

4.1.2.2. AVOIDANCE AND MINIMIZATION EFFORTS

The Build Alternative would completely avoid this sensitive habitat type (refer to Appendix F), so no avoidance and minimization measures are necessary.

4.1.2.3. PROJECT IMPACTS

No impacts to serpentine bunchgrass habitat will occur.

4.1.2.4. COMPENSATORY MITIGATION

This habitat will be avoided and no compensatory mitigation is proposed.

4.1.2.5. CUMULATIVE EFFECTS

There will be no cumulative impacts to serpentine bunchgrass habitat.

4.1.3. 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, all feasible and prudent measures must be taken to minimize this likelihood.

4.1.3.1. SURVEY RESULTS

Four exotic plant species with an invasiveness rating of High were observed in the BSA (refer to List of Species Observed in Appendix J): giant reed (*Arundo donax*), red brome (*Bromus madritensis*), iceplant (*Carpobrotus edulis*), and fennel (*Foeniculum vulgare*). A total of 20 plant species observed within the BSA with a Cal-IPC invasiveness rating of Moderate and 12 species with an invasiveness rating of Limited were also observed in the BSA. The distribution of these invasive plant species is scattered throughout the BSA, with several large concentrations of giant reed within the SLO Creek riparian corridor.

4.1.3.2. AVOIDANCE AND MINIMIZATION EFFORTS

The following Avoidance and Minimization Measures are proposed for maintaining compliance with Executive Order 13112.

1. During construction, the project will make all reasonable efforts 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.
2. To avoid the spread of invasive species, the contractor shall:
 - a) Stockpile the removed topsoil and incorporate the stockpiled soil in the construction of the new pathway; or,
 - b) Transport the topsoil to a certified landfill for disposal.
3. To avoid introduction and spread of weed seed from equipment, all equipment involved in vegetation removal, excavation, and hauling shall be cleaned prior to entering and leaving the project area. At a minimum, the equipment cleaning area should have the following characteristics:
 - a) Located at least 65 feet (20 meters) from the SLO Creek riparian area and storm drains that drain to SLO Creek.
 - b) Composed of concrete, asphalt, or other impermeable surface and bermed to contain wash water and prevent run-on and runoff.
 - c) Configured with a sump to allow collection and disposal of wash water.
 - d) Wash water shall not be discharged into storm drains or water courses.
4. Contractor shall coordinate with LCSLO staff where possible to facilitate ongoing giant reed removal efforts.
5. The HMMP restoration planting plans must emphasize the use of native species expected to occur in the area.
6. The necessary HMMP (refer to Chapters 4.1.1.2 and 4.1.1.4) would incorporate an invasive species control program.

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

4.1.3.3. PROJECT IMPACTS

Project activities would include construction of the new bike path, new bridges, and site reconstruction. Implementation of these project elements would require removing

and replacing soil that contains seeds of invasive plant species. Disturbance of the soil containing invasive species seeds could facilitate dispersal of invasive species in and out of the BSA.

4.1.3.4. COMPENSATORY MITIGATION

With implementation of the Avoidance and Minimization Measures, compensatory mitigation will not be necessary.

4.1.3.5. CUMULATIVE EFFECTS

No cumulative effects are expected in regards to invasive species.

4.1.4. Discussion of Critical Habitat – South-central California Coast Steelhead

The National Marine Fisheries Service designated critical habitat for nineteen evolutionary significant units (ESUs) for salmon and steelhead on March 17, 2000 (NMFS, 2000). On April 30, 2002, the U.S. District Court for the District of Columbia approved the NMFS consent decree withdrawing the March 2000 critical habitat designation for steelhead. A revised critical habitat designation for seven Evolutionarily Significant Units of Pacific salmon and steelhead in California was finalized on September 2, 2005 (NMFS, 2005).

The primary constituent elements (PCEs) essential for the conservation within ESUs 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: (i) water quantity and floodplain connectivity to form and maintain physical habitat conditions and support juvenile growth and mobility; (ii) water quality and forage supporting juvenile development; and (iii) 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 and excessive predation 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; and,

4. Estuarine areas free of obstruction and excessive predation with: (i) water quality, water quantity, and salinity conditions supporting juvenile and adult physiological transitions between fresh- and saltwater; (ii) natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels; and (iii) juvenile and adult forage, including aquatic invertebrates and fishes, supporting growth and maturation.

4.1.4.1. SURVEY RESULTS

The main channel of SLO Creek occurs within the south-central California coast steelhead critical habitat unit defined as Estero Bay Hydrologic Unit 3310 – (xii) San Luis Obispo Creek Hydrologic Sub-area 331024. The East Fork of SLO Creek and Davenport Creek are not included in the critical habitat designation (NMFS, 2005). Based on surveys within the project area and a review of the relevant literature, the section of SLO Creek that traverses the BSA contains the constituent elements of steelhead critical habitat. SLO Creek is a known steelhead stream, and freshwater spawning and rearing sites are present within this drainage. There are no known major obstructions that prevent migratory steelhead from reaching these reaches of the stream, and steelhead were readily visible during site surveys. Tributaries of SLO Creek may be capable of support steelhead when water levels are adequate, but appear to support inferior habitat conditions as compared to SLO Creek and do not support critical habitat PCEs.

4.1.4.2. AVOIDANCE AND MINIMIZATION EFFORTS

The avoidance and minimization efforts described in Chapter 4.1.1.2 for jurisdictional aquatic areas and riparian habitat will also serve to avoid and minimize impacts to steelhead critical habitat.

4.1.4.3. PROJECT IMPACTS

The proposed project may affect, but will not adversely modify, south-central California coast steelhead critical habitat. Although there will be impacts resulting from trimmed or removed willows, these effects would be minor and would not substantially affect the ability of steelhead to spawn, rear young, migrate, or feed in SLO Creek. It is anticipated the proposed project would permanently impact approximately 9,835 ft² (914 m²) (0.23 ac) of steelhead critical habitat associated with construction of bridge crossings through the SLO Creek riparian corridor. Temporary impacts to approximately 19,671 ft² (1,827 m²) (0.45 ac) of steelhead critical habitat

are estimated to result from work space associated with bridge construction. There will be no permanent or temporary loss of service to steelhead because no in-stream work or fill will be required within SLO Creek.

4.1.4.4. COMPENSATORY MITIGATION

No compensatory mitigation for impacts to steelhead critical habitat is necessary as impacts to habitats will be mitigated by the HMMP, which will detail revegetation and restoration methods for special-status species and their habitats, based on agency consultations.

4.1.4.5. CUMULATIVE EFFECTS

As previously described, historical land management practices in and adjacent to SLO Creek have resulted in a deterioration of habitat quality for steelhead and other aquatic organisms that inhabit the drainage. During recent years, restoration activities have been conducted along SLO Creek in an attempt to improve its water and habitat quality. Although implementation of the proposed project would result in the permanent loss of a minor quantity of steelhead critical habitat and a temporary loss of service to steelhead during dewatering/stream diversion activities SLO Creek will ultimately benefit from habitat restoration/enhancement through the implementation of the final HMMP.

Considered in context with the historic loss of steelhead habitat along the central coast of California, implementation of the proposed project would result in cumulative effects to steelhead critical habitat in SLO Creek; however, these cumulative effects are expected to be minor if appropriate avoidance and minimization measures are implemented. No other known current or reasonably foreseeable, non-federal actions within the BSA are expected to affect steelhead or steelhead critical habitat other than routine, ongoing agricultural practices and continued implementation of the WMP for SLO Creek (City of San Luis Obispo and County of San Luis Obispo, 2003).

4.1.5. Discussion of Critical Habitat – California Red-legged Frog

The United States Fish and Wildlife Service designated critical habitat for the CRLF on March 13, 2001 (USFWS, 2001). On July 2, 2002, the U.S. District Court approved a USFWS consent decree withdrawing the March 2001 critical habitat designation for the CRLF. A revised critical habitat designation for CRLF was finalized on April 13, 2006 (USFWS, 2006). Based on the 2006 ruling, SLO Creek and its tributaries did not occur within a currently designated CRLF critical habitat unit. In response to litigation, USFWS proposed revisions to the CRLF Critical

Habitat Designations in September 2008 (USFWS, 2008c). The 2008 proposed rule was finalized in March 2010 (USFWS 2010). The March 2010 designations are the current rule for California red-legged frog critical habitat. The BSA is located just south of Unit SLO-3 and does not fall within any of the current critical habitat units.

4.1.5.1. SURVEY RESULTS

The BSA does not currently occur within a designated CRLF critical habitat unit.

4.1.5.2. AVOIDANCE AND MINIMIZATION EFFORTS

The BSA does not occur within a designated CRLF critical habitat unit; therefore, no avoidance and minimization efforts pertaining to CRLF critical habitat will be necessary.

4.1.5.3. PROJECT IMPACTS

The proposed project will not impact CRLF critical habitat.

4.1.5.4. COMPENSATORY MITIGATION

No compensatory mitigation for impacts to CRLF critical habitat will be necessary.

4.1.5.5. CUMULATIVE EFFECTS

No cumulative impacts to CRLF critical habitat are anticipated.

4.2. Special-status Plant Species Occurrences

4.2.1. Discussion of Special-status Plant Species

Potential habitat occurs within the BSA for several special-status plant species. The special-status plant species in Table 5 with suitable habitat present within the BSA have been addressed as a group for conciseness. A brief description of each species considered follows.

Marsh sandwort (*Arenaria paludicola*) is a stoloniferous herb in the pink family (Caryophyllaceae) that is native to California and Washington. It occurs in bogs and ferns along with freshwater marshes and swamps. The species flowers from May to August. It is federally and state listed as endangered and the CNPS considers this species as very rare and seriously endangered in California (List 1B.1). It is known to occur in coastal lake and spring habitats in San Luis Obispo County (CNDDDB, 2006-2008) and is not known to occur in inland locations.

Miles's milk-vetch is an annual herb in the legume family (Fabaceae) that is endemic to California. The species occurs in coastal scrub and grassland habitats on clay or sandy soils. It flowers from March to June. The CNPS considers this species to be rare and fairly endangered in California (List 1B.2).

Obispo Indian paintbrush (*Castilleja densiflora* ssp. *obispoensis*) is an annual herb in the figwort family (Scrophulariaceae) that is endemic to California and found only in San Luis Obispo County. It occurs in meadows and seeps, and valley and foothill annual grassland communities, flowering from April to May. The CNPS considers this species to be rare and fairly endangered in California (List 1B.2).

La Graciosa thistle (*Cirsium loncholepis*) is a perennial herb in the sunflower family (Asteraceae) that is native to California. It occurs in cismontane woodland, coastal dunes, coastal scrub, marshes and swamps, and valley and foothill grasslands on sandy, mesic soil. The species flowers from May to August. It is federally listed as threatened, state listed as endangered, and the CNPS considers this species as rare and seriously endangered in California (List 1B.1). Habitat is considered marginal for this species within the BSA and most known occurrences occur south of Pismo Beach, well south of the BSA.

Pismo clarkia (*Clarkia speciosa* ssp. *immaculata*) is an annual herb in the evening primrose family (Onagraceae) that is endemic to California and found only in San Luis Obispo County. It occurs in chaparral margins and openings, cismontane woodland, and valley and foothill grassland in sandy soils. The species flowers from May to July. Pismo clarkia is a federally endangered and state-listed rare species and the CNPS considers this species as very rare and seriously endangered in California (List 1B.1). It is known to occur in the vicinity of Arroyo Grande, Nipomo, and surrounding areas (CNDDDB, 2006-2008) and is not expected to occur in or near San Luis Obispo.

San Luis Obispo serpentine dudleya (*Dudleya abramsii* ssp. *bettinae*) is a perennial succulent herb in the stonecrop family (Crassulaceae) that is endemic to California and found only in San Luis Obispo County. It occurs in chaparral, coastal scrub, and valley and foothill grassland, on serpentinite and rocky soil. The species blooms from May to July. The CNPS considers this species to be rare and fairly endangered in California (List 1B.2).

Blochman's dudleya (*Dudleya blochmaniae* ssp. *blochmaniae*) is a perennial herb in the Crassulaceae family that is endemic to California. It occurs in coastal bluff scrub,

chaparral, coastal scrub, and valley and foothill grassland, on rocky, often clay or serpentinite soil. The species blooms from April to June. The CNPS considers this species as very rare and seriously endangered in California (List 1B.1).

Kellogg's horkelia (*Horkelia cuneata* ssp. *sericea*) is a perennial herb in the rose family (Rosaceae) that is endemic to California. It occurs in closed-cone coniferous forest, coastal scrub, and maritime chaparral habitats on openings of sandy or gravelly soil. The species flowers from April to September. The CNPS considers this species as very rare and seriously endangered in California (List 1B.1).

Southern California black walnut (*Juglans californica* var. *californica*) is a tree in the walnut family (Juglandaceae) that is a California endemic. It occurs in chaparral, cismontane woodland, and coastal scrub (alluvial) habitats. The species flowers from March to May. There are two sub-species of the California walnut – the northern California black walnut (*J. californica hindsii*) and the southern California black walnut (*J. californica* ssp. *californica*). The northern subspecies occurs mainly north of the San Francisco Bay area. The southern subspecies is widely cultivated in the Santa Lucia Mountains (Hickman, 1993) and is the subspecies assumed to occur within the BSA. The CNPS considers this subspecies to have a limited distribution and is on a “watch list” (List 4.2). This species was observed to occur along the SLO Creek riparian corridor within the BSA.

Jones's layia (*Layia jonesii*) is an annual herb in the sunflower family (Asteraceae) that is a California endemic that occurs in San Luis Obispo and Kern Counties. It occurs in chaparral and valley and foothill grassland habitats on clay or serpentine soils. The species flowers from March to May. The CNPS considers this species to be rare and fairly endangered in California (List 1B.2).

Gambel's water cress (*Rorippa gambelii*) is a rhizomatous herb in the mustard family (Brassicaceae) that is native to California. It occurs in freshwater or brackish marshes and swamps and flowers from April to September. It is federally listed as endangered, state listed at threatened, and the CNPS considers this species as very rare and seriously endangered in California (List 1B.1).

Adobe sanicle (*Sanicula maritima*) is a perennial herb in the carrot family (Apiaceae) that is endemic to San Luis Obispo County. It occurs in chaparral, coastal prairie, meadows and seeps, and valley and foothill grassland habitats on clay and serpentine soil. The species flowers from February to May. The CNPS considers this species as very rare and seriously endangered in California (List 1B.1).

San Bernardino aster (*Symphyotrichum defoliatum*) is a rhizomatous herb in the Asteraceae family that is endemic to California. The species occurs in cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, valley and foothill grassland, near ditches, streams, and springs. It flowers from July to November. The CNPS considers this species as rare and fairly endangered in California (List 1B.2). San Bernardino Aster has been reported in San Luis Obispo County along the roadside of Mountain View Road in Oceano, between Halcyon Road and the Southern Pacific Railroad, but the identification is uncertain and the area may be too far north of the species range (CNDDDB, 2006-2008).

4.2.1.1. SURVEY RESULTS

Floristic surveys were conducted in 2006 during the appropriate flowering periods to enable identification and determine presence or absence of special-status plant species within the BSA. Supplemental botanical inventories were also conducted in April 2008 during field work for the wetland delineation. Freshwater marsh, annual grassland, and coastal scrub habitats were considered to be the habitats that were most likely to support special-status plant species; however, these habitats are marginal within the BSA and may not be within the appropriate elevation limits or have the required soil types to support each of the special-status species considered for this NES.

The only special-status plant species observed within the BSA was southern California black walnut, a CNPS List 4.2 species that occurs at various locations along the SLO Creek riparian corridor. Southern California black walnut occurs on a CNPS watch list and is among the lowest degrees of sensitivity that CNPS considers. Southern California black walnut is fairly common along stream reaches in San Luis Obispo County (Geoff Hoetker, personal observation), and many local specimens of this tree may be the result of plantings by humans. No special-status plant species included in Table 5 were observed in the BSA or are expected to occur.

4.2.1.2. AVOIDANCE AND MINIMIZATION EFFORTS

The following avoidance and minimization measures are recommended for southern California black walnut and other special-status plant species:

1. Avoid impacts to southern California black walnut trees to the extent practicable. If southern California black walnut trees cannot be avoided and must be removed or trimmed during construction, their loss shall be mitigated at a 4:1 restoration ratio for every walnut tree removed and a 2:1 ratio for every walnut tree trimmed

- or otherwise impacted but not removed. If more than 25 percent of a walnut tree must be trimmed, it shall be mitigated at a 4:1 restoration ratio.
2. Other special-status plant species were not observed during floristic surveys and are not expected to occur in the BSA; however, if any special-status plant species are observed in or near work areas during the monitoring of construction, the distribution of special-status plant species shall be mapped, marked off with exclusion zones, and avoided until the appropriate regulatory agencies (e.g., Caltrans, USFWS, and CDFG) are consulted for mitigation options. Should a federally listed plant species be found during monitoring or construction, Caltrans shall be notified so that it can initiate FESA Section 7 discussions with USFWS.

4.2.1.3. PROJECT IMPACTS

The construction of bridge crossings over SLO Creek may require the trimming and/or removal of southern California black walnut trees, which could result in the direct injury or mortality of trees and affect their availability as habitat to animal species. The temporary construction corridor needed to construct the new pathway may also require the trimming of southern California black walnut trees and other trees. Indirect impacts could also occur to root zones of walnut trees.

4.2.1.4. COMPENSATORY MITIGATION

Compensatory mitigation options to offset impacts to riparian trees, including southern California black walnut, are addressed in the conceptual HMMP (refer to Appendix I), which further outlines revegetation and restoration methods.

4.2.1.5. CUMULATIVE EFFECTS

Considered in context with the historic loss of this species in California, cumulative effects to southern California black walnut could be considerable if not mitigated; however, the above mitigation measures and implementation of the final HMMP are expected to be sufficient to mitigate any potential cumulative effects. Cumulative effects for special-status plant species other than southern California black walnut are not expected because they are not expected to occur in the BSA.

4.3. Special-status Animal Species Occurrences

Suitable habitat conditions occur within the BSA for several special-status animal species. The special-status animal species in Table 6 with potential for occurrence within the BSA have been addressed in this section, with some taxa combined as a group for conciseness because they will be subjected to similar potential project-

related impacts. Taxa combined into one section will be protected by similar avoidance and minimization measures.

4.3.1. Discussion of South-central California Coast Steelhead (*Oncorhynchus mykiss irideus*)

Steelhead are the anadromous form of rainbow trout. Steelhead historically ranged from Alaska southward to the California-Mexico border, though current data suggest that the Ventura River is presently the southernmost drainage supporting substantial steelhead runs. Steelhead along the central and southern California represent the southernmost portion of the native steelhead range in North America, having ecologically and physiologically adapted to seasonally intermittent coastal California streams.

All populations of steelhead occurring within the South-Central California Coast ESU Region, which is defined as that geographic region north of the Santa Maria River, northward to (and including) the Pajaro River (and its tributaries), Santa Cruz County, were listed as federally threatened by NMFS in August 1997. South-central California coast steelhead are also considered a California Special Concern (CSC) species by CDFG.

Optimal habitat for steelhead throughout its entire range on the Pacific Coast can generally be characterized by clear, cool water with abundant instream cover (i.e., submerged branches, rocks, logs), well-vegetated stream margins, relatively stable water flow, and a 1:1 pool-to-riffle ratio (Raleigh et al., 1984); however, steelhead are occasionally found in reaches of streams containing habitat that would be considered less than optimal. Steelhead within the central coast region begin migrating up coastal drainages following the first substantial rainfall of the fall season. Spawning typically occurs during the spring in riffle areas that consist of clean, coarse gravels. Deposited eggs incubate for approximately three to four weeks, with hatched fry rearing within the gravel interstices for an additional two to three weeks. Emergent fry rear at the stream margins near overhanging vegetation. Juveniles (smolts), after rearing for one to three years within freshwater, and post-spawning adults, outmigrate to the ocean from March to July, depending on streamflows.

4.3.1.1. SURVEY RESULTS

Steelhead are known to inhabit SLO Creek and were readily visible during surveys conducted for this NES. The SLO Creek watershed is composed of the main channel SLO Creek as well as numerous tributaries. Most tributaries are small and become dry

or severely intermittent throughout the summer months, and thus provide little or no rearing habitat for juvenile steelhead. While several important tributaries do exist that are thought to provide significant rearing habitat to juvenile fish, other biologists have identified Davenport Creek and the East Fork of SLO Creek as unsuitable habitat for steelhead rearing during the summer survey due to extreme low flows with poor water quality in widely isolated pools (Thomas R. Payne & Associates, 2004). These conditions were also apparent during the surveys SWCA biologists conducted for this NES.

SLO Creek is an important component of the south-central California coast steelhead ESU (Thomas R. Payne & Associates, 2004). Based on pool sampling, significant numbers of fry and juvenile steelhead occur in the main channel of SLO Creek, as well as selected tributaries. The total number of juvenile steelhead within the entire San Luis Obispo watershed is unknown, but is undoubtedly somewhat greater than the estimated abundance in pool habitats alone.

4.3.1.2. AVOIDANCE AND MINIMIZATION EFFORTS

Incorporating the measures in Chapter 4.1.1.2 will serve to avoid or minimize effects on aquatic habitats. In addition, the following measures will serve to further avoid or minimize impacts to steelhead:

1. Prior to construction, a component including a description of south-central California coast steelhead, its ecology, its legal status, and the need for conservation of the species shall be integrated into a worker environmental training program. All construction personnel conducting in-stream work shall participate in the training program conducted by a qualified biologist.

4.3.1.3. PROJECT IMPACTS

The project may affect, but is not likely to adversely affect, south-central California coast steelhead. Construction of bridges across SLO Creek could result in the removal of riparian cover that provides thermoregulation for steelhead; although, this amount is estimated to be minimal. No in-stream work will be required. While the removal of trees to accommodate the new bridges may slightly alter shading and micro-climate characteristics of the riparian corridor, the bridge themselves would create shade over the section of the creek flowing underneath, and shading differences are likely to be negligible. The loss of trees to clear space for the bridge crossings will also be mitigated with replacement trees, which will offer shade and temperature regulation in other areas along SLO Creek.

4.3.1.4. COMPENSATORY MITIGATION

Impacts to natural habitats, including those utilized by steelhead, will be mitigated by the measures included in Chapter 4.1.1.2 and the implementation of the final HMMP.

4.3.1.5. CUMULATIVE EFFECTS

Historical land management practices in and adjacent to SLO Creek have resulted in a deterioration of habitat quality for steelhead and other aquatic organisms that inhabit the drainage. During recent years, restoration activities have been conducted along SLO Creek in an attempt to improve its water and habitat quality. Although implementation of the proposed project would result in the loss of some riparian vegetation, SLO Creek will ultimately benefit from habitat restoration and enhancement through the implementation of the final HMMP.

According to the County of San Luis Obispo, CDFG, and the LCSLO, current or reasonably foreseeable, non-federal actions within the BSA expected to affect steelhead or steelhead critical habitat include routine, ongoing agricultural practices and continued implementation of the Waterway Management Plan for SLO Creek (City of San Luis Obispo and County of San Luis Obispo, 2003).

4.3.2. Discussion of California Tiger Salamander (*Ambystoma californiense*)

The California tiger salamander (*Ambystoma californiense*) (CTS) is a federal threatened species and is considered a CSC species by the CDFG. Critical habitat has been designated for the species, but not within the BSA. It is a large terrestrial salamander with several white or pale yellow spots or bars on jet-black skin. The species ranges from Sonoma County, south to northwest Tulare County, and in the Coast Range south to Buellton and Lompoc in the Santa Ynez drainage. The CTS can be found from sea level to about 3,600 ft (1,067 m) (Jennings and Hayes, 1994; CNDDDB, 2006-2008).

Adult CTS spend most of their life in upland habitats with burrows. They cannot dig their own burrows, and as a result their presence is associated with burrowing mammals such as ground squirrels. CTS use both occupied and unoccupied burrows (USFWS, 2004). During the mating season, these salamanders move to nearby vernal pools and similar water bodies. Breeding pools are typically large, and may include stock ponds if they are managed to preclude predatory fish species such as sunfish (Family Centrarchidae) (USFWS, 2004).

4.3.2.1. SURVEY RESULTS

No CTSs were observed during reconnaissance surveys of the BSA; however, no USFWS protocol CTS surveys were conducted. According to the CNDDDB, the nearest occurrence record for CTS is near the vicinity of San Luis Obispo; however, this is a museum record from 1939 and noted herpetologist M. R. Jennings considers the site extirpated (CNDDDB, 2006-2008). There are no other known nearby occurrence records for this species.

SLO Creek does not support suitable breeding habitat for CTS due to perennial flows within the channel and the presence of exotic predators such as Centrarchid fishes and crayfish. Marginal upland habitat for CTS may reside within grasslands in the BSA, but they are likely to be unoccupied by the species as there is no nearby suitable breeding habitat. No vernal pool habitat occurs in the BSA. Protocol surveys are not necessary for this project.

4.3.2.2. AVOIDANCE AND MINIMIZATION EFFORTS

As CTS is not expected to inhabit areas in or near the BSA, no avoidance and minimization measures are necessary.

4.3.2.3. PROJECT IMPACTS

The project will have no effect on CTS. The basis for this determination is that it is highly unlikely that CTS uses aquatic areas within the BSA for breeding and/or adjacent uplands for estivation. In addition, there are no known recent nearby occurrence records for the species.

4.3.2.4. COMPENSATORY MITIGATION

No modification to mitigate effects to CTS is proposed.

4.3.2.5. CUMULATIVE EFFECTS

No cumulative effects to CTS are expected as a result of the proposed action. There are no other known actions that are reasonably certain to occur in the action area that would contribute to additional cumulative effects.

4.3.3. Discussion of Coast Range Newt (*Taricha torosa torosa*)

The Coast Range newt (*Taricha torosa torosa*) is considered a CSC species by the CDFG. It is a moderate-sized, dark brown salamander with a bright yellow-orange to orange belly, and thick textured skin that exhibits papillation during its terrestrial phase, reverting to a relatively smooth condition during its aquatic phase. Historically, Coast Range newts have been distributed in coastal drainages from central Mendocino

County in the north Coast Ranges, south to Boulder Creek, San Diego County (Stebbins, 2003). Populations in southern California are very fragmented. The known elevation range for Coast Range newt extends from near sea level to 6,000 ft (1,830 m) (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, although coast range newts may enter ponds as early as December. Egg masses are attached to rocks, stems, or root masses and larvae take approximately three to six months to reach metamorphosis and feed mainly on aquatic invertebrates. Adult newts eat a wide variety of aquatic and terrestrial invertebrates.

4.3.3.1. SURVEY RESULTS

No Coast Range newts were observed during surveys of the BSA. While Coast Range newts have been observed in the upper watershed of SLO Creek near Cuesta Grade (pers. obs.), there are no CNDDDB records for Coast Range newt in or near the reach of SLO Creek that traverses the BSA (CNDDDB, 2006-2008). Habitat conditions are likely marginal at best for Coast Range newts in the BSA, due to water conditions that are likely too deep and turbid. The presence of exotic predators in lower SLO Creek may also preclude Coast Range newt presence in the BSA.

4.3.3.2. AVOIDANCE AND MINIMIZATION EFFORTS

Coast Range newts are not expected to be encountered in the BSA during construction activities. The avoidance and minimization efforts as outlined in this NES will be sufficient to avoid water quality impacts and other habitat impacts that could affect Coast Range newt. In addition, the following avoidance and minimization measure is recommended in the event that Coast Range newts are encountered within the BSA during construction:

1. Prior to construction, the applicant shall obtain a letter of permission from CDFG to relocate Coast Range newts and other CSC species from work areas encountered during construction within the ADI as necessary. Qualified biologists shall conduct a pre-construction survey for Coast Range newts in areas along and adjacent to the SLO Creek corridor where construction will occur. The qualified biologists shall capture and relocate any Coast Range newts (if present) or other sensitive aquatic species to suitable habitat outside of the area of impact.

Observations of CSC species or other special-status species shall be documented on CNDDDB forms and submitted to CDFG upon project completion

4.3.3.3. PROJECT IMPACTS

The use and movement of construction equipment, construction debris, vegetation removal, and worker foot traffic could produce effects that result in direct impacts to Coast Range newts. Indirect effects of construction activities, including noise and vibration, may cause Coast Range newts to temporarily abandon habitat adjacent to work areas. This disturbance may increase the potential for predation and desiccation if Coast Range newts abandon shelter sites. The indirect effects of erosion and sedimentation could also impact Coast Range newts.

4.3.3.4. COMPENSATORY MITIGATION

Impacts to natural habitats will be mitigated by the implementation of the final HMMP. No additional compensatory mitigation has been proposed.

4.3.3.5. CUMULATIVE EFFECTS

If project-related impacts to Coast Range newt were to occur, it is estimated that the cumulative effects of these impacts would not result in their jeopardy or extinction, because impacts will be mostly temporary, permanent impacts will be minimal, and the above measures and implementation of the final HMMP are anticipated to be sufficient to mitigate impacts. Restoration plantings as mitigation to offset the necessary temporary loss of riparian vegetation to create space for the new bridge will be consistent with the effort to restore the SLO Creek riparian corridor and will have a beneficial impact of improving Coast Range newt habitat.

4.3.4. Discussion of California Red-legged Frog (*Rana aurora draytonii*)

The CRLF was formally listed by the USFWS as federally threatened in 1996, and is considered a CSC species by CDFG. Critical habitat has been designated for the subspecies, but not within the BSA. The CRLF is recognized by the reddish color that forms on the underside of its legs and belly and the presence of a diagnostic dorsolateral fold. The subspecies historically ranged from Marin County southward to northern Baja California (Stebbins, 1972; 2003). Monterey, San Luis Obispo, and Santa Barbara counties support the largest remaining CRLF populations within California.

The CRLF prefers aquatic habitats with little or no flow, the presence of surface water to at least early June, surface water depths to at least 2.3 ft (0.7 m), and the presence of

fairly sturdy underwater supports such as cattails. The largest densities of this subspecies are typically associated with dense stands of overhanging willows and an intermixed fringe of sturdy emergent vegetation (Jennings and Hayes, 1994). The CRLF typically breeds from January to July, with peak breeding occurring in February. Eggs are attached to subsurface vegetation, and hatched tadpoles require 11 to 20 weeks to metamorphose. It is estimated that only one percent of eggs actually reach adulthood. Riparian habitat degradation, urbanization, predation by bullfrogs, and historic market harvesting have all reportedly contributed to its population decline.

4.3.4.1. SURVEY RESULTS

A CRLF Site Assessment Report for areas within the BSA was submitted to USFWS on April 2, 2007, in which SWCA biologists determined that suitable habitat for CRLF occurs within the BSA. No CRLFs were observed during the reconnaissance surveys of the BSA; however, on May 14, 2007, USFWS indicated that based on the information provided in the CRLF Site Assessment Report, protocol CRLF surveys would not be necessary and presence of CRLF in the project BSA could be inferred (Elvin, 2007).

4.3.4.2. AVOIDANCE AND MINIMIZATION EFFORTS

Although CRLF has not been observed in the BSA during reconnaissance surveys, there is suitable habitat and CRLF presence should be inferred within the BSA (Elvin, 2007). The proposed project has the potential to impact CRLF and its habitat. Recommended avoidance and minimization measures, as provided by the Programmatic Biological Opinion for Projects Funded or Approved under the Federal Aid Program (USFWS, 2011) include the following:

1. Only USFWS-approved biologists shall participate in activities associated with the capture, handling, and monitoring of CRLFs.
2. Ground disturbance shall not begin until written approval is received from the USFWS that the biologist is qualified to conduct the work. Caltrans shall request approval of the biologist from USFWS.
3. A USFWS-approved biologist shall survey the project area no more than 48 hours before the onset of work activities. If any life stage of the CRLF is found and these individuals are likely to be killed or injured by work activities, the approved biologist shall be allowed sufficient time to move them from the site before work activities begin. The USFWS-approved biologist shall relocate the CRLFs the

- shortest distance possible to a location that contains suitable habitat and will not be affected by the activities associated with the project. The USFWS-approved biologist shall maintain detailed records of any individuals that are moved (e.g., size, coloration, any distinguishing features, photographs [digital preferred]) to assist him or her in determining whether translocated animals are returning to the point of capture.
4. Before any activities begin on a project, a USFWS-approved biologist shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of the CRLF and its habitat, the specific measures that are being implemented to conserve the CRLF for the current project, and the boundaries within which the project may be accomplished. Brochures, books, and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions.
 5. A USFWS-approved biologist shall be present at the work site until all CRLFs have been removed, workers have been instructed, and disturbance of the habitat has been completed. After this time, the state or local sponsoring agency shall designate a person to monitor on-site compliance with all minimization measures. The USFWS-approved biologist shall ensure that this monitor receives the training outlined in measure 4 above and in the identification of CRLFs. If the monitor or the USFWS-approved biologist recommends that work be stopped because CRLFs would be affected to a degree that exceeds the levels anticipated by Caltrans and the USFWS during the review of the proposed action, they shall notify the resident engineer (the engineer that is directly overseeing and in command of construction activities) immediately. The resident engineer shall either resolve the situation by eliminating the effect immediately or require that all actions that are causing these effects be halted. If work is stopped, Caltrans and the USFWS shall be notified as soon as is reasonably possible.
 6. During project activities, all trash that may attract predators shall be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris shall be removed from work areas.
 7. All refueling, maintenance and staging of equipment and vehicles shall occur at least 60 ft (18 m) from the riparian habitat or water bodies and not in a location from where a spill would drain directly toward aquatic habitat. The monitor shall ensure contamination of habitat does not occur during such operations. Prior to

- the onset of work, Caltrans shall ensure that a plan is in place for prompt and effective response to any accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take shall a spill occur.
8. Project areas shall be revegetated with an assemblage of native riparian, wetland, and upland vegetation suitable for the area. Locally collected plant materials shall be used to the extent practicable. Invasive, exotic plants shall be controlled to the maximum extent practicable. This measure shall be implemented in all areas disturbed by activities associated with the project, unless the USFWS and Caltrans determine that it is not feasible or practical. (For example, an area disturbed by construction that would be used for future activities need not be revegetated.)
 9. Habitat contours shall be returned to their original configuration at the end of the project activities. This measure shall be implemented in all areas disturbed by activities associated with the project, unless the USFWS and Caltrans determine that it is not feasible or modification of original contours would not benefit the CRLF.
 10. The number of access routes, size of staging areas, and the total area of activity shall be limited to the minimum necessary to achieve the project. Environmentally Sensitive Areas shall be established to confine access routes and construction areas to the minimum area necessary to complete construction, and minimize the impact to CRLF habitat; this goal includes locating access routes and construction areas outside of wetlands and riparian areas to the maximum extent practicable.
 11. Caltrans will attempt to schedule work for times of the year when impacts to the CRLF 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 CRLFs 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 Caltrans and the USFWS during project planning shall be used to assist in scheduling work activities to avoid sensitive habitats during key times of year.

12. To control sedimentation during and after project implementation, Caltrans shall implement BMPs outlined in any authorizations or permits, issued under the authorities of the Clean Water Act received for the project. If BMPs are ineffective, Caltrans shall attempt to remedy the situation immediately, in consultation with the USFWS.
13. If a work site is to be temporarily dewatered by pumping, intakes shall be completely screened with wire mesh not larger than 0.2 inch (5 mm) to prevent CRLFs from entering the pump system. Water shall be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. The methods and materials used in any dewatering shall be determined by Caltrans in consultation with the USFWS on a site-specific basis. Upon completion of construction activities, any diversions or barriers to flow shall be removed in a manner that would allow flow to resume with the least disturbance to the substrate. Alteration of the streambed shall be minimized to the maximum extent possible; any imported material shall be removed from the streambed upon completion of the project.
14. Unless approved by the USFWS, water shall not be impounded in a manner that may attract CRLFs.
15. A USFWS-approved biologist shall permanently remove any individuals of exotic species, such as bullfrogs (*Rana catesbeiana*), crayfish, and centrarchid fishes from the project area, to the maximum extent possible. The USFWS-approved biologist shall be responsible for ensuring his or her activities are in compliance with the California Fish and Game Code.
16. If Caltrans demonstrates that the disturbed areas have been restored to conditions that allow the site to function as habitat for CRLF, these areas will not be included in the amount of total habitat permanently disturbed.
17. The project site 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 extent practicable. This measure will be implemented in all areas disturbed by activities associated with the project, unless the service and Caltrans determine that it is not feasible or practicable.

18. The Service approved biologist shall follow the fieldwork code of practice developed by the Declining Amphibian Task Force at all times.
19. Caltrans will not use herbicides as the primary method to control invasive, exotic plants. However, If 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 CRLF.
 - a) Caltrans will not use herbicides during the breeding season for CRLF.
 - b) Caltrans will conduct surveys for CRLF immediately prior to the start of herbicide use, If found, CRLF 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 a project site.
 - e) All precautions will be taken to ensure that no herbicide is applied to native vegetation.
 - f) Herbicide will not be applied on or near open water surfaces (no closer than 60 feet from open water)
 - g) Foliar applications of herbicide will not occur when wind speed is in excess of 3 miles per hour.
 - h) No herbicides will be applied within 24-hours of forecasted rain.
 - i) Application of all herbicides will be done by a qualified Caltrans staff or contractors to ensure that overspray is minimized, that all applications is made in accordance with the label recommendations, and with implementation of all required and reasonable safety measures. A safe dye will be added to the mixture to visually denote treated sites. Application of herbicides will be consistent with the U.S Environmental 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 areas. Caltrans will ensure that contamination of aquatic habitat does not occur during such operations. Prior to the onset of work, Caltrans will ensure that a plant 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.

4.3.4.3. PROJECT IMPACTS

Direct impacts to CRLF adults and sub-adults could potentially include injury or mortality in adjacent uplands from construction equipment, construction debris, and worker foot traffic. Indirect effects of construction activities, including noise and vibration, may cause CRLFs to temporarily 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. The removal of any encountered exotic wildlife species from SLO Creek may produce a beneficial effect by reducing predation and competition pressures for CRLF.

The project may affect, and is likely to adversely affect, CRLF. Although no CRLFs were observed during reconnaissance surveys within the BSA, USFWS has indicated that CRLF presence within the BSA should be inferred. There would be a potential for take of CRLF during construction in upland dispersal habitat adjacent to SLO Creek and any necessary capture and relocation of CRLF. The proposed project will also create temporary and/or permanent impacts to vegetation along SLO Creek, which may offer shading and microhabitat temperature regulation in the channel; however, the loss of trees will be mitigated with replacement trees. The potential for take of CRLF is believed to be very low, as CRLF are believed to be uncommon along the SLO Creek corridor.

4.3.4.4. COMPENSATORY MITIGATION

The previously described avoidance and/or minimization measures for impacts to aquatic habitat 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 and their habitats, based on agency consultations. USFWS will also list measures for any compensatory mitigation upon their review of the project Biological Assessment.

4.3.4.5. CUMULATIVE EFFECTS

As previously described, historical land management practices in and adjacent to SLO Creek have resulted in a deterioration of habitat quality for aquatic organisms that inhabit the drainage. Although implementation of the proposed project would result in the permanent loss of a minor quantity of CRLF habitat, SLO Creek will ultimately benefit from habitat restoration and enhancement through the implementation of the final HMMP.

Considered in context with the historic reduction in numbers of CRLF and loss of CRLF habitat along the central coast of California, implementation of the proposed project would result in cumulative effects to CRLF in SLO Creek; however, these cumulative effects are expected to be minor if appropriate avoidance and minimization measures are implemented.

According to the County of San Luis Obispo, CDFG, and the LCSLO, current or reasonably foreseeable, non-federal actions within the BSA expected to affect CRLF or CRLF critical habitat include routine, ongoing agricultural practices and continued implementation of the Waterway Management Plan for SLO Creek (City of San Luis Obispo and County of San Luis Obispo, 2003).

4.3.5. Discussion of Southwestern Pond Turtle (*Actinemys marmorata pallida*)

The SWPT is considered a CSC species by the CDFG. The SWPT historically has been present in most Pacific slope drainages between the Oregon and Mexican borders (Jennings and Hayes, 1994). Pond turtles live where water persists year-round in ponds along foothill streams or in broad washes near the coast. The ponds favored by turtles typically support emergent and floating vegetation such as cattails and algal mats. They also on half-submerged logs, rocks, or flat shorelines close to the edge of water. The SWPT is mostly aquatic, leaving its aquatic site to reproduce, estivate, and over-winter. The SWPT may overwinter on land or in water, but may remain active in water during the winter season. In warmer areas along the central and southern California coast, pond turtles may be active all year (Zeiner et al., 1990).

The SWPT prefers quiet waters of ponds, lakes, streams, and marshes. This subspecies inhabits reaches of streams that contain deep pools, from 3.0 to 5.2 (0.9 to 1.6 m) in depth (Stebbins, 1972). They typically inhabit the largest and deepest pools along streams containing large amounts of basking sites, including fallen trees and boulders. This species can occasionally be found crawling across creek riffles or

traversing open fields during transient movements. Upland nesting sites are required near the aquatic site, and nests are typically located in open, clay or silt slopes to ensure proper incubation temperature (Jennings and Hayes, 1994). Nesting sites may be more than 1,312 ft (400 m) from the aquatic site, but most nests are within 656 ft (200 m).

4.3.5.1. SURVEY RESULTS

No SWPTs were observed during reconnaissance surveys of the BSA. Suitable habitat for SWPTs occurs along SLO Creek.

4.3.5.2. AVOIDANCE AND MINIMIZATION EFFORTS

The measures discussed in previous sections for aquatic special-status species are also applicable to SWPT to avoid or minimize impacts to the subspecies. In addition, the following measure applying specifically to SWPT is recommended:

1. Prior to construction, the applicant shall obtain a letter of permission from CDFG to relocate SWPTs and other CSC species from work areas encountered during construction within the BSA as necessary. Qualified biologists shall conduct a pre-construction survey for SWPTs in areas along and adjacent to the SLO Creek corridor where construction will occur. The qualified biologists shall capture and relocate any SWPTs (if present) or other sensitive aquatic species to suitable habitat outside of the area of impact. Observations of CSC species or other special-status species shall be documented on CNDDDB forms and submitted to CDFG upon project completion.

4.3.5.3. PROJECT IMPACTS

Potential project impacts to SWPT are similar to those described for CRLF and other aquatic species. The use and movement of construction equipment, construction debris, vegetation removal, and worker foot traffic could produce effects that result in direct impacts to SWPTs. Indirect effects of construction activities, including noise and vibration, may cause SWPTs to temporarily abandon habitat adjacent to work areas. This disturbance may increase the potential for predation if SWPTs abandon shelter sites. The indirect effects of erosion and sedimentation could also impact SWPTs.

4.3.5.4. COMPENSATORY MITIGATION

The previously described avoidance and/or minimization measures for impacts to CRLF and aquatic habitats will be sufficient to mitigate potential impacts to SWPT

and its habitat. The final HMMP will detail revegetation and restoration methods for habitats. No additional compensatory mitigation is proposed.

4.3.5.5. CUMULATIVE EFFECTS

If project-related impacts to SWPT were to occur, it is estimated that the cumulative effects of these impacts would not result in jeopardy or extinction of the subspecies, because impacts will be mostly temporary, permanent impacts will be minimal, and the above mitigation measures and implementation of the HMMP are anticipated to be sufficient to mitigate impacts. Restoration plantings as mitigation to offset the necessary temporary loss of riparian vegetation to create space for the new bridge will be consistent with the effort to restore the SLO Creek riparian corridor and will have a beneficial impact of improving SWPT habitat.

4.3.6. Discussion of Silvery Legless Lizard (*Anniella pulchra pulchra*)

The silvery legless lizard is considered a CSC species by the CDFG. It is an elusive, fossorial (sub-surface), mostly coastally distributed lizard ranging from the San Francisco Bay area southward into northern Mexico (Zeiner et al., 1990). Suitable habitat includes loose soils of coastal dune, valley foothill woodland, chaparral, and coastal scrub areas, where the species forages at the bases of vegetation and under leaf litter. Little is known about its life history. The reproductive season begins with mating activities in late spring or early summer. Live young are born in September, October, or even November. Two subspecies of legless lizard are recognized in California: the silvery legless lizard, and the black legless lizard (*A. p. nigra*).

4.3.6.1. SURVEY RESULTS

No silvery legless lizards were observed during reconnaissance surveys of the BSA. Suitable habitat occurs in riparian and coastal scrub habitats in the BSA where loose sandy soils and surface duff are prominent.

4.3.6.2. AVOIDANCE AND MINIMIZATION EFFORTS

The following measure applying specifically to silvery legless lizard is recommended.

1. Prior to construction, the applicant shall obtain a letter of permission from CDFG to relocate silvery legless lizards and other CSC species from work areas encountered during construction within the BSA as necessary. Qualified biologists shall capture and relocate any silvery legless lizards (if present) or other sensitive species to suitable habitat outside of the area of impact if they are unearthed during construction activities. Observations of CSC species or other

special-status species shall be documented on CNDDDB forms and submitted to CDFG upon project completion.

4.3.6.3. PROJECT IMPACTS

Ground disturbing activities such as grading, other earth movement, or worker foot traffic within the BSA could result in direct impacts to silvery legless lizard, which could result in injury or death to individual lizards if they are found occupying soils in certain habitats. Temporary loss of silvery legless lizard habitat could result from the displacement of soil during construction. Silvery legless lizards could also be subjected to the indirect effects of noise and vibration disturbance.

4.3.6.4. COMPENSATORY MITIGATION

Implementation of the HMMP will mitigate impacts to habitats within the BSA. No additional compensatory mitigation is proposed.

4.3.6.5. CUMULATIVE EFFECTS

If project-related impacts to silvery legless lizard were to occur, it is estimated that the cumulative effects of these impacts would not result in jeopardy or extinction of the subspecies, because impacts will be mostly temporary, permanent impacts will be minimal, and the above mitigation measures and implementation of the HMMP are anticipated to be sufficient to mitigate impacts. Restoration plantings as mitigation to offset the necessary temporary loss of riparian vegetation to create space for the new bridge will be consistent with the effort to restore the SLO Creek riparian corridor and will have a beneficial impact of improving silvery legless lizard habitat.

4.3.7. Discussion of Two-striped Garter Snake (*Thamnophis hammondi*)

The two-striped garter snake is considered a CSC species by the CDFG. It is a medium-sized garter snake with a variable dorsal coloration of olive, brown, or brownish gray, with a single yellow-orange lateral stripe on each side of the body (Jennings and Hayes, 1994). There is no dorsal stripe, and the ventral surface is pale cream-colored to salmon, becoming white toward the throat. The lateral stripes may be lacking on melanistic individuals, which are common in the northern third of the species range (Bellemin and Stewart, 1977; Stewart, 2003). Melanistic individuals along the Central Coast are black underneath with a white throat; however, there are several other morphs found in the area (Stewart, 2003). The dark color of these specific morphs may be a selective factor that allows them to blend in with exposed root systems (Stewart, 2003).

The two-striped garter snake occurs mainly along Coast Range streams from Monterey Bay south to Baja California (Stebbins, 2003; Stewart, 2003). Its elevational range extends from sea level to approximately 2,500 meters. An extremely aquatic species, the two-striped garter snake uses water for both predation and escape from predators. Its habitat includes perennial and intermittent streams with rocky substrate bordered by dense vegetation (Jennings and Hayes, 1994). The species is infrequently found in streams or stock ponds lacking dense riparian vegetation along the banks. It is generally found near streams or stock ponds in the summer and occupies upland coastal sage scrub and grassy locations near its summer range in the winter (Jennings and Hayes, 1994). These snakes may also overwinter in small mammal burrows (Rathbun et al., 1993). During the day, this garter snake often basks on streamside rocks or on densely vegetated stream banks. When disturbed, it usually retreats rapidly to water. In milder areas, mammal burrows and surface objects such as rocks and rotting logs serve as winter refuges. The species has been found up to one mile from aquatic areas and can disperse across ridges (Stewart, 2003). It feeds on fish and other aquatic organisms.

4.3.7.1. SURVEY RESULTS

No two-striped garter snakes were observed during reconnaissance surveys of the BSA. Suitable habitat occurs along the aquatic habitat of SLO Creek.

4.3.7.2. AVOIDANCE AND MINIMIZATION EFFORTS

The measures discussed in previous sections for aquatic special-status species are also applicable to two-striped garter snake to avoid or minimize impacts to the subspecies. In addition, the following measure applying specifically to two-striped garter snake is recommended.

1. Prior to construction, the applicant shall obtain a letter of permission from CDFG to relocate two-striped garter snake and other CSC species from work areas encountered during construction within the BSA as necessary. Qualified biologists shall conduct a pre-construction survey for two-striped garter snakes in areas along and adjacent to the SLO Creek corridor where construction will occur. The qualified biologists shall capture and relocate any two-striped garter snakes (if present) or other sensitive aquatic species to suitable habitat outside of the area of impact. Observations of CSC species or other special-status species shall be documented on CNDDDB forms and submitted to CDFG upon project completion.

4.3.7.3. PROJECT IMPACTS

Potential project impacts to two-striped garter snake are similar to those described for CRLF and other aquatic species. The use and movement of construction equipment, construction debris, vegetation removal, and worker foot traffic could produce effects that result in direct impacts to two-striped garter snakes. Indirect effects of construction activities, including noise and vibration, may cause two-striped garter snakes to temporarily abandon habitat adjacent to work areas. This disturbance may increase the potential for predation and desiccation if Coast Range newts abandon shelter sites. The indirect effects of erosion and sedimentation could also impact two-striped garter snakes.

4.3.7.4. COMPENSATORY MITIGATION

The previously described avoidance and/or minimization measures for impacts to aquatic habitat will be sufficient to mitigate potential impacts to two-striped garter snake and its habitat. The final HMMP will detail revegetation and restoration methods for habitats. No additional compensatory mitigation is proposed.

4.3.7.5. CUMULATIVE EFFECTS

If project-related impacts to two-striped garter snake were to occur, it is estimated that the cumulative effects of these impacts would not result in jeopardy or extinction of the species, because impacts will be mostly temporary, permanent impacts will be minimal, and the above mitigation measures and implementation of the HMMP are anticipated to be sufficient to mitigate impacts. Restoration plantings as mitigation to offset the necessary temporary loss of riparian vegetation to create space for the new bridge will be consistent with the effort to restore the SLO Creek riparian corridor and will have a beneficial impact of improving two-striped garter snake habitat.

4.3.8. Discussion of Cooper’s Hawk (*Accipiter cooperii*), Sharp-shinned Hawk (*Accipiter striatus*), White-tailed Kite (*Elanus leucurus*), Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*), Loggerhead Shrike (*Lanius ludovicianus*), Least Bell’s vireo (*Vireo bellii pusillus*), Southwestern Willow Flycatcher (*Empidonax traillii extimus*), Purple Martin (*Progne subis*), Yellow Warbler (*Dendroica petechia brewsteri*), Yellow-breasted Chat (*Icteria virens*), and Other Nesting Birds (Class Aves)

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

The Cooper’s hawk is considered a CSC species by the CDFG. It is a fairly large accipiter hawk that ranges throughout the United States and is widely distributed throughout California. This species is a resident of San Luis Obispo County, nesting and foraging in and near deciduous riparian areas. Adults are slender, crow-sized birds with short, rounded wings and a long, white-tipped tail rounded at the tip. The Cooper’s hawk occupies forests and woodlands, especially near edges. It is rarely found in areas without dense tree stands or patchy woodland habitat. Nests are built in deciduous trees usually 20 to 50 ft (6 to 15 m) above ground (Zeiner, et al., 1990). Breeding occurs March to August, peaking from May to July (Baicich and Harrison, 1997). Incubation lasts 35 to 65 days, and young hatch and fledge approximately five to eight weeks later. Prey includes mostly birds and small mammals.

The sharp-shinned hawk is considered a CSC species by the CDFG. It is a small accipiter hawk with a grayish back and a squared-off, banded tail, in comparison to the more rounded off tail of the larger Cooper’s hawk. This species formerly bred in small numbers throughout much of northern California and in very small numbers in all the mountain ranges of southern California as far south as the Cuyamaca Mountains, San Diego County. The current breeding population is greatly reduced from former levels. This species roosts in intermediate to high-canopy forest or riparian areas. Sharp-shinned hawks usually nest within 275 ft (90 m) of water. The nest is a platform or cup in dense foliage against a trunk, or toward the center of a tree, usually 6 to 80 ft (2 to 24 m) above ground. The breeding season is from April through August, peaking in late May to July. Incubation lasts 34 to 35 days, and young hatch and fledge approximately 60 days later. Sharp-shinned hawks feed

mainly on small birds, but will also take small mammals, insects, reptiles, and amphibians.

The white-tailed kite is considered a Fully Protected species by the State of California Fish and Game Code. It is a yearlong resident ranging throughout valley and coastal lowlands in California, and most commonly, near agricultural areas. Within San Luis Obispo County, this species is considered an uncommon resident. Nesting and roosting occurs in dense, broad-leaved deciduous groves of trees. Breeding occurs from February-October, peaking in May-August. Its eggs (typically four to five) are incubated for about 28 days, with the young subsequently fledging 35 to 40 days thereafter. White-tailed kites prey chiefly on voles and other small diurnal mammals, and occasionally on birds, insects, amphibians, and reptiles.

The western yellow-billed cuckoo is a federal candidate for listing and a state endangered species. It is a casual spring and fall transient in SLO County (Edell, 2004). Although its historic status within the county is unknown, it was likely a regular breeder in large cottonwood-willow riparian woodlands. There are only eight San Luis Obispo County records for the species over the last fifty years, two of which pertain to nesting birds. The six recent non-breeding records are from Morro Bay (1961), Los Osos (1980), Morro Bay (1989), Carrizo Plain (1991), Oso Flaco Lake (1999), and San Simeon Creek (1999). This species was probably a breeder in dense willow and other floodplain habitats in San Luis Obispo County until the 1930s and possibly even later (Edell, 2004). The County's two nesting records involve a fledgling collected in San Luis Obispo in 1921 (San Bernardino County Museum) and an egg set taken in 1932 at "Mile's Station" in upper Avila Valley, which is incorrectly mapped by the CNDDDB as a City record (Edell, 2004). There are no known recent nesting records in San Luis Obispo County and there are no known breeding locations outside of the currently known breeding locations, none of which occur in San Luis Obispo County (Edell, 2004). The subspecies is not expected to nest within the BSA or otherwise be impacted by the proposed project.

The loggerhead shrike is considered a CSC species by the CDFG. It is a medium-sized passerine (perching) bird that ranges from southern Canada to southern Mexico and from the Gulf States west into California. This species prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches. The loggerhead shrike is the only known predatory songbird. The species preys on vertebrates and invertebrates, and often impale their prey on barbed wire or trees because they lack talons or claws. Their diet consists primarily of insects, amphibians, and small

mammals and birds. Nests are built on a stable branch in a densely foliated shrub or tree, usually well-concealed and 1.3 to 50 ft (0.4 to 15 m) above ground. Females lay four to eight eggs from March into May. Incubation lasts 14 to 15 days and young fledge in 18 to 19 days (Zeiner et al. 1990).

The least Bell's vireo (LBV) is a federal and state endangered species. Critical habitat has been designated for the species, but not within the BSA. 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. Historically, the 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, the 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. LBVs 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 and bound at the rim. 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 species bred north of Santa Barbara County at the San Joaquin River National Wildlife Refuge in 2005 and 2006. In 1983 three territorial males were along a six-mile stretch of the Salinas River in Monterey County and a singing male was identified in San Luis Obispo County near San Miguel a couple of years ago (Edell, 2008); however, habitat is more important than the known distribution, and the riparian corridor of SLO Creek is not suitable for LBV and the subspecies is not expected to nest within the BSA or otherwise be impacted by the proposed project.

Least Bell's vireos require 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 least Bell's vireo 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 3-6 feet of the ground, where nests are typically placed; and, 2) a dense, stratified canopy, which is needed for foraging (USFWS, 1998). This type of stratified riparian habitat structure with dense cover near the ground does not occur along the SLO Creek riparian corridor within the BSA.

The southwestern willow flycatcher is a federal and state endangered species. The southwestern willow flycatcher breeding range includes southern California (from the Santa Ynez River south), Arizona, New Mexico, extreme southern portions of Nevada and Utah, extreme southwest Colorado, and western Texas. Records of probable breeding southwestern willow flycatchers in Mexico are rare and restricted to extreme northern Baja California and Sonora.

The southwestern willow flycatcher breeds in dense riparian habitats along rivers, streams, or other wetlands. The vegetation can be dominated by dense growths of willows (*Salix* sp.), mule fat (*Baccharis salicifolia*), or other shrubs and medium-sized trees. There may be an overstory of cottonwood (*Populus* sp.), tamarisk (*Tamarix* sp.), or other large trees, but this is not always present. In some areas, the flycatcher will nest in habitats dominated by tamarisk and Russian olive (*Eleagnus angustifolia*). One of the most important characteristics of the habitat is the presence of dense vegetation, usually throughout all vegetation layers present (USFWS, 2005). The species is not expected to nest within the BSA or otherwise be impacted by the proposed project.

The purple martin is considered a CSC species by the CDFG. It is a dark purple-black swallow. At one time, the species was a fairly common breeder in the Coast Range, but in the last 15 years there has been a dramatic decrease in southern California where it was once a common breeder in the mountains and in some lowland residential areas. The purple martin inhabits hardwood, hardwood-conifer, riparian, and coniferous habitats. It usually nests in old woodpecker cavities, but will occasionally nest in man-made structures. The species nests from April to August, with peak activity in June. Altricial young tended by both parents leave the nest at 24 to 31 days (Harrison, 1978). Insects are typical food items.

The yellow warbler is considered a CSC species by the CDFG. Yellow warblers are migratory and are broadly distributed throughout North America, though their California distribution is largely restricted to northern and coastal areas and the Sierra Nevada foothills. Within San Luis Obispo County, this species is a fairly common summer transient of deciduous riparian habitats. Breeding and nesting of yellow warbler typically occurs from mid-April to early August, with peak activity occurring in June. Eggs are incubated for approximately 11 days, and young fledge approximately nine to 12 days thereafter.

The yellow-breasted chat is considered a CSC species by the CDFG. It is a migratory species distributed throughout the United States, though it is noted as an uncommon summer resident of the coast and Sierra Nevada foothills of California. Preferred habitat for cover, foraging, and nesting consists of willow riparian thickets, with dense understory cover. In San Luis Obispo County, observations of yellow-breasted chat are limited to uncommon occurrences from May to mid-August, concurrent with their breeding period, which peaks in June. Eggs are incubated for 11 to 15 days, with chicks fledging eight to 11 days thereafter.

The species described above are each protected by the MBTA and California Fish and Game Code Section 3503. In addition to these species, numerous other nesting bird species protected by these two regulatory laws have the potential to nest in habitats within the BSA.

4.3.8.1. SURVEY RESULTS

None of the bird species described above or other nesting bird species were observed during reconnaissance surveys of the BSA. Suitable nesting habitat for most of the birds considered occurs within the riparian corridor of SLO Creek, oak woodland, and coastal scrub habitats in the BSA. The riparian areas in the BSA supports suitable habitat for southwestern willow flycatcher. However, the BSA is north of this species' documented breeding range. Therefore, nesting southwestern willow flycatchers are not expected to occur in the BSA.

4.3.8.2. AVOIDANCE AND MINIMIZATION EFFORTS

The following measures apply to the bird species previously discussed and all other birds protected by the MBTA and California Fish and Game Code. The list of birds protected by these regulatory laws is extensive, and not all birds protected by these laws are included in Table 6. CDFG typically requires pre-construction nesting bird surveys and avoidance of impacts to active bird nests.

1. Prior to construction, the applicant shall schedule vegetation removal to occur outside of the nesting season (September 1 to February 14) if possible, to prevent birds from nesting within areas of disturbance during or just prior to construction.
2. Prior to construction, if construction activities are proposed to occur during the typical nesting season (February 15 to August 31) within 200 ft (60 m) of potential nesting habitat, a nesting bird survey shall be conducted by qualified biologists in potential nesting habitat at least two weeks prior to construction to determine presence/absence of nesting birds within the project area. Work

- activities shall be avoided within 100 ft (30 m) of active bird nests and 200 ft (60 m) of active raptor nests until young birds have fledged and left the nest. Readily visible exclusion zones shall be established in areas where nests must be avoided. Caltrans shall be contacted if western yellow-billed cuckoo, LBV, or any other federally listed bird species are observed during surveys. USFWS and CDFG shall be contacted for additional guidance if nesting birds are observed within or near the boundaries of the project site. Nests, eggs, or young of birds covered by the MBTA and California Fish and Game Code would not be moved or disturbed until the end of the nesting season or until young fledge, whichever is later, nor would adult birds be killed, injured, or harassed at any time.
3. Prior to construction, if construction activities are proposed to occur during the typical nesting bird season (February 15 to August 31) within 100 ft (30 m) of the existing South Higuera bridge, a nesting bird survey shall be conducted by qualified biologists to determine if nesting birds such as swallows are nesting under the bridge. Work activities shall be avoided within 100 ft (30 m) of active bird nests at under the bridge. Readily visible exclusion zones will be established in areas where nests must be avoided.
 4. The applicant shall ensure avoidance of take of the Fully Protected white-tailed kite by employing measures 1, 2, and 3 in Section 4.3.8.2.
 5. Vegetation removal in potential nesting habitats shall be monitored and documented by the biological monitor(s) regardless of time of year.

4.3.8.3. PROJECT IMPACTS

The removal of vegetation could directly impact bird nests and any eggs or young residing in nests. Indirect impacts could also result from noise and disturbance associated with construction, which could alter perching, foraging, and/or nesting behaviors. While temporary loss of vegetation supporting potential nesting habitat would result from trimming or removal, this would be mitigated by planting new trees and the establishment of habitat mitigation/restoration areas. The implementation of the avoidance and minimization measures such as appropriate timing of vegetation, preactivity surveys, and exclusion zones will reduce the potential for adverse effects to nesting bird species.

4.3.8.4. COMPENSATORY MITIGATION

Implementation of the HMMP will mitigate impacts to habitats within the ADI. No additional compensatory mitigation is proposed.

4.3.8.5. CUMULATIVE EFFECTS

As impacts to nesting birds will be avoided, and potential impacts to nesting habitat will be mitigated by implementation of the final HMMP, no cumulative effects to nesting birds are anticipated.

4.3.9. Discussion of Pallid Bat (*Antrozous pallidus*), Western Mastiff Bat (*Eumops perotis californicus*), and Other Roosting Bats (Class Chiroptera)

The pallid bat is considered a CSC species by the CDFG. Pallid bats range over much of the western United States, from central Mexico to British Columbia (Zeiner et al., 1990). They are found throughout California, especially in lowland areas below 6,400 feet. Pallid bats are apparently not migratory, but make local, seasonal movements. This nocturnal species resides in colonies consisting of a dozen to over 100 individuals. Pallid bats roost in deep crevices, caves, mines, rock faces, bridges and buildings. Like many bat species, pallid bats maintain both day and night roosts. Night roosts are used for feeding and are typically 0.25 mile (0.4 km) from the day roosts, which are used for sleeping. Their primary food source is ground dwelling insect species including crickets, grasshoppers, beetles, and centipedes. They maintain nursery colonies with 30 to over 100 individuals. Females have one to two pups for each pregnancy, usually born between mid to late June.

The western mastiff bat is considered a CSC species by the CDFG. It is an uncommon resident in the southeastern San Joaquin Valley and Coast Ranges from Monterey County southward through southern California, and from the coast eastward to the Colorado Desert (Zeiner et al., 1990). This species occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban. Crevices in cliff faces, high buildings, trees, and tunnels are required for roosting. The western mastiff bat roosts alone, or in small colonies, usually of fewer than 100 individuals. Nursery roosts are in tight rock crevices or crevices in buildings. Mating probably occurs most frequently in early spring (March). It exhibits yearlong nocturnal activity, but generally goes into daily torpor from December through February, usually resuming activity each night to feed. This bat rarely uses night roosts, and it has an exceptionally long foraging period, up to six to seven hours each night.

In addition to the pallid bat and western mastiff bat, which each have CNDDDB occurrence records in the region, other bat species protected by the CDFG or under CEQA have the potential to roost in habitats within the BSA.

4.3.9.1. SURVEY RESULTS

No bats were observed during reconnaissance surveys of the BSA. Night roosting bats were observed under the South Higuera Street Bridge during the retrofit of this bridge a few years ago (Geoff Hoetker, personal observation) and work in the vicinity of this bridge could be a concern for roosting bats.

4.3.9.2. AVOIDANCE AND MINIMIZATION EFFORTS

A variety of mitigation measures are recommended to avoid and minimize potential impacts to roosting bat species.

1. Prior to construction, if work is to occur within 100 ft (30 m) of bridges or other artificial structures capable of supporting bat roosts, pre-construction surveys (at least two at dawn and two at dusk) shall be conducted by qualified biologists at least 30 days prior to construction to determine if bats are roosting in these structures. The biologist(s) conducting the preconstruction surveys will also identify the nature of the bat utilization of the bridge (i.e., no roosting, night roost, day roost, maternity roost).
2. If bats are found to be roosting in the surveyed areas, the following measures will be implemented during construction:
 - a) If there is only night roosting by bats, work may proceed as normal provided that no night-time work is scheduled.
 - b) If there is day roosting by bats (or night roosting and work during nighttime), qualified biologists shall monitor any construction activities within 100 ft (30 m) for disturbance to bat roosting. If bat roosting behavior is determined to be adversely impacted by construction activities, construction must be avoided in the vicinity of bat roosts until either bats are no longer roosting or they have been excluded from roosting.
 - c) If maternity roosts are detected, construction activities must be avoided within 100 ft (30 m) of an active maternity roost until the end of the maternity roosting season, which typically occurs during the spring and summer months. No roost exclusion shall be conducted if maternity roosts are detected.
3. Readily visible exclusion zones shall be established in areas where roosts must be avoided.

4.3.9.3. PROJECT IMPACTS

The proposed project has minimal potential to directly impact bat species that may utilize existing structures within the BSA as roosting habitat. As bats can be sensitive to noise disturbance, indirect impacts could also result from construction, which could alter roosting behaviors.

4.3.9.4. COMPENSATORY MITIGATION

No compensatory mitigation is proposed.

4.3.9.5. CUMULATIVE EFFECTS

If project-related impacts to roosting bats were to occur, it is estimated that the cumulative effects of these impacts would not result in jeopardy or extinction of bat species, because impacts will be mostly temporary, and the above avoidance and minimization measures are anticipated to be sufficient to lessen impacts.

Chapter 5. Results: Permits and Technical Studies for Special Laws or Conditions

5.1. Federal Endangered Species Act Consultation Summary

Section 7 of the FESA requires federal agencies such as FHWA to make a finding on all federal actions as to the potential to jeopardize the continued existence of any listed species potentially affected by the action. Section 9 of the FESA protects federally listed plant and animal species from unlawful take. The USFWS and NMFS regulate activities that may result in take of federally endangered or threatened species, or candidate species. The documentation submitted to USFWS and/or NMFS analyzing impacts to federally listed species is typically a Biological Assessment. Once USFWS and/or NMFS review a Biological Assessment for a project, they may issue a federal Biological Opinion and Incidental Take Statement under FESA Section 7 that includes provisions for legal take, provided that specific mitigation measures are employed for construction. Since there is one preferred build alternative, a Biological Assessment is being prepared concurrently with this NES

The following is a summary of FESA technical assistance previously included in Section 2.4.1:

November 30, 2005: Crystahl Handel (SWCA) submitted a letter request to Steve Henry (USFWS Biologist) requesting a USFWS-approved species list for the proposed project.

August 10, 2006: Geoff Hoetker and Keith Miller (SWCA) attended a meeting with Chris Kofron and Julie Vanderwier (USFWS), Bob Stafford and Deborah Hillyard (CDFG), and Julie Eliason (County of San Luis Obispo Department of Planning and Building) to discuss the project and the route alternatives.

September 7, 2006: Geoff Hoetker (SWCA) had a phone conversation with Mark Elvin (USFWS Biologist) regarding the potential for the project to affect CRLF. Mr. Hoetker indicated that a field visit had just been conducted with CDFG. Mr. Hoetker informed Mr. Elvin that the CRLF Site Assessment Report would eventually be

submitted to USFWS for review, and that SWCA would be waiting on further direction on the potential need to conduct protocol CRLF site surveys.

October 17, 2006: Geoff Hoetker (SWCA) contacted Anthony Spina (NMFS) via email to inquire whether the tributaries of SLO Creek are included in the federal critical habitat designation for the south central California coast steelhead ESU.

October 18, 2006: Geoff Hoetker (SWCA) received an email reply from Anthony Spina (NMFS) (Spina, 2006) with documentation delineating steelhead critical habitat areas (NMFS, 2005). The mainstem of SLO Creek was included in the critical habitat designation but its tributaries examined in this NES are not considered critical habitat.

April 2, 2007: SWCA submitted the CRLF Site Assessment Report for the project to Dianne Noda (USFWS Field Supervisor) for review and to determine whether protocol CRLF surveys would be necessary for the proposed project.

May 11, 2007: Geoff Hoetker (SWCA) contacted Julie Vanderwier (Ventura USFWS) regarding the status of review of the CRLF Site Assessment Report. Ms. Vanderwier told Mr. Hoetker to contact Mark Elvin (USFWS Biologist), who had been assigned to the project. Mr. Hoetker contacted Mr. Elvin and left him a voicemail message.

May 14, 2007: Mark Elvin (USFWS Biologist) contacted Geoff Hoetker (SWCA), informing Mr. Hoetker that based on the information provided in the CRLF Site Assessment Report, the presence of CRLF in the project BSA could be inferred and protocol CRLF surveys would not be necessary. Mr. Elvin also mentioned that the FHWA Programmatic Biological Opinion for CRLF (USFWS, 2011) would be applicable for this project.

Pursuant to FESA Section 7, additional consultation will likely be required with the USFWS for potential impacts to CRLF and NMFS for potential impacts to south-central California coast steelhead. As the project has the potential to affect federally listed species, formal FESA consultation will need to be completed prior to project implementation (USFWS and NMFS, 1998). A Biological Assessment for this project will be submitted to these agencies to determine if existing Programmatic Biological Opinions are available, or to secure new Biological Opinions and incidental take authorizations.

5.2. Federal Fisheries and Essential Fish Habitat Consultation Summary

The Pacific Fishery Management Council (PFMC) is one of eight regional fishery management councils created by the 1976 Magnuson Fisheries Conservation and Management Act, renamed Magnuson Stevens Fisheries Conservation and Management Act in 1996, to manage living marine resources within that area (NMFS, 2008).

The PFMC is responsible for the creation of a Fishery Management Plan (FMP) in federal waters off the coast of California, and regulation for federally protected Essential Fish Habitat (EFH). These FMPs are for: Pacific coast groundfish, commercial and recreational west coast salmon fisheries, and northern anchovy/coastal pelagics. EFH descriptions and identifications for the Pacific's FMPs were approved on: September 27, 2000, for west coast salmon fisheries; June 10, 1999, for northern anchovy/coastal pelagics; and March 3, 1999, for Pacific coast groundfish.

The project area is within an inland location and no NMFS or EFH consultation has been conducted to date or should be necessary.

5.3. California Endangered Species Act Consultation Summary

No CESA consultation with CDFG has been conducted for the project to date. As the project will not affect state listed species, CESA consultation will not be required.

5.4. Floodplains Management

In compliance with Executive Order 11988 – Floodplains Management, no significant impacts on local flooding are predicted to result from the proposed project.

5.5. Wetlands and Other Waters Coordination Summary

No wetlands and other waters coordination with USACE or RWQCB has been conducted for the project to date. A detailed Wetland Assessment has been prepared for the project (refer to Appendix H). The proposed pathway alignment would cross jurisdictional wetlands and other waters; however, jurisdictional waters crossings have