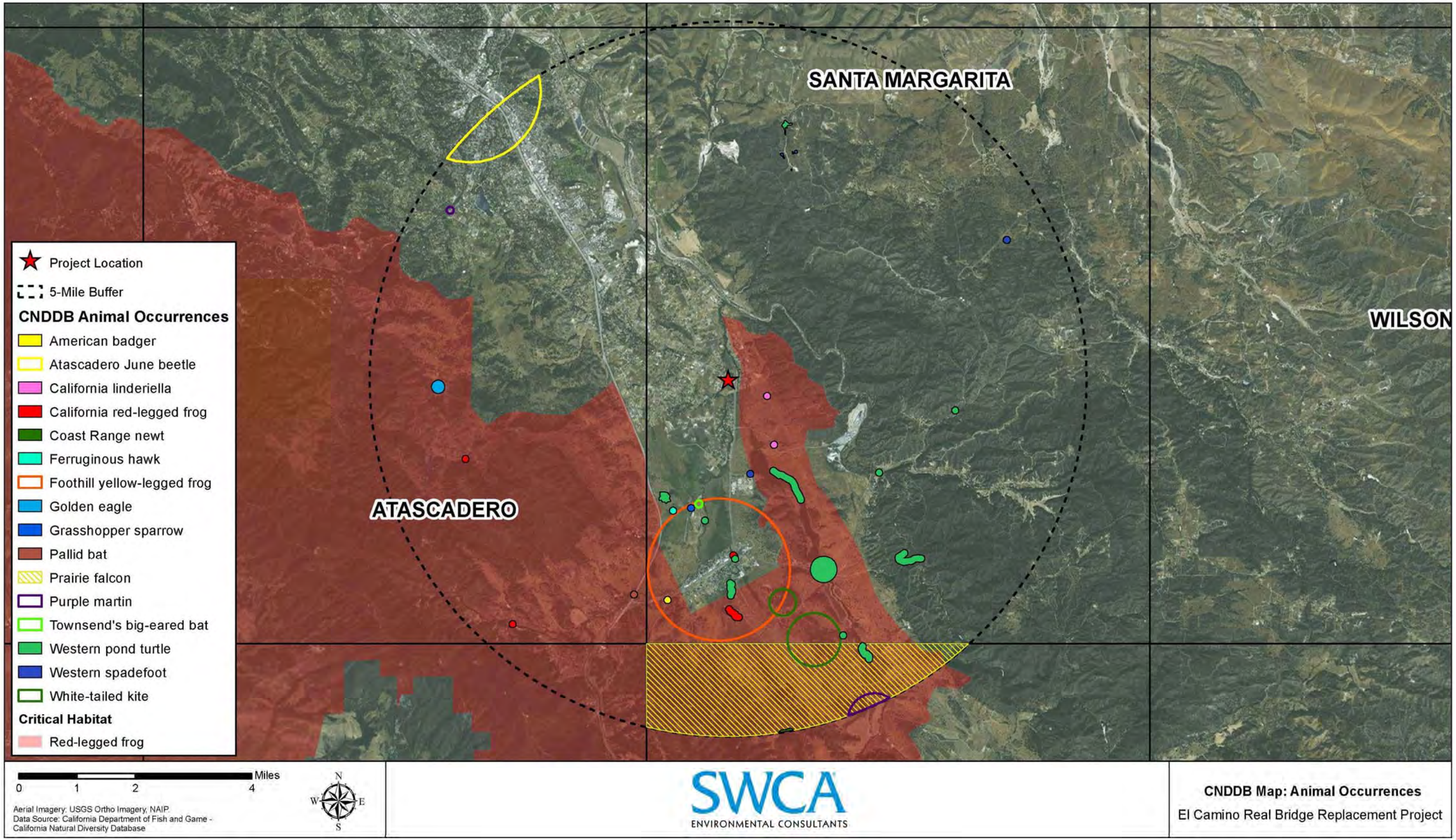

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Table 5: Special-status Species Evaluated for Potential Occurrence

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/ Absent	Rationale
Invertebrates					
Vernal pool fairy shrimp	*Branchinecta lynchi*	FT/--/--	Occur in vernal pool habitats including depressions in sandstone, to small swale, earth slump, or basalt-flow depressions with a grassy or, occasionally, muddy bottom in grassland (Eriksen and Belk, 1999).	A	**No Potential to Occur:** The BSA does not support vernal pool habitat. Species was not observed during field surveys.
Atascadero June beetle	*Polyphylla nubila*	--/--/SA	Known only from sand dunes in San Luis Obispo County.	A	**No Potential to Occur:** The BSA does not support sand dune habitat. Species was not observed during field surveys.
California fairy shrimp	*Linderiella occidentalis*	--/--/SA	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions. Water in the pools has very low alkalinity, conductivity, and total dissolved solutes.	A	**No Potential to Occur:** The BSA does not support vernal pool habitat. Species was not observed during field surveys.
Kern primrose Spinx moth	*Eupsoerpinus euterpe*	FT/--/--	Found in the walker basin, Kern County and several other scattered locations (Carrizo Plain, Pinnacles National Park). Larval food plant is kern primrose (*Oenothera contorta epilobioides*).	A	**No Potential to Occur:** The BSA does not support the host plant and is outside the documented range of this species. Neither species nor host plant were observed during field surveys.

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/ Absent	Rationale
Fish					
south/central California coast steelhead DPS	*Oncorhynchus mykiss irideus*	FT,FCH/--/ SSC	Clear, cool water with abundant in-stream cover, well-vegetated stream margins, relatively stable water flow, and a 1:1 pool-to-riffle ratio.	P	**Present:** The BSA supports a perennial water source suitable for this species. Species was documented within Santa Margarita Creek and within the BSA in 2011. Species was not observed during field surveys.
Amphibians					
California red-legged frog	*Rana draytonii*	FT/--/SSC	Aquatic habitats with little or no flow and surface water depths to at least 2.3 feet. Presence of fairly sturdy underwater supports such as cattails.	HP	**Potential to Occur:** The BSA supports perennial water source suitable for this species. Species was not observed during field surveys.
California tiger salamander	*Ambystoma californiense*	FT/ST/--	Requires underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	A	**No Potential to Occur:** The BSA is outside the current documented range of this species. Species was not observed during field surveys.
Coast Range newt	*Taricha torosa torosa*	--/--/SSC	Breed in ponds, reservoirs, and slow-moving streams. Frequents terrestrial habitats such as oak woodlands.	HP	**Potential to Occur:** The BSA supports a perennial water source suitable for this species; however species has never been documented within the BSA. Species was not observed during field surveys.
foothill yellow-legged frog	*Rana boylii*	--/--/SSC	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Need at least some cobble-sized substrate for egg-laying. Need at least 15 weeks to attain metamorphosis.	HP	**Potential to Occur:** The BSA supports perennial water source suitable for this species, however species has never been documented within the BSA. Species was not observed during field surveys.

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/ Absent	Rationale
western spadefoot	*Spea hammondii*	FP/--/SSC	Inhabits vernal pools in primarily grassland, but also in valley and foothill hardwood woodlands.	HP	**Potential to Occur:** The BSA supports marginally suitable habitat for this species. Species was not observed during field surveys. Species was not observed during field surveys.
Reptiles and Testudinids					
western pond turtle	*Emys marmorata*	--/--/SSC	Quiet waters of ponds, lakes, streams, and marshes. Typically in the deepest parts with an abundance of basking sites.	HP	**Potential to Occur:** The BSA supports a perennial water source suitable for this species. Species was not observed during field surveys.
Birds					
California clapper rail	*Rallus longirostris obsoletus*	FE,MBTA/ SE,§/--	Salt-water and brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay. Associated with abundant growths of pickleweed, but feeds away from cover on invertebrates from mud-bottomed sloughs.	A	**No Potential to Occur:** The BSA does not support suitable salt water marsh habitat and is outside the document range for this species. Species was not observed during field surveys.
California condor	*Gymnogyps californianus*	FE,MBTA/ SE,§/--	Require vast expanses of open savannah, grasslands, and foothill chaparral in mountain ranges of moderate altitude. Deep canyons supporting clefts in the rocky walls provide nesting sites. Forages up to 100 miles from roost/nest.	A	**No Potential to Occur:** The BSA does not support suitable foraging or nesting habitat for this species. The BSA is outside the documented current range of the California condor. Species was not observed during field surveys.

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/ Absent	Rationale
ferruginous hawk	*Buteo regalis*	MBTA/§/ WL	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes on pinyon-juniper habitats. Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles. Winters in San Luis Obispo County only.	A	**No Potential to Occur:** The BSA does not support suitable winter foraging habitat for this species. Species was not observed during field surveys.
golden eagle	*Aquila chrysaetos*	MBTA, BGEPA/§/F P	Rolling foothills, mountain areas, sage-juniper flats and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	A	**No Potential to Occur:** The BSA does not support suitable nesting or foraging habitat for this species. Species was not observed during field surveys.
grasshopper sparrow	*Ammodramus savannarum*	MBTA/§/ SSC	Dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes. Favors native grasslands with a mix of grasses, forbs & scattered shrubs. Loosely colonial when nesting.	A	**No Potential to Occur:** The BSA does not support suitable nesting or foraging habitat for this species. Species was not observed during field surveys.
least Bell's vireo	*Vireo bellii pusillus*	FE,MBTA/ SE,§/--	Summer resident of southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, coyote brush and mesquite.	A	**No Potential to Occur:** The BSA is outside the known current range of this species. The BSA does not support suitable nesting or foraging habitat for this species. Species was not observed during field surveys.
prairie falcon	*Falco mexicanus*	MBTA/§/ WL	Inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	A	**No Potential to Occur:** The BSA does not support suitable nesting or foraging habitat for this species. Species was not observed during field surveys.

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/ Absent	Rationale
purple martin	*Progne subis*	MBTA/§/ SSC	Inhabits woodlands, low elevation coniferous forest of Douglas-fir, ponderosa pine, and Monterey pine. Nests in old woodpecker cavities mostly, also in human-made structures. Nest often located in tall, isolated tree/snag.	A	**No Potential to Occur:** The BSA does support suitable nesting or foraging habitat for this species. However, the nearest known nesting colony is over four miles to the south. Species was not observed during field surveys.
southwestern willow flycatcher	*Empidonax traillii extimus*	FE,MBTA/ SE,§/--	Riparian woodlands in Southern California.	A	**No Potential to Occur:** The BSA does support suitable nesting or foraging habitat for this species, however BSA is outside current documented range. Species was not observed during field surveys.
white-tailed kite	*Elanus leucurus*	MBTA/§/ FP	Foraging habitat include rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland.	A	**No Potential to Occur:** The BSA supports marginally suitable foraging habitat for this species. Species was not observed during field surveys.
Mammals					
American badger	*Taxidea taxus*	--/--/SSC	Occurs in open stages of shrub, forest, and herbaceous habitats; needs uncultivated ground with friable soils.	A	**No Potential to Occur:** The BSA consists primarily riparian and ruderal habitat. Neither species nor dens were observed during field surveys.
pallid bat	*Antrozous pallidus*	--/--/SSC	Prefers rocky outcrops, cliffs, and crevices with access to open habitats for foraging. Day roosts are in caves, crevices, mines, and occasionally in hollow trees and buildings. Night roosts may be in more open sites, such as porches and buildings.	HP	**Potential to Occur:** The BSA supports marginal roosting habitat and suitable foraging habitat for this species. No sign of bats was observed during field surveys.

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/ Absent	Rationale
San Joaquin kit fox	*Vulpes macrotis mutica*	FE/ST/--	Annual grasslands or grassy open stages with scattered shrubby vegetation. Need loose-textured sandy soils for burrowing, and suitable prey base.	A	**No Potential to Occur:** The BSA supports marginally suitable habitat for this species; however, BSA is outside current documented range of this species. Species was not observed during field surveys.
Townsend's big-eared bat	*Corynorhinus townsendii*	--/SC/--	Occurs in a wide variety of habitats; most common in mesic (wet) sites. May use trees for day and night roosts; however, requires caves, mines, rock faces, bridges or buildings for maternity roosts. Maternity roosts are in relatively warm sites.	HP	**Potential to Occur:** The BSA supports suitable roosting and foraging habitat for this species. No sign of bats was observed during field surveys.
Other roosting bats	Class Chiroptera	--/--/--	Potential for roosting in several natural and artificial structures.	HP	**Potential to Occur:** The BSA supports suitable foraging habitat for this species. No sign of bats was observed during field surveys.

General References:

RareFind 5 search for five mile radius: (CNDDB accessed: October 2017).
IPaC - Information, Planning, and Conservation System online USFWS. Available: http://ecos.fws.gov/ipac/ (Accessed: July 2014 and July 2015)

Absent [A] - no habitat present and no further work needed; Habitat Present [HP] -habitat is, or may be present, the species may be present; Present [P] - the species is present; Critical Habitat [CH] - project footprint is located within a designated critical habitat unit, but does not necessarily mean that appropriate habitat is present.

Status Codes: No status (--); Federal Endangered (FE); Federal Threatened (FT); Federal Proposed (FP); Federal Proposed Endangered (FPE); Federal Proposed Threatened (FPT); Federal Critical Habitat (FCH); Proposed Federal Critical Habitat (PCH); Federal Migratory Bird Treaty Act (MBTA); Bald and Golden Eagle Protection Act (BGEPA); State Fully Protected Species (FP); State Endangered (SE); State Candidate (SC); State Threatened (ST); State Candidate Threatened (SCT); CA Fish and Game Code §3503 and §3503.5 (§); CDFW California Special Concern Species (SSC); Not formally listed but included in CDFW "Special Animal" List (SA); Not formally listed but included in CDFW "Watch List" (WL).

4 - Results: Biological Resources, Discussion of Impacts and Mitigation

Habitats and Natural Communities of Special Concern

Impacts anticipated within the BSA have been quantified as either permanent or temporary. Impacts to natural communities would result from activities such as ground disturbance, vegetation disturbance, and tree removal. Impacts to steelhead critical habitat and other jurisdictional features include activities such as the temporary diversion and dewatering of Santa Margarita Creek, and construction activities that will occur below the OHWM, below the top of bank, and in riparian areas. The total amount of impacts anticipated from the project was quantified using geographic information system (GIS) technology. The project plans were overlaid onto the habitat map and the impacts were calculated. Estimated impacts to sensitive vegetation communities characterized and described in the Physical Conditions Section of Chapter 3 are presented below in Table 6. Estimated impacts to jurisdictional areas are presented in Table 8.

Table 6: Estimated Impacts to Habitat and Natural Communities of Special Concern

Community/Habitat	Estimated Impacts	
	Permanent	**Temporary**
Terrestrial		
Arroyo Willow Thicket	1,306 ft^2 (0.03 acre)	1,742 ft^2 (0.04 acre)
Fremont Cottonwood Forest	237 ft^2 (0.01 acre)	4,500 ft^2 (0.10 acre)
Coast Live Oak Woodland[1]	60 ft^2 (0.0001 acre)	5,662 ft^2 (0.13 acre)
Valley Oak Woodland[1,2]	5,792 ft^2 (0.13 acre)	15,453 ft^2 (0.35 acre)
Steelhead Critical Habitat	-206 ft^2 (-0.005 acre)	7,302 ft^2 (0.17 acre)

[1] Impacts to oak woodland were quantified based on canopy cover.
[2] Two coast live oak trees with larger than six-inch diameter at breast height (DBH) are slated for removal.

Sources of temporary impacts would be primarily from the use of construction equipment, cut/fill, installation of temporary access roads, installation of temporary falsework within the stream channel, diversion and dewatering of Santa Margarita Creek, and associated worker foot traffic. Permanent impacts will primarily consist of the bridge footings placed in the stream channel and the location of the road curve re-alignment.

The proposed project will require minimal removal of riparian vegetation. No wildlife connectivity impacts are anticipated, other than the possibility that the proposed project will impede fish passage temporarily through the BSA. Measures will be implemented to avoid/minimize the spread of invasive species throughout the BSA.

Environmentally Sensitive Area (ESA) fencing will be installed to delineate areas where construction activities are allowed to occur and to protect sensitive resources including habitats of concern and trees to be avoided. Special Provisions for the installation of ESAs and the associated fencing shall be included in the Construction Contract for the project and will be outlined on the project plans. Prior to the start of construction activities, ESAs will be delineated in the field and will be approved by the Caltrans environmental division.

DISCUSSION OF JURISDICTIONAL FEATURES

An assessment of jurisdictional features within the BSA was conducted in 2015, and is included in Appendix E. This report identifies jurisdictional features such as: potential wetlands and waters of the United States, as defined by the U.S. Army Corps of Engineers (USACE); and potential waters of California, as defined by the state, including the California Department of Fish and Wildlife (CDFW), State Water Resources Control Board (SWRCB), and Regional Water Quality Control Board (RWQCB).

'Wetlands' are generally considered to be within USACE jurisdiction if the three-parameter criteria are satisfied (i.e., hydrophytic vegetation, hydric soils, and wetland hydrology). Based on the assessment in 2015, federal wetlands were not identified within the BSA per the USACE definition.

If an OHWM is observed; but the three wetland parameters need not met, these areas are considered 'other waters of the U.S., or commonly referred to as just 'other waters'. These areas are generally considered to be within USACE jurisdiction. Based on the assessment in 2015, USACE jurisdictional 'other waters' were identified within the BSA.

State jurisdiction, governed by CDFW/RWQCB, typically extends to the top-of-bank or outside edge of riparian vegetation. Based on the assessment conducted in 2015, State jurisdictional features were identified within the BSA. These areas include the riparian corridor of Santa Margarita Creek within the BSA, as well as the stream channel itself.

Project related impacts to these jurisdictional features will be offset through restoration, enhancement or mitigation.

Survey Results

A jurisdictional assessment was conducted for the project and potential federal and state jurisdictional areas were delineated within the project site (Appendix E). The results of

the delineation are preliminary and are subject to review by the resource agencies prior to issuance of any permits. During the permit review process, the resource agencies may conduct a site visit to verify the conditions and extents of the jurisdictional areas identified and will approve or request amendments to the report based on their findings.

Based on the conditions observed in the field, Santa Margarita Creek is likely subject to USACE, CDFW, and RWQCB jurisdiction. This is due to the presence of a clearly identifiable OHWM, the evidence of a defined bed and bank, connectivity to relatively permanent waters (Salinas River), presence of riparian vegetation, and evidence of wetland hydrology. The existing riparian corridor of Santa Margarita Creek extends beyond the top-of-bank; therefore, CDFW jurisdiction is mapped to include those areas within the outermost extent of riparian vegetation. The RWQCB also asserts jurisdiction over waters of the State, through the Porter Cologne Act. The definition of this state jurisdiction is very general and no formal delineation process is in place at this time. Therefore, the RWQCB will also commonly utilize the extent of riparian as the extent of their jurisdiction under Porter Cologne Act.

Within the BSA, potential USACE jurisdiction was mapped to include areas identified as 'other waters'. No USACE-defined 'wetlands' were present within the BSA. 'Other waters' were mapped between the OHWMs observed along the creek banks. In addition, a small ponded area was mapped that is located directly adjacent to the OHWM along the west bank of Santa Margarita Creek. Table 7 quantifies the total area of USACE, CDFW, and RWQCB jurisdictional features mapped within the BSA during the jurisdictional assessment.

Table 7: Jurisdictional Areas Present within the BSA

Jurisdictional Feature	Total Jurisdictional Areas Present
Federal - Clean Water Act (Sections 404 applicable)	11,060 ft^2 (0.25 acre)
State - California Fish and Game Code (Sections 1600–1602 and 401 applicable), Porter Cologne Act	40,282 ft^2 (0.92 acre)

Project Impacts

Table 8 provides a summary of potential project related impacts that would be subject to environmental permitting by USACE, under Section 404 of the CWA; CDFW, under Sections 1600-1602 of the CFG Code; and RWQCB, under Section 401 of the CWA. Areas with negative impact values represent areas where existing concrete will be removed from the channel.

Table 8: Summary of Impacts to Jurisdictional Areas

Jurisdictional Feature	Estimated Impacts	
	Permanent	**Temporary**
Federal - Clean Water Act (Sections 404)	211 ft^2 (0.005 acre)	6,529 ft^2 (0.15 acre)
Existing Concrete Removal	-417 ft^2 (-0.01 acre)	--
Total Federal - Clean Water Act (after concrete removal)	**-206 ft^2 (-0.005 acre)**	6,529 ft^2 (0.15 acre)
State - California Fish and Game Code (Sections 1600–1602 and 401)	7,586 ft^2 (0.17 acre)	19,622 ft^2 (0.45 acre)
Existing Concrete Removal	-1,018 ft^2 (-0.02 acre)	--
Total State - California Fish and Game Code and 401 (after concrete removal)	**6,568 ft^2 (0.15 acre)**	19,622 ft^2 (0.45 acre)

Jurisdictional areas that would be filled or otherwise replaced with a structure, or permanently altered from the current condition, were considered permanent impacts. Permanent impacts will result from installation of the approach abutments, placement of RSP, and construction of the fill slopes. Temporarily impacted areas are expected to be returned to the pre-construction condition following project completion. Temporary impacts will occur within an estimated 110-foot-wide dewatering and construction corridor that spans approximately 30 feet upstream and downstream of the proposed bridge. The corridor would include the dewatered area, temporary crossing, and associated riparian vegetation removal. Temporary impacts will also occur in the riparian vegetation located within 10 feet of either side of the proposed temporary clear span bridge. Project staging areas have been selected to minimize unnecessary impacts to native riparian vegetation.

Avoidance and Minimization Efforts

The project has the potential to impact state and federal jurisdictional aquatic features. The following avoidance and minimization efforts are recommended for impacts to these resources resulting from the project:

BIO-1 Prior to construction, the San Luis Obispo County Public Works Department will obtain a Section 404 Permit from the United States Army Corps of Engineers, a Section 401 Water Quality Certification from the Regional Water Quality Control Board, and a Section 1602 Streambed Alteration Agreement from the California Department of Fish and Wildlife for project related impacts that will occur in areas under state and federal jurisdiction.

BIO-2 Prior to construction, the San Luis Obispo County Public Works Department will retain a qualified biological monitor(s) to monitor construction and ensure compliance with the avoidance and minimization efforts outlined within all the project environmental documents. At a minimum, monitoring will occur during initial ground disturbance activities and vegetation removal within the Santa Margarita Creek corridor. Monitoring may be reduced to part time once initial disturbance and vegetation removal activities are complete. The duration of monitoring should be at least once per week throughout the remaining construction phases, unless specified otherwise by permitting agencies.

BIO-3 Prior to construction, all personnel will participate in an environmental awareness training program conducted by a qualified biologist. The program shall include a description of the sensitive aquatic resources within the within the Biological Study Area and the boundaries within which the project may be accomplished.

BIO-4 Construction activities within jurisdictional areas will be conducted during the dry season when stream flows will be at annual lows (June 15 and October 31) in any given year, or as otherwise directed by the regulatory agencies. Deviations from this work window can be made with permission from the relevant regulatory agencies.

BIO-5 Prior to initiation of any construction activities, including vegetation clearing or grubbing, sturdy high-visibility fencing will be installed to protect the jurisdictional areas adjacent to the designated work areas. This fencing will be placed so that unnecessary adverse impacts to the adjacent habitats are avoided. No construction work (including storage of materials) will occur outside of the specified project limits. The fencing will remain in place during the entire construction period, be monitored periodically by a qualified biologist, and maintained as needed by the contractor.

BIO-6 Prior to construction, a Storm Water Pollution Prevention Plan will be prepared for the project. Provisions of this plan will be implemented during and after construction as necessary to avoid and minimize erosion and storm water pollution in and near the work area.

BIO-7 Prior to construction, the contractor will prepare a Hazardous Materials Response Plan to allow for a prompt and effective response to any accidental spills. Workers will be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

BIO-8 During construction, erosion control measures (e.g., silt fencing, fiber rolls, and barriers) will remain available on-site and will be utilized as necessary to prevent erosion and sedimentation in jurisdictional areas. No synthetic

plastic mesh products will be used for erosion control and use of these materials on-site is prohibited. Erosion control measures and other suitable Best Management Practices used will be checked to ensure that they are intact and functioning effectively and maintained on a daily basis throughout the duration of construction. The contractor will also apply adequate dust control techniques, such as site watering, during construction to protect water quality.

BIO-9 During construction, the cleaning and refueling of equipment and vehicles will occur only within a designated staging area and at least 100 feet (30 meters) from wetlands or other aquatic areas. At a minimum, equipment and vehicles will be checked and maintained on a daily basis to ensure proper operation and avoid potential leaks or spills.

BIO-10 During construction, trash will be contained, removed from the work site, and disposed of regularly. Following construction, trash and construction debris will be removed from the work areas. Vegetation removed from the construction site will be taken to a certified landfill to prevent the spread of invasive species. If soil from weedy areas (such as areas with poison hemlock or other invasive exotic plant species) must be removed off-site, the top six inches (152 millimeters [mm]) containing the seed layer in areas with weedy species will be disposed of at a certified landfill.

BIO-11 During construction, no pets will be allowed on the construction site.

Compensatory Mitigation

The goal of compensatory mitigation is to prevent a net loss of wetlands or other aquatic resource acreage, function, and value. The following compensatory mitigation is proposed.

BIO-12 Prior to construction, the applicant will prepare a comprehensive Habitat Mitigation and Monitoring Plan that provides for a 1:1 restoration ratio for temporary impacts and a 3:1 enhancement ratio for permanent impacts, unless otherwise directed by regulatory agencies. To the extent feasible, mitigation activities will be implemented within the Biological Study Area and/or the Santa Margarita Creek riparian corridor and in areas in and adjacent to the Biological Study Area that support exotic species, contain agricultural trash, and have erosion. These areas provide the most optimal mitigation opportunities on-site. Any revegetation will be conducted using only native plant species. The final Habitat Mitigation and Monitoring Plan will identify the specific mitigation sites and it will be implemented immediately following project completion.

Cumulative Impacts

Cumulative effects include the effects of future state, tribal, local, or private actions that are reasonably certain to occur in the vicinity of the project area that were considered in this assessment to evaluate the potential cumulative impacts of the project. The County Planning and Building Department and Caltrans were contacted to obtain a list of projects that are upcoming or currently in review within the vicinity of Santa Margarita. To date, there are no other Caltrans projects that are known or expected to occur in the reasonable future within the vicinity of Santa Margarita to be considered for potential cumulative impacts of the proposed project (personal communications with Caltrans biologist Tom Edell).

The County Planning and Building Department reported that there are several small residential subdivisions that are likely to occur in the vicinity of Santa Margarita; however none of them have potential to result in impacts to biological resources. In addition, the County Planning and Building Department stated that there is currently a request to expand the existing Santa Margarita Quarry, which would likely result in impacts to biological resources, including potentially jurisdictional aquatic features and the associated riparian habitats.

The proposed project is not expected to result in, or contribute to, cumulative impacts to jurisdictional wetlands or other waters because the anticipated impacts will be mitigated for through implementation of the HMMP, installation of BMPs, use of other minimization measures, and because the necessary regulatory permits and authorizations will be obtained prior to project implementation. Similarly, the project proponent of the Santa Margarita Quarry Expansion project is required to obtain the necessary regulatory permits and authorizations prior to project approval and implementation and this would ensure that all potential impacts to jurisdictional resources are avoided, minimized, and/or mitigated in a manor that is acceptable to the pursuant resource agencies and to maximum extent feasible. Therefore, the proposed project is not likely to result in, or contribute to, cumulative impacts to jurisdictional aquatic features.

DISCUSSION OF ARROYO WILLOW THICKET AND FREMONT COTTONWOOD FOREST

The arroyo willow thicket associated with Santa Margarita Creek falls within the Holland (1986) description of central coast riparian scrub and is recognized by the CNDDB (CTT63200CA) as a natural community of special concern. The USFWS Wetland Inventory (2014 national list) recognizes arroyo willow as a FACW plant. Arroyo willow thickets are classified by the CDFW (2010) as a natural community of special concern.

The Fremont cottonwood forest associated with Santa Margarita Creek falls within the Holland (1986) description of southern cottonwood willow riparian forest and is

recognized by the CNDDB (CTT61330CA) as a natural community of special concern. The USFWS Wetland Inventory (2014 arid west list) recognizes Fremont cottonwood as a FACW plant. Fremont cottonwood forest intergrades with valley oak woodland along the southwestern banks and with coast live oak woodland along the northeastern banks of Santa Margarita Creek.

Survey Results

Within the BSA, the arroyo willow thicket is restricted to open areas within the Santa Margarita Creek riparian corridor and is bordered by Fremont cottonwood forest. Approximately 0.07 acre of arroyo willow thicket and 0.34 acre of Fremont cottonwood forest were mapped within the BSA.

Project Impacts

The project would result in approximately 1,306 ft^2 (0.03 acre) of permanent impacts and 1,742 ft^2 (0.04 acre) of temporary impact to arroyo willow thicket. The project would also result in approximately 237 ft^2 (0.01 acre) of permanent impacts and 4,500 ft^2 (0.10 acre) of temporary impacts to Fremont cottonwood forest.

Avoidance and Minimization Efforts

Avoidance and Minimization Measures BIO-1 through BIO-12 proposed for the protection of jurisdictional features will also serve to protect the riparian habitats identified on-site. No additional measures are necessary.

Compensatory Mitigation

As stated in Measure BIO-12, compensatory mitigation will be detailed in the HMMP. The HMMP will include re-vegetation of impacted arroyo willow thicket and Fremont cottonwood forest habitats. Permanent impacts will be mitigated at a 3:1 ratio and temporary impacts will be mitigated at a 1:1 ratio, unless otherwise directed by regulatory agencies.

Cumulative Impacts

As discussed above, a list of potential projects within the vicinity of Santa Margarita was requested from Caltrans and the County Planning and Building Department to evaluate potential cumulative impacts of the proposed project. Of the known projects anticipated to occur within the vicinity of Santa Margarita, the Santa Margarita Quarry Expansion project has potential to result in impacts to riparian habitats associated with jurisidictional aquatic features.

However, the proposed project is not expected to result in, or contribute to, cumulative impacts to riparian habitats because the potential impacts will be mitigated for through

implementation of the HMMP, installation of BMPs, use of other minimization measures, and because the necessary regulatory permits will be obtained prior to project implementation. Similarly, the Santa Margarita Quarry Expansion project proponent is required to obtain the necessary regulatory permits and authorizations prior to project approval and implementation and this would ensure that all potential impacts to riparian habitats are avoided, minimized, and/or mitigated to the maximum extent feasible and in a manner that is acceptable to the pursuant resource agencies. Therefore, the proposed project is not expected to result in, or contribute to, cumulative impacts to riparian habitats.

DISCUSSION OF OAK WOODLAND AND OAK TREES

Coast live oak woodlands are characterized by dense cover of coast live oaks. The tree canopy may reach up to 75 feet and the shrub layer is usually poorly developed. Coast live oak woodlands typically grow on north-facing slopes and shaded ravines, intergrading with coastal scrub and chaparral communities on xeric (dry) sites and coast live oak forest or mixed evergreen forest on mesic (moist) sites (Holland 1986).

Valley oak woodlands are characterized by having an open tree canopy with mature individuals reaching heights up to 100 feet. Valley oak woodland occurs on deep, well-drained alluvial soils, usually in valley bottoms. The valley oak woodland associated with Santa Margarita Creek is recognized by the CNDDB (CTT71130CA) as a natural community of special concern. Coast live oak and valley oak woodlands are considered sensitive under CEQA Section 21083.4.

Survey Results

Remnant stands of coast live oak woodland are restricted to the uplands north of the Santa Margarita Creek riparian corridor within the BSA. Coast live oak woodland is bordered by Fremont cottonwood forest to the south and developed lands to the north. Within the BSA, remnant stands of valley oak woodland are restricted to the uplands south of the Santa Margarita Creek riparian corridor. The valley oak woodland is bordered by Fremont cottonwood forest to the north and agricultural land and developed lands to the south. A small stand is located at the southernmost boundary of the BSA. Approximately 0.13 acre of coast live oak woodland and 0.58 acre of valley oak woodland were mapped on-site.

Project Impacts

Two valley oak trees with DBH greater than four inches will be removed during project activities—the large valley oak southeast of the existing bridge and a smaller valley oak northwest of the existing bridge. Four coast live oak trees are located along the eastern road shoulder of El Camino Real and directly north of the existing bridge location. Removal of these trees is not anticipated. However, construction activities are expected

to result in grading and soil compaction within the root zone of these trees and several limbs may require trimming. Activities such as these can have adverse effects on the oak trees.

Avoidance and Minimization Efforts

At least two valley oak trees will require removal during construction and activities are anticipated to occur within the root and/or canopy zones of two other coast live oak trees. Anticipated impacts include trimming branches, grading, and compaction within the root zone. The following measures are provided to ensure that impacts to oak woodlands and individual oak trees are minimized to the maximum extent feasible:

BIO-13 Oak trees that will remain within the Biological Study Area will not be removed or otherwise affected by project implementation. All trees to remain within 50 feet of construction or grading activities will be marked for protection with protective fencing and their root zone fenced prior to any grading. The fencing will be checked periodically to ensure that it remains intact and is functioning effectively and maintained as needed throughout the duration of construction. Avoidance areas shall be shown in the project plans as an Environmental Sensitive Area. The root zone will be defined at 1.5 times the diameter of the canopy dripline. All activities within the root zone shall be avoided to the extent feasible.

BIO-14 Trimming and other potentially detrimental effects on oak trees shall be minimized to the maximum extent feasible. Only those encroachments that are absolutely necessary to accomplish the project goals will be conducted.

Compensatory Mitigation

The following compensatory mitigation is proposed to mitigate for the removal of two valley oak trees and the anticipated impacts associated with trimming and/or encroachments within the root zones of four coast live oak trees within the BSA.

BIO-15 The Habitat Mitigation and Monitoring Plan will provide for the in-kind replacement of removed oak trees at a 4:1 ratio. Replanting activities will occur during the subsequent late fall season (after construction is completed), in order to maximize the use of natural winter rainfall.

BIO-16 Locations of newly planted trees should adhere to the following recommendations, whenever feasible: use of sites on the north side of and at the canopy/dripline edge of existing mature native trees; on north-facing slopes; along the creek banks; where topsoil is present; and away from continuously wet areas (e.g., at least 15 feet uphill of the creek OHWM).

BIO-17 The Habitat Mitigation and Monitoring Plan will provide for the maintenance of the planted trees until they are successfully established (approximately three to five years). This will include protection (e.g., tree shelters, caging) from animals (e.g., deer, rodents), weeding (typically once early fall and once early spring) of a three-foot radius out from plant, mulching, and adequate watering during the first two years after installation.

Cumulative Effects

As previously discussed, a list of potential projects within the vicinity of Santa Margarita was requested from Caltrans and the County Planning and Building Department to evaluate potential cumulative impacts of the proposed project. Of the known projects expected to occur within the vicinity of Santa Margarita, the Santa Margarita Quarry Expansion project has potential to result in impacts to oak woodland habitats and/or oak trees.

However, the proposed project is not expected to result in, or contribute to, cumulative impacts to these resources because the potential impacts will be mitigated for through implementation of the HMMP. Similarly, the Santa Margarita Quarry Expansion project proponent is required to comply with CEQA and this would ensure that all potential impacts to oak woodland habitats and/or oak trees are avoided, minimized, and/or mitigated to the maximum extent feasible. Therefore, the proposed project is not likely to result in, or contribute to, cumulative impacts to oak woodland habitats and/or oak trees.

DISCUSSION OF STEELHEAD CRITICAL HABITAT

Santa Margarita Creek is designated as critical habitat for the South-Central California Coast steelhead DPS and is identified as the Paso Robles hydrologic sub-area of the designation (70 CFR 52488–52627). Adverse modification of critical habitat is defined as a "direct or indirect alteration that appreciably diminished the value of critical habitat for both the species survival and recovery."

Survey Results

Santa Margarita Creek is a densely vegetated, perennial tributary to the Salinas River within the upper Salinas River watershed. Steelhead were seen during both daytime field surveys conducted by County Environmental Division staff between April and July of 2011 (Hutchinson 2012).

Project Impacts

The project may result in adverse impacts to South-Central California Coast steelhead designated critical habitat, which includes permanent and temporary impacts to aquatic

habitat and adjacent riparian vegetation. In total, the BSA includes approximately 11,060 ft^2 (0.25 acre) of steelhead aquatic habitat over a 260-linear-foot distance. This measurement is consistent with the amount of federal 'other waters' identified within the BSA, which was based on the presence of an OHWM. Of this amount, project activities are anticipated to permanently impact approximately 211 ft^2 (0.005-acre) of steelhead designated critical habitat. However, since approximately 417 ft^2 (0.01-acre) of existing concrete will be removed from the creek channel, there will be a total net gain of approximately 206 ft^2 (0.005 acre) of steelhead designated critical habitat and the overall habitat quality on site will be greatly improved by project implementation.

Permanent impacts to riparian habitat are also considered impacts to steelhead designated critical habitat since riparian habitat provides the necessary shade and cover for steelhead residing in the aquatic environment. Permanent impacts to designated steelhead critical habitat would result primarily from the placement of RSP at the proposed bridge abutments. Although, installation of RSP is considered a permanent impact, the effects will be minimized by placing the RSP above the OHWM and backfilling the rock with with clean soils for revegetation purposes. Revegetation will provide shading and will also serve to minimize potential adverse impacts from the project.

Temporary impacts to steelhead designated critical habitat are associated with dewatering the stream reach, heavy equipment operation, bridge construction, removal of existing concrete, and bridge demolition. The total area of temporary impacts anticipated is approximately 19,622 ft^2 (0.45 acre). This temporary impact area is consistent with the total amount of impact to CDFW jurisdiction because it includes the extent of riparian vegetation and the extent of the aquatic habitat.

Avoidance and Minimization Efforts

The avoidance and minimization efforts described for jurisdictional features, which includes riparian vegetation, will also serve to avoid and minimize project related impacts to steelhead designated critical habitat. These measures function to both avoid and minimize impacts to the stream and to the riparian vegetation surrounding it, which generally provides shading to keep water cool and improves water quality via filtration. The following additional measure is proposed to further improve steelhead designated critical habitat within the BSA:

BIO-18 Although the substrate in the creek channel does contain gravel and some other coarser materials, the gravel is embedded with silt. Therefore, the suitability of the site for steelhead spawning is reduced. The San Luis Obispo County Public Works Department will include gravel augmentation practices in the proposed project. When removing material from the channel, the contractors will utilize a hopper or screen to separate the coarser materials

from the fine sediments. The fine sediments will be permanently removed from the channel and the course materials will be salvaged and returned back into the channel. If additional material is needed to create the desired channel topography, the additional material will consist of a variety of sized gravels to enhance the steelhead spawning substrates. The material must be clean and not include any pollutants.

Compensatory Mitigation

The project would result in a net gain and overall improvement of aquatic habitat to steelhead designated critical habitat. The proposed avoidance and minimization measure provided above will also improve the aquatic habitat quality by enhancing steelhead spawning substrates. No further mitigation for steelhead designated critical habitat is necessary or proposed.

For impacts to riparian habitat, the compensatory mitigation outlined in the project HMMP will serve to mitigate for any permanent and temporary impacts that may result from the project. No additional compensatory mitigation is required or proposed.

Cumulative Impacts

As discussed in the previous sections, a list of potential projects within the vicinity of Santa Margarita was requested from Caltrans and the County Planning and Building Department to evaluate potential cumulative impacts of the proposed project. Of the known projects anticipated to occur within the vicinity of Santa Margarita, the Santa Margarita Quarry Expansion project has potential to result in impacts to steelhead designated critical habitat.

However, the proposed project is not expected to result in, or contribute to, cumulative impacts to this resource because consultation with NOAA Fisheries through the Section 7 process is being conducted to address the anticipated impacts to this resource and all the necessary regulatory permits and authorizations will be obtained prior to project implementation. Similarly, the Santa Margarita Quarry Expansion project proponent is required to obtain all the necessary regulatory permits and authorizations prior to poroject approval and implementation and this would ensure that all potential impacts to steelhead designated critical habitat are avoided, reduced, and/or mitigated in a manner that is acceptable to the pursuant resource agencies. Therefore, the proposed project is not likely to result in, or contribute to, cumulative impacts to designated steelhead critical habitat.

DISCUSSION OF INVASIVE SPECIES

Executive Order 13112 is a directive aimed at preventing the introduction and spread of invasive species as a result of federal agency actions. This Executive Order requires

federal agencies to work cooperatively to prevent and control the spread of invasive plants and animals. On August 10, 1999, FHWA issued implementing guidance on Executive Order 13112. On October 22, 1999, Caltrans issued a memo to implement the FHWA guidance. The guidance provides that a NEPA analysis for an action include an analysis of the probability of the action to cause or promote the introduction or spread of invasive species. If analysis indicates that disturbances caused by the action have the potential to promote the introduction or spread of invasive species, feasible and prudent measures must be taken to minimize this likelihood.

Survey Results

A total of 26 invasive plant species identified in the Cal-IPC Inventory were observed within the BSA (refer to Table 2).

Project Impacts

Project activities would include construction of the temporary access road, bridge construction, bridge demolition, and site reconstruction. Implementation of these project elements would require removing and replacing soil that is likely to contain seeds of invasive plant species. Disturbance of the soil containing invasive species seeds could facilitate the spread of invasive species in and outside of the BSA.

Avoidance and Minimization Efforts

The following avoidance and minimization measures are proposed for maintaining compliance with Executive Order 13112:

BIO-19 During construction, the contractor will make a deliberate effort to limit the use of imported soils for fill. Soils currently existing on-site should be used for fill material. If the use of imported fill material is necessary, the imported material must be obtained from a source that is known to be free of invasive plant species, or the material must consist of purchased clean material such as crushed aggregate, sorted rock, or similar. To avoid the spread of invasive species, the contractor will:

a. Remove any invasive plant species within the Biological Study Area during construction activities and ensure that they are not replanted.

b. Stockpile topsoil and redeposit the stockpiled soil on the slopes after construction of the new bridge is complete; or

c. Transport the topsoil to a certified landfill for disposal.

BIO-20 During construction, the biological monitor(s) will ensure that the spread or introduction of invasive exotic plant species is avoided to the maximum extent

practicable. When practicable, invasive exotic plants in the project site will be removed and properly disposed of. Removed invasive plants shall be bagged and tied up so that they do not blow in the wind when being driven off site.

BIO-21 The Habitat Mitigation and Monitoring Plan restoration planting plans must emphasize the use of native species expected to occur in the area.

BIO-22 The Habitat Mitigation and Monitoring Plan will include an invasive species control program.

BIO-23 All erosion control materials including straw bales, straw wattles, or mulch used on site must be free of invasive species seed.

Compensatory Mitigation

With implementation of the avoidance and minimization measures, compensatory mitigation is not required or proposed.

Cumulative Effects

As explained previously, a list of potential projects within the vicinity of Santa Margarita was requested from Caltrans and the County Planning and Building Department to evaluate potential cumulative impacts of the proposed project. Of the known projects expected to occur within the vicinity of Santa Margarita, the Santa Margarita Quarry Expansion project has potential to cause or promote the introduction and spread of invasive plant species.

However, the proposed project is not expected to result in, or contribute to, cumulative impacts associated with the introduction and spread of invasive plant species because appropriate measures to avoid and minimize potential impacts from invasive species have been incorporated into the project. Similarly, the Santa Margarita Quarry Expansion project proponent is required to is required to comply with CEQA and must obtain the necessary regulatory permits and authorization prior to project approval and implementation. Therefore, it is expected that practicable measures to avoid and minimize potential impacts from invasive species will be implemented and that these measures will be included in the permit terms and other conditions of approval. The proposed project is not likely to result in, or contribute to, cumulative impacts resulting from invasive species.

Special-Status Plant Species

Of the numerous special-status plant species addressed in Table 4, the following discussion includes those species that have the potential to be impacted by the proposed project, and/or have suitable habitat within the BSA.

DISCUSSION OF SPECIAL-STATUS PLANT SPECIES

Botanical surveys were initially conducted by the County of San Luis Obispo on May 24 and August 9, 2011. Additional surveys were conducted on March 10 and April 16, 2015 by SWCA. A survey was also conducted on April 20, 2017 by the County. None of the special-status plant species considered were observed within the BSA, and none are anticipated to occur or otherwise be impacted as a result of the proposed project. Appendix D includes a list of plant species observed during botanical surveys.

Survey Results

Although the BSA provides suitable habitat for seven of the sensitive plant species discussed above in Table 4, none were observed in the BSA during botanical surveys conducted within the appropriate blooming periods of each species.

Project Impacts

No sensitive plant species were identified within the BSA; therefore, no impacts to these species will occur.

Avoidance and Minimization Efforts

Since no special-status plant species were not observed in the BSA during the springtime floristic surveys, avoidance and minimization measures for the special-status plants are not proposed.

Compensatory Mitigation

Compensatory mitigation for special-status plant species is not warranted, due to the absence of special-status plants in the BSA.

Cumulative Effects

The proposed project will not result in, or contribute to, cumulative impacts to special status plant species because none were observed within the BSA during the botanical surveys conducted within the appropriate blooming periods for each species considered to have potential to occur.

Special-Status Animal Species

DISCUSSION OF SOUTH-CENTRAL CALIFORNIA COAST STEELHEAD

Steelhead belong to the family Salmonidae which includes salmon, trout, and chars. Steelhead occupy streams in watersheds with perennial fresh water. The populations of steelhead on the California central coast are part of the South-Central California Coast ESU (Federal Threatened). Santa Margarita Creek is designated critical habitat (NOAA

Fisheries 2005). The Central California Coast DPS of steelhead is federally listed as threatened, and steelhead is a SSC. Steelhead are genetically indistinct from rainbow trout and differ only in their behavior. They prefer cool, clear, coastal streams and rivers with a gradient less than five percent. Steelhead exhibit life cycle strategies similar to other salmonids, known as anadromy. Steelhead trout enter streams and rivers to prepare for migration to spawning grounds as soon as streamflow is adequate and the summer sand bar present at the mouths of many coastal lagoons have breached.

Steelhead are known to occur within Santa Margarita Creek and nearby Trout Creek (NOAA Fisheries 2005). Santa Margarita Creek is a tributary of Salinas River. The Salinas River enters the Pacific Ocean approximately 150 miles north near the city of Monterey. The upper Salinas River and its tributaries historically supported large runs of steelhead salmon. By 1915, the salmon were extirpated largely due to the construction of dams that prevented fish passage to spawning runs. Today, the steelhead are reduced to mere remnant populations.

Survey Results

Santa Margarita Creek is a densely vegetated, perennial tributary to the Salinas River within the upper Salinas River watershed. Steelhead were seen during both daytime field surveys conducted by County Environmental Division staff between April and July of 2011 (Hutchinson 2012).

Project Impacts

If present within the BSA during project activities, individual steelhead may be directly impacted. They may be stranded in portions of the creek that must be dewatered, get caught in dewatering pumps, or made vulnerable to predation from foraging birds and mammals. With the implementation of avoidance and minimization measures, these potential impacts may be avoided. Potential indirect impacts to steelhead from the project may occur and include sediment deposition downstream of the work area, which may adversely impact downstream water quality. However, these potential indirect impacts to steelhead may be avoided through the use of appropriate silt and erosion control measures.

Avoidance and Minimization Efforts

The project has the potential to result in “take” of steelhead; therefore, Caltrans must consult with NOAA Fisheries under Section 7 of the FESA to obtain a Biological Opinion for the project. The Biological Opinion will include several Reasonable and Prudent Measures and Terms and Conditions to reduce the effects on steelhead and their habitat. In addition to Avoidance and Minimization Measures BIO-1 through BIO-12 which would avoid, minimize and mitigate for impacts to habitats that provide cover and

shade for steelhead, the following measures will serve to further minimize potential project related impacts to steelhead:

BIO-24 In-stream work will take place between June 15 and October 31 in any given year, when the surface water within Santa Margarita Creek is likely to be at seasonal minimum. Deviations from this work window will only be made with permission from the relevant regulatory agencies. During in-stream work, a qualified biologist will be retained with experience in steelhead biology and ecology, aquatic habitats, biological monitoring (including diversion/dewatering), and capturing, handling, and relocating fish species. During in-stream work, the biological monitor(s) will continuously monitor placement and removal of any required stream diversions and will capture stranded steelhead and other native fish species and relocate them to suitable habitat, as appropriate. The biologist(s) will capture steelhead stranded as a result of diversion/dewatering and relocate steelhead to the nearest suitable instream habitat. The biologist(s) will note the number of steelhead observed in the affected area, the number of steelhead relocated, and the date and time of the collection and relocation.

BIO-25 During in-stream work, if pumps are incorporated to assist in temporarily dewatering the site, intakes will be completely screened with no larger than 0.2-inch (five-millimeter) wire mesh to prevent steelhead and other sensitive aquatic species from entering the pump system. Pumps will release the diverted water so that suspended sediment will not re-enter the stream. The form and function of pumps used during the dewatering activities will be checked daily, at a minimum, by a qualified biological monitor to ensure a dry work environment and minimize adverse effects to aquatic species and habitats.

Compensatory Mitigation

Existing man-made structures in the channel such as old bridge footings or hardened channel linings, which may create a migration barrier under some flow conditions, will be removed to optimize fish passage. The proposed avoidance and minimization measures will serve to reduce impacts to individual steelhead. No additional compensatory mitigation is proposed.

Cumulative Effects

As previously discussed, a list of potential projects within the vicinity of Santa Margarita was requested from Caltrans and the County Planning and Building Department to evaluate potential cumulative impacts of the proposed project. Of the known projects anticipated to occur within the vicinity of Santa Margarita, the Santa Margarita Quarry Expansion project has potential to result in impacts to steelhead.

However, the proposed project is not expected to result in, or contribute to, cumulative impacts to this species because consultation with NOAA Fisheries through the Section 7 process is being conducted to address the anticipated impacts to this resource and all the necessary regulatory permits and authorizations will be obtained prior to project implementation. Similarly, the Santa Margarita Quarry Expansion project proponent is required to obtain all the necessary regulatory permits and authorizations prior to project approval and implementation and this would ensure that all potential impacts to steelhead are avoided, reduced, and/or mitigated in a manner that is acceptable to the pursuant resource agencies. Therefore, the proposed project is not likely to result in, or contribute to, cumulative impacts to steelhead.

DISCUSSION OF CALIFORNIA RED-LEGGED FROG

CRLF is federally threatened and considered a SSC by CDFW. This amphibian species ranges from Northern California to Baja California, Mexico, and is found from sea level to approximately 5,200 feet (USFWS 2010). It is a large (two to five inches), brown, grayish, red frog with black flecks, a red lower abdomen, and red on the underside of the hind legs. A characteristic feature of the CRLF is its prominent dorsolateral folds, visible on both sides of the frog (Stebbins 2003). CRLF are mostly aquatic but use a variety of habitats such as backwater areas in streams, ponds, marshes, riparian and upland habitat with small mammal burrows, moist leaf litter, or structures that provide shade (USFWS 2002). Breeding habitat occurs typically in ponds, slow-flowing stream reaches, or deep pools within streams that support vegetation to which egg masses may be attached. These habitats must support enough water to last through metamorphosis and into the development of juvenile frogs (USFWS 2010).

CRLF is the largest native frog species in California and was once abundant throughout the California coast range and southern California foothills. The species is also known to have occurred in the central valley and western Sierra Nevada, but the number of historical locations and population sizes in these regions is obscure (Barry and Fellers 2013). The species has been extirpated from 70 percent of its former range primarily due to urban encroachment, construction of reservoirs and water diversions, contaminants, agriculture, disease, and other factors. The introduction of non-native predators and competitors, such as bullfrog (*Lithobates catesbeianus*) continues to threaten the viability of many CRLF populations (USFWS 2002).

Survey Results

According to the March 2014 update of the CNDDB, there are no records of CRLF within one mile (1.6 km) of the BSA. There was a sighting of four adult CRLFs on February 7, 2002, approximately 2.47 miles south of the proposed project along Yerba Buena Creek in Santa Margarita Community Park. On September 25, 2003, in the same Yerba Buena Creek, approximately 3.29 miles south of the proposed project, 14 metamorphing

tadpoles/frogs were observed in late drying pools. Approximately 3.8 miles to the west, one juvenile was observed in a spring box of McLain Spring in Kathleen Valley on May 18, 2000. On July 8, 2002, one adult CRLF was observed approximately 4.52 miles to the southwest of the BSA near Tassajara Creek (CNDDB 2017). Yerba Buena Creek makes a confluence with Santa Margarita Creek about 1.2 miles upstream (south) of the BSA. Tassajara Creek makes a confluence with Santa Margarita Creek about 3.97 miles upstream (south) of the project. McLain Spring is in the Atascadero Creek watershed that flows to the Salinas River further north.

The project site is not within a CRLF designated critical habitat unit. The Upper Salinas River critical habitat unit (SLO-4) for CRLF is located east of the BSA, approximately 1,000 feet east of the existing Santa Margarita Creek Bridge. Critical Habitat Unit SLO-3 provides connectivity between populations in the outer Coast Ranges and inland populations and is currently occupied.

The County of San Luis Obispo conducted a protocol-level survey for this species in 2011 as part of a scour repair project for the bridge. No individuals were identified as a result of this survey effort.

As part of the bridge replacement project, SWCA conducted a habitat assessment in 2014, which was utilized for informal consultation with USFWS to determine if additional protocol level surveys would be required. The results of the CRLF habitat assessment demonstrate that habitat suitability for CRLF within the BSA is low given the lack primary constituent elements and the presence of predators. Based on SWCA's findings, and previous efforts by the County in 2011, USFWS agreed that no additional protocol-level surveys are warranted. Refer to Section 5 for a summary of this coordination.

Although presence of the species is unlikely, for the purposes of this project presence of California red-legged frog is inferred due to the mobility of this species. It may use the stretch of Santa Margarita Creek within the BSA as a migration corridor and may reside in the deeper pools during the dry season.

Project Impacts

Direct impacts to CRLF adults and sub-adults could include injury or mortality if they are present within the stream channel, or in adjacent riparian areas and uplands, from construction equipment, construction debris, dewatering activities, and traffic. However, these impacts will be avoided with the presence of qualified biologists surveying for and moving CRLFs outside of the project area to areas of adjacent suitable habitat. Indirect effects of construction activities, including noise and vibration, may cause CRLFs to abandon habitat adjacent to work areas. This disturbance may increase the potential for predation and desiccation, if CRLFs abandon shelter sites. The indirect effects of erosion and sedimentation could also impact CRLFs. However, potential indirect effects

will be mitigated through the use of appropriate silt/erosion controls. The removal of any encountered exotic wildlife species from Santa Margarita Creek may produce a beneficial effect by reducing predation and competition pressures for CRLF.

Although no CRLFs were observed during reconnaissance surveys within the BSA, there is a potential for the species to occur within the area despite the low quality of habitat. There would be a potential for take of CRLF during construction in upland and riparian dispersal habitats associated with Santa Margarita Creek and any necessary capture and relocation of CRLF. The proposed project will also create temporary and/or permanent impacts to vegetation along the creek, which may offer shading and microhabitat temperature regulation in the channel; however, the loss of trees will be mitigated with replacement trees.

Avoidance and Minimization Efforts

Although CRLF has not been observed in the BSA, presence is inferred due to the mobility of this species, presence of aquatic features on site, and proximity of previously documented occurrences in the CNDDB. Therefore, formal consultation with the USFWS under Section 7 of the Endangered Species Act will be required. Caltrans will be the lead agency for this consultation through its FHWA delegated authority. Because the project has potential to adversely affect/impact CRLF, it is eligible for coverage under the *Programmatic Biological Opinion for Projects Funded or Approved under the Federal Highway Administration's Federal Aid Program* (USFWS 2011a). The following avoidance and minimization measures are based on the specific measures included within the Programmatic Biological Opinion, and shall be implemented.

BIO-26 Only United States Fish and Wildlife Service-approved biologists will participate in activities associated with the capture and handling of California red-legged frogs. Biologists authorized under the Programmatic Biological Opinion do no need to re-submit their qualifications for subsequent projects conducted pursuant to the Programmatic Biological Opinion, unless the United States Fish and Wildlife have revoked their approval at any time during the life of the Programmatic Biological Opinion.

BIO-27 Ground disturbance will not begin until written approval is received from the United States Fish and Wildlife Service that the biologist(s) is qualified to do conduct the work, unless the individual has/have been approved previously and the United States Fish and Wildlife has not revoked that approval. *The California Department of Transportation will request approval of the biologist(s) from the United States Fish and Wildlife Service.

BIO-28 A United States Fish and Wildlife Service-approved biologist will survey the project area no more than 48 hours before the onset of work activities. If any life stage of the California red-legged frog is found and these individuals are

likely to be killed or injured by work activities, the approved biologist will be allowed sufficient time to move them from the site before work activities begin. The United States Fish and Wildlife Service-approved biologist will relocate the California red-legged frogs the shortest distance possible to a location that contains suitable habitat and will not be affected by the activities associated with the project. The relocation site should be in the same drainage to the extent practicable. Caltrans will coordinate with the Service on the relocation site prior to the capture of any California red-legged frogs.

BIO-29 Before any activities begin on a project, a United States Fish and Wildlife-approved biologist will conduct a training session for all construction personnel. At a minimum, the training will include a description of the California red-legged frog and its habitat, the specific measures that are being implemented to conserve the California red-legged frog 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.

BIO-30 A United States Fish and Wildlife Service-approved biologist will be present at the work site until California red-legged frogs have been relocated out of harm's way, workers have been instructed, and disturbance of the habitat has been completed. After this time, the San Luis Obispo County Public Works Department will designate a person to monitor on-site compliance with minimization measures. The United States Fish and Wildlife Service-approved biologist will ensure that this monitor receives the training outlined in BIO-29 above and in the identification of California red-legged frogs. If the monitor or the United States Fish and Wildlife Service-approved biologist recommends that work be stopped because California red-legged frogs would be affected in a manner not anticipated by the California Department of Transportation, County of San Luis Obispo Public Works Department, and the United States Fish and Wildlife Service during the 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 adverse effect immediately or require that actions that are causing these effects be halted. If work is stopped, the California Department of Transportation, County of San Luis Obispo Public Works Department and United States Fish and Wildlife Service will be notified as soon as is reasonably .

BIO-31 During project activities, trash that may attract predators will be properly contained, removed from the work site, and disposed of regularly. Following construction, trash and construction debris will be removed from work areas.

BIO-32 All refueling, maintenance, and staging of equipment and vehicles will occur at least 60 feet from riparian habitat or water bodies and in a location from where a spill would not drain directly toward aquatic habitat (e.g., on a slope that drains away from the water). The monitor will ensure contamination of habitat does not occur during such operations. Prior to the onset of work, Caltrans and the County of San Luis Obispo Public Works will ensure that a plan is in place 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.

BIO-33 Habitat contours will be returned to their original configuration at the end of project activities. This measure will be implemented in all areas disturbed by activities associated with the project, unless the United States Fish and Wildlife, Caltrans and the County of San Luis Obispo Public Works Department determine that it is not feasible or modification or original contours would benefit the California red-legged frog.

BIO-34 The number of access routes, size of staging areas, and the total area of activity will be limited to the minimum necessary to achieve the project. Environmentally Sensitive Areas will be established to confine access routes and construction areas to the minimum area necessary to complete construction, and minimize the impact to California red-legged frog habitat; this goal includes locating access routes and construction areas outside of wetlands and riparian areas to the maximum extent practicable.

BIO-35 The County of San Luis Obispo and Caltrans will attempt to schedule work for times of the year when impacts to the California red-legged frog would be minimal. For example, work that would affect large pools that may support breeding would be avoided, to the maximum degree practicable, during the breeding season (November through May). Isolated pools that are important to maintain California red-legged frogs through the driest portions of the year would be avoided, to the maximum degree practicable, during the late summer and early fall. Habitat assessments, surveys, and technical assistance between the California Department of Transportation and United States Fish and Wildlife Service during project planning will be used to assist in scheduling work activities to avoid sensitive habitats during key times of year.

BIO-36 To control sedimentation during and after project implementation, Caltrans and the County of San Luis Obispo Public Works Department will implement best management practices outlined in any authorizations or permits issued under the authorities of the Clean Water Act that it receives for the specific project. If best management practices are ineffective, Caltrans will attempt to

remedy the situation immediately, in coordination with the United States Fish and Wildlife Service.

BIO-37 If a work site is to be temporarily dewatered by pumping, intakes will be completely screened with wire mesh not larger than 0.2 inch to prevent California red-legged frogs from entering the pump system. Water will be released downstream at an appropriate rate to maintain downstream flows during construction. Upon completion of construction activities, any diversions or barriers to flow will be removed in a manner that would allow flow to resume with the least disturbance to the substrate. Alteration of the stream bed will be minimized to the maximum extent possible; any imported material will be removed from the stream bed upon completion of the project.

BIO-38 Unless approved by the United States Fish and Wildlife Service, water will not be impounded in a manner that may attract California red-legged frogs.

BIO-39 A United States Fish and Wildlife Service-approved biologist will permanently remove any individuals of exotic species, such as bullfrogs (*Lithobates catesbeiana*), crayfish, and centrarchid fishes from the project area, to the maximum extent. The United States Fish and Wildlife Service-approved biologist will be responsible for ensuring their activities are in compliance with the California Fish and Game Code.

BIO-40 If Caltrans and the County of San Luis Obispo Public Works Department demonstrates that disturbed areas have been restored to conditions that allow them to function as habitat for the California red-legged frog, these areas will not be included in the amount of total habitat permanently disturbed.

BIO-41 To ensure that diseases are not conveyed between work sites by the United States Fish and Wildlife Service-approved biologist, the fieldwork code of practice developed by the Declining Amphibian Task Force will be followed at all times.

BIO-42 Project sites will be re-vegetated with an assemblage of native riparian, wetland, and upland vegetation suitable for the area. Locally collected plant materials will be used to the extent practicable. Invasive, exotic plants will be controlled to the maximum extent practicable. This measure will be implemented in all areas disturbed by activities with the project, unless the United States Fish and Wildlife, Caltrans and the County of San Luis Obispo Public Works Department have determined that it is not feasible or practical.

BIO-43 The County of San Luis Obispo Public Works Department and Caltrans will not use herbicides as the primary method to control invasive, exotic plants.

However, if the County of San Luis Obispo Public Works Department and Caltrans determines the use of herbicides is the only feasible method for controlling invasive plants at a specific project site, it will implement the following additional measures to protect California red-legged frog.

a. The County of San Luis Obispo Public Works Department and Caltrans will not use herbicides during the breeding season for California red-legged frog;

b. The County of San Luis Obispo Public Works Department and Caltrans will conduct surveys for California red-legged frog immediately prior to the start of herbicide use. If found, California red-legged frog will be relocated to suitable habitat far enough from the project area that no direct contact with herbicide would occur;

c. Giant reed and other invasive plants will be cut and hauled out by hand and painted with glyphosate-based products, such as Aquamaster® or Rodeo®;

d. Licensed and experienced Caltrans staff or a licensed and experienced contractor will use a hand-held sprayer for foliar application of Aquamaster® or Rodeo® where large monoculture stands occur at an individual project site.

e. All precautions will be taken to ensure that no herbicide is applied to native vegetation.

f. .

g. Foliar applications of herbicide will not occur when wind speeds are in excess of 3 miles per hour.

h. No herbicides will be applied within 24 hours of forecasted rain.

i. Application of herbicides will be done by a qualified Caltrans staff, County of San Luis Obispo staff or contractors to ensure that overspray is minimized, that application is made in accordance with the label recommendations, and that required and reasonable safety measures are implemented. A safe dye will be added to the mixture to visually denote treated sites. Application of herbicides will be consistent with the United States Environmental Protection Agency's Office of Pesticide Programs Endangered Species Protection Program county bulletins.

j. All herbicides, fuels, lubricants, and equipment will be stored, poured, or refilled at least 60 feet from riparian habitat or water bodies in a location where a spill would not drain directly toward aquatic habitat. Caltrans and the County of San Luis Obispo Public Works Department will ensure that a plan is in place for a prompt and effective response to accidental spills. All workers will be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

BIO-44 Upon completion of the project, Caltrans and the County of San Luis Obispo will ensure that a Project Completion Report is completed and provided to the United States Fish and Wildlife Ventura Field Office. Caltrans and the County of San Luis Obispo should include recommended modifications of the protective measures if alternative measures would facilitate compliance with the provisions of the consultation. In addition, Caltrans will reinitiate formal consultation in the event any of the following thresholds are reached as a result of the projects conducted under the provisions of the consultation associated with the Programmatic Biological Opinion:

Caltrans will reinitiate consultation when, as a result of projects conducted under the provision of the consultation associated with the Programmatic Biological Opinion:

a. 10 California red-legged frog adults or juveniles have been killed or injured in any given year. (For this and all other standards, an egg mass is considered to be on California red-legged frog.);

b. 50 California red-legged frogs have been killed or injured in total;

c. 20 acres of critical habitat for the California red-legged frog that include the primary constituent elements of aquatic breeding and non-breeding aquatic habitat and upland and dispersal habitat have been permanently lost in any given year;

d. 100 acres of critical habitat for the California red-legged frog that include the primary constituent elements of aquatic breeding and non-breeding aquatic habitat and upland and dispersal habitat have been permanently lost in total;

e. 100 acres of critical habitat for the California red-legged frog that include the primary constituent elements of aqutic breeding and non-breeding aquatic habitat and upland and dispersal habitat have been temporarily disturbed in any given year; or

f. 500 acres of critical habitat for the California red-legged frog that include the primary constituent elements of aquatic breeding and non-breeding aquatic habitat and upland and dispersal habitat have been temporarily disturbed in total.

Compensatory Mitigation

The previously described avoidance and minimization measures for impacts to aquatic habitat, impacts to CRLF, and the implementation of the HMMP will minimize impacts to CRLF and its habitat. The HMMP will detail revegetation and restoration methods for special-status species habitats, based on agency consultations. Additional compensatory mitigation is not proposed.

Cumulative Effects

As discussed in previous sections, a list of potential projects within the vicinity of Santa Margarita was requested from Caltrans and the County Planning and Building Department to evaluate potential cumulative impacts of the proposed project. Of the known projects anticipated to occur within the vicinity of Santa Margarita, the Santa Margarita Quarry Expansion project has potential to result in impacts to CRLF.

However, the proposed project is not expected to result in, or contribute to, cumulative impacts to this species because consultation with the USFWS through the Section 7 process is being conducted to address the anticipated impacts to this resource and all the necessary regulatory permits and authorizations will be obtained prior to project implementation. Similarly, the Santa Margarita Quarry Expansion project proponent is required to obtain all the necessary regulatory permits and authorizations prior to project approval and implementation and this would ensure that all potential impacts to CRLF are avoided, reduced, and/or mitigated in a manner that is acceptable to the pursuant resource agencies. Therefore, the proposed project is not likely to result in, or contribute to, cumulative impacts to CRLF.

DISCUSSION OF COAST RANGE NEWT, FOOTHILL YELLOW-LEGGED FROG, SOUTHWESTERN POND TURTLE, AND WESTERN SPADEFOOT

The Coast Range newt (*Taricha torosa torosa*) is considered a SSC by CDFW. It is a moderate-sized, dark brown salamander with a bright yellow-orange belly. Historically, Coast Range newts were distributed in coastal drainages from central Mendocino County in the north Coast Ranges, south to Boulder Creek, San Diego County (Stebbins 2003). Coast Range newts occupy terrestrial habitats, but breed in ponds, reservoirs, and slow-moving streams. In spring, males arrive at breeding sites first, followed by females a few days to weeks later. In central California, breeding appears to occur in two waves—the first in January or February and the second in March or April.

The foothill yellow-legged frog (*Rana boylii*) is listed as a SSC by CDFW. It prefers partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Need at least some cobble-sized substrate for egg-laying. Foothill yellow-legged frog requires at least 15 weeks to attain metamorphosis.

The southwestern pond turtle (*Emys marmorata*) is listed as a SSC by CDFW. This aquatic turtle inhabits ponds, lakes, streams, marshes, and other permanent waters located in woodland, grassland, and open forests below 6,000 feet (Stebbins 2003). Pond turtles can often be seen basking in the sun on partially submerged logs, rocks, mats of floating vegetation, or mud banks. During cold weather, they hibernate in bottom mud. The diet of these turtles consists of aquatic vegetation, insects, fish, worms, and carrion. Females dig soil nests in or near stream banks (Rathbun et al. 1997). Eggs are deposited between April and August. One factor in the decline of this species is the introduction of non-native fish, which prey on hatchlings and juveniles.

The western spadefoot (*Spea hammondii*) is considered a SSC by CDFW and is currently listed as a candidate species by USFWS. It is a small, 1.5- to 2.5-inch toad that is dusky green on top with orange or reddish skin tubercles (Stebbins 2003). The eyes are usually pale gold and have been described as “cat-like” with vertical pupils. There is a wedge-shaped, keratinous, and glossy black spade on each hind foot. During the dry season, western spadefoot toads are inactive, retreating to self-made burrows or burrows made by other animals such as ground squirrels, kangaroo rats (*Dipodomys* spp.), and other small mammals. Dispersal distances are unknown, but it is presumed that upland movements are not very far. Western spadefoot toads breed January through May in pools that form in heavy rain, or in slow streams, reservoirs, or irrigation ditches. As with the CRLF, western spadefoot toad breeding pools usually lack crawfish, fishes, and bullfrogs because these exotic predators reduce larvae.

Survey Results

Coast Range newt, foothill yellow-legged frog, southwestern pond turtle, and western spadefoot were not observed in the BSA during the reconnaissance surveys. The BSA may provide suitable aquatic habitat for these species and the adjacent coast live oak woodland is considered suitable upland/dispersal habitat for southwestern pond turtle, spadefoot, and coast range newt.

Project Impacts

Project implementation could result in impacts to Coast Range newt, foothill yellow-legged frog, southwestern pond turtles, and western spadefoot, if they are present within the BSA during construction. Direct impacts to these species could occur if they are present in the construction area during activities such as dewatering, excavation, grading, grubbing, and vegetation removal from injury, mortality, construction-related noise, and general disturbance. Project implementation has potential to indirectly affect

these species via adverse effects to water quality. Implementation of the recommended avoidance and minimization measures outlined below and the other measures presented in previous sections to maintain water quality are expected to fully avoid or minimize potential impacts to these species.

Avoidance and Minimization Efforts

In addition to previously stated measures above, implementation of the following measure is expected to further avoid and minimize the potential project related impacts to Coast Range newt, foothill yellow-legged frog, southwestern pond turtle, and western spadefoot:

BIO-45 Prior to construction, clearance surveys will be conducted by a qualified biologist immediately prior to disturbance within all suitable habitat. Clearance surveys will also be conducted directly following any dewatering activities. If Coast Range newt, foothill yellow-legged frog, southwestern pond turtle, or western spadefoot are found, the qualified biologist will move the species out of harm's way to the nearest suitable habitat outside the project construction area.

Compensatory Mitigation

No compensatory mitigation is required or proposed.

Cumulative Effects

As previously discussed, a list of projects within the vicinity of Santa Margarita was requested from Caltrans and the County Planning and Building Department to evaluate potential cumulative impacts of the proposed project. Of the known projects anticipated to occur within the vicinity of Santa Margarita, the Santa Margarita Quarry Expansion project has potential to result in impacts to these four special status amphibian and reptile species.

However, the proposed project is not expected to result in, or contribute to, cumulative impacts to these species because suitable avoidance and minimization measures have been incorporated into the project and all of the necessary permits and authorizations will be obtained prior to project implementation. Similarly, the Santa Margarita Quarry Expansion project proponent is required to comply with CEQA and must obtain all the necessary regulatory permits and authorizations prior to project approval and implementation, which would ensure that all potential impacts are avoided, minimized, and/or mitigated in a manner that is acceptable to the pursuant resource agencies. Therefore, the proposed project is not likely to result in, or contribute to, cumulative impacts to Coast Range newt, foothill yellow-legged frog, southwestern pond turtle, or western spadefoot.

DISCUSSION OF LEAST BELL'S VIREO, SOUTHWESTERN WILLOW FLYCATCHER, AND NESTING MIGRATORY BIRDS

Least Bell's vireo (LBV) is a federal and state endangered species. Federal critical habitat has been designated for the species, but the BSA is not within the designation. It is one of four recognized subspecies of Bell's vireo and is the western-most subspecies, breeding entirely within California and northern Baja California. LBV is the grayest of the four subspecies and is about four inches long with a seven-inch wingspan.

Historically, LBV was a common to locally abundant species in lowland riparian habitat, ranging from coastal southern California through the Sacramento and San Joaquin Valleys. By the time the species was federally listed in 1986, LBV had been extirpated from most of its historic range. Populations were confined to eight counties south of Santa Barbara, with the majority of birds occurring in San Diego County. The population decline was the likely result of nest parasitism by brown-headed cowbirds (*Molothrus ater*) and habitat conversion to agriculture (USFWS 1998).

LBV requires riparian areas to breed and typically inhabit structurally diverse woodlands along watercourses. They occur in a number of riparian habitat types, including cottonwood-willow woodlands/forests, oak woodlands, and mule fat scrub. Several investigators have attempted to identify the habitat requirements of the LBV by comparing characteristics of occupied and unoccupied sites and have focused on two features that appear to be essential: 1) the presence of dense cover within three to six feet off the ground, where nests are typically placed; and 2) a dense, stratified canopy, which is needed for foraging (USFWS 1998).

LBV usually arrive in California during mid- to late-March. They build their nests in a variety of plants that provide concealment in the form of dense foliage. The nests are open-cup nests placed in the horizontal fork of a tree or shrub branch. Females typically lay clutches of two to four eggs, and incubation takes 14 days. Nestlings fledge 10 to 12 days after hatching. Their primary diet is insects.

The southwestern willow flycatcher (SWWF; *Empidonax traillii extimus*) is a federal and state endangered species. It is a summer breeder within its range in the United States, and is gone to wintering areas in Central America by the end of September. Nest territories are set up for breeding, and there is some site fidelity to nest territories.

For nesting, SWWF requires dense riparian habitats (cottonwood/willow and tamarisk vegetation) with microclimatic conditions dictated by the local surroundings. Saturated soils, standing water, or nearby streams, pools, or cienegas are a component of nesting habitat that also influences the microclimate and density vegetation component. Habitat not suitable for nesting may be used for migration and foraging. Recurrent flooding and a natural hydrograph are important to withstand invading exotic species (e.g., tamarisk).

SWWF are typically found below 8,500 feet of elevation. Federally designated critical habitat for this species does not occur within San Luis Obispo County.

A number of bird species have the potential for nesting within the project study area and are protected during their nesting period under the provisions of the federal MBTA and CFG Code Sections 3503 and 3503.5. Birds may nest on bridge structures and within riparian habitat, oak woodlands, and ruderal and developed habitats.

Survey Results

A habitat assessment for LBV was conducted by SWCA Biologist Jackie Hancock in 2014, which characterized the BSA as "unlikely that LBV would inhabit the assessment area." The USFWS gave concurrence to Caltrans that protocol level surveys of the area were not necessary. Refer to Section 5 for a summary of coordination.

There are no known records of this species nesting in the BSA. The last confirmed breeding pair along the Salinas River was documented in 1983 (Roberson 2002). A non-breeding male was documented in 2009 approximately 38 miles north of the project site (Bloom and Roberts 2009).

According to the results of the LBV habitat assessment, the area upstream of the bridge may provide suitable foraging habitat. However, the vegetative structure present is unlikely to provide suitable nesting habitat for this species and SWWF, which also requires dense riparian habitat. The width of the corridor and proximity to urban activities decreases the overall value of the site to provide nesting habitat for these two species. Therefore, the habitat within the BSA is not considered suitable nesting habitat for either species.

No specific nesting migratory bird surveys were conducted as part of this survey. It is inferred that nesting migratory birds would exist within the creek corridor or on the bridge itself.

Project Impacts

No impacts to LBV or SWWF are anticipated because suitable nesting habitat this species does not occur within the BSA. Therefore, no specific measures to avoid and minimize potential impacts to LBV or SWWF are needed. However, several other species of nesting birds protected by the MBTA and State of California Fish and Game Code could potentially nest within the BSA and measures to avoid and minimize potential project related impacts to these resources are included below.

Avoidance and Minimization Efforts

Implementation of the following measures are recommended to avoid and minimize potential impacts to nesting birds:

BIO-46 Prior to construction, when feasible, tree removal will be scheduled to occur from November 1 through January 31, outside of the typical nesting bird season, to avoid potential impacts to nesting birds.

BIO-47 If construction activities are proposed during the typical nesting season (February 1 to September 1), a nesting bird survey will be conducted by qualified biologists no more than two weeks prior to the start of construction to determine presence/absence of nesting birds within the Biological Study Area and immediate vicinity. The California Department of Transportation will be notified if federally listed nesting bird species are observed during the surveys and will facilitate coordination with the United States Fish and Wildlife Service, if necessary to determine an appropriate avoidance strategy. Likewise, coordination with California Department of Fish and Wildlife will be facilitated by the San Luis Obispo County Public Works Department if necessary to devise a suitable avoidance plan for state-listed nesting bird species. If raptor nests are observed within the Biological Study Area during the pre-construction nesting bird surveys, the nest(s) shall be designated an Environmental Sensitive Area and protected by a minimum 500-foot avoidance buffer until the breeding season ends or until a qualified biologist determines that all young have fledged and are no longer reliant upon the nest or parental care for survival. Similarly, if active passerine nests are observed within the Biological Study Area during the pre-construction nesting bird surveys, the nest(s) shall be designated an Environmentally Sensitive Area and protected by a minimum 250-foot avoidance buffer until the breeding season ends or until a qualified biologist determines that all young have fledged and are no longer reliant upon the nest or parental care for survival. Resource agencies may consider proposed variances from these buffers if there is a compelling biological or ecological reason to do so, such as protection of a nest via concealment due to site topography.

Compensatory Mitigation

No compensatory mitigation is required.

Cumulative Effects

As discussed in the preceeding sections, a list of projects within the vicinity of Santa Margarita was requested from Caltrans and the County Planning and Building Department to evaluate potential cumulative impacts of the proposed project. Of the known projects expected to occur within the vicinity of Santa Margarita, the Santa Margarita Quarry Expansion project has potential to result in impacts to LBV and other nesting bird species.

However, the proposed project is not expected to result in, or contribute to, cumulative impacts to these resources because suitable avoidance and minimization measures have been incorporated into the project, consultation with the USFWS through the Section 7 process is being conducted to address the anticipated impacts to LBV, and all the necessary regulatory permits and authorizations will be obtained prior to project implementation. Similarly, the Santa Margarita Quarry Expansion project proponent is required to obtain all the necessary regulatory permits and authorizations prior to project approval and implementation and this would ensure that all potential impacts to LBV and other nesting bird species are avoided, reduced, and/or mitigated in a manner that is acceptable to the pursuant resource agencies. Therefore, the proposed project is not likely to result in, or contribute to, cumulative impacts to these resources.

DISCUSSION OF AMERICAN BADGER

American badger (*Taxidea taxus*) is listed as a SSC by CDFW. It is a stocky, low-slung member of the weasel family (Mustelidae) with distinctive white and black head markings, short powerful legs, and long claws adapted for digging. Suitable habitat for badgers consists of herbaceous, shrub, and other open habitats with dry, friable soils (Zeiner et al. 1990). Badgers dig burrows in friable soil for cover and frequently reuse old burrows. Dens are typically greater than six inches in diameter and horizontally oval-shaped, frequently with claw marks along the sides of the den opening.

Badgers are active year-round, nocturnally and diurnally, with variable periods of torpor over the winter months during colder temperatures. They mate in summer and early fall and two to three young are born in March and April. Badgers are carnivorous and eat fossorial rodents, preying on rats, mice, chipmunks, and especially ground squirrels and pocket gophers (*Thomomys* spp.). Badger diets shift seasonally and yearly in response to availability of prey (Zeiner et al. 1990).

Survey Results

The BSA provides marginally suitable habitat for American badger. It is unlikely that badger will den on-site, but this species may occur as a transient during foraging activities. No potential badger dens were observed within the BSA during field surveys and no dirt piles, prey remains, claw marks inside burrows, or other signs of badger were observed.

Project Impacts

If present during construction, American badger could be directly impacted by project activities. It could be trapped in a den during grading or injured by construction equipment. Noise and other disturbance associated with construction could affect foraging and dispersal behaviors, if this species is present on-site during project implementation.

Avoidance and Minimization Efforts

The following avoidance and minimization measures will be implemented for American badger to ensure that all potential impacts are negated. These measures are adapted from the USFWS *Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance* (USFWS 2011b):

BIO-48 No less than 14 days and no more than 30 days prior to the start of any construction activities or any project activity likely to impact American badger, a pre-construction survey for this species will be conducted by a qualified biologist. The survey will identify any and all American badger habitat features within the Biological Study Area, evaluate use by American badger, and will assess the potential impacts to this species from project implementation. The status of dens will be determined and mapped. Known dens, if observed within the project footprint, will be monitored for three days with tracking medium to determine the current use. If no American badger activity is observed during this period, the den will be destroyed immediately to preclude subsequent use. If American badger activity is observed at the den during this period, the den will be monitored for at least five more consecutive days from the time of the observation to allow any resident animal to move to another den during its normal activity. Only when the den is determined to be unoccupied will the den be excavated under the direction of a qualified biologist.

BIO-49 Prior to construction, all personnel will be provide with an environmental training program that will be conducted by a qualified biologist. At a minimum, the program will include a review of the species of concern, a review of avoidance and minimization measures, a point of contact should a species be observed, harmed, or inadvertently killed on-site.

BIO-50 Project personnel shall exercise caution when driving within the Biological Study Area. Travel by vehicles will be prohibited outside of the project limits, unless authorized by the project biologist.

BIO-51 Maintenance and construction excavations greater than two feet deep will be covered (e.g., with plywood, sturdy plastic, steel plates, or equivalent), filled in at the end of each working day, or have earthen escape ramps no greater than 200 feet apart to prevent trapping of American badger or terrestrial species.

Compensatory Mitigation

No compensatory mitigation is proposed.

Cumulative Effects

As previously discussed, a list of projects within the vicinity of Santa Margarita was requested from Caltrans and the County Planning and Building Department to evaluate potential cumulative impacts of the proposed project. Of the known projects anticipated to occur within the vicinity of Santa Margarita, the Santa Margarita Quarry Expansion project has potential to result in impacts to American badger.

However, the proposed project is not expected to result in, or contribute to, cumulative impacts to this species because suitable avoidance and minimization measures have been incorporated into the project and all of the necessary permits and authorizations will be obtained prior to project implementation. Similarly, the Santa Margarita Quarry Expansion project proponent is required to comply with CEQA and must obtain all the necessary regulatory permits and authorizations prior to project approval and implementation, which would ensure that all potential impacts are avoided, minimized, and/or mitigated in a manner that is acceptable to the pursuant resource agencies. Therefore, the proposed project is not likely to result in, or contribute to, cumulative impacts to American badger.

DISCUSSION OF SENSITIVE BAT SPECIES

Bat species have been addressed as a group because they have similar habitat requirements, potential project related impacts, and avoidance and minimization measures.

The pallid bat (*Antrozous pallidus*) is a SSC. It prefers rocky outcrops, cliffs, and crevices with access to open habitats for foraging. Pallid bat day roosts are in caves, crevices, mines, and occasionally in hollow trees and buildings, while night roosts may be in more open sites, such as porches and buildings.

The Townsend's big-eared bat (*Corynorhinus townsendii*) is a State Candidate species. It forages over a wide variety of grassland, wetland, shrub, and wooded habitats, although it is most common in mesic forests. This species roosts in small colonies of 12–200 individuals, typically in caves and rock crevices. Bridges, buildings, and tree cavities are also occasionally used for roosting. Nursery roosts are most often located in caves, tunnels, mines, and buildings (Zeiner et. al 1990).

The western mastiff bat (*Eumops perotis californicus*) is a SSC. It is the largest native bat species in the United States. Suitable habitat for this species consists of extensive open areas with rock outcrops, cliffs, buildings, or trees for roosting. It occurs in a variety of open habitats including woodlands, scrub, annual grassland, chaparral, and urban areas (Zeiner et. al 1990). Nursery roosts are typically in tight rock crevices or crevices in buildings (Zeiner et. al 1990). This species commonly shares roosts with other bat species.

The western red bat (*Lasiurus blossevillii*) is a SSC. It is locally common in some areas of California, occurring from Shasta County to the Mexican border, west of the Sierra Nevada range and the deserts. The winter range includes western lowlands and coastal regions south of San Francisco Bay. Roosting habitat includes forests and woodlands. The western red bat roosts primarily in trees, often in edge habitats adjacent to streams, fields, or urban areas (Zeiner, et al. 1990).

The Yuma myotis (*Myotis yumanensis*) is a SSC and is locally common in some areas of California. This species occurs widely in western North America, from central Mexico to British Columbia, Montana, and New Mexico. This species is found in open forests and woodlands near water sources such as rivers, irrigation canals, ponds, streams, or creeks. The Yuma myotis is known to roost in caves, abandoned buildings, and other structures.

Survey Results

No bats were observed during the reconnaissance surveys within the BSA. However, bat guano was observed under the existing bridge by County staff in 2011 (Hutchinson 2012). The existing bridge and the riparian and oak woodland areas provide suitable roosting habitat for bats.

Project Impacts

No bats or other indicators of bat activity was observed beneath the existing bridge during the reconnaissance surveys. However, if bats are present under the bridge or in the surrounding trees seasonally while roosting, then they may be directly impacted by construction activities. Direct effects could result in injury or mortality of bats and harassment could alter roosting behaviors. Other direct impacts to bats could result from noise and other disturbances associated with construction, which could also alter roosting behaviors. Implementation of pre-activity surveys and use of exclusionary netting will reduce these potential adverse effects to roosting bat species. No impacts to roosting bats are anticipated with implementation of avoidance and minimization measures included below.

Avoidance and Minimization Efforts

The following measures are recommended to avoid and minimize potential impacts to roosting bat species.

BIO-52 Pre-construction surveys (at least two day and two dusk surveys) will be conducted by a qualified biologist to identify potential roosting bat activity. The biologist(s) conducting the pre-construction surveys will also identify the nature of the bat utilization of the area (i.e., no roosting, night roost, day

roost, maternity roost). If no bats or other sign of bat are observed, no further measures are required.

BIO-53 If roosting bat activity is observed during the pre-construction survey process, the following measures will be implemented:

a. A focused survey to determine if bats are roosting at the bridge will be conducted by a qualified biologist before commencement of construction activities and before installation of exclusionary netting or other exclusionary devices.

b. If bridge and/or tree removal activities are proposed during the typical maternal bat roosting season (February 15 to August 31), an additional bat roost survey will be conducted by a qualified biologist at least two weeks prior to these activities to determine the presence/absence of roosting bats. If maternal bat roosts are observed, the roost(s) will not be disturbed or obstructed until a qualified biologist determines that the roost(s) is no longer being used.

c. The roost(s) will be designated as an Environmentally Sensitive Area and all construction activities shall be avoided within 100 feet (30 meters) until the end of the maternity roosting season (end of August) and the qualified biologist confirms that the roost(s) are no longer occupied. No roost exclusion will be conducted if maternity roosts are detected.

d. If special-status bat species are identified, then the San Luis Obispo County Public Works Department will coordinate with the California Department of Fish and Wildlife to determine an appropriate course of action to exclude the bats from roosting under the bridge and avoid potential project related impacts.

e. If the qualified biologist determines that bat exclusion is necessary (for bats that do not have special status) and feasible, a qualified biologist will be contracted to implement passive exclusion (e.g., netting) in roosting areas. Suitable exclusionary materials may include netting, Visqueen poly sheeting, foam filling (for crevices), or other mechanical devices.

BIO-54 If it is determined that a substantial impact to pallid bat, Townsend's big-eared bat, western mastiff bat, western red bat, Yuma myotis, or a maternity roost will occur, then the San Luis Obispo County Public Works Department will compensate for the impact through the development and implementation of a mitigation plan in coordination with the California Department of Fish and Wildlife.

Compensatory Mitigation

No compensatory mitigation is proposed.

Cumulative Effects

As discussed in the preceeding sections, a list of projects within the vicinity of Santa Margarita was requested from Caltrans and the County Planning and Building Department to evaluate potential cumulative impacts of the proposed project. Of the known projects anticipated to occur within the vicinity of Santa Margarita, the Santa Margarita Quarry Expansion project has potential to result in impacts to sensitive bat species.

However, the proposed project is not expected to result in, or contribute to, cumulative impacts to these species because suitable avoidance and minimization measures have been incorporated into the project and all of the necessary permits and authorizations will be obtained prior to project implementation. Similarly, the Santa Margarita Quarry Expansion project proponent is required to comply with CEQA and must obtain all the necessary regulatory permits and authorizations prior to project approval and implementation, which would ensure that all potential impacts are avoided, minimized, and/or mitigated in a manner that is acceptable to the pursuant resource agencies. Therefore, the proposed project is not likely to result in, or contribute to, cumulative impacts to sensitive bat species.

5 - Conclusions and Regulatory Determinations

FEDERAL ENDANGERED SPECIES ACT CONSULTATION SUMMARY

An official species list from the USFWS was received on July 17, 2014. The official USFWS list is included as Appendix C. The USFWS (Julie Vanderwier) discussed the project with the County (Katie Drexhage) via e-mail on May 15, 2014, and protocol-level surveys for LBV were not deemed necessary. The County also coordinated with Kristina Barry of USFWS regarding CRLF the week of May 19, 2014. Table 9 provides a summary of the effects determinations for federally listed species and critical habitats in the vicinity of the project site. A formal Biological Assessment will be prepared to consult with the USFWS and NOAA Fisheries.

There are three possible determinations for Section 7 findings for federally listed (and proposed) species and their designated critical habitats pertinent to implementation of the project, and they include the following:

- ***No Effect***. There will be no impacts, positive or negative, to federally listed species and their designated critical habitat. Generally, this means that no species or designated critical habitats will be subject to project-related actions and potential environmental consequences associated with those actions. With a finding of no effect, concurrence from the USFWS is not required.
- ***May Affect, But Not Likely to Adversely Affect.*** All potential project-related effects are beneficial, insignificant, or discountable. Beneficial effects have contemporaneous positive effects without any adverse effects to the species or its designated critical habitat. Insignificant effects are related to the size of the impact and include those effects that are undetectable, not measurable, or that cannot be evaluated. Discountable effects are those that are extremely unlikely to occur.
- ***May Affect, and is Likely to Adversely Affect.*** Listed species and/or their designated critical habitats are likely to be exposed to project-related actions and/or the environmental consequences of the actions and are likely to respond in a negative or detrimental manner.

Table 9: Federal Endangered Species Act Effects Determination.

Common Name	Scientific Name	Legal Status	Rationale
Habitats			
South-Central California Coast steelhead DPS	*Oncorhynchus mykiss irideus*	Critical Habitat	May affect, likely to adversely affect
Plants			
Morro manzanita	*Arctostaphylos morroensis*	Federally Threatened	No effect

Common Name	Scientific Name	Legal Status	Rationale
marsh sandwort	*Arenaria paludicola*	Federally Endangered	No effect
California jewelflower	*Caulanthus californicus*	Federally Endangered	No effect
purple amole	*Chlorogalum purpureum* var. *purpureum*	Federally Threatened	No effect
San Luis Obispo fountain thistle	*Cirsium fontinale* var. *obispoense*	Federally Endangered	No effect
La Graciosa thistle	*Cirsium scariosum var. loncholepis*	Federally Endangered	No effect
spreading navarretia	*Navarretia fossalis*	Federally Threatened	No effect
Invertebrates			
Kern primrose Spinx moth	*Eupsoerpinus euterpe*	Federally Threatened	No effect
vernal pool fairy shrimp	*Branchinecta lynchi*	Federally Threatened	No effect
Fish			
South-Central California Coast steelhead DPS	*Oncorhynchus mykiss irideus*	Federally Threatened	May affect, likely to adversely affect
Amphibians			
California red-legged frog	*Rana draytonii*	Federally Threatened	May affect, likely to adversely affect
California tiger salamander	*Ambystoma californiense*	Federally Threatened	No effect
western spadefoot	*Spea hammondii*	Federally Petitioned	No effect
Reptiles			
blunt-nosed leopard lizard	*Gambelia silus*	Federally Endangered	No effect
Birds			
California clapper rail	*Rallus longirostris obsoletus*	Federally Endangered	No effect
California condor	*Gymnogyps californianus*	Federally Endangered	No effect
least Bell's vireo	*Vireo bellii pusillus*	Federally Endangered	May affect, not likely to adversely affect
southwestern willow flycatcher	*Empidonax traillii extimus*	Federally Endangered	May affect, not likely to adversely affect
western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	Federally Threatened	No effect
Mammals			
giant kangaroo rat	*Dipodomys ingens*	Federally Endangered	No effect
San Joaquin kit fox	*Vulpes macrotis mutica*	Federally Endangered	No effect

CALIFORNIA ENDANGERED SPECIES ACT CONSULTATION SUMMARY

CDFW has not been consulted at this time in regards to compliance with the CESA. It is expected that a Streambed Alteration Agreement is needed for the project; however, no project related impacts to state listed species are anticipated. Therefore, no additional permits (e.g., Incidental Take Permit) are needed.

INVASIVE SPECIES

The NISC was established by Executive Order 13112 to ensure that federal programs and activities to prevent and control invasive species are coordinated, effective, and efficient. The NISC is co-chaired by the Secretaries of Commerce, Agriculture, and the Interior, and NISC members are the Secretaries and Administrators of 13 federal departments and agencies that provide high-level coordination on invasive species. Executive Order 13112 defines invasive species as "…an alien (or non-native) species whose introduction does, or is likely to cause economic or environmental harm or harm to human health." Avoidance and minimization measures have been included in this NES to control the spread of invasive, exotic plants to the maximum extent practicable, described in Chapter 4.

WETLANDS AND OTHER WATERS COORDINATION SUMMARY

Executive Order 11990 was issued on May 24, 1977, directing federal agencies to avoid, to the extent possible, the long- and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative.

Although no federal wetlands were identified within the BSA, the County will obtain a permit pursuant to Section 404 of the CWA, from the USACE, to address impacts to jurisdictional waters of the United States. Compensatory mitigation for unavoidable impacts to jurisdictional features are described in Appendix E.

NESTING BIRDS: MBTA AND CFG CODE SECTIONS 3503 AND 3503.5

A number of bird species have the potential to nest within the BSA and are protected during their nesting periods under the provisions of the federal MBTA and CFG Code Sections 3503 and 3503.5. Measures are included in this NES to avoid and minimize potential project related impacts to nesting birds and these efforts will ensure compliance with the MBTA and CFG Code Sections 3503 and 3503.5. Avoidance and minimization efforts for nesting birds are discussed in Chapter 4.

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6 - References

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Appendix A – Project Plans (65% Completion)

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Dist	COUNTY	PROJECT	SHEET No.	TOTAL SHEETS
5	SLO	SANTA MARGARITA CREEK BRIDGE ON EL CAMINO REAL	5	69

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Garrett McLaughlin — No. C67687 — CIVIL — STATE OF CALIFORNIA

THE COUNTY OF SAN LUIS OBISPO OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

QUINCY ENGINEERING
11017 COBBLEROCK DRIVE, SUITE 100
RANCHO CORDOVA, CA 95670
P: 916.368.9181

65% SUBMITTAL

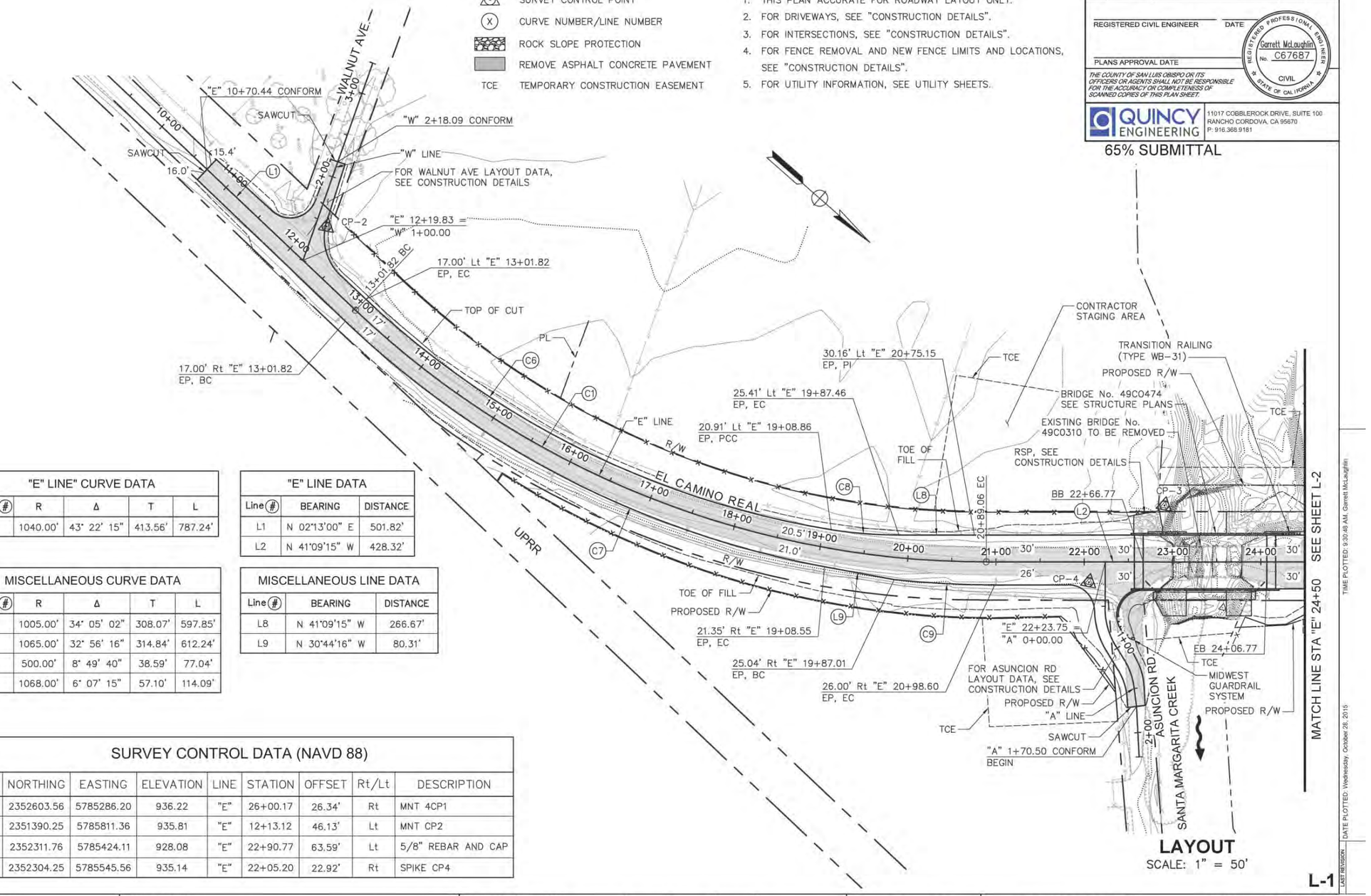
CALCULATED-DESIGNED BY: E. MCPHERSON
CHECKED BY: G. MCLAUGHLIN
REVISED BY / DATE REVISED
CONSULTANT PROJECT MANAGER: MARK RENO
SAN LUIS OBISPO – DEPARTMENT OF PUBLIC WORKS
SANTA MARGARITA CREEK BRIDGE REPLACEMENT

LEGEND:

- SURVEY CONTROL POINT
- (X) CURVE NUMBER/LINE NUMBER
- ROCK SLOPE PROTECTION
- REMOVE ASPHALT CONCRETE PAVEMENT
- TCE TEMPORARY CONSTRUCTION EASEMENT

NOTE:

1. THIS PLAN ACCURATE FOR ROADWAY LAYOUT ONLY.
2. FOR DRIVEWAYS, SEE "CONSTRUCTION DETAILS".
3. FOR INTERSECTIONS, SEE "CONSTRUCTION DETAILS".
4. FOR FENCE REMOVAL AND NEW FENCE LIMITS AND LOCATIONS, SEE "CONSTRUCTION DETAILS".
5. FOR UTILITY INFORMATION, SEE UTILITY SHEETS.



"E" LINE" CURVE DATA				
Curve (#)	R	Δ	T	L
C1	1040.00'	43° 22' 15"	413.56'	787.24'

"E" LINE DATA		
Line (#)	BEARING	DISTANCE
L1	N 02°13'00" E	501.82'
L2	N 41°09'15" W	428.32'

MISCELLANEOUS CURVE DATA				
Curve (#)	R	Δ	T	L
C6	1005.00'	34° 05' 02"	308.07'	597.85'
C7	1065.00'	32° 56' 16"	314.84'	612.24'
C8	500.00'	8° 49' 40"	38.59'	77.04'
C9	1068.00'	6° 07' 15"	57.10'	114.09'

MISCELLANEOUS LINE DATA		
Line (#)	BEARING	DISTANCE
L8	N 41°09'15" W	266.67'
L9	N 30°44'16" W	80.31'

SURVEY CONTROL DATA (NAVD 88)

No.	NORTHING	EASTING	ELEVATION	LINE	STATION	OFFSET	Rt/Lt	DESCRIPTION
CP-1	2352603.56	5785286.20	936.22	"E"	26+00.17	26.34'	Rt	MNT 4CP1
CP-2	2351390.25	5785811.36	935.81	"E"	12+13.12	46.13'	Lt	MNT CP2
CP-3	2352311.76	5785424.11	928.08	"E"	22+90.77	63.59'	Lt	5/8" REBAR AND CAP
CP-4	2352304.25	5785545.56	935.14	"E"	22+05.20	22.92'	Rt	SPIKE CP4

BORDER LAST REVISED 7/2/2010
USERNAME Garrettm
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UNIT UNIT
PROJECT NUMBER & PHASE S13201 – 65% SUBMITTAL
LAST REVISION
DATE PLOTTED: Wednesday, October 28, 2015
TIME PLOTTED: 9:30:48 AM, Garrett McLaughlin

NOTE:

1. THIS PLAN ACCURATE FOR ROADWAY LAYOUT ONLY.
2. FOR NOTES AND LEGEND, SEE "LAYOUT" L-1.

Dist	COUNTY	PROJECT	SHEET No.	TOTAL SHEETS
5	SLO	SANTA MARGARITA CREEK BRIDGE ON EL CAMINO REAL	6	69

REGISTERED CIVIL ENGINEER DATE

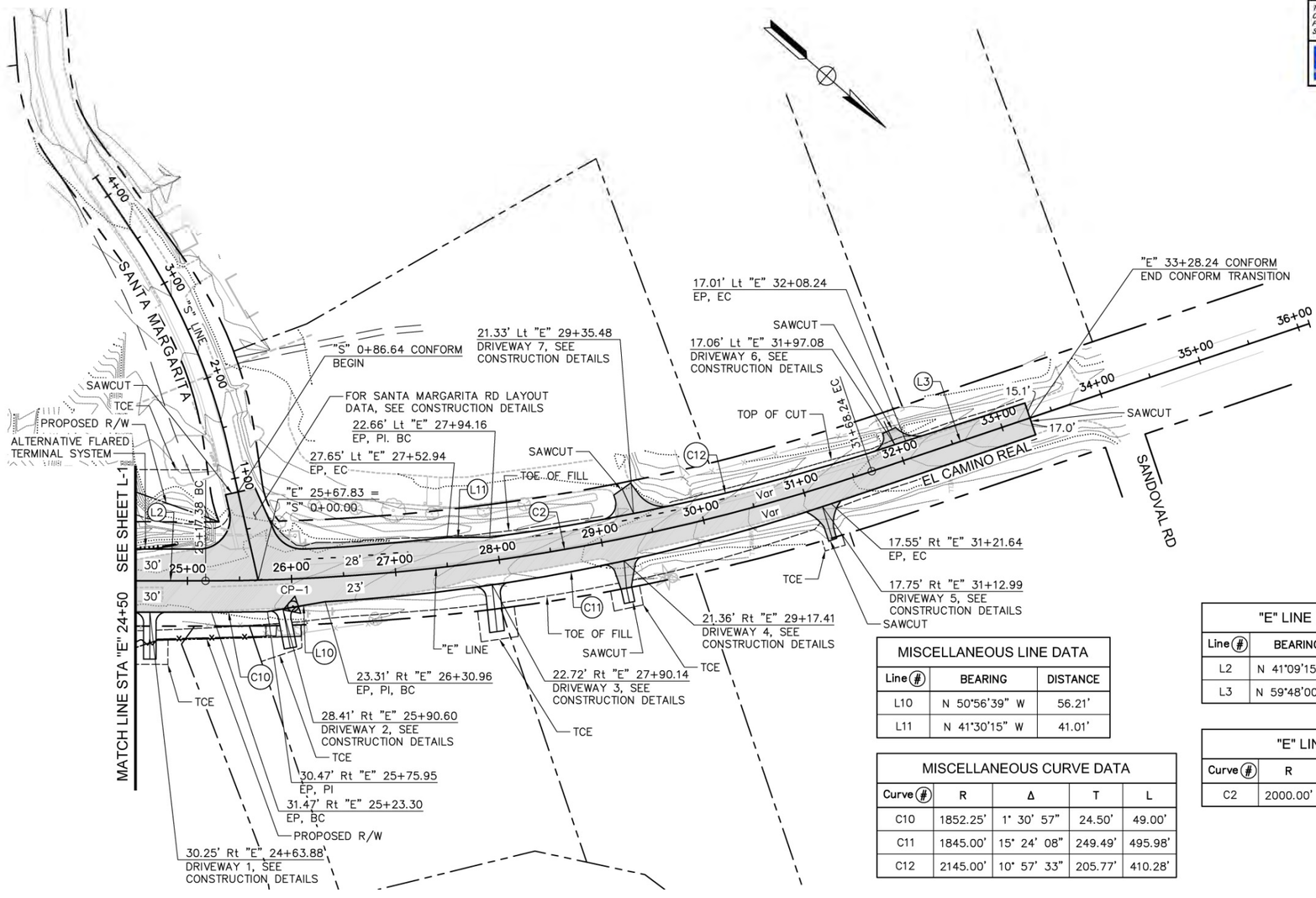
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Garrett McLaughlin — No. C67687 — CIVIL — STATE OF CALIFORNIA

THE COUNTY OF SAN LUIS OBISPO OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

QUINCY ENGINEERING
11017 COBBLEROCK DRIVE, SUITE 100
RANCHO CORDOVA, CA 95670
P: 916.368.9181

65% SUBMITTAL



MISCELLANEOUS LINE DATA		
Line (#)	BEARING	DISTANCE
L10	N 50°56'39" W	56.21'
L11	N 41°30'15" W	41.01'

"E" LINE DATA		
Line (#)	BEARING	DISTANCE
L2	N 41°09'15" W	428.32'
L3	N 59°48'00" W	442.88'

MISCELLANEOUS CURVE DATA				
Curve (#)	R	Δ	T	L
C10	1852.25'	1° 30' 57"	24.50'	49.00'
C11	1845.00'	15° 24' 08"	249.49'	495.98'
C12	2145.00'	10° 57' 33"	205.77'	410.28'

"E" LINE" CURVE DATA				
Curve (#)	R	Δ	T	L
C2	2000.00'	18° 38' 45"	328.33'	650.86'

LAYOUT
SCALE: 1" = 50'

L-2

SAN LUIS OBISPO – DEPARTMENT OF PUBLIC WORKS
SANTA MARGARITA CREEK BRIDGE REPLACEMENT
CONSULTANT PROJECT MANAGER: MARK RENO
CALCULATED-DESIGNED BY: E. MCPHERSON
CHECKED BY: G. MCLAUGHLIN
REVISED BY
DATE REVISED
TIME PLOTTED: 9:31:17 AM, Garrett McLaughlin
DATE PLOTTED: Wednesday, October 28, 2015
LAST REVISION

BORDER LAST REVISED 7/2/2010
USERNAME Garrettm
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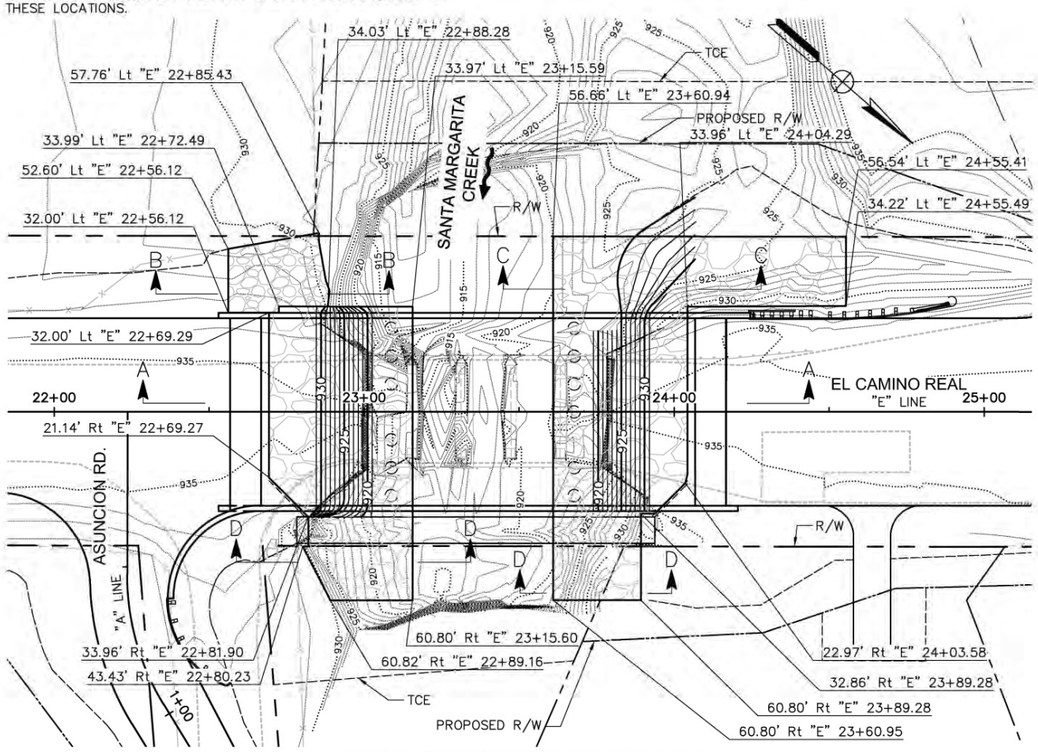
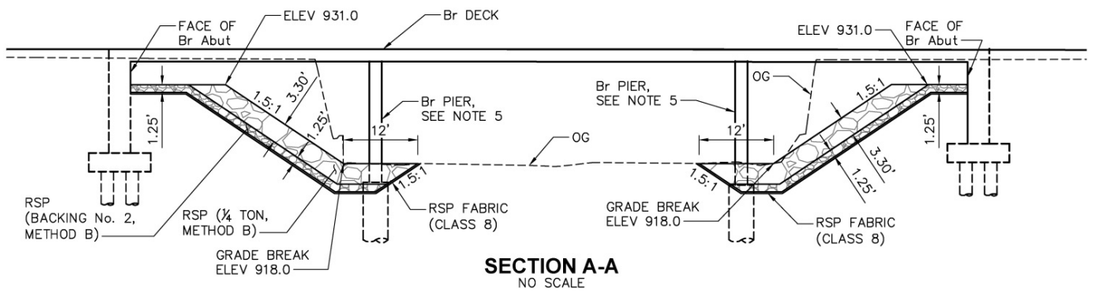
UNIT UNIT
PROJECT NUMBER & PHASE S13201 – 65% SUBMITTAL

NOTES:

1. THIS PLAN ACCURATE FOR CONTOUR GRADING WORK AND RSP PLACEMENT ONLY.
2. PLACE RSP AT SPECIFIED LOCATIONS. ENGINEER TO DETERMINE EXCAVATION LIMITS AND IF RSP IS NOT NEEDED.
3. PLACE RSP FABRIC AROUND ALL SIDES OF RSP INTERFACE TO NATIVE SOIL.
4. RSP IS NOT TO BE PLACED ON SLOPES STEEPER THAN 1:1.
5. CONTRACTOR SHALL PROTECT BRIDGE PIER COLUMNS AND SHAFTS. PLACE RSP BY BY HAND WITHIN THESE LOCATIONS.



RSP & CONTROUR GRADING PLAN
Scale 1"=20'



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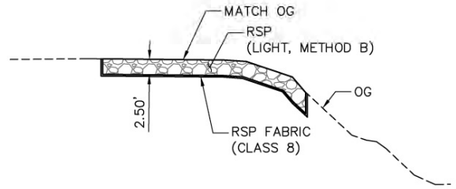

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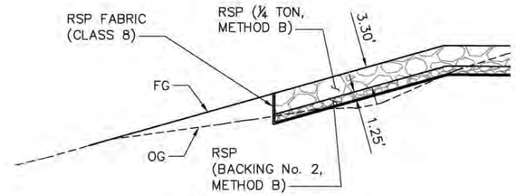

SECTION C-C
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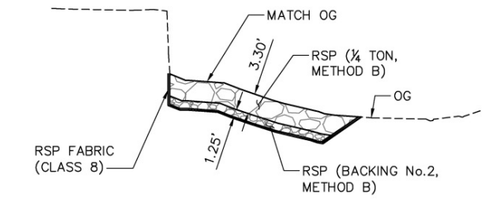


SECTION D-D
NO SCALE

CONSTRUCTION DETAILS
SCALE: AS SHOWN
C-9

Dist	COUNTY	PROJECT	SHEET No.	TOTAL SHEETS
5	SLO	SANTA MARGARITA CREEK BRIDGE ON EL CAMINO REAL	18	69

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Garrett McLaughlin — No. C67687 — CIVIL — STATE OF CALIFORNIA

THE COUNTY OF SAN LUIS OBISPO OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

QUINCY ENGINEERING
11017 COBBLEROCK DRIVE, SUITE 100
RANCHO CORDOVA, CA 95670
P: 916.368.9181

65% SUBMITTAL

SAN LUIS OBISPO – DEPARTMENT OF PUBLIC WORKS
SANTA MARGARITA CREEK BRIDGE REPLACEMENT
CONSULTANT PROJECT MANAGER: MARK RENO
CALCULATED-DESIGNED BY: E. MCPHERSON
CHECKED BY: G. MCLAUGHLIN
REVISED BY
DATE REVISED
TIME PLOTTED: 9:36:26 AM, Garrett McLaughlin
DATE PLOTTED: Wednesday, October 28, 2015
LAST REVISION

BORDER LAST REVISED 7/2/2010 | USERNAME Garrettm | DWG FILE S:\Client\SLO-County\S13-201-El Camino Real\CAD\roadway\AutoCad Civil 3D 2015\S13201rga009.dwg | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT UNIT | PROJECT NUMBER & PHASE S13201 – 65% SUBMITTAL

NOTES:

1. THIS PLAN ACCURATE FOR TEMPORARY STREAM DIVERSION ONLY.
2. EXACT LENGTH AND LOCATION OF PIPES TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
3. EXACT LOCATION OF DIVERSION DAMS TO BE APPROVED IN THE FIELD BY THE ENGINEER.
4. CONTRACTOR TO SUBMIT STREAM DIVERSION PLAN THAT SHALL BE APPROVED BY THE ENGINEER.
5. STREAM DIVERSION SHALL BE REMOVED DURING WINTER SUSPENSION.
6. DIVERSION SYSTEM SHALL BE PROTECTED DURING ALL BRIDGE CONSTRUCTION AND REMOVAL.

TEMPORARY DIVERSION PIPES		
MIN PIPE DIAMETER	QUANTITY OF PIPES	DESIGN FLOW
18 INCHES	2	XX CFS

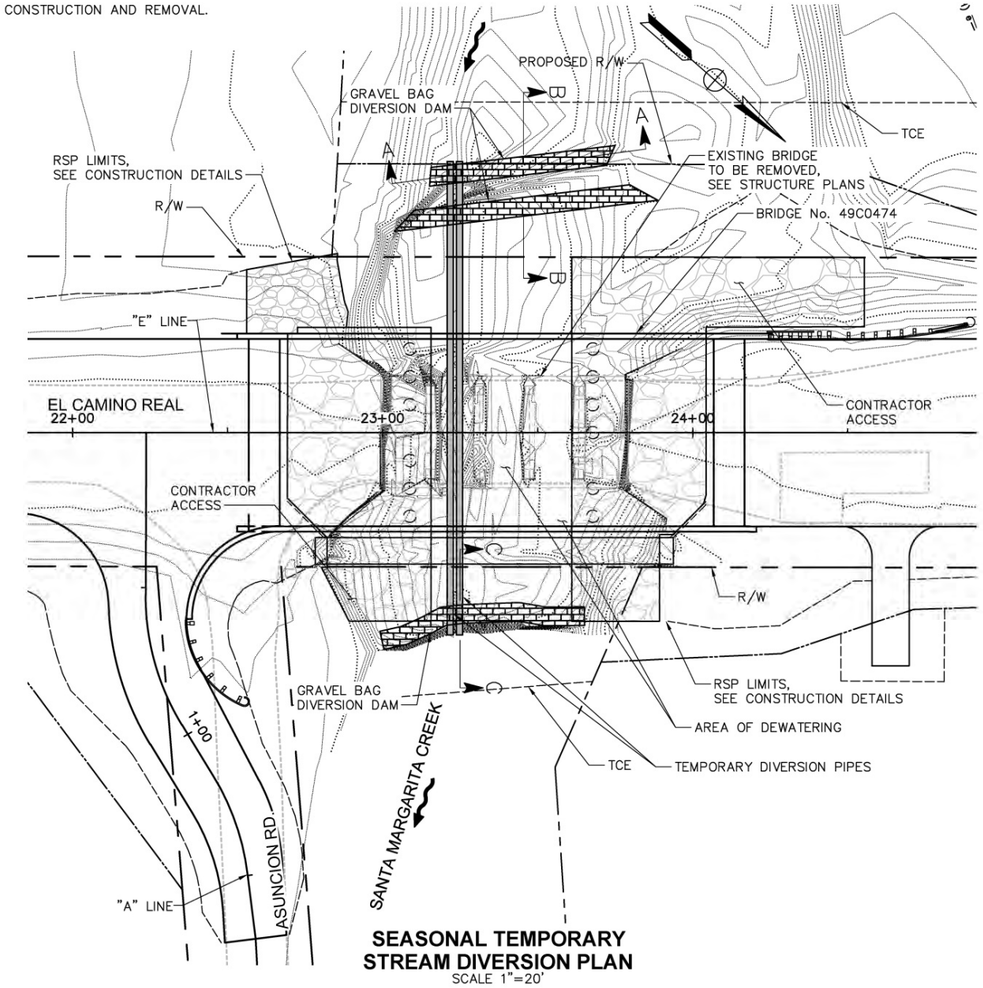
LEGEND:

INDICATES 48" CIDH PILE

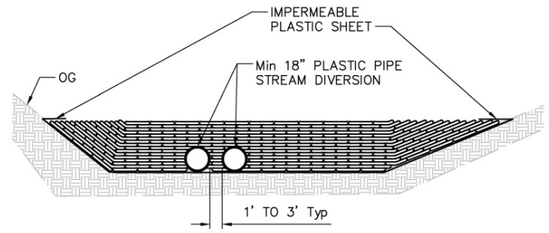
INDICATES EXISTING FOOTINGS TO BE REMOVED

Dist	COUNTY	PROJECT	SHEET No.	TOTAL SHEETS
5	SLO	SANTA MARGARITA CREEK BRIDGE ON EL CAMINO REAL	22	69

65% SUBMITTAL



SEASONAL TEMPORARY STREAM DIVERSION PLAN
SCALE 1"=20'



SECTION A-A
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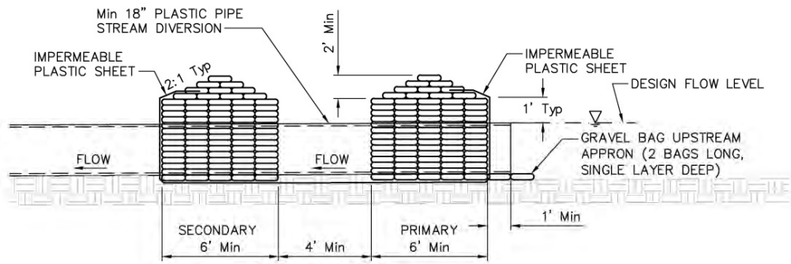

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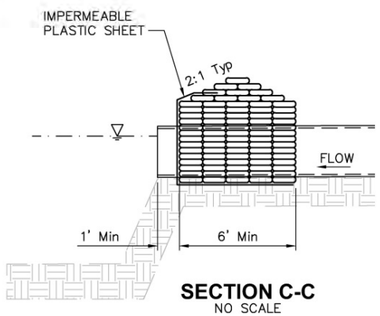

SECTION C-C
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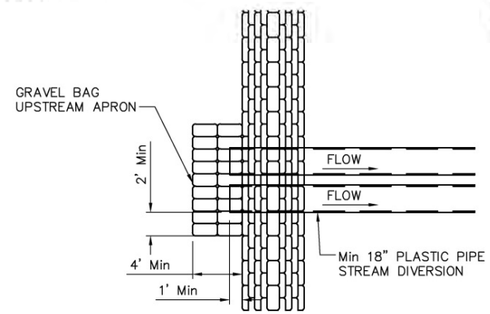


PRIMARY UPSTREAM GRAVEL BAG DIVERSION DAM END DETAIL
NO SCALE

SEASONAL TEMPORARY STREAM DIVERSION
SCALE: AS SHOWN

THIS SHEET IS FOR INFORMATION PURPOSES ONLY

TSD-1

SAN LUIS OBISPO – DEPARTMENT OF PUBLIC WORKS
SANTA MARGARITA CREEK BRIDGE REPLACEMENT
CONSULTANT PROJECT MANAGER: MARK RENO
CALCULATED-DESIGNED BY: E. MCPHERSON
CHECKED BY: G. MCLAUGHLIN
REVISED BY
DATE REVISED
LAST REVISION
DATE PLOTTED: Wednesday, October 28, 2015
TIME PLOTTED: 9:38:26 AM, Garrett McLaughlin

BORDER LAST REVISED 7/2/2010
USERNAME Garrettm
DWG FILE S:\Client\SLO-County\S13-201-El Camino Real\CAD\roadway\AutoCad Civil 3D 2015\S13201rgc001.dwg
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT UNIT
PROJECT NUMBER & PHASE S13201 – 65% SUBMITTAL

NOTE:

1. THIS PLANS ACCURATE FOR EROSION CONTROL WORK ONLY.
2. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT THE CAL TRANS DISTRICT 4 OFFICE.
3. LOCATION OF FIBER ROLLS ARE SCHEMATIC. ACTUAL PLACEMENT LOCATIONS OF FIBER ROLLS SHALL BE IN ACCORDANCE WITH SPECIAL PROVISIONS.

LEGEND:

- FIBER ROLL
- xx TSF — TEMPORARY SILT FENCE
- TFESA — TEMPORARY FENCE (TYPE ESA)
- EROSION CONTROL (HYDROSEED)

Dist	COUNTY	PROJECT	SHEET No.	TOTAL SHEETS
5	SLO	SANTA MARGARITA CREEK BRIDGE ON EL CAMINO REAL	23	69

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Garrett McLaughlin — No. C67687 — CIVIL — STATE OF CALIFORNIA

THE COUNTY OF SAN LUIS OBISPO OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

QUINCY ENGINEERING
11017 COBBLERCK DRIVE, SUITE 100
RANCHO CORDOVA, CA 95670
P: 916.368.9181

65% SUBMITTAL

58.62' Lt "E" 10+72.71
BEGIN TEMPORARY FENCE (TYPE ESA)
BEGIN TEMPORARY SILT FENCE
BEGIN FIBER ROLL

100.01' Lt "E" 11+54.67
END TEMPORARY FENCE (TYPE ESA)
END TEMPORARY SILT FENCE
END FIBER ROLL

101.11' Lt "E" 11+92.88
BEGIN TEMPORARY FENCE (TYPE ESA)
BEGIN TEMPORARY SILT FENCE
BEGIN FIBER ROLL

"W" LINE

58.69' Lt "E" 11+72.50 PI

59.78' Lt "E" 12+10.72 PI

27.56' Rt "E" 10+70.19
BEGIN TEMPORARY FENCE (TYPE ESA)
BEGIN TEMPORARY SILT FENCE
BEGIN FIBER ROLL

WALNUT AVE.

TOP OF CUT

"E" LINE

46.76' Rt "E" 15+38.84 PI

55.83' Rt "E" 15+38.56 PI

UPRR

PROPOSED R/W

EL CAMINO REAL

CONTRACTOR STAGING AREA

209.77' Lt "E" 20+46.37 PI

TCE

56.76' Lt "E" 20+26.78 PI

TOE OF FILL

57.63' Lt "E" 22+84.66
END TEMPORARY FENCE (TYPE ESA)
END TEMPORARY SILT FENCE
END FIBER ROLL

SANTA MARGARITA CREEK

85.22' Lt "E" 23+60.23
BEGIN TEMPORARY FENCE (TYPE ESA)
BEGIN TEMPORARY SILT FENCE
BEGIN FIBER ROLL

172.68' Lt "E" 22+78.78 PI

61.85' Rt "E" 20+86.24 PI

TOE OF FILL

TCE

CONTRACTOR STAGING AREA

183.68' Rt "E" 20+94.51 PI

"A" LINE

180.12' Rt "E" 22+38.00
END TEMPORARY FENCE (TYPE ESA)
END TEMPORARY SILT FENCE
END FIBER ROLL

ASUNCION RD

72.04' Rt "E" 23+70.33
BEGIN TEMPORARY FENCE (TYPE ESA)
BEGIN TEMPORARY SILT FENCE
BEGIN FIBER ROLL

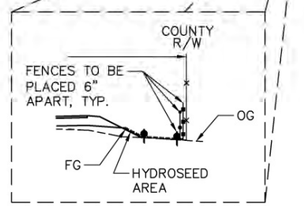
43.20' Rt "E" 22+67.25
END TEMPORARY FENCE (TYPE ESA)
EMD TEMPORARY SILT FENCE
END FIBER ROLL

161.54' Rt "E" 22+74.61
BEGIN TEMPORARY FENCE (TYPE ESA)
BEGIN TEMPORARY SILT FENCE
BEGIN FIBER ROLL

MATCH LINE STA "E" 24+50 SEE SHEET EC-2

HYDROSEED SEED MIX	
BOTANICAL NAME (COMMON NAME)	POUNDS PURE LIVE SEED PER ACRE (SLOPE MEASUREMENT)
BROMUS CARINATUS (CUCAMONGA BROME)	20
TRIFOLIUM TRIDENTATUM (TOMCAT CLOVER)	4
VULPIA MICROSTACHYS (SMALL FESCUE)	8
TOTAL	32

EROSION CONTROL - HYDROSEED				
ITEM	SEQUENCE	MATERIAL		NOTES
		DESCRIPTION	TYPE	
HYDROSEED	STEP 1	SEED	SEED MIX	32 LB/ACRE
	STEP 2	FIBER	WOOD	1200 LB/ACRE
	STEP 3	TACKIFIER	PSYLLIUM	150 LB/ACRE



EROSION CONTROL PLAN
SCALE: 1" = 50'

EC-1

CONSULTANT PROJECT MANAGER: MARK RENO
CALCULATED-DESIGNED BY: E. MCPHERSON
CHECKED BY: X
REVISED BY
DATE REVISED

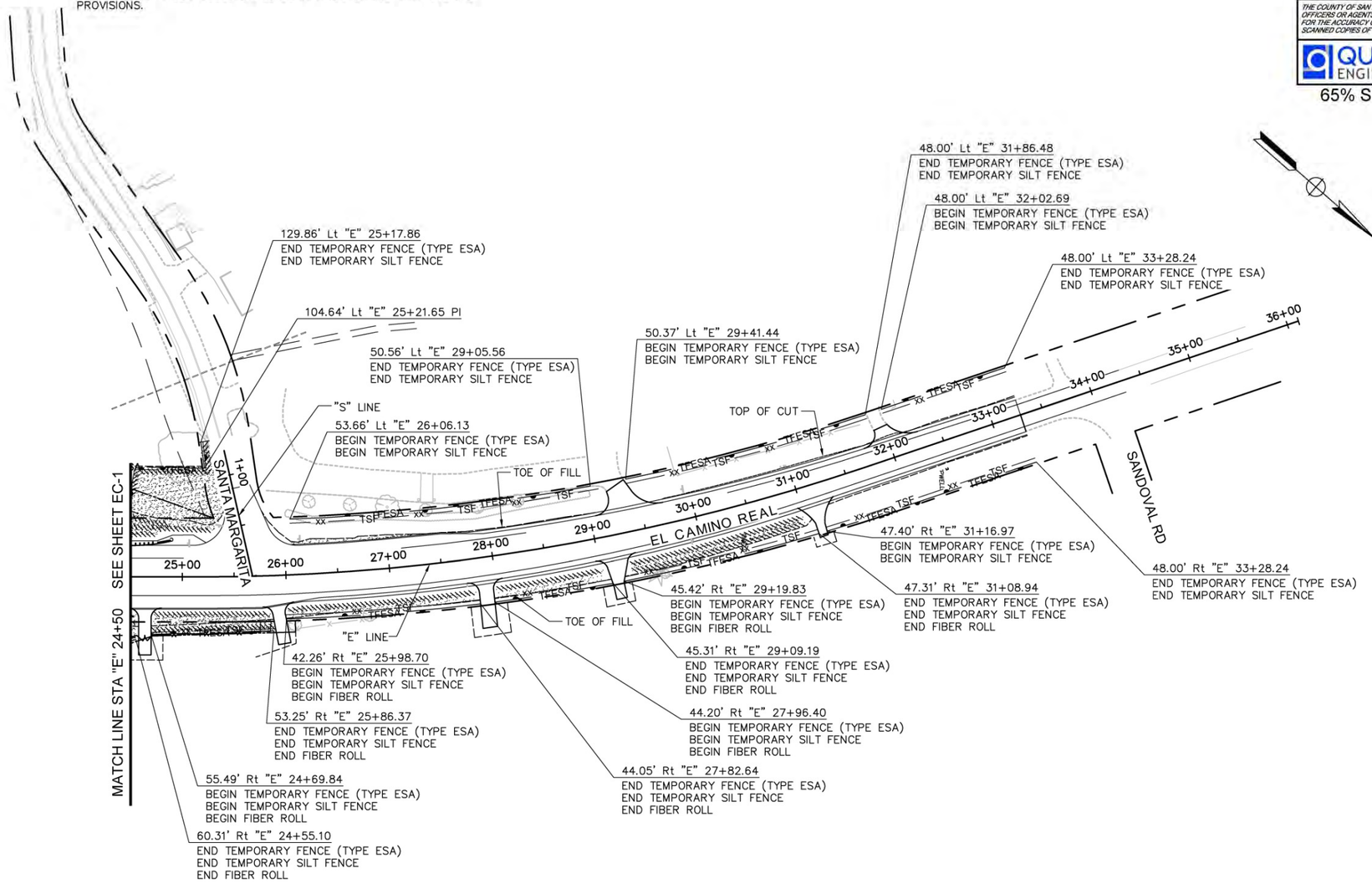
SAN LUIS OBISPO – DEPARTMENT OF PUBLIC WORKS
SANTA MARGARITA CREEK BRIDGE REPLACEMENT

TIME PLOTTED: 9:39:01 AM, Garrett McLaughlin
DATE PLOTTED: Wednesday, October 28, 2015
LAST REVISION

BORDER LAST REVISED 7/2/2010
USERNAME Garrettm
DWG FILE S:\Client\SLO-County\S13-201-El Camino Real\CAD\roadway\AutoCad Civil 3D 2015\S13201rgh001.dwg
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT UNIT
PROJECT NUMBER & PHASE S13201 – 65% SUBMITTAL

NOTE:

1. THIS PLANS ACCURATE FOR EROSION CONTROL WORK ONLY.
2. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT THE CAL TRANS DISTRICT 4 OFFICE.
3. LOCATION OF FIBER ROLLS ARE SCHEMATIC. ACTUAL PLACEMENT LOCATIONS OF FIBER ROLLS SHALL BE IN ACCORDANCE WITH SPECIAL PROVISIONS.



Dist	COUNTY	PROJECT	SHEET No.	TOTAL SHEETS
5	SLO	SANTA MARGARITA CREEK BRIDGE ON EL CAMINO REAL	24	69

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Garrett McLaughlin — No. C67687 — CIVIL — STATE OF CALIFORNIA

THE COUNTY OF SAN LUIS OBISPO OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

QUINCY ENGINEERING
11017 COBBLERCK DRIVE, SUITE 100
RANCHO CORDOVA, CA 95670
P: 916.368.9181

65% SUBMITTAL

REVISED BY | DATE REVISED
E. MCPHERSON | X
CALCULATED-DESIGNED BY | CHECKED BY

CONSULTANT PROJECT MANAGER
MARK RENO

SAN LUIS OBISPO – DEPARTMENT OF PUBLIC WORKS
SANTA MARGARITA CREEK BRIDGE REPLACEMENT

TIME PLOTTED: 9:39:28 AM, Garrett McLaughlin
DATE PLOTTED: Wednesday, October 28, 2015
LAST REVISION

EROSION CONTROL PLAN

SCALE: 1" = 50'

EC-2

BORDER LAST REVISED 7/2/2010

USERNAME Garrettm
DWG FILE S:\Client\SLO-County\S13-201-El Camino Real\CAD\roadway\AutoCad Civil 3D 2015\S13201rgh002.dwg

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT UNIT

PROJECT NUMBER & PHASE S13201 – 65% SUBMITTAL

Appendix B – Photo Documentation

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PHOTO 1:

View north of the existing El Camino Real Bridge. Note perennial pool in foreground.

Photo taken on March 26, 2015.

PHOTO 2:

View southwest of El Camino Real Bridge and the Nacimiento waterline span.

Photo taken on March 26, 2015.

PHOTO 3:

View northwest of existing El Camino Real Bridge. Note parallel utility bridge spanning across Santa Margarita Creek.

Photo taken on March 26, 2015.

PHOTO 4:

View west looking up stream from El Camino Real Bridge.

Photo taken on March 26, 2015.

PHOTO 5:

View north of El Camino Real Bridge. Note foothill pine that falls within the proposed bridge footprint.

Photo taken on March 26, 2015.

PHOTO 6:

View north along El Camino Real of Santa Margarita Bridge. Note utility bridge and large valley oak tree to the east of the bridge.

Photo taken on March 26, 2015.

PHOTO 7:

View south of existing El Camino Real Bridge. Note large amount of concrete to be removed from the Santa Margarita Creek Channel.

Photo taken on March 26, 2015.

PHOTO 8:

View west of the underlying sandstone geology on the east bank adjacent to the BSA downstream of the bridge.

Photo taken on March 26, 2015.

PHOTO 9:

View north of existing El Camino Real Bridge from the intersection at Asuncion Road.

Photo taken on March 26, 2015.

PHOTO 10:

View east of Santa Margarita Road and El Camino Road intersections.

Photo taken on March 26, 2015.

PHOTO 11:

View north of El Camino Road intersections. Note riparian corridor boarded by valley oaks.

Photo taken on March 26, 2015.

PHOTO 12:

View south along El Camino Road. Note agricultural field to the west.

Photo taken on March 26, 2015.

PHOTO 13:

View north along El Camino Road. Note agricultural field to the west.

Photo taken on March 26, 2015.

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Appendix C –USFWS, NMFS Official Species Lists

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ventura Fish And Wildlife Office
2493 Portola Road, Suite B
Ventura, CA 93003-7726
Phone: (805) 644-1766 Fax: (805) 644-3958

In Reply Refer To: October 31, 2017
Consultation Code: 08EVEN00-2014-SLI-0387
Event Code: 08EVEN00-2018-E-00104
Project Name: El Camino Real Bridge Replacement -- created on July 17, 2014 01:39

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

To Whom It May Concern:

The enclosed list identifies species listed as threatened and endangered, species proposed for listing as threatened or endangered, designated and proposed critical habitat, and species that are candidates for listing that may occur within the boundary of the area you have indicated using the U.S. Fish and Wildlife Service's (Service) Information Planning and Conservation System (IPaC). The species list fulfills the requirements under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the species list should be verified after 90 days. We recommend that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists following the same process you used to receive the enclosed list. Please include the Consultation Tracking Number in the header of this letter with any correspondence about the species list.

Due to staff shortages and excessive workload, we are unable to provide an official list more specific to your area. Numerous other sources of information are available for you to narrow the list to the habitats and conditions of the site in which you are interested. For example, we recommend conducting a biological site assessment or surveys for plants and animals that could help refine the list.

If a Federal agency is involved in the project, that agency has the responsibility to review its proposed activities and determine whether any listed species may be affected. If the project is a major construction project*, the Federal agency has the responsibility to prepare a biological assessment to make a determination of the effects of the action on the listed species or critical habitat. If the Federal agency determines that a listed species or critical habitat is likely to be adversely affected, it should request, in writing through our office, formal consultation pursuant to section 7 of the Act. Informal consultation may be used to exchange information and resolve conflicts with respect to threatened or endangered species or their critical habitat prior to a

written request for formal consultation. During this review process, the Federal agency may engage in planning efforts but may not make any irreversible commitment of resources. Such a commitment could constitute a violation of section 7(d) of the Act.

Federal agencies are required to confer with the Service, pursuant to section 7(a)(4) of the Act, when an agency action is likely to jeopardize the continued existence of any proposed species or result in the destruction or adverse modification of proposed critical habitat (50 CFR 402.10(a)). A request for formal conference must be in writing and should include the same information that would be provided for a request for formal consultation. Conferences can also include discussions between the Service and the Federal agency to identify and resolve potential conflicts between an action and proposed species or proposed critical habitat early in the decision-making process. The Service recommends ways to minimize or avoid adverse effects of the action. These recommendations are advisory because the jeopardy prohibition of section 7(a)(2) of the Act does not apply until the species is listed or the proposed critical habitat is designated. The conference process fulfills the need to inform Federal agencies of possible steps that an agency might take at an early stage to adjust its actions to avoid jeopardizing a proposed species.

When a proposed species or proposed critical habitat may be affected by an action, the lead Federal agency may elect to enter into formal conference with the Service even if the action is not likely to jeopardize or result in the destruction or adverse modification of proposed critical habitat. If the proposed species is listed or the proposed critical habitat is designated after completion of the conference, the Federal agency may ask the Service, in writing, to confirm the conference as a formal consultation. If the Service reviews the proposed action and finds that no significant changes in the action as planned or in the information used during the conference have occurred, the Service will confirm the conference as a formal consultation on the project and no further section 7 consultation will be necessary. Use of the formal conference process in this manner can prevent delays in the event the proposed species is listed or the proposed critical habitat is designated during project development or implementation.

Candidate species are those species presently under review by the Service for consideration for Federal listing. Candidate species should be considered in the planning process because they may become listed or proposed for listing prior to project completion. Preparation of a biological assessment, as described in section 7(c) of the Act, is not required for candidate species. If early evaluation of your project indicates that it is likely to affect a candidate species, you may wish to request technical assistance from this office.

Only listed species receive protection under the Act. However, sensitive species should be considered in the planning process in the event they become listed or proposed for listing prior to project completion. We recommend that you review information in the California Department of Fish and Wildlife's Natural Diversity Data Base. You can contact the California Department of Fish and Wildlife at (916) 324-3812 for information on other sensitive species that may occur in this area.

[*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.]

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

Ventura Fish And Wildlife Office
2493 Portola Road, Suite B
Ventura, CA 93003-7726
(805) 644-1766

Project Summary

Consultation Code: 08EVEN00-2014-SLI-0387

Event Code: 08EVEN00-2018-E-00104

Project Name: El Camino Real Bridge Replacement -- created on July 17, 2014 01:39

Project Type: TRANSPORTATION

Project Description: Replace El Camino Real bridge over Santa Margarita Creek

Project Location:

Approximate location of the project can be viewed in Google Maps:
https://www.google.com/maps/place/35.42828565N120.60543489011403W

Counties: San Luis Obispo, CA

Endangered Species Act Species

There is a total of 15 threatened, endangered, or candidate species on this species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

Mammals

NAME	STATUS
Giant Kangaroo Rat *Dipodomys ingens* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6051	Endangered
San Joaquin Kit Fox *Vulpes macrotis mutica* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2873	Endangered

Birds

NAME	STATUS
California Clapper Rail *Rallus longirostris obsoletus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4240	Endangered
California Condor *Gymnogyps californianus* Population: U.S.A. only, except where listed as an experimental population There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8193	Endangered
Least Bell's Vireo *Vireo bellii pusillus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5945	Endangered
Southwestern Willow Flycatcher *Empidonax traillii extimus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered

Reptiles

NAME	STATUS
Blunt-nosed Leopard Lizard *Gambelia silus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/625	Endangered

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander *Ambystoma californiense* Population: U.S.A. (Central CA DPS) There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2076	Threatened

Insects

NAME	STATUS
Kern Primrose Sphinx Moth *Euproserpinus euterpe* There is **proposed** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/7881	Threatened

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp *Branchinecta lynchi* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened

Flowering Plants

NAME	STATUS
California Jewelflower *Caulanthus californicus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4599	Endangered
Marsh Sandwort *Arenaria paludicola* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2229	Endangered
Purple Amole *Chlorogalum purpureum* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5531	Threatened
Spreading Navarretia *Navarretia fossalis* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1334	Threatened

Critical habitats

There are 5 critical habitats wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Steelhead *Oncorhynchus (=Salmo) mykiss* Population: Northern California DPS For information on why this critical habitat appears for your project, even though Steelhead is not on the list of potentially affected species at this location, contact the local field office. https://ecos.fws.gov/ecp/species/1007#crithab	Final
Steelhead *Oncorhynchus (=Salmo) mykiss* Population: South-Central California Coast DPS For information on why this critical habitat appears for your project, even though Steelhead is not on the list of potentially affected species at this location, contact the local field office. https://ecos.fws.gov/ecp/species/1007#crithab	Final
Steelhead *Oncorhynchus (=Salmo) mykiss* Population: Central California Coast DPS For information on why this critical habitat appears for your project, even though Steelhead is not on the list of potentially affected species at this location, contact the local field office. https://ecos.fws.gov/ecp/species/1007#crithab	Final
Steelhead *Oncorhynchus (=Salmo) mykiss*	Final

Population: California Central Valley DPS
For information on why this critical habitat appears for your project, even though Steelhead is not on the list of potentially affected species at this location, contact the local field office.
https://ecos.fws.gov/ecp/species/1007#crithab

Steelhead *Oncorhynchus (=Salmo) mykiss* Final
Population: Southern California DPS
For information on why this critical habitat appears for your project, even though Steelhead is not on the list of potentially affected species at this location, contact the local field office.
https://ecos.fws.gov/ecp/species/1007#crithab

From: Jon Claxton
To: nmfswcrca.specieslist@noaa.gov
Cc: Michaela M. K. Robbins (michaela.robbins@dot.ca.gov); Kristie Scarazzo; MARK L. RENO (markr@quincyeng.com)
Subject: Request Species List for El Camino Real Bridge Replacement Project
Date: Friday, December 01, 2017 4:06:00 PM
Attachments: image003.png

On behalf of California Department of Transportation District 5 and the County of San Luis Obispo Public Works Department, I hereby am requesting Official Species List for the El Camino Real Bridge Replacement Project located approximately 2.6 miles north of Santa Margarita in San Luis Obispo County, California. Through numerous bridge inspections, the California Department of Transportation (Caltrans) determined that the bridge remains eligible for replacement due to its scour condition and advanced age. The County proposes to replace the existing structure (Bridge No. 49C0310) which spans Santa Margarita Creek. Caltrans is the federal lead agency for the project with its FHWA-delegated authority.

Michael Robbins, Caltrans District 5 biologist, will be the agency contact for this project. His contact information is:

Michaela Robbins
District Biologist
Caltrans District 5
50 Higuera Street, San Luis Obispo, CA 93401
805.549.3422

Kristie Scarazzo, County of San Luis Obispo Department of Public Works is the local agency representative. Her contact information is:

Kristie Scarazzo
County of San Luis Obispo
County Government Center, Room 207
San Luis Obispo, CA 93408

Quad Name **Santa Margarita**
Quad Number **35120-D5**

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) - **X**
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 - X
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 -

Jon Claxton
Natural Resources Team Leader

SWCA Environmental Consultants
1422 Monterey Street, Suite C-200
San Luis Obispo, CA, 93401
P 805.543.7095 x6813. | F 805.543.2367 | M 805.268.6898

SWCA
ENVIRONMENTAL CONSULTANTS

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Appendix D – List of Species Observed

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Plant Species Observed

Scientific Name	Common Name	Native	Species Status/Notes*
Nomenclature follows The Jepson Online Interchange for California Floristics http://ucjeps.berkeley.edu/interchange/			
ANGIOSPERMS			
Adoxaceae	***Moschatel Family***		
Sambucus nigra ssp. *caerulea*	blue elderberry	Yes	FAC
Anacardiaceae	***Sumac Family***		
Toxicodendron diversilobum	poison oak	Yes	FAC
Apiaceae	***Carrot Family***		
Conium maculatum	poison hemlock	No	Cal-IPC Moderate, FACW
Foeniculum vulgare	sweet fennel	No	Cal-IPC High
Apocynaceae	***Dogbane Family***		
Nerium oleander	oleander	No	Ornamental
Vinca major	periwinkle	No	Cal-IPC Moderate
Araceae			
Lemna sp.	duckweed	Yes	OBL
Asteraceae	***Sunflower Family***		
Ambrosia psilostachya	western ragweed	Yes	FACU
Artemisia douglasiana	mugwort	Yes	FAC
Artemisia californica	California sagebrush	Yes	
Baccharis glutinosa	marsh baccharis	Yes	FACW
Baccharis pilularis	coyote brush	Yes	
Baccharis salicifolia	mulefat	Yes	FAC
Carduus pycnocephalus	Italian thistle	No	Cal-IPC Moderate
Centaurea melitensis	tocalote	No	Cal-IPC Moderate
Centaurea solstitialis	yellow star-thistle	No	Cal-IPC High
Cirsium vulgare	bull thistle	No	Cal-IPC Moderate, FACU
Hypochaeris glabra	smooth cat's ear	No	Cal-IPC Limited
Matricaria discoidea	pineapple weed	No	Invasive Weed, FACU
Pseudognaphalium biolettii	two-color rabbit-tobacco	Yes	
Senecio vulgare	common groundsel	No	FACU
Silybum marianum	milk thistle	No	Cal-IPC Limited
Sonchus asper	sow thistle	No	FAC

Scientific Name	Common Name	Native	Species Status/Notes*
Brassicaceae	***Mustard Family***		
Brassica nigra	black mustard	No	Cal-IPC Moderate
Hirschfeldia incana	wild mustard	No	Cal-IPC Moderate
Boraginaceae	***Forget-me-not Family***		
Amsinckia intermedia	Common fiddleneck	Yes	
Plagiobothrys canescens	valley popcorn flower	Yes	
Caprifoliaceae	***Honeysuckle Family***		
Symphoricarpos mollis	snowberry	Yes	FACU
Cornaceae	***Dogwood Family***		
Cornus sericea	American dogwood	Yes	FACW
Convolvulaceae	***Morning Glory Family***		
Calystegia macrostegia	morning glory	Yes	
Convolvulus arvensis	bindweed	No	
Cyperaceae	***Sedge Family***		
Eleocharis macrostachya	spikerush	Yes	(FACW/OBL)
Cyperus eragrostis	tall flatsedge	Yes	FACW
Equisetaceae	***Horsetail Family***		
Equisetum hyemale	scouringrush horsetail	Yes	FACW
Euphorbiaceae	***Spurge Family***		
Croton setigerus	dove weed	Yes	
Fabaceae	***Pea Family***		
Acmispon americanus	American lotus	Yes	
Hoita macrostachya	leather root	Yes	OBL
Lupinus bicolor	miniature lupine	Yes	
Lupinus nanus	sky lupine	Yes	
Medicago polymorpha	bur clover	No	Cal-IPC Limited, FACU
Melilotus albus	sweetclover	No	
Melilotus indicus	sourclover	No	FACU
Vicia villosa	purple vetch	No	
Fagaceae	***Oak Family***		
Quercus agrifolia	coast live oak	Yes	
Quercus lobata	valley oak	Yes	FACU
Quercus suber	cork oak	No	Ornamental
Geraniaceae	***Geranium Family***		
Erodium botrys	storkbill filaree	No	FACU

Scientific Name	Common Name	Native	Species Status/Notes*
Erodium cicutarium	red-stemmed filaree	No	Cal-IPC Limited
Erodium moschatum	whitestem filaree	No	
Geranium dissectum	cutleaf geranium	No	Cal-IPC Limited
Geranium molle	woodland geranium	No	
Geranium rotundifolium	roundleaf geranium	No	
Juglandaceae	***Walnut Family***		
Juglans californica	Southern California black walnut	Yes	FAC
Juncaceae	***Rush Family***		
Juncus balticus	Baltic rush	Yes	FACW
Lamiaceae	***Mint Family***		
Mentha spicata	spearmint	No	OBL
Malvaceae	***Mallow Family***		
Lavatera olbia	tree lavatera	No	
Malva parviflora	cheeseweed	No	
Myrsinaceae	***Myrsine Family***		
Anagallis arvensis	scarlet pimpernel	Yes	
Onagraceae	***Evening Primrose Family***		
Clarkia unguiculata	elegant clarkia	Yes	
Epilobium ciliatum	fringed willowherb	Yes	FACW
Platanaceae	***Sycamore Family***		
Platanus racemosa	western sycamore	Yes	FAC
Plantaginaceae	***Snapdragon Family***		
Plantago lanceolata	English plantain	No	Cal-IPC Limited, FAC
Plantago major	common plantain	No	FAC
Veronica americana	American speedwell	Yes	OBL
Veronica catenata	chain speedwell	No	
Poaceae	***Grass Family***		
Avena barbarta	slender wild oat	No	Cal-IPC Moderate
Bromus carinatus	California brome	Yes	
Bromus diandrus	rip-gut brome	No	Cal-IPC Moderate
Bromus madritensis ssp. *rubens*	red brome	No	Cal-IPC High, UPL
Cynodon dactylon	Bermuda grass	No	Cal-IPC Moderate, FACU
Digitaria sanguinalis	crabgrass	No	FACU

Scientific Name	Common Name	Native	Species Status/Notes*
Elymus condensatus	Giant wild rye	Yes	FACU
Festuca myuros	rattail fescue	No	Cal-IPC Moderate, FACU
Festuca perennis	Italian rye grass	No	Cal-IPC Moderate, FAC
Hordeum murinim	foxtail barley	No	Cal-IPC Moderate
Polypogon monspeliensis	rabbitsfoot grass	No	Cal-IPC Limited, FACW
Stipa miliacea	smilo grass	No	Cal-IPC Limited
Stipa pulchra	purple needlegrass	Yes	
Triticum aestivum	common wheat	No	Agricultural Crop
Polygonaceae	***Buckwheat Family***		
Persicaria sp.	smartweed		OBL
Rumex crispus	curly dock	No	Cal-IPC Limited, FAC
Phrymaceae	***Lopseed Family***		
Mimulus aurantiacus	sticky monkeyflower	Yes	
Ranunculaceae	***Buttercup Family***		
Clematis ligusticifolia	virgin's bower	Yes	FAC
Rhamnaceae	***Buckthorn Family***		
Frangula californica	coffeeberry	Yes	
Rosaceae	***Rose Family***		
Heteromeles arbutifolia	toyon	Yes	
Rosa californica	California rose	Yes	FAC
Rubus armeniacus	Himalayan blackberry	No	Cal-IPC High, FACU
Rubus ulmifolius	elmleaf blackberry	No	
Rubus ursinus	California blackberry	Yes	FACU
Rubiaceae	***Cleaver Family***		
Galium aparine	climbing bedstraw	Yes	
Salicaceae	***Willow Family***		
Populus fremontii	Fremont cottonwood	Yes	FAC
Salix laevigata	red willow	Yes	FACW
Salix lasiolepis	arroyo willow	Yes	FACW
Salix × sepulcralis	weeping willow	No	Ornamental
Sapindaceae	***Maple Family***		
Acer negundo	boxelder	Yes	FACW

Scientific Name	Common Name	Native	Species Status/Notes*
Typhaceae	***Cattail Family***		
Typha sp.	cattail		OBL
Urticaceae	***Stinging Nettle Family***		
Urtica dioica	stinging nettle	Yes	FAC
Verbenaceae	***Verbena Family***		
Verbena lasiostachys	western vervain	Yes	FAC
GYMNIOSPERMS			
Cupressaceae	***Redwood Family***		
Sequoia sempervirens	coast redwood	No	Ornamental
Pinaceae	***Pine Family***		
Pinus pinea	Italian stone pine	No	Ornamental
Pinus sabiniana	gray pine	Yes	

* OBL (Obligate Wetland) = almost always occur in wetlands
FACW (Facultative Wetland) = usually occur in wetlands, but may occur in non-wetlands
FAC (Facultative) = occur in wetlands and non-wetlands
FACU (Facultative Upland) = usually occur in non-wetlands, but may occur in wetlands
UPL (Obligate Upland) = almost never occur in wetlands

Wildlife Species Observed

Scientific Name	Common Name	Species Status/Notes
Birds		
Agelaius phoeniceus	red-winged Blackbird	MBTA
Aphelocoma californica	western Scrub-Jay	MBTA
Baeolophus inornatus	oak Titmouse	MBTA
Buteo lineatus	wed-shouldered Hawk	MBTA
Calypte anna	Anna's Hummingbird	MBTA
Cathartes aura	turkey vulture	MBTA
Catharus guttatus	hermit thrush	MBTA
Corvus brachyrhynchos	American crow	MBTA
Empidonax difficilis	Pacific-slope flycatcher	MBTA
Ixoreus naevius	varied thrush	MBTA
Melanerpes formicivorus	acorn woodpecker	MBTA
Melozone crissalis	California towhee	MBTA
Oreothlypis celata	orange-crowned warbler	MBTA
Passer domesticus	house sparrow	
Picoides nuttallii	Nuttall's woodpecker	MBTA
Sayornis nigricans	black phoebe	MBTA
Setophaga coronata	yellow-rumped warbler	MBTA
Sitta carolinensis	white-breasted nuthatch	MBTA
Spinus tristis	American goldfinch	MBTA
Stelgidopteryx serripennis	northern rough-winged swallow	MBTA
Sturnus vulgaris	European starling	
Tyrannus verticalis	western kingbird	MBTA
Zenaida macroura	mourning dove	MBTA
Zonotrichia leucophrys	white-crowned sparrow	MBTA
Mimus polyglottos	northern mockingbird	MBTA
Mergus merganser	common merganser	MBTA
Mammals		
Castor canadensis	North American beaver	
Otospermophilus beecheyi	California ground squirrel	
Procyon lotor	American raccoon	
Sciurus griseus	western gray squirrel	
Thomomys bottae	Botta's pocket gopher	
Reptile		
Sceloporus occidentalis	western fence lizard	

Appendix E – Wetland and Waters Assessment

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EL CAMINO REAL AT SANTA MARGARITA CREEK BRIDGE REPLACEMENT PROJECT

WETLANDS AND WATERS ASSESSMENT

Federal Project No. BRLS-5949(131)
Bridge No. 49C0310

February 2018

PREPARED FOR

County of San Luis Obispo
Department of Public Works
County Government Center, Room 207
San Luis Obispo, CA 93408

PREPARED BY

SWCA Environmental Consultants
1422 Monterey Street, Suite C200
San Luis Obispo, CA 93401

El Camino Real at Santa Margarita Creek Bridge Replacement Project
Wetlands and Waters Assessment
Santa Margarita, San Luis Obispo County, California

Prepared for

County of San Luis Obispo
Department of Public Works
County Government Center, Room 207
San Luis Obispo, CA 93408
Attn: Kristie Scarazzo, Environmental Resource Specialist
(805) 781-4263

Prepared by

Travis Belt, Senior Biologist

Jon Claxton, Project Manager

SWCA Environmental Consultants
1422 Monterey Street, Suite C200
San Luis Obispo, CA 93401
(805) 543-7095
www.swca.com

SWCA Project No. 25457

February 13, 2018

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Appendices

1 INTRODUCTION

1.1 Scope

This Wetland and Waters Assessment summarizes the existing hydrology, soil, and vegetative conditions for the El Camino Real at Santa Margarita Creek Bridge Replacement Project (project) located in Santa Margarita, San Luis Obispo County, California (refer to Figures 1 and 2). SWCA Environmental Consultants (SWCA) prepared this report at the request of the County of San Luis Obispo Public Works Department (County) and the California Department of Transportation (Caltrans) and it is intended for use by the County, Caltrans, and other pertinent regulatory agencies. The area studied for this report includes the location of the existing bridge, the proposed location for the new bridge, proposed staging areas, roadside drainages, and other areas within the immediate vicinity of proposed project activities.

This report identifies potential wetlands and waters of the United States, as defined by the U.S. Army Corps of Engineers (USACE), and potential waters of California, as defined by the state, including the California Department of Fish and Wildlife (CDFW), State Water Resources Control Board (SWRCB), and Regional Water Quality Control Board (RWQCB). Findings reported herein are based on information gathered during the field investigation conducted and the investigator's understanding of the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (USACE 2008b), and federal, state, and local guidelines for identification of jurisdictional waters. This report is subject to review by the affected agencies and should be submitted to USACE, CDFW, and RWQCB for verification.

1.2 Site Location and Description

The project site is located on El Camino Real approximately 2.6 miles north of Santa Margarita, and approximately two miles southeast of the Atascadero city limits, in San Luis Obispo County, California (refer to Figures 1 and 2). The existing El Camino Real bridge spans Santa Margarita Creek between the intersections of El Camino Real with Santa Margarita Road to the north and Asuncion Road to the south. Santa Margarita Creek runs from south to north up to its confluence with the Salinas River about 1.3 miles north of the project site. The creek is flanked by agricultural fields to the southwest and southeast, rural residential property to the northeast, and county roads to the northwest and southeast (refer to Figure 2).

1.3 Project Description

The County proposes to replace the El Camino Real Bridge (Existing Bridge Number 49C0310) over Santa Margarita Creek utilizing local and Federal Highway Administration (FHWA) Highway Bridge Program (HBP) funding. In 2012, Caltrans inspected the bridge and determined it to be scour critical and structurally deficient. The structurally deficient classification has since been removed; however, the scour condition makes replacement necessary. In order to qualify for federal funding, all aspects of this bridge replacement project must be in accordance with FHWA guidelines for the HBP process and meet current Caltrans bridge design standards. The project goals include: 1) replace the deteriorating, hydraulically inadequate bridge; 2) accommodate a consistent 55-miles-per-hour posted speed corridor; 3) maintain traffic during construction; and 4) incorporate a center turn lane for improved safety. In order to minimize the need for additional right of way acquisition, the proposed design will follow the existing alignment as much as possible while implementing some design improvements according to the project design criteria which are discussed in the *El Camino Real at Santa Margarita Creek Bridge Replacement Project Draft Project Report* (Quincy 2014).

Figure 1. Project Vicinity Map

Figure 2. Project Location Map

Demolition of the existing bridge and construction of the new bridge will be conducted in and above Santa Margarita Creek. Due to the potential for the bridge demolition and construction activities to affect potentially jurisdictional areas, these activities are discussed in more detail below. Plan view maps of the proposed bridge and existing site conditions are provided in Appendices A and B.

1.3.1 Proposed Bridge Structure

Caltrans concurred with the proposed bridge structure type, which will be designed to the American Association of State Highway Transportation Official's (AASHTO) Load and Resistance Factor Design (LRFD) Bridge Design Specifications, 6th Edition with California Amendments (2014). The new bridge will be a cast-in-place, pre-stressed, concrete slab bridge, that will be approximately 140 feet long with three unequal spans (42 feet, 58.5 feet, and 39.5 feet, respectively), and a structure depth of two feet to clear the hydraulic opening of the creek.

The proposed 140-foot-long replacement bridge will be longer than the existing bridge and have an improved clear deck width of 60.5 feet between railings to accommodate three 12-foot vehicle lanes plus eight-foot shoulders and additional width for staging. Due to creek bank scour potential, the proposed bridge design includes cast-in-drilled-hole (CIDH) piles under each column extension. Given the exposed sandstone substrate at the site, driven piles cannot be used. Installation of the CIDH piles will require contractor access and the use of falsework in the creek channel.

Four sets of columns and piles will support the structure. Two sets will be located at the abutments just above the creek banks and two sets will be located at the base of each abutment in the creek channel. The sets in the channel will consist of seven two-foot diameter columns spaced approximately eight to 10 feet apart. Each column will be supported by a four-foot CIDH pile.

1.3.1.1 CONSTRUCTION ACCESS AND CREEK DIVERSION

The contractor will need access into the creek to install the temporary falsework, install the CIDH piles, and remove the existing bridge. Access may be achieved by temporarily diverting water through or around the work area and constructing a temporary access route into the creek channel. Water diversion may be accomplished with a combination of cofferdams, pipes, sand bags, and temporary fill. If a temporary culvert or diversion dam is placed in the creek, it will be sized and placed appropriately to allow fish passage throughout construction. Considering the sandstone substrates at the site, driven sheet piling with impact hammers for cofferdam construction will not be used. Alternatively, isolated standing pools may be dewatered by pumping, if determined to be feasible and appropriate. Any stranded aquatic species will be captured and relocated to nearby areas of suitable habitats and in accordance with any applicable regulations and permit conditions.

The temporary access route will be located on the north bank. Access from the southern bank will be avoided to maintain the existing natural rock formations. The temporary access route will traverse the creek bank, enter the channel, and extend under the proposed and existing bridges. The contractor may temporarily place clean crushed rock into the creek in order to create the temporary path, construct the CIDH piles, and support the falsework. All temporary fill associated with the creek diversion and the access path will be removed after construction is complete. This project is anticipated to span over two construction seasons and the contractor will be required to remove the diversion system and any other temporary fill placed into the creek channel at the completion of first construction season. These materials will be reinstalled again (temporarily) at the beginning of the second construction season.

1.3.1.2 ROCK SLOPE PROTECTION

Abutments located within the channel will be subject to creek flows, and soils are likely to erode from around the abutments over time. Ungrouted rock slope protection (RSP) will be placed around the

abutments to curtail the erosion process. Based on the current project goals and plans, RSP would be placed immediately below the bridge abutments and extend beyond the bridge rails on the northeast, northwest, and southeast banks (refer to Appendices A and B). The RSP would range from 2.5 to 4.5 feet thick of quarter-ton material.

1.3.1.3 BRIDGE DEMOLITION

Crews will partially construct the new bridge prior to removing the existing bridge. This will allow the new roadway alignment to align closer to the existing alignment and will help to accommodate traffic during construction because once the sides of the new bridge are constructed they will be able to support traffic. The contractors will remove the old bridge from between the two newly installed bridge sides. Temporary shoring along the roadway near the new bridge abutments is anticipated to separate traffic from construction excavation. Once traffic has been shifted onto the new alignment and bridge sides, the existing bridge will be removed. Complete removal of the old bridge will require the contractors to maintain the established creek access and installed water diversion system until the old bridge foundations are removed and the construction phase of the project is completed.

2 REGULATORY BACKGROUND

2.1 U.S. Army Corps of Engineers

The USACE regulates discharges of dredged or fill material into waters of the United States. These waters include wetland and non-wetland water bodies that meet specific criteria. USACE regulatory jurisdiction, pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 United States Code [U.S.C.] 403), regulates almost all work in, over, and under waters listed as "navigable waters of the U.S." that results in a discharge of dredged or fill material within USACE regulatory jurisdiction, pursuant to Section 404 of the Clean Water Act. Under Section 404, the USACE regulates traditional navigable waters, wetlands adjacent to traditional navigable waters, relatively permanent non-navigable tributaries that have a continuous flow at least seasonally (typically three months), and wetlands that directly abut relatively permanent tributaries. The USACE will determine jurisdiction over waters that are non-navigable tributaries, that are not relatively permanent and wetlands adjacent to non-navigable tributaries, and that are not relatively permanent only after making a significant nexus finding.

33 Code of Federal Regulations (CFR) 328.3 defines waters of the United States as:

(1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce;
(2) All interstate waters including interstate wetlands;
(3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams) the use, degradation or destruction of which could affect interstate or foreign commerce;
(4) All impoundments of waters otherwise defined as waters of the United States under the definition; and,
(5) Tributaries of waters defined in paragraphs (a) (1)–(4) of this section
(6) The territorial seas;
(7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a)(1)–(6) of this section.

USACE jurisdiction over nontidal waters of the United States extends laterally to the OHWM or beyond the OHWM to the limit of any adjacent wetlands, if present (33 CFR 328.4). The OHWM is defined in 33 CFR 328.3 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 soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas."*

Jurisdiction over nontidal waters typically extends upstream to the point where the OHWM is no longer perceptible. USACE jurisdiction over tidal waters of the United States extends to the line on the shore reached by the highest high water.

The preamble to USACE regulations (Preamble §328.3, Definitions) states that the USACE does not generally consider the following waters to be waters of the United States. The USACE does, however, reserve the right to regulate these waters on a case-by-case basis.

- Nontidal drainage and irrigation ditches excavated on dry land;
- Artificially irrigated areas that would revert to upland if the irrigation ceased;
- Artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water and used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;
- Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating and/or diking dry land to retain water for primarily aesthetic reasons; and,
- Water-filled depressions created in dry land incidental to construction activity and pits excavated in dry land for purposes of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States.

2.2 California Department of Fish and Wildlife

Pursuant to Division 2, Chapter 6, Sections 1600–1602 of the California Fish and Game Code, CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake, which supports fish or wildlife. CDFW defines a "stream" (including creeks and rivers) as:

> *"A body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation."*

CDFW's definition of "lake" includes "natural lakes or man-made reservoirs." CDFW jurisdiction within altered or artificial waterways is based upon the value of those waterways to fish and wildlife. CDFW jurisdiction typically extends to the top of bank, outside edge of riparian canopy cover, or bank full width, whichever is larger.

2.3 State Water Resources and Regional Water Quality Control Boards

SWRCB and the nine RWQCBs regulate discharges of fill and dredged material in California, under Section 401 of the Clean Water Act and the State Porter-Cologne Water Quality Control Act, through the State Water Quality Certification Program. State Water Quality Certification is necessary for all projects

that require a USACE permit, or fall under other federal jurisdiction, and have the potential to impact waters of the State. Waters of the State are defined by the Porter-Cologne Act as:

> *"Any surface water or groundwater, including saline waters, within the boundaries of the state."*

In order for a Section 404 permit to be valid, a Water Quality Certification or waiver must be obtained according to Section 401 of the Clean Water Act. The Water Quality Certification (or waiver) is required to ensure that the permitted activities will not violate water quality standards individually or cumulatively over the term of the action. Water quality certification must be consistent with the requirements of the Clean Water Act, California Environmental Quality Act, California Endangered Species Act, and Porter-Cologne Act.

SWRCB and RWQCB have not established a formal wetland definition nor have they developed a wetland delineation protocol to identify waters of the State pursuant to their jurisdiction. However, these agencies generally adhere to the same delineation protocol set forth by USACE. Therefore, the methods used to determine potential waters of the State are generally the same as those used to identify potential Section 404 jurisdiction.

3 METHODOLOGY

3.1 Delineation Methods

The jurisdictional delineation efforts for this project utilized the routine delineation methodology described in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), and as supplemented in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (Arid West; USACE 2008b). Delineators also utilized *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2008a). *A Manual of California Vegetation* (Sawyer et al. 2009), *The Jepson Manual* (Baldwin et al. 2012), and *The National Wetland Plant List: 2014 Update of Wetland Ratings* (Lichvar et al. 2014). Soils data was obtained from the *Soil Survey Geographic Database* (SSURGO) *for San Luis Obispo County, California* (NRCS 2011).

Delineation of jurisdictional areas observed with the project study area were based on review of pertinent literature and a thorough on-site investigation of the Biological Study Area (BSA) conducted on April 15, 2015, by SWCA Biologists Travis Belt and Michaela Koenig, and a follow up visit on March 2, 2016, by Travis Belt. The BSA includes all areas anticipated to be directly or indirectly affected by the project, including construction areas, staging areas, temporary access areas, and right-of-way acquisition areas. This report focuses on the portion of the BSA that includes the riparian corridor of Santa Margarita Creek that may be affected by the bridge replacement element of the project. Prior to beginning the field delineation, the U.S. Geological Survey (USGS) Santa Margarita, California 7.5-minute quadrangle map and recent aerial photographs of the project site were examined to determine the locations of potential areas of USACE/State jurisdiction. These resources were also used as a reference to determine hydrologic connectivity to a navigable water body. A site examination was conducted to identify boundaries between upland and jurisdictional habitats and ensure compliance with the Arid West requirements. Representative sampling points in potentially jurisdictional areas were evaluated to investigate the presence of hydric soils, hydrophytic vegetation, and wetland hydrology indicators. A total of two sampling points were excavated in the project area (refer to Appendix C) to observe and record soil characteristics, vegetation types, and hydrologic features. Soil matrix colors were classified according to the *Munsell Soil Color Charts* (Munsell Color 2000).

Plant species identified at sample point locations were assigned a wetland status according to the Arid West 2014 Regional Wetland Plant List (Lichvar et al. 2014). This wetland classification system is based on the expected frequency of occurrence in wetlands as follows:

- Obligate Wetland (OBL) – Almost always is a hydrophyte, rarely in uplands.
- Facultative Wetland (FACW) – Usually is a hydrophyte but occasionally found in uplands.
- Facultative (FAC) – Commonly occurs as either a hydrophyte or nonhydrophyte.
- Facultative Upland (FACU) – Occasionally is a hydrophyte, but usually occurs in uplands.
- Upland (UPL) – Rarely is a hydrophyte, almost always in uplands.

3.2 Jurisdictional Mapping

Jurisdictional features including tops of banks, OHWMs, and adjacent or in-stream wetland boundaries were mapped using a Trimble® Geo XT Global Positioning System unit capable of one-meter accuracy. Perimeters of wetlands were mapped at the wetland/upland interface. Jurisdictional waters assessment maps showing the project area, potentially jurisdictional features, and sample point locations are included in Appendix B.

4 RESULTS

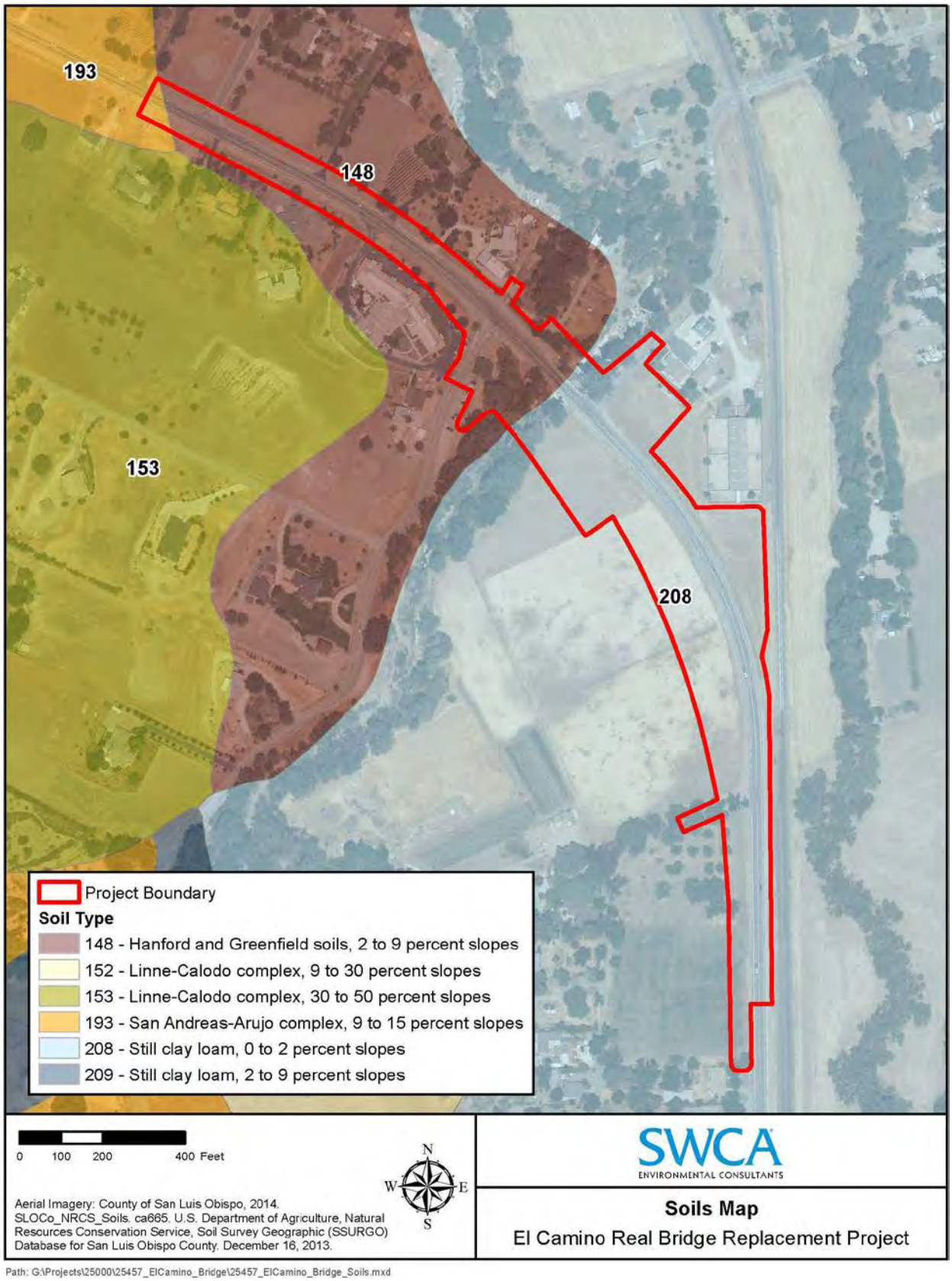
4.1 Soils

The U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) Web Soil Survey shows two soil series in the areas surrounding the bridge and four additional soil types in the BSA (NRCS 2015; refer to Figure 3). The following are discussions of the two soils found within the proximity of the bridge and Santa Margarita Creek. Neither of the mapped soil types is listed as hydric soils in San Luis Obispo County.

- **Hanford and Greenfield fine sandy loams (#148)** are shown to occur on the terrace to the northwest of the creek. The Hanford and Greenfield map unit is an undifferentiated unit that can include soils from the Hanford or Greenfield soil series. Soils in the Hanford series tend to be gently sloping, very deep, well drained, and formed in alluvium from mixed rocks. These soils have low erodibility and low shrink-swell characteristics. Soils in the Greenfield series tend to be steeply to very steeply sloping and moderately drained. Greenfield soils have low erodibility and low shrink-swell characteristics.

- **Still clay loam (#208)** is shown to occur on the terrace to the southeast of the creek. Still clay loam is a very deep, nearly level soil that is considered to be well drained. Still clay loam is formed in alluvium derived from sedimentary rocks. The soil has moderate erodibility and moderate shrink-swell characteristics.

Figure 3. Soils Map



4.2 Hydrology

The project area is located along Santa Margarita Creek, which is a tributary to the Salinas River. The existing bridge over Santa Margarita Creek is approximately 1.2 miles upstream of the Salinas River confluence. At the project site, Santa Margarita Creek is perennial and supports two deep-water pools (up to twelve feet deep) throughout the year. One pool is located upstream of the bridge and the second pool is located downstream of the bridge. During the dry season, a shallow thalweg (one to two feet) maintains light flows under the bridge that connects the two pools. The USGS topographic maps of the area show Santa Margarita Creek as a continuous blue line creek that, via Tassajara Creek, has headwaters in Los Padres National Forest, near Tassajara Peak.

A small ponded area is located at the base of the northwest bridge abutment (refer to Appendices A and B). The ponded area is connected to the main channel via a small overflow channel that directs flows from the pond to the downstream side of the bridge and into the main channel. The pond has a bedrock floor and lacks vegetation; whereas, the overflow channel has riverwash substrates and passes through Himalayan blackberries (*Rubus armeniacus*). During the March 2016 site inspection, the pond had standing water and drift debris in it; the riverwash in the overflow channel was moist, but lacked flowing water. Based on the presence of drift debris in the pond and the overflow channel connecting the pond to the main channel, it was determined that the pond is within the confines of the OHWM. However, the pond is separated from the main channel during the dry season due to the existing bridge concrete foundations. The ponded area was mapped as USACE jurisdiction due to the hydrologic connectivity. However, the ponded area was not considered a wetland due to the lack of vegetation in the pond.

4.3 Vegetation

The vegetation communities present within the entire BSA are Fremont cottonwood forest, red willow thicket, valley oak woodland, coast live oak woodland, annual brome grassland, and ruderal habitat. The coast live oak woodland, annual brome grassland, and ruderal habitat do not contribute to the riparian corridor, therefore, are not discussed further in this document.

The riparian corridor is dominated by Fremont cottonwood forest with arroyo willow thickets and valley oak woodland interspersed. Fremont Cottonwood Forest (*Populus fremontii* Forest Alliance; CDFW California Code: 61.130.00) is described by Sawyer et al. (2009) as occurring on floodplains, along low-gradient rivers, along perennial or seasonally intermittent streams, in valleys with a dependable subsurface water supply that varies considerably during the year. The 2014 National Wetland Plant List recognizes Fremont cottonwood as a facultative plant in the Arid West region.

Along the Santa Margarita Creek riparian corridor, the Fremont cottonwood is co-dominant in the tree canopy with valley oak (*Quercus lobata*), California black walnut (*Juglans californica*), coast live oak (*Quercus agrifolia*), red willow (*Salix laevigata),* and arroyo willow (*S. lasiolepis*). Dominant shrubs within the riparian corridor of the BSA consist of creek dogwood (*Cornus sericea*), poison oak (*Toxicodendron diversilobum*), virgin's bower (*Clematis ligusticifolia*), snowberry (*Symphoricarpos mollis*), and scattered coyote brush (*Baccharis pilularis*). Fremont cottonwood forest intergrades with valley oak woodland along the southwestern banks and with coast live oak woodland along the northeastern banks of Santa Margarita Creek.

4.4 Ordinary High Water Cross Section and Sample Plot Observations

All potentially jurisdictional areas on site were examined utilizing Arid West methodologies. Santa Margarita Creek is a riverine system; therefore, the delineators completed an *Updated Datasheet for the Identification of the Ordinary High Water Mark in the Arid West Region of the Western United States*

(USACE 2010). To augment the vegetation, soils, and hydrology data for the site, the delineators also investigated two sample plots and completed Arid West Region Wetland Determination Data Forms for the plots. The OHWM and Wetland Determination Data forms are included in Appendix C. Descriptions of the conditions observed in the Santa Margarita Creek corridor are provided below.

4.4.1 Ordinary High Water Mark Identification

The delineator observed a representative cross section of the creek channel to identify the OHWM (refer to Appendices A and C). The low flow channel and the right bank of Santa Margarita Creek at the cross section is underlain with bedrock. The OHWM on the right side of the cross section (southeast side of creek) was identifiable as surface staining on the bedrock. At the time of the survey, the staining was approximately four feet up the nearly vertical bedrock bank from the surface of the water. On the left side of the cross section (northwest bank of creek), the OHWM was located at the transition from the bedrock creek channel to the vegetated portion of the creek's active flood plain. At this location, the substrate texture changes from exposed bedrock to a thin layer of sandy loam laying over bedrock. Annual grasses and a prominent debris line were present at the transitional area. At the cross section, the measured width of the channel between the OHWMs is 56.6 feet. The width between the OWHMs varies through the creek reach in the BSA. However, the staining, transitions between bedrock and sediment, and/or debris line was observable throughout the creek reach. Therefore, the OWHM mapping provided in Appendix A is based on the location of these features as observed in the field.

4.4.2 Sample Plot 1

Sample Plot 1 included a 20-foot-diameter plot that was located just below the OHWM of the creek and directly upstream of the existing bridge. In this area, sandstone bedrock is exposed and creates a deep pool with a nearly vertical southern bank and a gradually sloping northern bank. Sandstone rock and open water comprised most of the area in the plot. Upland species rip-gut brome (*Bromus diandrus*) and white sweet clover (*Melilotus albus*) were the dominant plant species observed in the vegetated portions of the plot. Common spikerush (*Eleocharis macrostachya*), an obligate wetland species, was present but contributed very little cover in the plot (refer to Appendix C, Data Sheet 1). Due to the presence of bedrock in the plot, a soil test pit could not be excavated. However, a thin layer of riverwash was present on some of the bedrock. Riverwash is considered a hydric soil in San Luis Obispo County; therefore, hydric soil was determined to be present based on its presence. Observed wetland hydrology indicators included surface water in the plot, biotic crust on the rock surface, and inundation visible on aerial imagery. The vegetation in the sample plot was not dominated by wetland plant species; therefore, the plot did not qualify as a three-parameter wetland. Despite the lack of a three-parameter wetland, the plot likely falls within USACE jurisdiction as other waters due to the presence of an OHWM. Due to the lack of hydric vegetation, this sample plot did not meet the requirements of a three-parameter wetland. However, due to the presence of the OHWMs in the creek, it is likely that Santa Margarita Creek is jurisdictional other waters.

4.4.3 Sample Plot 2

This sample plot was located on the creek bank and approximately 15 feet north of Sample Plot 1. Dominant vegetation in the plot included California black walnut (FAC) in the sapling/shrub stratum and ripgut brome (UPL), mugwort (*Artemisia douglasiana*; FAC), Indian sweet clover (*Melilotus indica*; FACU), and periwinkle (*Vinca major*) in the herb stratum. Unlike Sample Plot 1, Sample Plot 2 had sufficient soil overlaying the bedrock to excavate a test pit. Soil in the sample pit included a five-inch layer of moist sandy loam with a 10YR 3/2 matrix. A layer of light gray (5YR 7/1) sand occurred from five to 12 inches. Bedrock created a restrictive layer at 12 inches. The light gray sand was colored consistent with the bedrock material. No redoxomorphic features were observed in the test pit. The soil in Sample Plot 2 did not resemble any of the soils that are mapped in the area by USGS. The upper 12 inches appeared to be loamy sediment sitting on top of sand derived from the sandstone bedrock. Since

hydrophytic vegetation and hydric soil indicators were not observed in the plot and the plot was located above the OHWM of the creek, it is likely that Sample Plot 2 is not located within USACE jurisdictional boundaries.

4.5 Functions and Services of Jurisdictional Areas

In the BSA, Santa Margarita Creek is a perennial stream that supports a multi-stratum riparian vegetative community. Because the adjacent areas are subject to high levels of disturbance from agricultural, rural residential, and roadway activities, Santa Margarita Creek and its riparian community provide important wildlife shelter and foraging habitat and are a movement corridor for a variety of wildlife species.

Santa Margarita Creek is a tributary to the Salinas River, both of which are designated critical habitat for the South-Central California Coast Distinct Population Segment (DPS) of steelhead (*Oncorhynchus mykiss*). According to the *Designation of Critical Habitat for Seven Evolutionarily Significant Units of Pacific Salmon and Steelhead in California – Final Rule*, the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries) designated Santa Margarita Creek and the Salinas River as steelhead Critical Habitat in the Salinas Hydrologic Unit (3309) and the Paso Robles Hydrologic Sub-unit 330981 (NOAA Fisheries 2005).

In addition to important aquatic habitat, the portion of the creek in the BSA provides recreational opportunities for local residents. Several rope swings are installed and provide access into the deep pools that are located at the upstream and downstream portions of the BSA. The local community also relies on Santa Margarita Creek and its ground water for agricultural and residential water supply, ground water recharge, and associated water quality benefits. The combination of wildlife habitat, recreational opportunities, and water supply benefits provided by Santa Margarita Creek make it a valuable resource for the local community.

5 JURISDICTIONAL ASSESSMENT

This assessment identifies potential federal and state jurisdictional areas within the project site, and discusses the potential impacts that would result from project implementation. These jurisdictional results are preliminary and are subject to review by USACE and other agencies prior to issuance of any permits. During the permit review process, USACE and other agencies may conduct a site visit to verify the conditions and jurisdictional areas identified in this report, and may approve or request amendments to the report based on their findings.

Based on the conditions observed in the field, Santa Margarita Creek is likely subject to USACE, CDFW, and RWQCB jurisdiction (indicative of other waters/non-wetland waters feature). This is due to the presence of a clearly identifiable OHWM, the evidence of a defined bed and bank, connectivity to relatively permanent waters (Salinas River), presence of riparian vegetation, and evidence of wetland hydrology. CDFW jurisdiction typically extends to the top of bank or outside edge of riparian canopy cover. At the project site, riparian vegetation extends beyond Santa Margarita Creek's top-of-bank; therefore, CDFW jurisdiction is mapped to include areas within the outer extent of riparian vegetation.

At the project site, potential USACE jurisdiction is mapped to include all areas between the OHWMs of the creek inclusive of the small ponded area located underneath the bridge (refer to Appendix B). At the time of investigation, the USACE jurisdictional areas within the sample plots did not support all three wetland indicators, which is not expected in linear features. Therefore, the reach of Santa Margarita Creek in the BSA is indicative of federal other waters. Under Section 401 of the Clean Water Act, the federal other waters likely falls within RWQCB jurisdiction. Table 1 quantifies the total area of potential USACE, CDFW, and RWQCB jurisdictional waters within the project site.

Table 1. USACE, CDFW, and RWQCB Jurisdictional Areas Present in the Project Area

Jurisdictional Feature	Total Jurisdictional Areas Present
Clean Water Act - Other Waters (Sections 404/401 Applicable)	11,060 ft^2 (0.25 acre)
CDFW Jurisdiction (California Fish and Game Code Sections 1600–1602 Applicable)	40,282 ft^2 (0.92 acre)

Note: ft^2 = square feet

5.1 Estimated Jurisdictional Impacts

Table 2 provides a summary of the potential project-related impacts that are anticipated to be subject to environmental permitting by USACE, under Section 404 of the Clean Water Act; CDFW, under Sections 1600–1602 of the California Fish and Game Code; and RWQCB, under Section 401 of the Clean Water Act. The estimated impact calculations are based on digital project plans provided by Quincy Engineering on August 10, 2015.

The existing bridge structure includes more concrete in the creek channel than the proposed bridge will include. Approximately 1,018 square feet of concrete will be removed from the creek channel during project implementation. Table 2 includes estimated impacts to jurisdictional areas without consideration of the concrete removal and estimated impacts of the concrete removal. Removal of the existing concrete and construction of the new bridge will result in a net reduction of approximately 206 square feet of concrete within the OHWMs of Santa Margarita Creek, thereby improving the habitat conditions in the stream by opening up more of the natural channel.

Table 2. Estimated Impacts in Jurisdictional Areas Including Existing Concrete Removal

Jurisdictional Feature	Estimated Impacts	
	Permanent	Temporary
Federal - Clean Water Act – Other Waters (Sections 404)	211 ft^2 (0.005 acre)	6,529 ft^2 (0.15 acre)
Existing Concrete Removal	-417 ft^2 (0.01 acre)	n/a
Total Federal - Clean Water Act - Other waters (after concrete removal)	**-206 ft^2 (-0.005 acre)**	**6,529 ft^2** (0.15 acre)
State - California Fish and Game Code (Section 1600-1602 and 401)	7,586 ft^2 (0.17 acre)	19,622 ft^2 (0.45 acre)
Existing Concrete Removal	-1,018 ft^2 (0.02 acre)	n/a
Total State - California Fish and Game Code and 401 (after concrete removal)	**6,568 ft^2 (0.15 acre)**	**19, 622 ft^2 (0.45 acre)**

Note: ft^2 = square feet

All jurisdictional areas where fill is proposed and regions that will be permanently altered from the current condition were considered permanent impacts. Permanent impacts will result from the approach abutments, placement of RSP, and fill slopes. Temporary impacts will result from temporary disturbance and these areas are expected to be returned to their current condition following project completion. Temporary impacts will result from dewatering and installation of a construction access corridor. The construction corridor includes the dewatered area, temporary access pathway, and associated riparian vegetation removal. Project staging areas have been sited to avoid unnecessary impacts to potentially jurisdictional areas.

6 DISCUSSION AND CONCLUSION

Santa Margarita Creek is a perennial stream and a tributary to the Salinas River, which is a traditional navigable waters. Santa Margarita Creek maintains definable OHWMs, supports riparian vegetation, and has bed and bank features. Even though the surrounding areas are subject to constant disturbance from urban influences, the creek is relatively undisturbed. The only noted disturbances on site were rope swings in the channel and the existing bridge's structural components. Due to the intact conditions of the creek, the riparian system is valuable wildlife habitat and an important water supply feature. Santa Margarita Creek provides several significant functions and values due to its permanent flow regime, intact riparian vegetation, and connectivity to the Salinas River.

Implementation of the project will result in improvement to the quality of habitat in the creek via concrete removal. Impacted riparian vegetation will be restored and standard best management practices for erosion and sediment control will be utilized. Such measures may include fencing exclusion zones for environmentally sensitive areas and to define the project limits, a spill prevention and containment plan for hazardous materials, implementation of erosion controls, and monitoring during construction.

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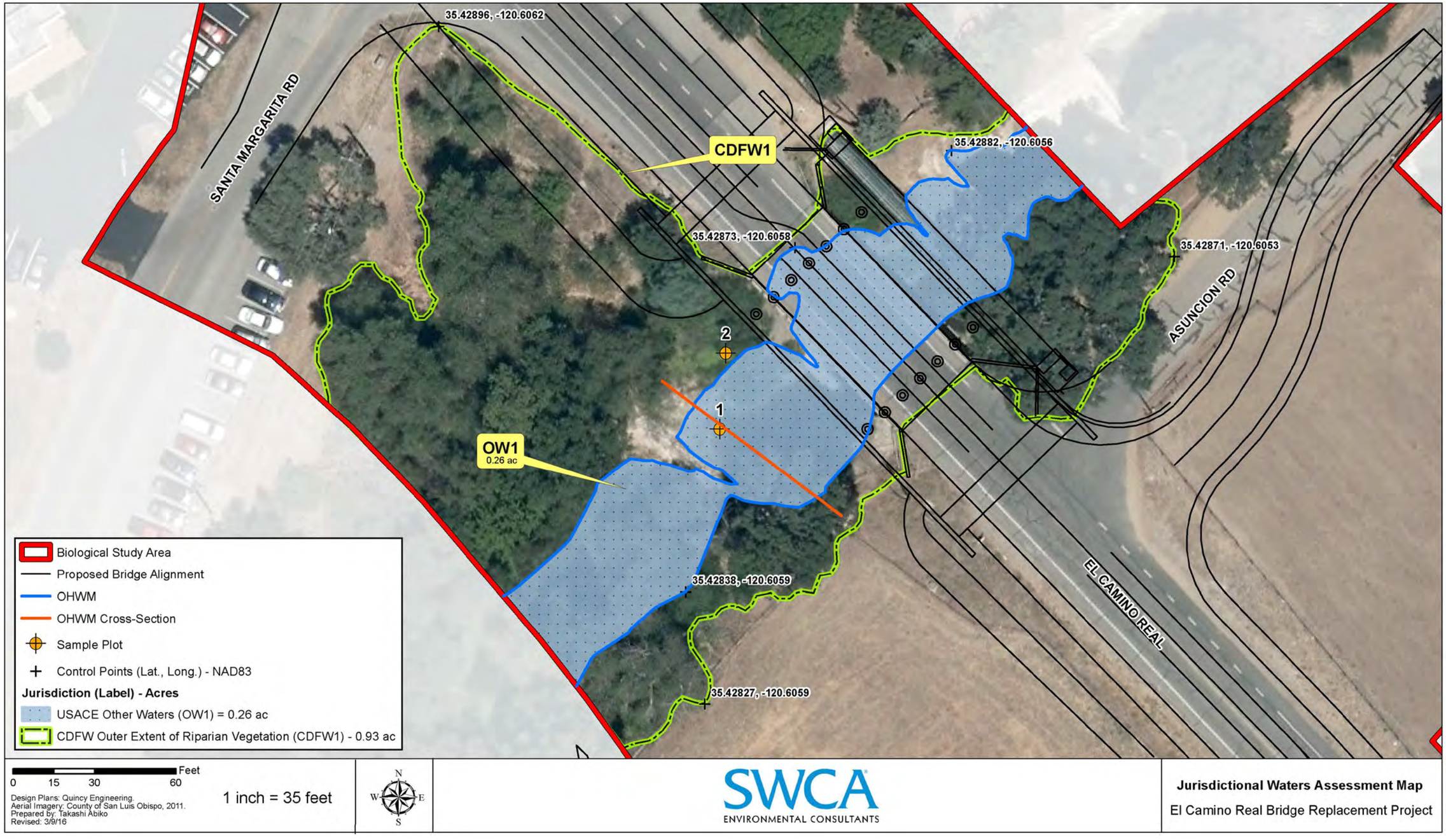
Appendix A.
Wetlands and Waters Assessment Map


35.42896, -120.6062
SANTA MARGARITA RD
CDFW1
35.42882, -120.6056
35.42873, -120.6058
35.42871, -120.6053
ASUNCION RD
2
1
OW1
0.26 ac
35.42838, -120.6059
35.42827, -120.6059
EL CAMINO REAL
Biological Study Area
Proposed Bridge Alignment
OHWM
OHWM Cross-Section
Sample Plot
Control Points (Lat., Long.) - NAD83
Jurisdiction (Label) - Acres
USACE Other Waters (OW1) = 0.26 ac
CDFW Outer Extent of Riparian Vegetation (CDFW1) - 0.93 ac
Feet
0 15 30 60
Design Plans: Quincy Engineering.
Aerial Imagery: County of San Luis Obispo, 2011.
Prepared by: Takashi Abiko
Revised: 3/9/16
1 inch = 35 feet
N
W
E
S
SWCA
ENVIRONMENTAL CONSULTANTS
Jurisdictional Waters Assessment Map
El Camino Real Bridge Replacement Project

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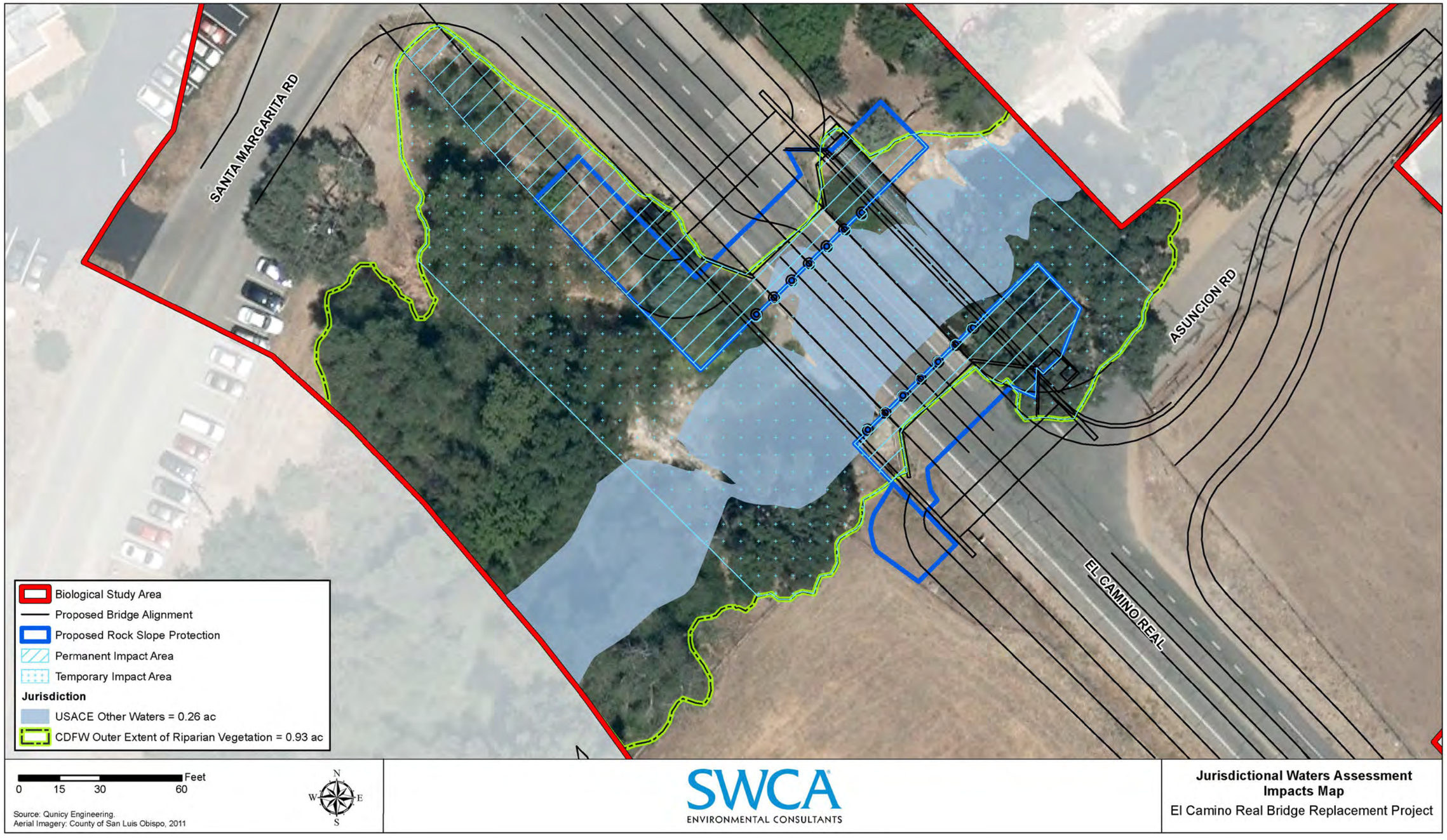
Appendix B.
Impact Map


SANTA MARGARITA RD
ASUNCION RD
EL CAMINO REAL
Biological Study Area
Proposed Bridge Alignment
Proposed Rock Slope Protection
Permanent Impact Area
Temporary Impact Area
Jurisdiction
USACE Other Waters = 0.26 ac
CDFW Outer Extent of Riparian Vegetation = 0.93 ac
0 15 30 60 Feet
N
W E
S
Source: Qunicy Engineering.
Aerial Imagery: County of San Luis Obispo, 2011
SWCA
ENVIRONMENTAL CONSULTANTS
Jurisdictional Waters Assessment Impacts Map
El Camino Real Bridge Replacement Project

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Appendix C.
Arid West Datasheets and OHWM Datasheets

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SOIL Sampling Point: 2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-5	10YR 3/2	100					sandy loam	
5-12	5Y 7/1	100					sand	

[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 D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (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[3]:

- ___ 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: sandstone bedrock

Depth (inches): 12

Hydric Soil Present? Yes ____ No X

Remarks:

No hydric soil indicators observed. Plot includes loamy sediment sitting on top of sand derived from sandstone bedrock parent material.

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)
- ___ 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**)
- ☑ 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 X Depth (inches): ____

Water Table Present? Yes ____ No X Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Oxidized rhizospheres were noted in the upper twelve inches. Drift deposits included wrack material piled up on the walnut sapling.

US Army Corps of Engineers Arid West – Version 2.0

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: El Camino Real Bridge City/County: Santa Margarita, San Luis Obispo Sampling Date: 04/15/2015

Applicant/Owner: SLO County Department of Public Works State: Ca Sampling Point: 1

Investigator(s): Travis Belt and Michaela Koenig Section, Township, Range: Santa Margarita Land Grant

Landform (hillslope, terrace, etc.): Creek Local relief (concave, convex, none): Concave Slope (%): 2-5%

Subregion (LRR): C Lat: 35.428545 Long: -120.605884 Datum: NAD 1983

Soil Map Unit Name: Hanford and Greenfield soils (2 to 9 percent slopes) NWI classification: Riverine

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

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are Vegetation No, Soil No, or Hydrology No 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 X	Is the Sampled Area within a Wetland? Yes ☐ No ☑
Hydric Soil Present?	Yes X No ☐	
Wetland Hydrology Present?	Yes X No ☐	

Remarks:

Region wide drought, resulting in low water conditions. Plot is located at the waters edge on sandstone bedrock and riverwash. Presence of hydric soil is assumed due to the riverwash.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20 foot diameter)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0		
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 20 foot diameter)			
1. Salix lasiolepis (Arroyo willow)	1	Yes	FACW
2.			
3.			
4.			
5.			
	1% = Total Cover		
Herb Stratum (Plot size: 20 foot diameter)			
1. Bromus diandrus (rip-gut brome)	10	Yes	UPL
2. Melilotus albus (white sweetclover)	10	Yes	UPL
3. Eleocharis macrostachya (E. palustris) (common spikerush)	2	No	OBL
4. Avena barbata (wild oats)	1	No	-
5. Cynodon dactylon (bermuda grass)	1	No	FACU
6. Vicia sativa	1	No	FACU
7.			
8.			
	25% = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 25% % Cover of Biotic Crust 10%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (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[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ☐ No ☑

Remarks:

Plot is dominated approximately with 40% open water, ruderal species are dominant in the herbaceous strata. Biotic crust occurs on exposed sandstone bedrock.

US Army Corps of Engineers Arid West – Version 2.0

SOIL Sampling Point: 1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0							Rock	Bedrock and Riverwash

[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 D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (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[3]:

- ___ 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: Sandstone Bedrock

Depth (inches): 0= on the surface

Hydric Soil Present? Yes X No ____

Remarks:

Substrate at plot center is sandstone bedrock. No soil pit described due to bedrock. Approximately 10% of the bedrock is overlain with riverwash. Riverwash is considered to be a hydric soil in San Luis Obispo County. Therefore, the presence of hydric soil in the plot is assumed.

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)
- ___ 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**)
- ___ 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 X No ____ Depth (inches): 72 inches

Water Table Present? Yes ____ No ____ Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ____ No ____ Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Standing water in creek on sandstone bedrock.

US Army Corps of Engineers Arid West – Version 2.0

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: El Camino Real Bridge City/County: Santa Margarita, San Luis Obispo Sampling Date: 04/15/2015

Applicant/Owner: SLO County Department of Public Works State: Ca Sampling Point: 2

Investigator(s): Travis Belt and Michaela Koenig Section, Township, Range: Santa Margarita Land Grant

Landform (hillslope, terrace, etc.): Creek Local relief (concave, convex, none): Concave Slope (%): 2-5%

Subregion (LRR): C Lat: 35.428622 Long: -120.605874 Datum: NAD 1983

Soil Map Unit Name: Hanford and Greenfield soils (2 to 9 percent slopes) NWI classification: Riverine

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

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are Vegetation No, Soil No, or Hydrology No 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:

Region wide drought, resulting in low water conditions. Plot is located outside of ordinary high water mark. Restrictive layer is present at a depth of 12 inches.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20 foot diameter)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0		
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 20 foot diameter)			
1. Juglans californica (Ca black walnut)	1	Yes	FAC
2.			
3.			
4.			
5.			
	1% = Total Cover		
Herb Stratum (Plot size: 20 foot diameter)			
1. Bromus diandrus (rip-gut brome)	20	Yes	UPL
2. Artemisia douglasiana (mugwort)	20	Yes	FAC
3. Melilotus indicus (Indian sweet clover)	15	Yes	FACU
4. Vinca major (periwinckle)	15	Yes	
5. Galium aparine (cleaver)	10	No	FACU
6. Vicia sativa (garden vetch)	10	No	FACU
7. Bromus hordeaceus (shoft chess brome)	5	No	FACU
8. Lolium multiflorum (Festuca perennis) (Italian wild rye)	5	No	FAC
	100% = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 25% % Cover of Biotic Crust 12%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (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[1]
- ___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ☐ No ☑

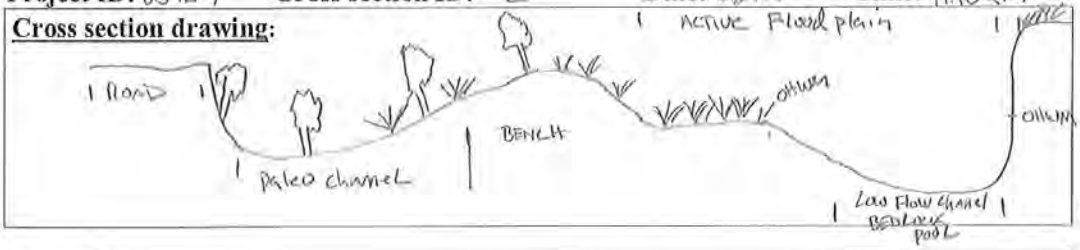
Remarks:

Herbaceous strata dominated by ruderal annuals with a California black walnut sapling.

US Army Corps of Engineers Arid West – Version 2.0

Project ID: 25457 **Cross section ID:** 1 **Date:** 3/2/16 **Time:** 11:10 AM

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- ☒ Change in average sediment texture
- ☐ Change in vegetation species
- ☒ Change in vegetation cover
- ☒ Break in bank slope
- ☒ Other: Debris Line
- ☒ Other: Staining

Comments: The OHWM on the Right Bank was identified by staining on the bedrock Bank. The OHWM on the Left was identified by the transition from Unvegetated Bedrock to vegetated sandy Loam, a mild Break in slope, and the presence of a wrack/debris line.

Floodplain unit: ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Bedrock with Thin Layer of Fine silt

Total veg cover: 0 % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: Open water
- ☐ Other: _____
- ☐ Other: _____

Comments:

The Low Flow channel at the cross section includes a deep pool with open water habitat.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: EL CAMINO REAL AT SANTA MARGARITA CREEK
Project Number: 25457
Stream: SANTA MARGARITA CREEK
Investigator(s): TRAVIS BEST
Date: 3/2/16 **Time:** 11:10 AM
Town: SANTA MARGARITA **State:** CA
Photo begin file#: N/A **Photo end file#:** N/A

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?
Recent removal of woody vegetation

Location Details:
EL CAMINO REAL AT ASUNCION ROAD, SANTA MARGARITA
Projection: 35.428565 LAT **Datum:** NAD83
Coordinates: 120.6059358 LONG

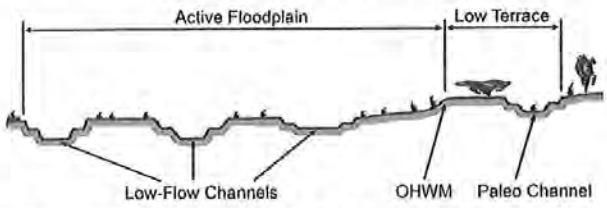
Potential anthropogenic influences on the channel system: The existing bridge structure has placed large amounts of concrete in the channel, which may affect the location of the OHWM. Woody vegetation such as willows & cottonwoods were recently cut back from the channel.

Brief site description: The site is located at the EL CAMINO REAL Bridge over SANTA MARGARITA CREEK. At the site, the creek channel includes deep pools on bedrock, beds of River wash, sandy loam, and sand was present.

Checklist of resources (if available):

- ☒ Aerial photography
  Dates: 8/23/2013
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☒ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☒ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

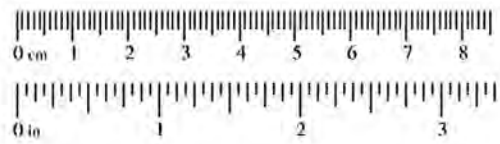


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: **Cross section ID:** **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Bedrock / Sandy Loam

Total veg cover: 50 % Tree: 10 % Shrub: ____ % Herb: 40 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☒ Drift and/or debris
- ☐ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

The active ordinary high flow floodplain was identified by the presence of the Low flow channel that is confined by a bedrock bank on the right and a Sandy Loam bench on the Left

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: ____ % Tree: ____ % Shrub: ____ % Herb: ____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Appendix D.
Photo Documentation

PHOTO 1:

General view of the stream reach immediately upstream of the existing bridge

Photo taken on March 26, 2015.

PHOTO 2:

General view of the stream reach immediately downstream of the existing bridge

Photo taken on March 26, 2015.

PHOTO 3:

View of the center point of Sample Plot 1 located upstream of the bridge and at the water's edge.

Photo taken on April 16, 2015.

PHOTO 4:

View of the conditions at the center point of Sample Plot 2.

Photo taken on April 16, 2015.

PHOTO 5:

View of the pooled area located under the bridge.

Photo taken on April 16, 2015.

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Appendix F – CNDDB 9 Quad List

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Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Templeton (3512056) OR Creston (3512055) OR Shedd Canyon (3512054) OR Atascadero (3512046) OR Santa Margarita (3512045) OR Wilson Corner (3512044) OR San Luis Obispo (3512036) OR Lopez Mtn. (3512035) OR Santa Margarita Lake (3512034))

El Camino Real Bridge over Santa Margarita Creek

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Candidate Endangered	G2G3	S1S2	SSC
Agrostis hooveri Hoover's bent grass	PMPOA040M0	None	None	G2	S2	1B.2
Ammodramus savannarum grasshopper sparrow	ABPBXA0020	None	None	G5	S3	SSC
Anniella pulchra northern California legless lizard	ARACC01020	None	None	G3	S3	SSC
Antrozous pallidus pallid bat	AMACC10010	None	None	G5	S3	SSC
Aquila chrysaetos golden eagle	ABNKC22010	None	None	G5	S3	FP
Arctostaphylos luciana Santa Lucia manzanita	PDERI040N0	None	None	G3	S3	1B.2
Arctostaphylos pechoensis Pecho manzanita	PDERI04140	None	None	G2	S2	1B.2
Arctostaphylos pilosula Santa Margarita manzanita	PDERI042Z0	None	None	G2?	S2?	1B.2
Ardea herodias great blue heron	ABNGA04010	None	None	G5	S4	
Arizona elegans occidentalis California glossy snake	ARADB01017	None	None	G5T2	S2	SSC
Astragalus didymocarpus var. milesianus Miles' milk-vetch	PDFAB0F2X3	None	None	G5T2	S2	1B.2
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Batrachoseps minor lesser slender salamander	AAAAD02170	None	None	G1	S1	SSC
Bombus caliginosus obscure bumble bee	IIHYM24380	None	None	G4?	S1S2	
Bombus crotchii Crotch bumble bee	IIHYM24480	None	None	G3G4	S1S2	
Branchinecta lynchi vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
Buteo regalis ferruginous hawk	ABNKC19120	None	None	G4	S3S4	WL

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Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
California macrophylla round-leaved filaree	PDGER01070	None	None	G4	S4	1B.2
Calochortus obispoensis San Luis mariposa-lily	PMLIL0D110	None	None	G2	S2	1B.2
Calochortus simulans La Panza mariposa-lily	PMLIL0D170	None	None	G2	S2	1B.3
Calycadenia villosa dwarf calycadenia	PDAST1P0B0	None	None	G3	S3	1B.1
Calystegia subacaulis ssp. episcopalis Cambria morning-glory	PDCON040J1	None	None	G3T2	S2	4.2
Camissoniopsis hardhamiae Hardham's evening-primrose	PDONA030N0	None	None	G2	S2	1B.2
Carex obispoensis San Luis Obispo sedge	PMCYP039J0	None	None	G3?	S3?	1B.2
Castilleja densiflora var. obispoensis San Luis Obispo owl's-clover	PDSCR0D453	None	None	G5T2	S2	1B.2
Caulanthus lemmonii Lemmon's jewelflower	PDBRA0M0E0	None	None	G3	S3	1B.2
Centromadia parryi ssp. congdonii Congdon's tarplant	PDAST4R0P1	None	None	G3T2	S2	1B.1
Chlorogalum pomeridianum var. minus dwarf soaproot	PMLIL0G042	None	None	G5T3	S3	1B.2
Chorizanthe breweri Brewer's spineflower	PDPGN04050	None	None	G3	S3	1B.3
Chorizanthe rectispina straight-awned spineflower	PDPGN040N0	None	None	G2	S2	1B.3
Cirsium fontinale var. obispoense San Luis Obispo fountain thistle	PDAST2E162	Endangered	Endangered	G2T2	S2	1B.2
Cirsium occidentale var. lucianum Cuesta Ridge thistle	PDAST2E1Z6	None	None	G3G4T2	S2	1B.2
Coastal and Valley Freshwater Marsh Coastal and Valley Freshwater Marsh	CTT52410CA	None	None	G3	S2.1	
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	None	G3G4	S2	SSC
Danaus plexippus pop. 1 monarch - California overwintering population	IILEPP2012	None	None	G4T2T3	S2S3	
Delphinium parryi ssp. eastwoodiae Eastwood's larkspur	PDRAN0B1B2	None	None	G4T2	S2	1B.2
Delphinium umbraculorum umbrella larkspur	PDRAN0B1W0	None	None	G3	S3	1B.3
Dudleya abramsii ssp. bettinae Betty's dudleya	PDCRA04011	None	None	G4T2	S2	1B.2

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Dudleya abramsii ssp. murina mouse-gray dudleya	PDCRA04012	None	None	G4T2	S2	1B.3
Dudleya blochmaniae ssp. blochmaniae Blochman's dudleya	PDCRA04051	None	None	G3T2	S2	1B.1
Elanus leucurus white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Eremophila alpestris actia California horned lark	ABPAT02011	None	None	G5T4Q	S4	WL
Eriastrum luteum yellow-flowered eriastrum	PDPLM03080	None	None	G2	S2	1B.2
Eryngium aristulatum var. hooveri Hoover's button-celery	PDAPI0Z043	None	None	G5T1	S1	1B.1
Eumops perotis californicus western mastiff bat	AMACD02011	None	None	G5T4	S3S4	SSC
Falco columbarius merlin	ABNKD06030	None	None	G5	S3S4	WL
Falco mexicanus prairie falcon	ABNKD06090	None	None	G5	S4	WL
Fritillaria ojaiensis Ojai fritillary	PMLIL0V0N0	None	None	G2?	S2?	1B.2
Fritillaria viridea San Benito fritillary	PMLIL0V0L0	None	None	G2	S2	1B.2
Gymnogyps californianus California condor	ABNKA03010	Endangered	Endangered	G1	S1	FP
Horkelia cuneata var. puberula mesa horkelia	PDROS0W045	None	None	G4T1	S1	1B.1
Horkelia cuneata var. sericea Kellogg's horkelia	PDROS0W043	None	None	G4T1?	S1?	1B.1
Juncus luciensis Santa Lucia dwarf rush	PMJUN013J0	None	None	G3	S3	1B.2
Lanius ludovicianus loggerhead shrike	ABPBR01030	None	None	G4	S4	SSC
Lasiurus blossevillii western red bat	AMACC05060	None	None	G5	S3	SSC
Layia heterotricha pale-yellow layia	PDAST5N070	None	None	G2	S2	1B.1
Layia jonesii Jones' layia	PDAST5N090	None	None	G2	S2	1B.2
Linderiella occidentalis California linderiella	ICBRA06010	None	None	G2G3	S2S3	

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Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Lupinus ludovicianus San Luis Obispo County lupine	PDFAB2B2G0	None	None	G1	S1	1B.2
Malacothamnus palmeri var. palmeri Santa Lucia bush-mallow	PDMAL0Q0B5	None	None	G3T2Q	S2	1B.2
Monardella palmeri Palmer's monardella	PDLAM180H0	None	None	G2	S2	1B.2
Myotis yumanensis Yuma myotis	AMACC01020	None	None	G5	S4	
Navarretia fossalis spreading navarretia	PDPLM0C080	Threatened	None	G2	S2	1B.1
Navarretia nigelliformis ssp. radians shining navarretia	PDPLM0C0J2	None	None	G4T2	S2	1B.2
Northern Interior Cypress Forest Northern Interior Cypress Forest	CTT83220CA	None	None	G2	S2.2	
Oncorhynchus mykiss irideus steelhead - south-central California coast DPS	AFCHA0209H	Threatened	None	G5T2Q	S2	
Perognathus inornatus San Joaquin Pocket Mouse	AMAFD01060	None	None	G2G3	S2S3	
Phrynosoma blainvillii coast horned lizard	ARACF12100	None	None	G3G4	S3S4	SSC
Plagiobothrys uncinatus hooked popcornflower	PDBOR0V170	None	None	G2	S2	1B.2
Polyphylla nubila Atascadero June beetle	IICOL68040	None	None	G1	S1	
Progne subis purple martin	ABPAU01010	None	None	G5	S3	SSC
Pyrgulopsis taylori San Luis Obispo pyrg	IMGASJ0A50	None	None	G1	S1	
Rana boylii foothill yellow-legged frog	AAABH01050	None	Candidate Threatened	G3	S3	SSC
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Sanicula maritima adobe sanicle	PDAPI1Z0D0	None	Rare	G2	S2	1B.1
Senecio aphanactis chaparral ragwort	PDAST8H060	None	None	G3	S2	2B.2
Serpentine Bunchgrass Serpentine Bunchgrass	CTT42130CA	None	None	G2	S2.2	
Sidalcea hickmanii ssp. anomala Cuesta Pass checkerbloom	PDMAL110A1	None	Rare	G3T1	S1	1B.2
Spea hammondii western spadefoot	AAABF02020	None	None	G3	S3	SSC

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Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Streptanthus albidus ssp. peramoenus most beautiful jewelflower	PDBRA2G012	None	None	G2T2	S2	1B.2
Taricha torosa Coast Range newt	AAAAF02032	None	None	G4	S4	SSC
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Trifolium hydrophilum saline clover	PDFAB400R5	None	None	G2	S2	1B.2
Trimerotropis occulens Lompoc grasshopper	IIORT36310	None	None	G1G2	S1S2	
Tropidocarpum capparideum caper-fruited tropidocarpum	PDBRA2R010	None	None	G1	S1	1B.1
Vireo bellii pusillus least Bell's vireo	ABPBW01114	Endangered	Endangered	G5T2	S2	
Vulpes macrotis mutica San Joaquin kit fox	AMAJA03041	Endangered	Threatened	G4T2	S2	

Record Count: 89

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Appendix G – Dewatering and Diversion Plan

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DIVERSION / DEWATERING PLAN

El Camino Real Bridge Replacement Project
Over Santa Margarita Creek
San Luis Obispo County, CA
Federal Project No. BRLS-5949(131)

Prepared for:
San Luis Obispo County Department of Public Works Transportation
976 Osos Street
San Luis Obispo, CA 93408

By:
Quincy Engineering, Inc.
11017 Cobblerock Drive, Suite 100
Rancho Cordova, California 95670

February 13, 2018

Water Diversion. The Santa Margarita Creek has perennial flow and is expected to be flowing within the project area year-round. A water diversion system will be required to divert the summer flow through the work area for the duration of construction. To avoid impacts to fish and other aquatic wildlife, construction within the creek is planned to occur during the non-rainy season (between June 15 and October 15), when surface water within the Santa Margarita Creek is at its seasonal minimum. The project is expected to be a two season project so the creek diversion will need to be placed for the first season of construction and then removed during winter months and then replaced for the second season of construction.

Temporary berms will be constructed both upstream and downstream of the bridge. The berms will be constructed using clean gravel or sand bags with clean crushed rock or sand and will be used to divert summer flows away from the work area and downstream. The berms will have an impervious membrane made up of visqueen polyethylene film to keep water from seeping into the work area and downstream away from the project site. The berms will be stacked bags and are expected to be at least 4 feet tall. The berms will be a minimum of 6'wide.

Temporary culverts, consisting of approximately two 18-inch pipes, will be used to divert summer flows away from the work area and downstream. The pipes will be approximately 150' long and will be installed through the upstream and downstream berms running parallel to the direction of flow.

Based upon historical summer flow records, Santa Margarita Creek flows are expected to be approximately 100 cfs. Perennial flow is expected to be conveyed through the planned pipe culverts. Construction of the water diversion system is not expected to require any grading within the creek. The imported gravel bags will be removed offsite when they are no longer needed. The berms will completely block the normal flow of the creek, keeping water out of the work area, allowing only the flow that enters the diversion pipes to pass under the bridge. All diversion/dewatering activities will adhere to Caltrans Standard Specifications.

The responsible Contractor will be required to submit plans for exact locations of the berms and pipes and the diversion plans to the County and any other regulator permitting agencies for approval at least 30 days prior to construction activities.

After the berms are constructed, sump pumps will be used to dewater the site, if necessary. If aquatic life become trapped within the dewatering area, a qualified biologist will be responsible for relocating fish or wildlife to a suitable habitat outside the construction zone, in conformance with state and local regulatory permitting guidelines. The pumped water will be returned to the Santa Margarita Creek, downstream of the project. A wire mesh screen with no larger than 0.2 inch holes will be placed over the pump intake and the pump will be placed in a screened basket to reduce the velocity of the water flowing into the pump and minimize turbidity of the water. This system will also minimize inadvertent aquatic interactions. If the pumped water has visible turbidity as compared to the undisturbed river, a portable storage tank will be used as a settling tank to ensure proper sediment filtration before pumping water back into the Santa Margarita Creek to prevent adverse impacts to aquatic resources. A geo-textile bag filter may be used at the

discharge point of the sump pump to prevent erosion/scour and to ensure proper sediment filtration. A qualified biologist will monitor the pump intake and outfall during dewatering to protect water quality and verify the system is free of debris. The qualified biologist will also remove fish and wildlife prior to starting pump and again if animals become trapped (stranded).

Prior to construction activities, a qualified biologist will provide an environmental training session for all project personnel. Information on avoidance and minimization measures for sensitive environmental resources and the other pertinent permit terms and conditions of approval will be reviewed during the training.

Weather reports looking to identify peak flow storm events will be monitored daily by a designated onsite qualified person responsible. This designated person will also inspect all berms daily to identify possible leaks and identify containment breaches. Additional supplies including sump pumps, gravel bags, visqueen, and hoses will be staged onsite to be used in the event of an exclusionary device breach. If a full breach of one of the berms does take place, the County and other applicable regulatory agencies will be notified by the Contractor's responsible person so water quality and aquatic impacts can be evaluated. The dewatering plan submittal by the contractor will contain a contingency plan for such an event.

Monitoring of the Santa Margarita Creek's visible water characteristics and water quality monitoring at the project location will take place in advance of any construction related activities for the project to establish a baseline including turbidity, water temperature, dissolved oxygen, and pH. Daily monitoring by a qualified member of the Contractors team during construction will monitor and log visible water characteristics including soil erosion, sedimentation, and turbidity. Periodic monitoring of water quality including temperature, dissolved oxygen, and pH will be captured at a frequency determined by the County and appropriate regulatory agencies. Discharge water will not be greater than four degrees Fahrenheit from the receiving water temperature. Water discharges will not reduce the dissolved oxygen level to below 5.0 milligrams per liter (mg/L) and median values should not fall below 85 percent saturation of the baseline measurement and pH will be maintained between 7.0 - 8.5. If water temperature, dissolved oxygen levels, or pH fall outside these ranges, the Contractor's qualified responsible person will immediately notify the County and the project biologist to develop a remediation procedure to improve the water quality and take immediate corrective action. In addition, the appropriate regulatory agency will also be notified of baseline changes that fall outside of the pre-project thresholds. At the project conclusion, the Contractor will provide the County and any appropriate regulatory agencies with the daily and periodic monitoring logs and sampling photos.

After construction is complete, the contractor will remove the temporary berms and culverts and restore any disturbed areas within the creek to pre-construction conditions. The berms and pipes will be removed by the contractor in a manner that will provide the least amount of disturbance possible while minimize turbidity in the river.

Construction Staging and Access.

Materials and equipment that will be used during bridge construction will be staged at a designated staging area located on south side of the creek.

The berms are expected to be approximately 6 ft wide (at the top) and 65 ft long. Approximately 220 cubic yards (CY) of fill bags will be required to construct all the temporary berms. The temporary fill will consist of gravel bags containing clean crushed rock or sand within the low flow channel and will form the temporary berms upstream and downstream of the construction area.

A temporary construction easement (TCE) will be required for the construction of the berms. The TCE required for the temporary stream diversion affects four parcels (Assessor's Parcel Number [APN] 059-531-007, 059-531-002, 059-491-001 and 059-491-005).

Construction Equipment. The table below summarizes the types of construction equipment that are anticipated to be used during construction that may be driven on the berm/access roads.

Table 2.3: Anticipated Construction Equipment

Equipment	Construction Purpose
Backhoe	soil manipulation and drainage work
Bobcat	fill distribution
Bulldozer / Loader	earthwork construction and clearing and grubbing
Crane	bridge construction
Dump Truck	fill material delivery
Drill Rig	CIDH pile installation
Excavator	soil manipulation
Forklift	material transportation
Front-End Loader	dirt or gravel manipulation
Haul Truck	earthwork construction and clearing and grubbing
Truck with Seed Sprayer	BMP installation
Water Truck	earthwork construction and dust control

- CIDH = cast in drilled hole

Dist	COUNTY	PROJECT	SHEET No.	TOTAL SHEETS
5	SLO	SANTA MARGARITA CREEK BRIDGE ON EL CAMINO REAL	23	69

65% SUBMITTAL

NOTES:

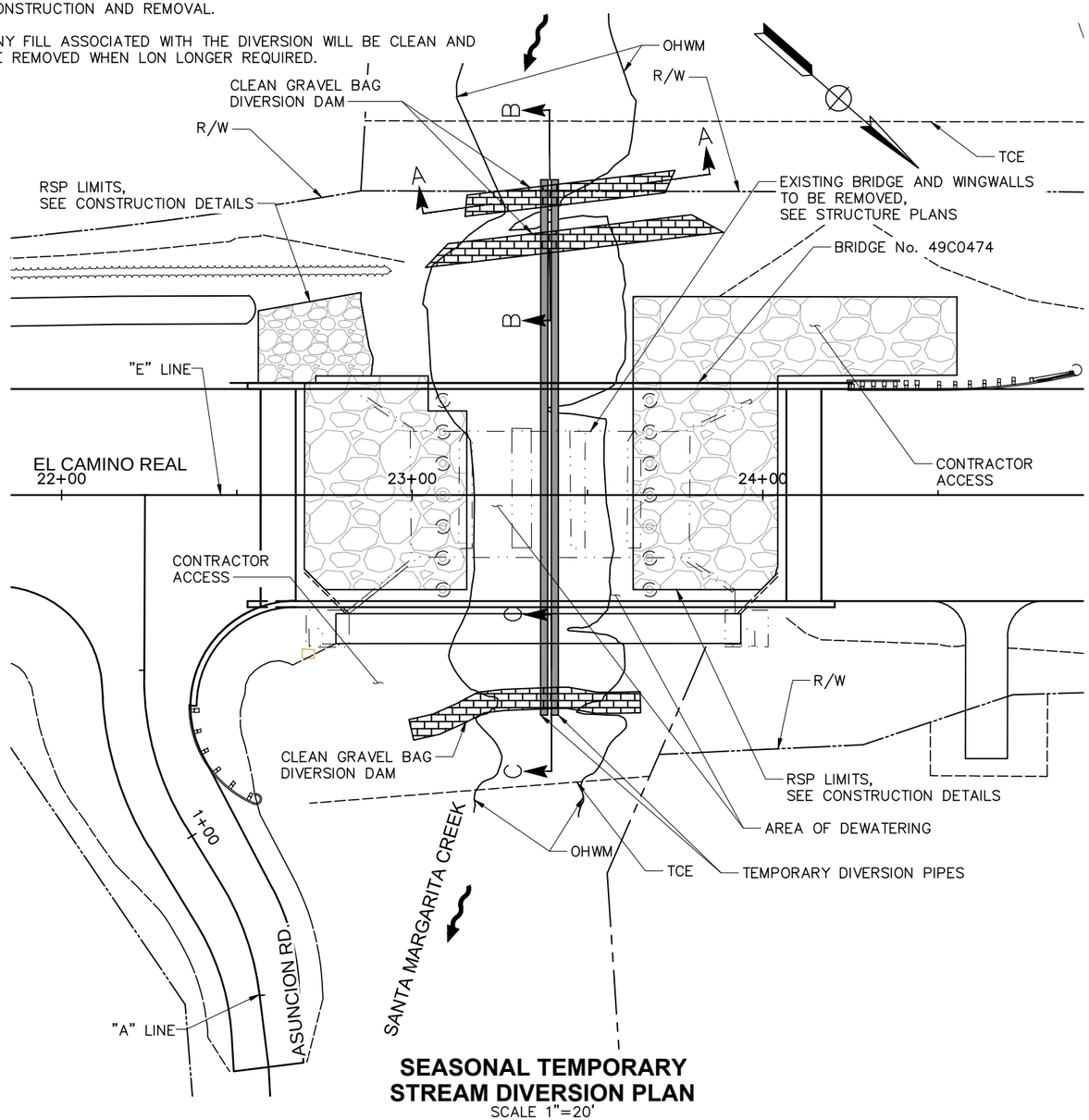
1. THIS PLAN ACCURATE FOR TEMPORARY STREAM DIVERSION ONLY.
2. EXACT LENGTH AND LOCATION OF PIPES TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
3. EXACT LOCATION OF DIVERSION DAMS TO BE APPROVED IN THE FIELD BY THE ENGINEER.
4. CONTRACTOR TO SUBMIT STREAM DIVERSION PLAN THAT SHALL BE APPROVED BY THE ENGINEER.
5. STREAM DIVERSION SHALL BE REMOVED DURING WINTER SUSPENSION.
6. DIVERSION SYSTEM SHALL BE PROTECTED DURING ALL BRIDGE CONSTRUCTION AND REMOVAL.
7. ANY FILL ASSOCIATED WITH THE DIVERSION WILL BE CLEAN AND BE REMOVED WHEN LON LONGER REQUIRED.

TEMPORARY DIVERSION PIPES		
MIN PIPE DIAMETER	QUANTITY OF PIPES	DESIGN FLOW
18 INCHES	2	100 CFS

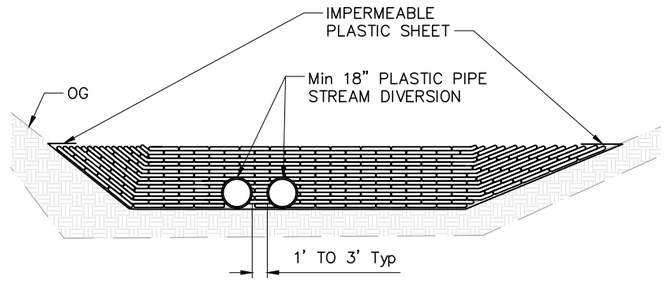
LEGEND:

INDICATES 48" CIDH PILE

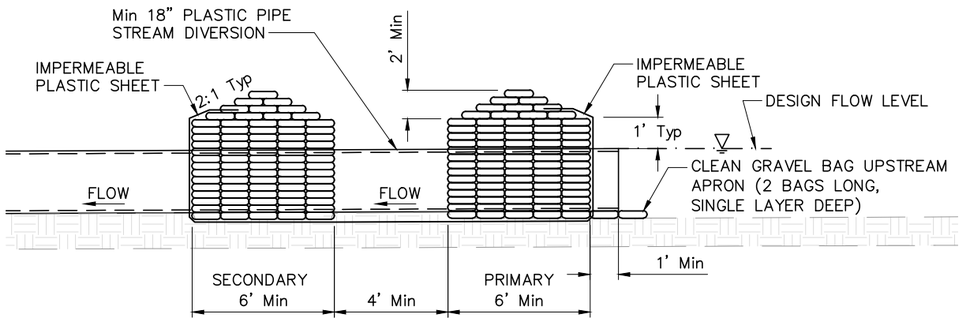
INDICATES EXISTING FOOTINGS TO BE REMOVED



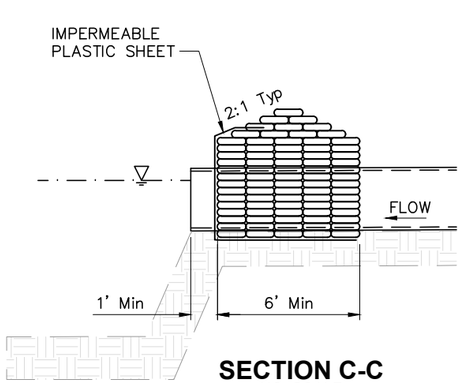
SEASONAL TEMPORARY STREAM DIVERSION PLAN
SCALE 1"=20'



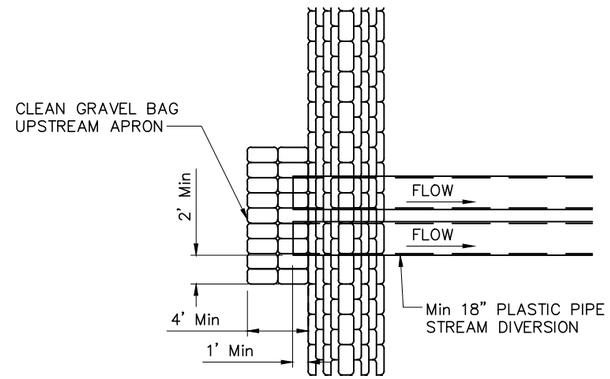
SECTION A-A
NO SCALE



SECTION B-B
NO SCALE



SECTION C-C
NO SCALE



PRIMARY UPSTREAM GRAVEL BAG DIVERSION DAM END DETAIL
NO SCALE

SEASONAL TEMPORARY STREAM DIVERSION
SCALE: AS SHOWN

TSD-1

THIS SHEET IS FOR INFORMATION PURPOSES ONLY

CALCULATED-DESIGNED BY		
CHECKED BY		
REVISED BY	E. MCPHERSON	GM
DATE REVISED	G. MCLAUGHLIN	2/13/2018
CONSULTANT PROJECT MANAGER	MARK RENO	

SAN LUIS OBISPO – DEPARTMENT OF PUBLIC WORKS

SANTA MARGARITA CREEK BRIDGE REPLACEMENT

TIME PLOTTED: 3:48:30 PM, Garrett McLaughlin

DATE PLOTTED: Tuesday, February 13, 2018

LAST REVISION

Dist	COUNTY	PROJECT	SHEET No.	TOTAL SHEETS
5	SLO	SANTA MARGARITA CREEK BRIDGE ON EL CAMINO REAL	23	69

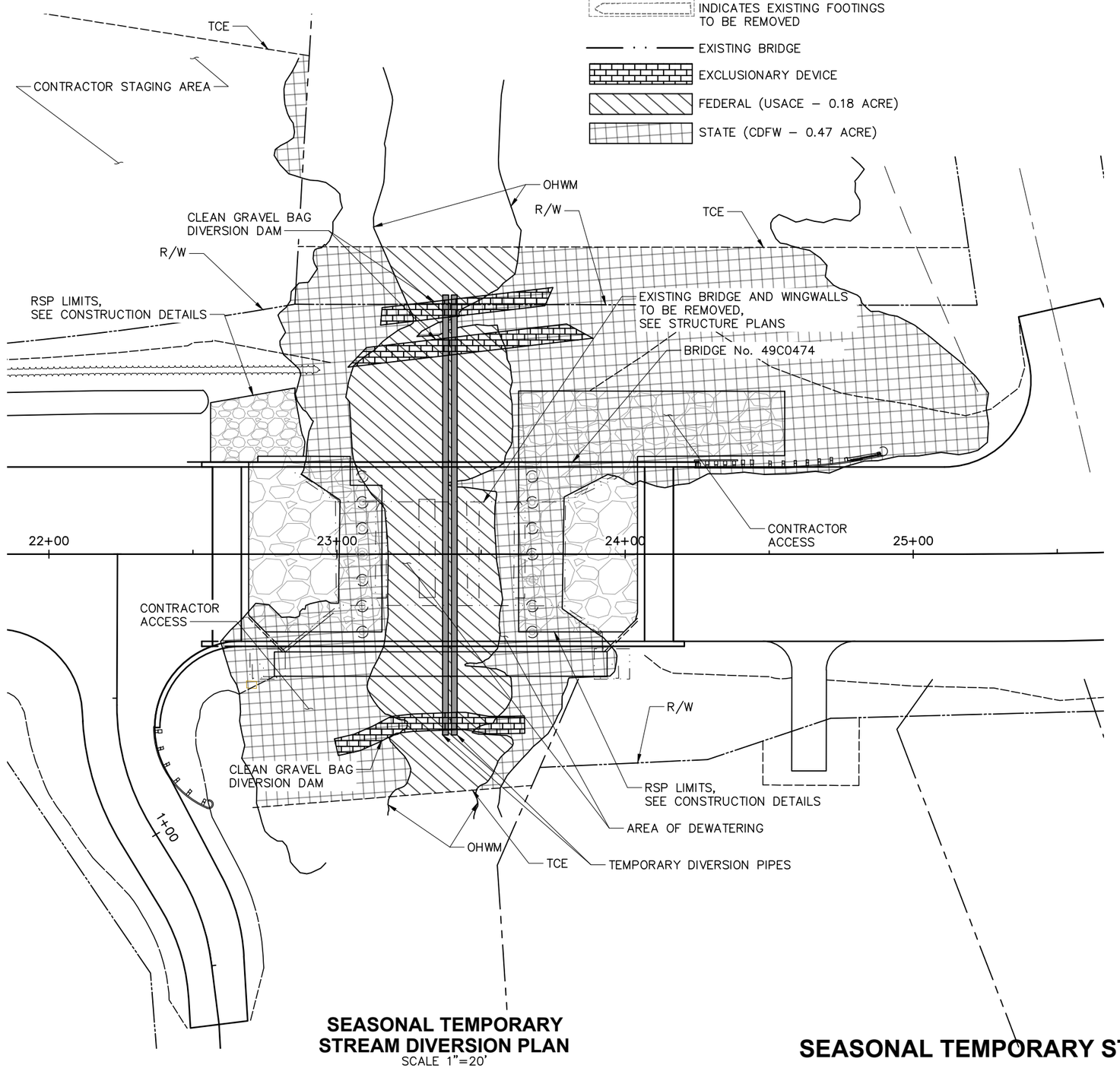
65% SUBMITTAL

NOTES:

1. THIS PLAN ACCURATE FOR TEMPORARY STREAM DIVERSION ONLY.
2. EXACT LENGTH AND LOCATION OF PIPES TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
3. EXACT LOCATION OF DIVERSION DAMS TO BE APPROVED IN THE FIELD BY THE ENGINEER.
4. CONTRACTOR TO SUBMIT STREAM DIVERSION PLAN THAT SHALL BE APPROVED BY THE ENGINEER.
5. STREAM DIVERSION SHALL BE REMOVED DURING WINTER SUSPENSION.
6. DIVERSION SYSTEM SHALL BE PROTECTED DURING ALL BRIDGE CONSTRUCTION AND REMOVAL.
7. ANY FILL ASSOCIATED WITH THE DIVERSION WILL BE CLEAN AND BE REMOVED WHEN LON LONGER REQUIRED.

LEGEND:

- INDICATES 48" CIDH PILE
- INDICATES EXISTING FOOTINGS TO BE REMOVED
- EXISTING BRIDGE
- EXCLUSIONARY DEVICE
- FEDERAL (USACE – 0.18 ACRE)
- STATE (CDFW – 0.47 ACRE)



SEASONAL TEMPORARY STREAM DIVERSION PLAN
SCALE 1"=20'

SEASONAL TEMPORARY STREAM DIVERSION AND POTENTIAL DISCHARGE BASIN
SCALE: AS SHOWN

THIS SHEET IS FOR INFORMATION PURPOSES ONLY

TSD-1

REVISED BY	DATE REVISED
GM	2/13/2018

E. MCPHERSON
G. MCLAUGHLIN
CALCULATED-DESIGNED BY
CHECKED BY
CONSULTANT PROJECT MANAGER
MARK RENO

SAN LUIS OBISPO – DEPARTMENT OF PUBLIC WORKS
SANTA MARGARITA CREEK BRIDGE REPLACEMENT

TIME PLOTTED: 4:52:00 PM, Garrett McLaughlin
DATE PLOTTED: Tuesday, February 13, 2018
LAST REVISION

BORDER LAST REVISED 7/2/2010
USERNAME Garrettm
DWG FILE S:\Client\SLO-County\S13-201-El Camino Real\CAD\roadway\AutoCad Civil 3D 2015\S13201rgc001.dwg
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT UNIT
PROJECT NUMBER & PHASE S13201 – 65% SUBMITTAL