4.2 Biological Resources

A substantial number of biological resource studies have been conducted on the Project Site during the past fifteen years. Results of the studies were presented in various documents prepared on behalf of the Applicant. They include general resource assessments, execution plans, restoration plans, technical reports, and results of specific studies. Information contained in these documents provides the basis for the Biological Resources section of this Environmental Impact Report (EIR). Documents most integral to the preparation of this section include:

- Predictive Ecological Risk Assessment for the Unocal San Luis Obispo Tank Farm. Prepared for the San Luis Obispo Tank Farm Surface Evaluation, Remediation, and Restoration Team. Prepared by BBL Sciences. Ratified May 25, 2004

- Chevron Environmental Management Company (CEMC). 2007. Project Execution Plan for the Chevron San Luis Obispo Tank Farm Restoration and Re-development Project, San Luis Obispo, California. December 20, 2007.

- Padre Associates Inc. and WSP Ecosystem Science & Natural Resources Management Services. 2009. Landscape Restoration for the Chevron San Luis Obispo Tank Farm. Prepared for Chevron Environmental Management Company. January 2009. 56 pp.

- Padre Associates Inc. and WSP Ecosystem Science & Natural Resources Management Services. 2008a. An Analysis of the Geographic Extent of Waters of the U.S., Including Wetlands at the Chevron Tank Farm Facility, San Luis Obispo, California. Prepared for Chevron Environmental Management Company. August 5, 2008. 62 pp. plus appendices. *Note: this is the most recent and most complete of several wetland delineation reports prepared for this Project Site.*

- Padre Associates Inc. and WSP Environment and Energy. 2008b. Description and Analysis of the Botanical Resources, *Including Vascular Plant Species of Conservation Concern,* at the Chevron Tank Farm Facility, San Luis Obispo, California. Final Report. Prepared for Chevron Environmental Management Company. December. 38 pp. plus appendices.

- Padre Associates Inc. and WSP Environment and Energy. 2008c. Operational Guidebook to Assessment of Riverine Waters and wetlands Functions at the Chevron Tank Farm Facility San Luis Obispo, California Final Report. Prepared for Chevron Environmental Management Company. December. 124 pp. plus appendices. *Note: this document includes support information to Padre Associates Inc. and WSP Environment and Energy (2008a).*

- Padre Associates Inc. 2008d. Protocol-level California Red-legged Frog Survey Report for the Former San Luis Obispo Tank Farm Site (Tank Farm), San Luis Obispo County, California. Prepared for Chevron Environmental Management Company. December.13 pp. plus appendices.

- Padre Associates Inc. 2008e. Burrowing Owl Survey Report for the Former San Luis Obispo Tank Farm Site (Tank Farm), San Luis Obispo County, California. Prepared for Chevron Environmental Management Company. September. 7 pp. plus appendices.

- Padre Associates, Inc. 2013c. One-Parameter Wetland Clarification Memo for the Chevron San Luis Obispo Tank Farm, San Luis Obispo County, California.

- Rincon Consultants, Inc. 2003a.Unocal San Luis Obispo Tank Farm Phase I Biological Studies. Final Report. Prepared for Union Oil Company of California. September 10, 2003. 8 pp. plus appendices.

- Rincon Consultants, Inc. 2003b. Unocal San Luis Obispo Tank Farm Phase II Biological Studies. Final Report. Prepared for Union Oil Company of California. October 10, 2003. 6 pp. plus appendices.

- Rincon Consultants, Inc. 2004. Unocal San Luis Obispo Tank Farm Phase III Biological Studies. Final Report. Prepared for Union Oil Company of California. June 3, 2004. 12 pp. plus appendices.

- Padre Associates, Inc. 2012. 90-Day Report on Wet Season Vernal Pool Branchiopod Surveys for the Chevron San Luis Obispo Tank Farm Site, 276 Tank Farm Road, San Luis Obispo, California. July 18, 2012.

- Rincon Consultants, Inc. 2005. Unocal Corporation San Luis Obispo Tank Farm Comprehensive Fairy Shrimp Wet and Dry Season Survey Report. October 18, 2005.

- U.S. Fish and Wildlife Service. 2011. Biological Opinion for the San Luis Obispo Tank Farm Cultural Resource Surveys and Soil Assessment Activities, San Luis Obispo County, California (8-8-10-F-63) (File No. SPL-2010-00604-BAH). Issued January 13, 2011.

- Padre Associates, Inc. 2012. California Red-Legged Frog Survey for the San Luis Obispo Tank Farm, San Luis Obispo County, California. California. August 27, 2012.

- Padre Associates, Inc. 2013 Biological Resource Survey Letter-Report for the Off-Site Flower Mound Impact Area, Chevron San Luis Obispo Tank Farm, San Luis Obispo County, California.

Copies of the relevant biological resource reports for the Project Site are included in Appendix C, and the predictive Ecological Risk Assessment is included in Appendix H, H.2.

The EIR project team included Storrer Environmental Services biologists John Storrer and Tom Olson who reviewed each of the background documents for content and accuracy. Methods of gathering data for specific resources were evaluated for conformance with agency-approved survey protocols. Descriptive information presented in these reports was verified during general field reconnaissance by Mr. Storrer and Mr. Olson on July 22, 2009

4.2.1 Environmental Setting

There is a large body of recently collected data from the Project Site. Information for the Environmental Setting subsection was taken from previous reports, including the Project Execution Plan (CEMC 2007), Landscape Restoration Plan (Padre and WSP 2009), and Description and Analysis of the Botanical Resources (Padre 2008b). These documents include comprehensive environmental setting and site-specific information on biological resources. Portions of these documents were incorporated into this subsection. Data from more focused technical studies, such as surveys for California red-legged frog (*Rana draytonii* [CRLF]), burrowing owl (*Athene cunicularia*), and wetlands, are also incorporated as appropriate for specific resources.

Conclusions regarding plant and animal species of regional concern (e.g., potential for occurrence, breeding/non-breeding) are based on a review of the technical information and reflect the opinions of the preparers of this section, John Storrer and Tom Olson.

4.2.1.1 Overview of the Project Site

Topography, soils, and vegetation have been altered considerably at the Project Site via cultivation techniques (such as plowing and disking), construction and removal of tanks and associated berms, stream channelization, and other anthropogenic alterations. As such, the Project Site is dominated by non-native annual grasslands. Waters of the U.S., including wetlands, are prominent within the Project Site. Many of the waters and wetlands at the Project Site are associated with natural features; however, some of the depressional wetlands are associated with remnant, man-made depressions from decommissioning the former oil storage facility

The Project site contains several surface hydrocarbon expressions of oil, sheen, liquid oil and locations of pliable oil. These surface hydrocarbon expressions have resulted in increased exposure risks to plants and wildlife species in the area. In addition, some of these areas pose a real and recorded risk for entrapment (Chevron prepares a Monthly Surface Hydrocarbon Inspection and Mitigation Monitoring Report). Numerous wildlife species have been reported being found entrapped. Since 2007, 65 animals have been recorded as being entrapped and released, 12 were found dead, and two were found, collected and brought to Pacific Wildlife Care. Many more animals prior to the 2007 reporting are expected to have been affected by these hydrocarbon expressions and the netting enclosures attempting to restrict access to these areas.

4.2.1.2 Climate

The San Luis Obispo area has a mild, Mediterranean climate with warm, dry summers and wetter, cooler winters. The average maximum temperature (by month) ranges from 63 degrees Fahrenheit (°F) in January to 79.5°F in September. Average minimum temperatures range between 41.6°F in January and 53°F in August (Station No. 047851-4) (WRCC 2007). In this coastal area, the majority of precipitation comes as rainfall during the winter months (November through April). Average annual precipitation is 23.45 inches (WRCC 2007).

4.2.1.3 Geomorphic Setting

The Project Site is a partially filled coastal basin composed primarily of alluvium. The northern portion of the Project Site is characterized by a slope wetland that serves at the headwaters of a small, unnamed tributary that has been mostly disconnected from San Luis Obispo Creek due to anthropogenic activities. This area is a colluvial toe slope that grades to valley alluvium, which dominates the central and southern portions of the Project Site. The valley alluvium surface is approximately 8,000 to 10,000 years old while the colluvial toe slope is a somewhat older surface. This landscape has been shaped by the wandering meanders of San Luis Obispo Creek as it moved back and forth across the basin (WSP 2007). The Project Site is located in a geologically complex and seismically active region. The underlying geologic structure has been formed by millions of years of folding and faulting as the Pacific plate moves north along the North American plate. Geologic structure in this landscape is oriented primarily in a northwesterly direction with the coast range.

The central California coast is subject to damaging earthquakes on a regular basis, most of which are associated with the San Andreas Fault. However, there have been a number of earthquakes of magnitude 5.0 and greater on other faults that have affected large portions of the Central Coast.

4.2.1.4 Soils

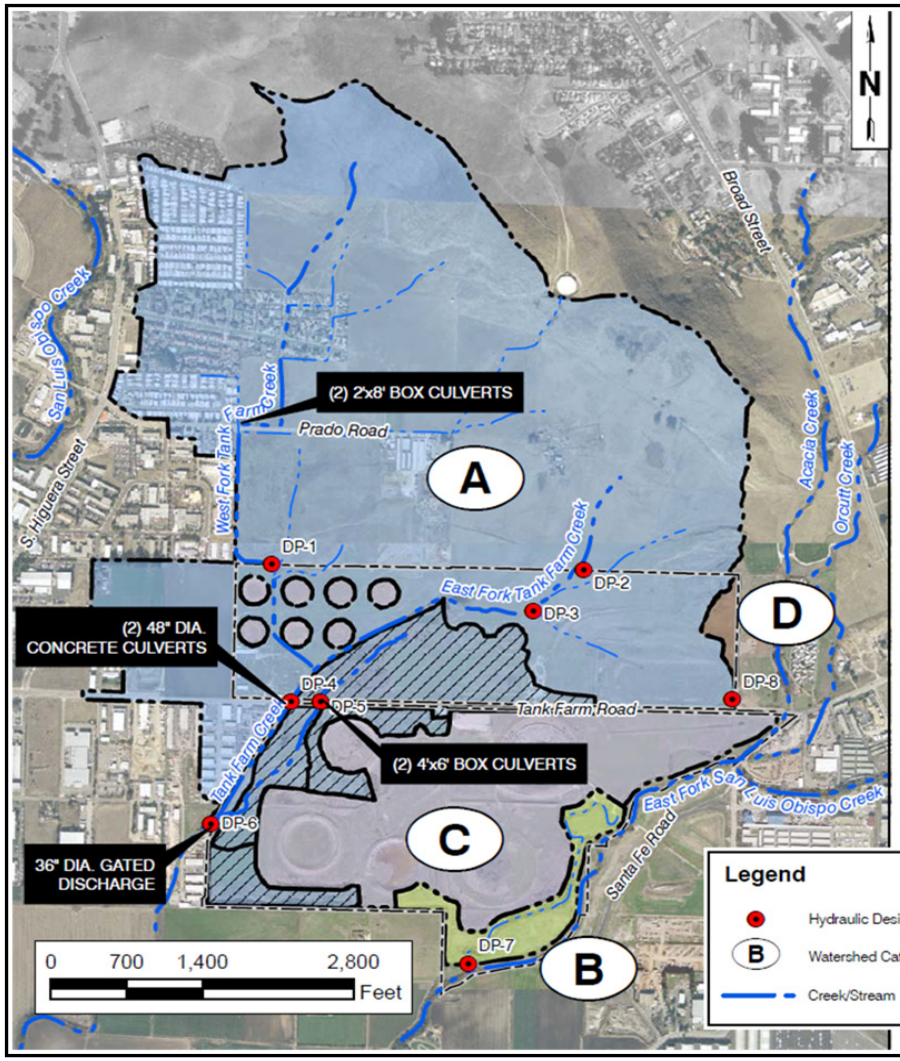
The map "Geology of California, San Luis Obispo Sheet," published by the California Division of Mines and Geology and dated 1958, indicates that the Project Site is located within the Coast Range geomorphic province of California. Serpentine hills are located to the northeast and the Project Site is underlain by alluvial deposits (CDMG 1959).

According to the United States Department of Agriculture, Soil Conservation Service's Soil Survey of San Luis Obispo County, Coastal Part, the Project Site is underlain by Cropley clay (USDA 1984). Specifically, the majority of the soils within the Project Site have been designated Xererts-Xerolls-Urban land complex (Ernstrom 1984). The Xererts-Xerolls-Urban land complex is used to describe areas that have been modified by heavy equipment such that their physical characteristics have been modified. The Xererts of this complex are Cropley or Diablo clays that vary physically depending on changes in moisture content. The Xerolls of this complex consist of several soil types that have slowly permeable clay subsoils which also shrink and swell with changes in moisture content (Ernstrom 1984). These soils typically provide substrate that is suitable for listed vernal pool branchiopod species and several locally sensitive plant species.

4.2.1.5 Hydrology

The natural drainage patterns of the Project Site have been drastically altered due to historical activity (i.e., construction of containment berms). Figure 4.2-1 shows the site drainage patterns. The East Fork of San Luis Obispo Creek has been channelized by containment berms along the eastern and southern boundaries of the Project Site. However, the historical ox-bow channel and associated floodplain areas are still evident due to remnant mixed willow scrub habitat.

Figure 4.2-1 –Overview of Watersheds that Impact Chevron Tank Farm Property – Existing Conditions



WATERSHED ID	ONSITE (ac)	OFFSITE (ac)	TOTAL (ac)
WATERSHED A TANK FARM CREEK WATERSHED	160.1	476.5	636.6
WATERSHED B ONSITE TRIBUTARY TO THE EAST FORK OF SAN LUIS OBISPO CREEK	19.1	0.0	19.1
WATERSHED C ONSITE HYDROLICALLY ISOLATED DEPRESSIONS	139.1	0.8	139.9
WATERSHED D ONSITE AREA TO THE EAST WHICH DRAINS OFFSITE	4.0	0.0	4.0
OTHER OTHER MINOR OFFSITE DRAINAGE	11.0	0.0	11.0
TOTAL	333.3	477.3	810.6

NOTES:
1) DIAGONAL HATCHED AREAS ARE TRIBUTARY TO THE NORTH MARSH AND AUXILIARY TANK FARM CREEK AND ARE NOT ENGAGED IMMEDIATELY DURING A STORM,

Source: Avocet 2009

In addition, containment berms constructed around the former oil tanks have created ephemeral wet areas and seasonal wet meadow throughout the Project Site that alter flood flow and contribute to groundwater recharge.

Currently, the East Fork of San Luis Obispo Creek, along the eastern boundary, is the principal drainage for the Project Site. A regional overview of drainage in the area shows that drainage from most of the Margarita Area (directly north of the Project Site) is transported to the east branch San Luis Obispo Creek via the west, middle, and east forks of Tank Farm Creek, (i.e., through the North Marsh) that join the East Fork San Luis Obispo Creek at the southwest corner of the Airport area. The remaining Margarita Area drainage is collected in Acacia Creek, which joins the East Fork of San Luis Obispo Creek near the intersection of Tank Farm Road and Santa Fe Road.

Drainage travels through the Project Site and adjacent areas on a generally southwesterly course until the East Fork of the San Luis Obispo Creek joins San Luis Obispo Creek downstream of the Project Site. Portions of the southwestern and southeastern areas of the Project Site are within the 100-year floodplain. All of the wetlands on the site are described as either "ephemeral" or "intermittent" (Padre 2008a). The East Fork of San Luis Obispo Creek downstream of the SLO Tank Farm is infrequently intermittent or perennial (Padre 2008a).

4.2.1.6 Vegetation

One hundred twenty-eight vascular plant species were identified within the Project Site during the field surveys conducted by Rincon (2003) and Padre (2008b). A complete list of plant species identified on the Project Site (Padre 2008b) is provided in Appendix C (all scientific nomenclature based on Hickman 1993).

Plants observed consisted of 58 native taxa (45 percent of the total number of plants) and 70 non-native taxa (55 percent of the total). The relatively high percentage of non-native taxa was likely influenced by a high level of site disturbance associated with past oil operations, maintenance, abandonment, and past and continued cattle grazing.

Several biological surveys were conducted by Padre and WSP biologists (2008a and 2008b) at the Project Site for the purpose of habitat characterization and identification of jurisdictional wetlands. Various vegetation types were found, including both wetland and upland habitats. Upland plant communities were classified using the Holland (1986) classification system. These include non-native annual grassland, native perennial grassland, seasonal wet meadow, freshwater marsh, coyote brush scrub, and mixed riparian woodland.

The classification used for the waters and wetlands plant communities was developed for waters and wetlands in central and southern coastal California (Ferren et al. 1996). This classification is a regionalized version of the widely accepted U.S. Fish & Wildlife Service's classification of wetlands and deepwater habitats (Ferren et al.1996; Cowardin et al. 1979). Historic and current land uses at the Project Site have had profound effects on its hydrology. These include ditching, grading, cultivation, redirection and/or consolidation of storm water to and through the site, oil spill containment features, and installation of numerous drainage and pipe systems. The effects on wetland resources at the Project Site were determined through interpretation of aerial

photography and field evaluation. Because of these site modifications and their effects on current hydrologic, soil, and vegetation conditions at the Project Site, the Padre technical team chose to delineate waters and wetlands using a combination of "Routine" and "Atypical" approaches as articulated in the *1987 U.S. Army Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987). A detailed description of the methodology used for characterizing and classifying wetland resources at the Project Site is provided in Padre 2008c and clarified in Padre 2013c. Figure 4.2-2 shows distribution of the primary vegetation types or plant communities (Padre and WSP 2008c).

Annual Grassland

California annual grasslands are comprised of a sparse to dense cover of various non-native, annual grasses, often interspersed with native and non-native forbs. The annual grassland vegetation type covers most of the Project Site, and is highly variable in species composition, depending on the location.

Representative non-native grassland species found on-site include Italian ryegrass (*Lolium multiflorum*), soft chess (*Bromus hordeaceus*), hare barley (*Hordeum murinum var. leporinum*), ripgut grass (*Bromus diandrus*), and slender wild oat (*Avena barbata*). Common broad-leaved species include bird's-foot trefoil (*Lotus corniculatus*), cut-leaf plantain (*Plantago coronopus*), bristly ox-tongue (*Picris echioides*), hayfield tarplant (*Deinandra congesta* ssp. *luzulifolia*), star thistle (*Centaurea solstitialis*), and western ragweed (*Ambrosia psilostachya*) (Padre 2008c).

Native Perennial Grassland

This vegetation type occurs in relatively disturbed conditions at the northeast portion of the Project Site, just west of the former quarry area. Similar to the annual grassland, non-native annual species, primarily slender wild oat and ripgut grass, comprise a large portion of the composition, but it also supports many individuals of native purple needlegrass (*Nasella pulchra*) (Padre 2008c).

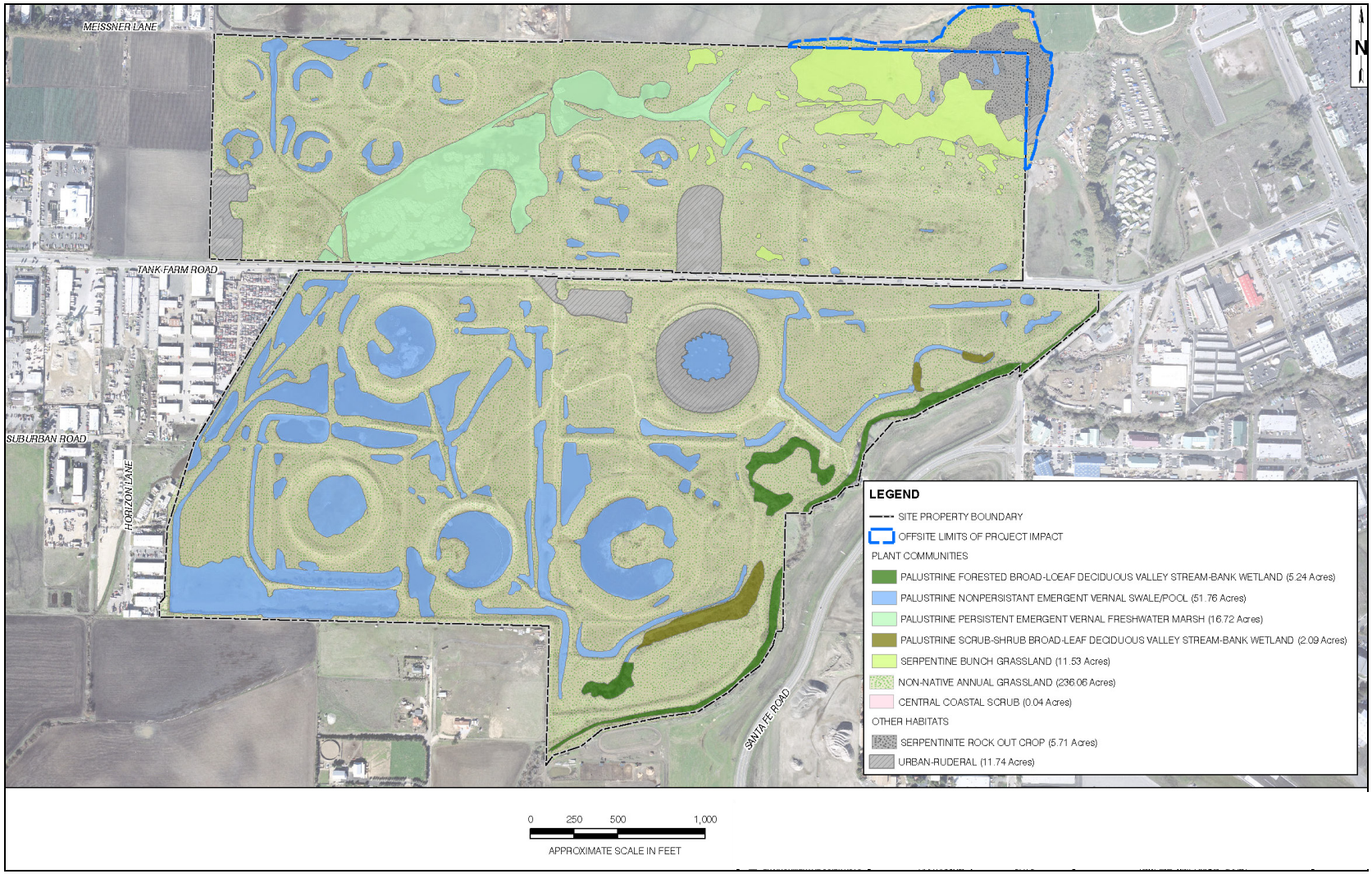
Coyote Brush Scrub

Coyote brush scrub habitat occurs in scattered locations throughout the Project Site. Dominant species within this habitat include coyote brush (*Baccharis pilularis* var. *consanguinea*) and California sagebrush (*Artemisia californica*) as well as a variety of non-native herbaceous species similar to those present in the annual grassland plant vegetation type.

Seasonal Wet Meadow

Much of the wetlands present is ephemeral and occur in various patterns, due to the historical activity on the Project Site (e.g., excavation, construction of containment berms). This has allowed establishment of a wide range of seasonal wet meadows with highly variable species composition. Species observed include saltgrass (*Distichlis spicata*), spikerush (*Eleocharis macrostachya*), beardgrass (*Polypogon monspeliensis*), tall flatsedge (*Cyperus eragrostis*), brass buttons (*Cotula coronopifolia*), rush (Juncus spp.), curly dock (*Rumex crispus*), and cocklebur (*Xanthium strumarium*). Other species commonly found include bristly ox-tongue, meadow barley (*Hordeum brachyantherum*), and Congdon's tarplant (*Centromadia parryi ssp. congdonii*) (Padre 2008c).

Figure 4.2-2 – Plant Communities on the Project Site



Source: Padre WSP 2008c

Three "potential pool locations" (totaling less than approximately 0.25 acres) were identified in the northeast portion of the Project Site ("Flower Mound" area) during the Padre 2012 October surveys (Padre 2013). These potential pools are not included in Figures 4.2-2 or the final wetland acreage. These areas did not contain water during the time of the surveys and were not formally delineated. Appropriate wetland delineations will be conducted in the winter/spring of 2012/2013. Acreages will be finalized prior to any site disturbances.

Freshwater Marsh

Numerous freshwater marsh communities exist throughout the Project Site. A large area, adjacent to the north side of Tank Farm Road (North Marsh), comprises several acres of marsh. Additionally, two of the remnant concrete-lined reservoirs (Reservoirs 5 and 7) have established freshwater marsh vegetation. A drainage canal along the west side of the Project Site (Western Marsh) and several small patches on the south side of the Project Site also support freshwater marsh vegetation. Species observed include cattail (*Typha angustifolia*), bulrush (*Scirpus acutus*), nutsedge (*Cyperus esculentus*), spikerush, and water plantain (*Alisma plantago-aquatica*) (EDAW 1999; CEMC 2007).

Mixed Riparian

The portion of Acacia Creek and the East Fork of San Luis Obispo Creek which run along the eastern and southern boundaries of the Project Site support a variety of riparian vegetation. The mixed riparian habitat is dominated by a tall, patchy canopy of western sycamore (*Platanus racemosa*), arroyo willow (*Salix lasiolepis.*), red willow (*Salix laevigata*), and cottonwood (*Populus fremontii*), with a few occurrences of eucalyptus (*Eucalyptus* spp.*)* and black walnut (*Juglans californica*) (EDAW 1999). In addition to the riparian vegetation type along the creeks, several bermed areas on the southwestern portion of the Project Site, along the margins of freshwater marsh vegetation types, have established willows. Further, several depressions west of the creek channel appear to be remnants of historical channel meanders and contain dense canopies of willow, sycamore, and cottonwood (EDAW 1999).

Disturbed Rock Outcrop

A disturbed rock outcrop (i.e., former quarry site) exists in the northeastern corner of the Project Site and contains a mixture of serpentine rock outcrops along the upper slopes and clay-loam soils along the lower slopes. Areas of non-native grasses, including species described within the annual grassland habitat, as well as scattered occurrences of herbaceous species such as poison hemlock (*Conium maculatum*), cudweed everlasting (*Gnaphalium luteo-album*), and red valerian (*Centranthus ruber*) exist on the lower slopes. The serpentine rock outcrops along the upper slopes support species such as slender buckwheat (*Eriogonum elongatum* var. *elongatum*) and the special-status San Luis Obispo serpentine dudleya (*Dudleya abramsii* ssp. *bettinae*) (Padre 2008c).

Ornamental

Several species of ornamental trees occur in scattered locations throughout the Project Site. These species include Peruvian pepper tree (*Schinus molle*), blackwood acacia (*Acacia melanoxylon*), green wattle (*Acacia decurrens*), and firethorn (*Pyracantha angustifolia*).

Seasonal Wet Meadow/Tarflat

Seasonal wet meadow vegetation types exist on surface exposures of asphalt/tar slag. Several areas within the Project Site have little or no soil surface and are partly to completely inundated

by precipitation and runoff in the early spring. Plant species that establish within the cracks in the substrate include a small sub-set of the seasonal wet meadow species listed above (Padre 2008c).

Willow-Cottonwood/Concrete-Asphalt

Willow-cottonwood vegetation types exist within the remnants of Reservoir 2, a concrete-lined earthen reservoir. The dominant riparian species, which include cottonwoods and willows, are well-established in the cracked, concrete-asphalt substrate. This area is often inundated during the rainy season and also contains herbaceous species similar to those present in the seasonal wet meadow/tarflat (EDAW 1999).

4.2.1.7 Wildlife

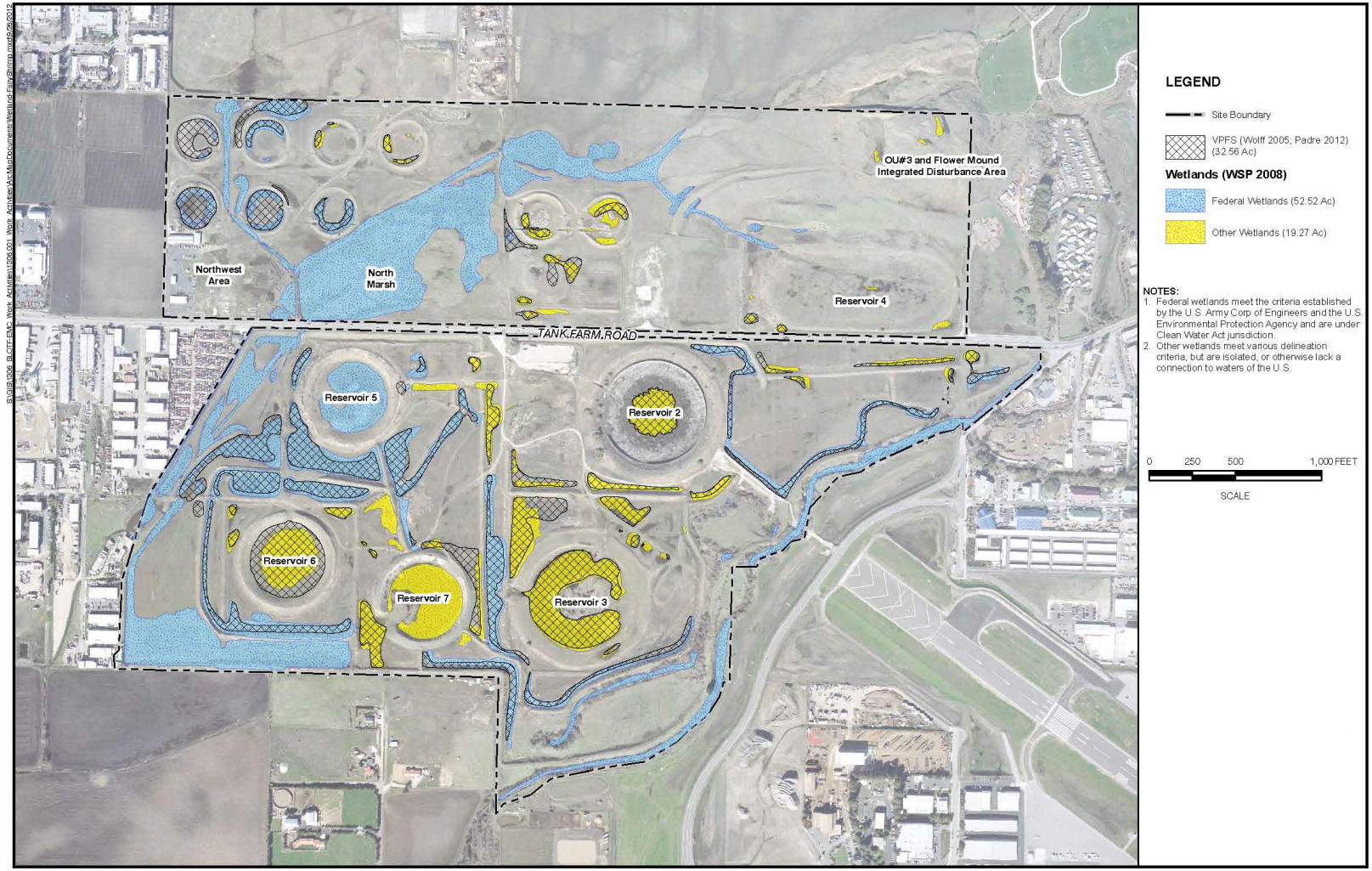
Wildlife information was developed during field surveys conducted by EXTRIX (1998), Rincon (2003), and Padre (2007, 2013). Detection methods included direct observation with binoculars; examination and identification of tracks, scats, burrows/diggings, and carcasses/skeletal remains; and identification of vocalizations (calls and songs). Surveys were supplemented with previously published wildlife reports, regional and local species distribution references, and coordination with the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW, formerly the California Department of Fish and Game [CDFG]) to determine which species occur or potentially occur on the Project Site. Rincon (2003, Appendix C) contains a list of wildlife species observed during field surveys and/or expected to occur on the Project Site. Summary descriptions of faunal groups known or with potential to occur on the Project Site follow.

Invertebrates

Initial aquatic water column and benthic invertebrate studies resulted in the observation of invertebrates typical of non-flowing seasonally ponded habitats (Rincon 2003a). Following the initial study, a vernal pool fairy shrimp (*Branchinecta lynchi* [VPFS]) dry season survey resulted in the positive identification of VPFS at several locations within the site (Rincon 2003b) (see Figure 4.2-3). Rincon (2005) conducted a comprehensive wet and dry season survey for vernal pool fairy shrimp in 2005. Additional wet season surveys were conducted by Padre biologists during the 2011/2012 wet season within previously unoccupied habitat areas in order to evaluate the current occupancy of suitable habitat (Padre 2012a).

The three “potential pool locations” (described above) identified in the northeast portion of the Project Site during the Padre 2012 October surveys (Padre 2013) are not included in Figures 4.2-3 or the potential VPFS acreage. Surveys and agency approval of findings have not yet been finalized. Appropriate VPFS wet season surveys were conducted in the winter/spring of 2012/2013. Dry season sampling will be conducted during summer 2013 to complete the protocol survey requirements and establish VPFS presence/absence in the off-site impact area. Final acreages will be finalized prior to any site disturbances.

Figure 4.2-3 – Wetlands and Vernal Pool Fairy Shrimp Habitat



Source: Padre WSP 2012a

Fish

The fish species described by Rincon (2003) and Padre (2007) included common carp (*Cyprinus carpio*) and mosquitofish (*Gambusia affinis*) in the western marsh area, and threespine stickleback (*Gasterosteus aculeatus*) in the creek/riparian areas. Potential habitat for South-central California coast steelhead is present within the East Fork of the San Luis Obispo Creek during high flow periods; the nearest known location for this species was observed in Acacia Creek at Tank Farm Road (E. Weir, 2006).

Amphibians

Western toad (*Anaxyrus boreas*), Northern Pacific treefrog (*Pseudacris regilla*), and adult bullfrogs (*Rana catesbeiana*) were observed primarily in the seasonally flooded areas of the Project Site; however, bullfrogs were also observed in the creek /riparian areas (EXTRIX 1998; Rincon 2003). Habitat suitability for two listed amphibian species, CRLF and California tiger salamander (*Ambystoma californiense*) and one amphibian species of special concern, the western spadefoot toad (*Spea hammondii*) was also assessed. Suitable habitat for CRLF was identified in both the East Fork of San Luis Obispo Creek and the north and south sides of the Project Site (Padre 2008d). Protocol-level field surveys for CRLF were conducted by Padre in 2008. Padre also conducted a one day, one night dry-season survey and habitat assessment for this species in July 2012 (Padre 2012b). Site Results of surveys for CRLF are summarized in Section 4.2.1.9, Regional Wildlife Species. A habitat assessment, including field surveys, for California tiger salamander and western spadefoot toad were also conducted (Rincon 2003a). Suitable upland and aquatic breeding habitats for both species were found to be present at the Project Site. Results of assessment are summarized in Section 4.2.1.9, Regional Wildlife Species.

Reptiles

The annual grassland and mixed riparian areas of the Project Site provide the most favorable habitats for reptiles, though field surveys reflect a relatively depauperate herpetofauna. Species observed included western fence lizard (*Sceloporus occidentalis*) and garter snake (*Thamnophis sp*.) in the upland areas and western pond turtle (*Actinemys marmorata*) in the creek/riparian habitat within adjacent Acacia Creek and the East Fork of San Luis Obispo Creek (ENTRIX 1998; CEMC 2007). Other regionally common reptile species, including western gopher snake (*Pituophis catenifer*), western rattlesnake (*Crotalus viridis*), and common kingsnake (*Lampropeltis getulus*) are also expected to occur.

Birds

Quantitative survey techniques were employed to evaluate the avian species present at four observation stations representing the general habitat types present at the Project Site (ENTRIX 1999). Species observed included killdeer (*Charadrius vociferous*), song sparrow (*Melospiza melodia*), red-winged blackbird (*Agelaius phoeniceus*), American kestrel (*Falco sparverius*), mourning dove (*Zenaida macroura*), cliff swallow (*Petrochelidon pyrrhonota*), cinnamon teal (*Anas cyanoptera*), mallard (*Anas platyrhynchos*), great-tailed grackle (*Quiscalus mexicanus*), spotted sandpiper (*Actitis macularia*), Cooper's hawk (*Accipiter cooperi*), sharp-shinned hawk (*Accipiter striatus*), and downy woodpecker (*Picoides pubescens*) (ENTRIX 1999). In addition, the following bird species were observed within the Project Site during field surveys conducted by Padre in spring/summer 2007: golden eagle (*Aquila chrysaetos*), northern harrier (Circus cyaneus), great horned owl (*Bubo virginianus*), California horned lark (*Eremophila alpestris actia*), and loggerhead shrike (*Lanius ludovicianus*).

Mammals

Mammals are typically mobile and may spend time in several different habitats. Thus, the surveys to identify the resident mammals were not restricted or defined by specific sample areas. The daytime and nighttime surveys resulted in the observation of scat, tracks, and direct observation of live individuals. The small, medium and large mammals observed include; western harvest mouse (*Reithrodontomys megalotis*), California vole (*Microtus californicus*), Botta's pocket gopher (*Thomomys bottae*), California ground squirrel (*Spermophilus beecheyi*), black-tailed hare (*Lepus californicus*), desert cottontail (*Sylvilagus audubonii*), striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), muskrat (*Ondatra zibethicus*), Virginia opossum (*Didelphis virginiana*), coyote (*Canis latrans*) and mule deer (*Odocoileus hemionus*) (ENTRIX 1998, CEMC 2007).

Rincon (2003, Phase 1, Appendix C) presents the vertebrate and invertebrate taxa observed during field surveys as well as potentially occurring species that may be present at the Project Site. Refer to Rincon 2003, Appendix C for a list of all wildlife species observed and expected to occur at the Project Site.

4.2.1.8 Regional Plant Species of Concern

The following narratives briefly present ecological and range information and legal status for those special-status plant species that are known to occur on the Project Site. Specifically, Congdon's tarplant (*Centromadia parryi* spp. *congdonii*), Hoover's button-celery (*Eryngium aristatulum* var. *hooveri*), Cambria morning glory (*Calystegia subacaulis* ssp. *subacaulis*), San Luis Obispo owl's clover (*Castilleja densiflora* ssp. *obispoensis*), and San Luis Obispo serpentine dudleya (*Dudleya abramsii ssp. bettinae*) have been found on the Project Site. The presence, geographic distribution, and relative density of these five plant species was determined through field surveys conducted in spring and summer of 2008 (Padre 2008b).

Table 4.2-1 Definitions of Plants Species of Concern

Plant Species of Concern
• Plants listed or proposed for listing as threatened or endangered under the Federal Endangered Species Act (50 CFR 17.12 for listed plants and various notices in the Federal Register for proposed species).
• Plants that are Category 1 candidates for possible future listing as threatened or endangered under the Federal Endangered Species Act (55 CFR 6184, February 21, 1990).
• Plants that meet the definitions of rare or endangered species under the CEQA (*State CEQA Guidelines,* Section 15380).
• Plants considered by the CNPS to be "rare, threatened, or endangered" in California (Lists 1B and 2 in Skinner and Pavlik 1994).
• Plants listed by CNPS as plants about which we need more information and plants of limited distribution (Lists 3 and 4 in Skinner and Pavlik 1994).
• Plants listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (14 CCR 670.5).
• Plants listed under the California Native Plant Protection Act (California Fish and Game Code 1900 et seq.).

Table 4.2-1 Definitions of Plants Species of Concern

Plant Species of Concern
• Plants considered sensitive by other federal (i.e., U.S. Forest Service, Bureau of Land Management), state, and local agencies and jurisdictions. • Plants considered sensitive or unique by the scientific community or occurring at the limits of its natural range (*State CEQA Guidelines*, Appendix G).

Notes: CNPS = California Native Plant Society

Two additional plant species, California walnut (*Juglans californica*) and purple needlegrass (*Nassella pulchra*), which are indicative of habitats considered by state and local jurisdictions to be of regional importance, also occur on the Project Site.

Fifteen other plant species of concern were considered as having potential to occur on the Project Site, based on known regional distribution and habitat affinity. Assessment of regional distribution based on several sources of information. The California Natural Diversity Data Base (CNDDB) was queried for the 7.5-minute USGS that includes the Project Site (San Luis Obispo) and the eight adjacent quads:

- Arroyo Grande NE;
- Atascadero;
- Lopez Mountain;
- Morro Bay North;
- Morro Bay South;
- Pismo Beach;
- Port San Luis; and
- Santa Margarita.

Because a review of nine 7.5-minute quads may indicate occurrences more than 10 miles from the site, other sources of information were also consulted to refine the potential occurrence. Technical reports prepared for projects in the vicinity were reviewed, as were regional botanical field guides, such as *The Vascular Plants of San Luis Obispo County, California* (Hoover 1970) and *A Flora of the Santa Barbara Region, California* (Smith 1998). Professional contacts were made with biologists who regularly conduct field surveys in the vicinity of the Project Site. Files maintained by biologists preparing this document were checked for additional distributional data (Olson, Storrer, files of personal observations).

Extensive botanical surveys conducted over several seasons failed to confirm the presence of these other 15 plant species on the Project Site. Although potential habitat exists for these species, none were observed: Brewer's spineflower (*Chorizanthe breweri*), San Luis Obispo mariposa lily (*Calochortus simulans*), San Luis mariposa lily (*Calochortus obispoensis*), adobe sanicle (*Sanicula maritima*), Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*), caper-fruited tripodocarpum (*Tropidocarpum capparideum*), Jones' layia (*Layia jonesii*), pale-yellow layia (*Layia heterotricha*), marsh sandwort (*Arenaria pludicola*), round-leaved filaree (*Erodium macrophyllum*), saline clover (*Trifolium depauperatum* var. *hydrophilum*), San Joaquin spearscale (*Atriplex joaquiniana*), Blochman's dudleya (*Dudleya blochmaniae*), San Luis Obispo

dudleya (*Dudleya abramsii* ssp. *murina*), and shining navarretia (*Navarretia nigelliformis*). Based on the negative results of several botanical field surveys, these species are not expected to occur on the Project Site.

Table 4.2-2 lists special status plant species known or with potential to occur at the Project Site. The list is based on field surveys of the Project Site and a CNDDB search completed in 2007 (Padre 2009). A more recent CNDDB query was completed for the EIR to update known and potential for occurrence (CNDDB 2010). Figure 4.2-4 shows the geographic distribution of sensitive plant species and plant species of concern occurring in the Project footprint.

Congdon's Tarplant (*Centromadia parryi* ssp. *congdonii*)

Congdon's tarplant, a California Native Plant Society (CNPS) List 1B species, is a prostrate to erect spiny-herbaceous annual herb in the sunflower family (Asteraceae). This species generally blooms from June to November. It is typically found in alkaline or clay soils associated with seasonally wet valley and foothill grasslands. Congdon's tarplant is known to occur in the San Francisco Bay area, northern Monterey County, and San Luis Obispo County (County). This species has been found in topographic low areas and swales within wetland habitat on the Project Site. Congdon's tarplant is the most widespread rare plant species at the Project Site, occupying 25.9 acres (Figure 4.2-4), though these occurrences vary considerably in terms of plant density.

Hoover's Button-celery (*Eryngium aristatulum* var. *hooveri*)

Hoover's button-celery is an ascending to erect annual/perennial herb in the carrot family (Apiaceae) and is a CNPS List 1B species. This species arises from a taproot and has sharply toothed stem leaves and small white flowers. This species generally blooms in July and typically occurs in vernal pools and low-lying areas within wetland habitat. Hoover's button-celery is known to occur in Alameda and San Luis Obispo Counties and historically has been collected in San Benito and Santa Clara Counties. This species is very rare in San Luis Obispo County and relatively limited distribution outside the County. On the Project Site, Hoover's button-celery is found in several small populations near the northern border in the western portion, as well as several small populations on the south parcel (Figure 4.2-4). It occupies only 0.16 acre, most often in association with paulustrine, non-persistent vernal swales, and pools (Padre 2008c).

Cambria Morning glory (*Calystegia subacaulis* ssp. *episcopalis*)

Cambria morning glory, a CNPS List 1B species, is a perennial herb in the morning glory family (Convolvulaceae) that has trailing or sometimes weakly twining stems. This species typically blooms from April to June and has a cream colored, funnel-shaped flower. Cambria morning glory primarily occurs in grassland and dry open scrub including chaparral and cismontane woodland, and is known to occur only in San Luis Obispo County. This species (Figure 4.2-4) was found to be widespread and abundant throughout annual grassland areas of the Project Site, where it occupied approximately 14.2 acres (Padre 2008c).

Table 4.2-2 Regional Plant Species of Concern

Common Name Scientific Name	Status	General Habitat Associations	Known/Potential Occurrence at the Project Site
Adobe sanicle *Sanicula maritima*	SR, List 1B.1	Meadows and seeps, chaparral, valley and foothill grassland, or coastal prairie (associated w/ moist clay or ultramafic soils) ["ultramafic" = containing iron and magnesium, with little or no silica]	Valley and foothill grasslands, seasonal wet meadows, and clay soils are present within Project Site; however, species not observed during field surveys. Nearest known location: 0.6-mile east of U.S. Highway 101 at the end of Margarita Ave. (CNDDB 2010).
Arroyo de la Cruz manzanita *Arctostaphylos cruzensis*	List 1B.2	Coastal bluff scrub, broadleaved upland forest, closed-cone coniferous forest, chaparral, coastal scrub and grasslands (associated w/sandy soils)	Habitat associations and/or soil types do not occur within Project Site. Nearest known location: Hollister Peak area, approximately 9 miles west-northwest (CNDDB 2010).
Beach spectaclepod *Dithyrea maritima*	ST, List 1B.1	Coastal dunes and coastal scrub	Coastal dune and coastal scrub habitats do not occur within Project Site. Nearest known location: Pismo State Beach, 10 miles south (CNDDB 2010).
Black-flowered figwort *Scrophularia atrata*	List 1B.2	Closed-coned coniferous forest, chaparral, coastal dunes, riparian scrub usually in sands and diatomaceous shales (sand dunes)	Riparian scrub habitat present however fragmented and degraded, sandy soils are not present within Project Site, and species not observed during field surveys. Nearest known location: Price Canyon, approximately four miles southeast (CNDDB 2010).
Blochman's dudleya *Dudleya blochmaniae* ssp. *blochmaniae*	List 1B.1	Coastal scrub and grasslands w/ shallow rocky slopes in clays over serpentine	Occurrences correlate closely with rocky serpentine outcrops which occur in northeast corner of Project Site; however, species not observed during field surveys. Nearest known location: base of Bishop Peak, San Luis Obispo, three miles northwest (CNDDB 2010).
Blochman's leafy daisy *Erigeron blochmaniae*	List 1B.2	Coastal dunes. Endemic to San Luis Obispo County	Coastal dune habitat does not occur within Project Site. Nearest known location Montana de Oro State Park, 14 miles west (CNDDB 2010).
Brewer's spineflower *Chorizanthe breweri*	List 1B.3	Chaparral, coastal scrub, cismontane woodland and closed-coned coniferous forest, associated with serpentine, rocky or gravelly sites	Occurrences correlate closely with serpentine outcrops which occur within the northeast corner of Project Site; however, species not observed during field surveys. Nearest known location: Price Canyon Road, approximately four miles southeast (CNDDB 2010).
California seablite *Suaeda californica*	FE, List 1B.1	Coastal salt marshes and swamps	Coastal salt marshes and swamps are not present within Project Site. Nearest known location southeast shore of Morro Bay, approximately 15 miles west-northwest (CNDDB 2010).

Table 4.2-2 Regional Plant Species of Concern

Common Name Scientific Name	Status	General Habitat Associations	Known/Potential Occurrence at the Project Site
Caper-fruited tropidocarpum *Tropidocarpum capparideum*	List 1B.1	Valley and foothill grassland, associated with alkaline clay	Grassland habitat exists within Project Site; however, species was not observed during field surveys. Nearest known location: Pozo Road, southeast of Santa Margarita, approximately 12 miles east-northeast (CNDDB 2010).
Carmel Valley bush mallow *Malacothamnus palmeri* var. *involucratus*	List 1B.2	Cismontane woodland, chaparral	Suitable habitat not present within Project Site. Nearest known location at Cerro Alto, between Morro Bay and Atascadero, approximately 20 miles northwest (CNDDB 2010).
Chorro Creek bog thistle *Cirsium fontinale* var. *obispoense*	FE, SE, List 1B.2	Chaparral, cismontane woodland	Habitat associations do not occur within Project Site. Nearest known locations: Miossi Creek, Prefumo Canyon and Laguna Lake, all 2+ miles away (CNDDB 2010).
Congdon's tarplant *Centromadia parryi* ssp. *congdonii*	List 1B.2	Valley and foothill grassland	Species known to occur within Project Site; identified during field surveys (Rincon 2003, 2005; CEMC 2007).
Coulter's goldfields *Lasthenia glabrata* ssp. *coulteri*	List 1B.1	Coastal salt marsh, valley and foothill grassland, vernal pools	Grasslands and vernal pools occur within Project Site; however, species was not observed during field surveys. Nearest known location is Baywood Park at Sweet Springs marsh, 13 miles west (CNDDB 2010).
Crisp monardella *Monardella crispa*	List 1B.2	Coastal dunes, coastal scrub	Habitat associations are not present within Project Site. Nearest known location: Hazard Canyon, 16 miles west (CNDDB 2010).
Cuesta Pass checkerbloom *Sidalcea hickmanii* ssp. *anomala*	SR, List 1B.2	Closed-coned coniferous forest	Coniferous forests do not occur within Project Site. Nearest known location: Cuesta Ridge, approximately seven miles north (CNDDB 2010).
Dacite manzanita *Arctostaphylos tomentosa* ssp. *daciticola*	List 1B.1	Chaparral, cismontane woodland	Habitat associations are not present within Project Site. Nearest known location: Hollister Peak, east of Morro Bay, eight miles west-northwest (CNDDB 2010).
Diablo Canyon blue grass *Poa diaboli*	List 1B.2	Chaparral, cismontane woodland, coastal scrub, closed-cone coniferous forest	Habitat associations are not present within Project Site. Nearest known location: Ridge south of Coon Creek, 17 miles west (CNDDB 2010).
Dune larkspur *Delphinium parryi* ssp. *blochmaniae*	List 1B.2	Maritime chaparral and coastal dunes	Maritime chaparral and coastal dune habitat do not occur within Project Site. Nearest known location: Piney Ridge, southwest of Lopez Mountain, 6 miles southeast (CNDDB 2010).

Table 4.2-2 Regional Plant Species of Concern

Common Name Scientific Name	Status	General Habitat Associations	Known/Potential Occurrence at the Project Site
Dwarf soaproot *Chlorogalum pomeridianum* var. *minus*	List 1B.2	Chaparral, valley and foothill grassland, associated with serpentine soils	Valley and foothill grasslands associated with serpentine soils present within Project Site; however species not observed during field surveys. Nearest known location: three miles east of San Luis Obispo, southwest of West Corral de Piedra Creek (CNDDB 2010).
Hardam's evening primrose *Camissonia hardhamiae*	List 1B.2	Chaparral, cismontane woodland	Suitable habitat not present within the Project Site. Nearest known location east of Santa Margarita, approximately 12 miles northeast (CNDDB 2010).
Hoover's bent grass *Agrostis hooveri*	List 1B.2	Chaparral, cismontane woodland, valley and foothill grassland, associated with sandy soils	Sandy soils are not present within Project Site. Nearest known location: Irish Hills, 12 miles west (CNDDB 2010).
Hoover's button-celery *Eryngium aristulatum* var. *hooveri*	List 1B.1	Vernal pools	Species known to occur within Project Site; identified during field surveys (Rincon 2003, 2005; CEMC 2007).
Indian Knob mountainbalm *Eriodictyon altissimum*	FE, SE, List 1B.1	Maritime chaparral, cismontane woodland. Endemic to San Luis Obispo County	Maritime chaparral and cismontane woodland do not occur within Project Site. Nearest known location is at Indian Knob, about 4 miles north of Pismo Beach and 3 miles of San Luis Obispo (CNDDB 2010).
Jones' layia *Layia jonesii*	List 1B.2	Chaparral, valley and foothill grasslands areas w/ clay and serpentine outcrops	Grasslands and clay soils and serpentine outcrops are present within Project Site; however, species not observed during surveys. Nearest known location: 1.75 miles southwest of San Luis Obispo (CNDDB 2010).
La Graciosa thistle *Cirsium loncholepis*	FE, ST, List 1B.1	Coastal dunes, brackish marshes, riparian scrub	Habitat associations are not present within Project Site. Nearest known location: Laguna Lake County Park, near Madonna Road, 3 miles northwest (CNDDB 2010).
Leafy tarplant *Deinandra increscens* ssp. *foliosa*	List 1B.2	Valley and foothill grassland w/ sandy soils	Sandy soils absent in Project Site. Nearest known locations: Arroyo Grande, Pozo Road, more than 10 miles from the Project Site (CNDDB 2010).
Marsh sandwort *Arenaria paludicola*	FE, SE, List 1B.1	Marshes and swamps	Marsh habitat occurs within Project Site; however, species not observed during surveys. Nearest known location: Pismo Beach, 10 miles south (CNDDB 2010).

Table 4.2-2 Regional Plant Species of Concern

Common Name Scientific Name	Status	General Habitat Associations	Known/Potential Occurrence at the Project Site
Mesa horkelia *Horkelia cuneata* ssp. *puberula*	List 1B.1	Chaparral, cismontane woodland, coastal scrub	Habitat associations are not present within Project Site. Nearest known location: Indian Knob Ridge, 3 miles east of San Luis Obispo (CNDDB 2010).
Miles's milk-vetch *Astragalus didymocarpus* var. *milesianus*	List 1B.2	Coastal scrub associated with clay soils	Coastal scrub does not occur in Project Site. Nearest known location: End of Margarita Ave., San Luis Obispo, about 2 miles from the Project Site (CNDDB 2010).
Morro manzanita *Arctostaphylos morroensis*	FT, List 1B.1	Chaparral, cismontane woodland, coastal dunes, coastal scrub, associated with Baywood sands	Habitat associations do not occur in Project Site. Nearest known location: Prefumo Canyon, about 3 miles from the Project Site (CNDDB 2010).
Most beautiful jewel-flower *Streptanthus albidus* ssp. *peramoenus*	FSC, List 1B.2	Chaparral, cismontane woodland, valley and foothill grasslands associated with serpentine soils	Valley and foothill grasses associated with serpentine soils occur with the Project Site; however, species not found during field surveys. Nearest known location: Brizziolari Canyon, approximately 3 miles north (CNDDB 2010).
Obispo Indian paintbrush *Castilleja densiflora* ssp. *obispoensis*	List 1B.2	Valley and foothill grassland	This local variant of a native annual wildflower is widespread within the non-native on the Project Site (Padre 2008c). Taxonomy is unclear and distinguishing the local endemic from the common and widespread taxon is difficult.
Oso manzanita *Arctostaphylos osoensis*	List 1B.2	Chaparral, cismontane woodland, narrowly endemic to mountains north of Los Osos Valley, San Luis Obispo County	Chaparral and cismontane woodland do not occur within Project Site. Nearest known location: northwest slope of Hollister Peak, eight miles west-southwest (CNDDB 2010).
Pale-yellow layia *Layia heterotricha*	List 1B.1	Cismontane woodland, pinyon-juniper woodland, valley and foothill grassland, associated with alkaline or clay soils	Potential habitat present within Project Site; however, species not identified during field surveys. Nearest known location: Hwy 58 at the Salinas River Bridge, Calf Canyon, more than 20miles away (CNDDB 2010).
Pecho manzanita *Arctostaphylos pechoensis*	List 1B.2	Closed-cone coniferous forest, chaparral, coastal scrub. Narrowly endemic to coastal mountains of San Luis Obispo County.	Closed-cone coniferous forest, chaparral, and coastal scrub do not occur within Project Site. Nearest known location: hills and ridges above upper Coon Creek and head of See Canyon, San Luis Canyon, more than 3 miles from the Project Site (CNDDB 2010).

Table 4.2-2 Regional Plant Species of Concern

Common Name Scientific Name	Status	General Habitat Associations	Known/Potential Occurrence at the Project Site
Pismo clarkia *Clarkia speciosa* ssp. *immaculata*	FE, SR, List 1B.1	Chaparral, cismontane woodland, and grasslands, associated with sandy soils	Typically associates with oak woodland and on sandy soils which do not occur within Project Site. Nearest known location: Price Canyon approximately 4 miles southeast (CNDDB 2010).
Rayless ragwort *Senecio aphanactis*	List 2.2	Coastal scrub, cismontane woodland	Habitat associations not present within Project Site. Nearest known location: San Luis Obispo, hill near cemetery, more than two miles away (CNDDB 2010).
Round-leaved filaree *California macrophylla*	List 1B.1	Cismontane woodland, valley and foothill grassland, associated with clay soils	Potential habitat exists within Project Site; however, species not observed during field surveys (CNDDB 2010).
Saline clover *Trifolium depauperatum* var. *hydrophilum*	List 1B.2	Marshes and swamps, valley and foothill grassland, vernal pools	Potential habitat present within Project Site; however, not observed during field surveys. Nearest known location in Laguna Lake Park, San Luis Obispo, 3 miles northwest (CNDDB 2010).
Salt marsh bird's-beak *Chloropyron maritimum* ssp. *maritimms*	FE, SE, List 1B.2	Coastal salt marsh, coastal dunes	Coastal salt marsh and coastal dune habitat not present within the Project Site. Nearest known location at Sweet Springs marsh at south end of Morro Bay, 13 miles west (CNDDB 2010).
San Benito fritillary *Fritillaria viridea*	List 1B.2	Chaparral associated with serpentine slopes	Habitat associations do not occur within the Project Site. Nearest known location: Prefumo Canyon, about three miles from the Project Site (CNDDB 2010).
San Joaquin spearscale *Atriplex joaquiniana*	List 1B.2	Chenopod scrub, alkali meadow, valley and foothill grassland, associated with seasonal alkali wetlands or alkali sink scrub	Grassland and seasonal wetland meadow habitat present within the Project Site; however, highly degraded. Species not observed during field surveys. Nearest known location: Near Morro Bay, 11 miles west-northwest (CNDDB 2010).
San Luis mariposa lily *Calochortus obispoensis*	List 1B.2	Chaparral, coastal scrub, and grasslands, often in serpentine	Occurrences correlate closely with serpentine outcrops which occur in the northeast corner of Project Site; however species not observed during field surveys. Nearest known location: Ridge at intersection of Broad St. and Orcutt St., more than two miles away (CNDDB 2010).
San Luis Obispo County lupine *Lupinus ludovicianus*	List 1B.2	Chaparral, cismontane woodland in sandstone or sandy soils	Chaparral and/or cismontane woodland do not occur within Project Site. Nearest known location: Price Canyon approximately four miles southeast (CNDDB 2010).

Table 4.2-2 Regional Plant Species of Concern

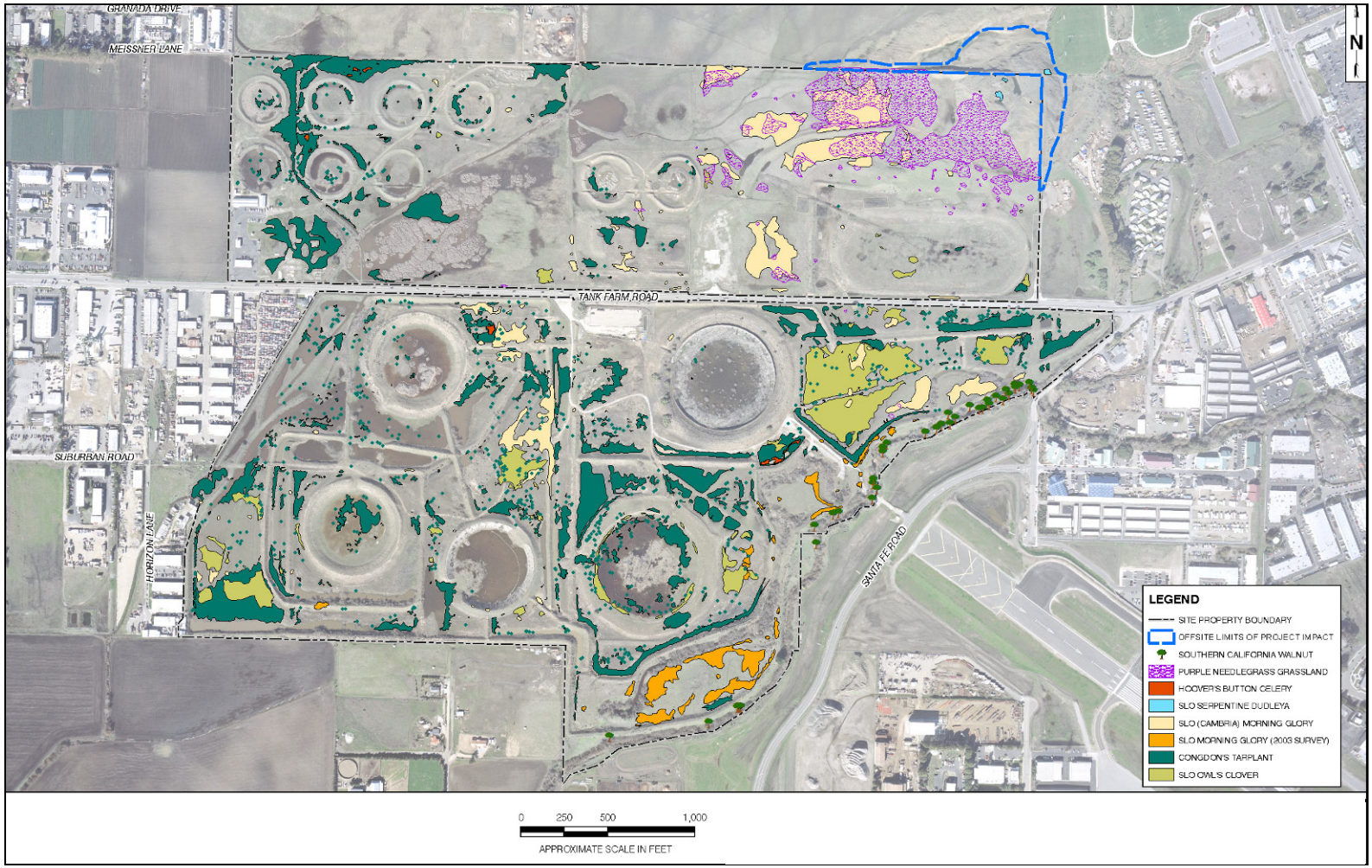
Common Name Scientific Name	Status	General Habitat Associations	Known/Potential Occurrence at the Project Site
Cambria morning glory *Calystegia subacaulis* ssp. *episcopalis*	List 1B.2	Chaparral, cismontane woodland, and grassland	Species is known to occur within Project Site. Observed during field surveys (Rincon 2003, 2005; CEMC 2007).
San Luis Obispo dudleya *Dudleya abramsii* ssp. *murina*	List 1B.3	Coastal scrub, grasslands, on rocky barren exposures of serpentine	Occurrences correlate closely with serpentine outcrops which occur in the northeast corner of the Project Site. Nearest known location: North of Project Site at base of South Hills (Rincon 2000).
San Luis Obispo mariposa lily *Calochortus simulans*	List 1B.3	Valley and foothill grassland, cismontane woodland, chaparral, associated with decomposed granite and serpentine clay soils	Valley and foothill grasslands occur within Project Site; however, species was not observed during surveys. Nearest known location: End of Margarita Ave., San Luis Obispo, about 2 miles from the Project Site (CNDDB 2010).
San Luis Obispo monardella *Monardella frutescens*	List 1B.2	Coastal dunes, coastal scrub	Coastal dune and scrub habitat does not occur within Project Site. Nearest known location: South of Morro Bay, 12 miles west (CNDDB 2010).
San Luis Obispo sedge *Carex obispoensis*	List 1B.2	Closed-coned forest, chaparral, coastal prairie, coastal scrub, valley and foothill grasslands	Grasslands present within Project Site; however, highly degraded. Species not observed during field surveys. Nearest known location: approximately 7 miles north Ridge (CNDDB 2010).
San Luis Obispo serpentine dudleya *Dudleya abramsii* ssp. *bettinae*	List 1B.2	Coastal scrub, grasslands, and chaparral; barren exposures of serpentine	Believed to occur on serpentine outcrops within the northeast corner of Project Site, confirmation needed (CEMC 2010). Nearest known location: O'Connor Way, San Luis Obispo, 5 miles northwest (CNDDB 2010).
Santa Lucia bush mallow *Malacothamnus palmeri* var. *palmeri*	List 1B.2	Chaparral	Chaparral habitat is not present within Project Site. Nearest known location: Highway 41, northwest of Cerro Alto, about 20 miles northwest (CNDDB 2010).
Santa Lucia manzanita *Arctostaphylos luciana*	List 1B.2	Chaparral	Chaparral habitat does not occur within the Project Site. Nearest known location: Northeast of Slide Hill, east of San Luis Obispo (CNDDB 2010).
Santa Margarita manzanita *Arctostaphylos pilosula*	List 1B.2	Closed-coned coniferous forest, chaparral	Closed-coned coniferous forest and chaparral is not present within Project Site. Nearest known location in vicinity of Indian Knob, about 3.5 miles north-northwest of Pismo Beach, South of San Luis Obispo (CNDDB 2010).

Table 4.2-2 Regional Plant Species of Concern

Common Name Scientific Name	Status	General Habitat Associations	Known/Potential Occurrence at the Project Site
Shining navarretia *Navarretia nigelliformis* ssp. *radians*	List 1B.2	Cismontane woodland, valley and foothill grassland, vernal pools,	Suitable habitat exists within Project Site; however, species not observed during field surveys. Nearest known location: Rocky Canyon Road, Creston, more than 15 miles away (CNDDB 2010).
Splitting yarn lichen *Sulcaria isidiifera*	S1.1	Chaparral, cismontane woodland	Chaparral and cismontane woodland habitat does not occur within in Project Site. Nearest known location: North of town of Baywood and South of Morro Bay State Park, about 12 miles west (CNDDB 2010)
Straight-awned spineflower *Chorizanthe rectispina*	List 1B.3	Chaparral, cismontane woodland, coastal scrub	Habitat associations are not present within Project Site. Nearest known location: Carpenter Canyon, about four miles southeast (CNDDB 2010).
Surf thistle *Cirsium rhothophilum*	ST, List 1B.2	Coastal dunes	Coastal dune habitat does not occur in Project Site. Nearest known location: Pismo Beach, 10 miles south (CNDDB 2010).
Wells's manzanita *Arctostaphylos wellsii*	List 1B.1	Chaparral, closed-cone coniferous forest	Habitat associations do not occur in Project Site. Nearest known location: Price Canyon, approximately four miles southeast (CNDDB, 2010).
Yellow-flowered eriastrum *Eriastrum luteum*	List 1B.2	Broadleaved upland forest, cismontane woodland, chaparral	Habitat associations do not occur in Project Site. Nearest known location: Creston Road, Santa Margarita, more than 20 miles northeast (CNDDB 2010).

Notes: Species arranges alphabetically by common name
Status Codes:
FE Federal Endangered (United States Fish and Wildlife Service)
FT Federal Threatened (United States Fish and Wildlife Service)
List 1B Plants rare, threatened, or endangered in California (California Native Plant Society)
0.1 Seriously endangered in California, 0.2 Fairly endangered in California, 0.3 Not very endangered in California
List 2 Rare, threatened, or endangered in California, but more common elsewhere.
SE State Endangered (California Department of Fish & Wildlife)
SR State Rare (California Department of Fish & Wildlife)
ST State Threatened (California Department of Fish & Wildlife)
P Habitat Present
A Habitat Absent

Figure 4.2-4 – Geographic Distribution of Plant Species of Concern



Source: Padre WSP 2008c

San Luis Obispo Owl's Clover (*Castilleja densiflora* ssp. *obispoensis*)
San Obispo owl's clover is a CNPS list 1B species. This annual herb in the figwort family (Scrophulariaceae) has white to pale yellow flowers and typically blooms from March through June. This species generally occurs in valley and foothill grasslands, meadows, and seeps, often associated with serpentine soils. San Obispo owl's clover is endemic to San Luis Obispo County. At the Project Site, this rare species is widespread in the non-native grassland plant communities, occupying 10.6 acres (Figure 4.2-4), (Padre 2008c). However, color forms that key to both the widespread taxon and the local endemic were found during field surveys and in many cases, it is not always possible to distinguish between the two (Padre 2008c).

San Luis Obispo serpentine dudleya (*Dudleya abramsii ssp. bettinae*)
San Luis Obispo serpentine dudleya is a perennial herb in the stonecrop family (Crassulaceae). This species has fleshy leaves, pale-yellow, purple-tinged flowers, and typically blooms from May through July. This species occurs on rock outcrops in serpentine grasslands and was observed on the rock outcrop in the northeastern corner of the Project Site (CEMC 2007). This species is described in Padre 2008c as being one of the most restricted rare plant species that was observed during site surveys, occupying only 0.04-acre of the Project site Padre 2008c.

Purple Needlegrass (*Nassella pulchra*)
Purple needlegrass is a perennial bunchgrass widespread in California west of the Sierra Nevada crest. It is one of four species of needlegrass in the state, three of which are native. Because of its large geographic distribution, purple needlegrass often is a dominant, co-dominant, or subdominant in many grassland and shrubland plant communities (see CDFW 2003 for further listings). At the Project Site, purple needlegrass is primarily found in the far northeastern portion of the site in association with the ultramafic outcrop and derivative soils (ultramafic contains iron and magnesium, with little or no silica). Smaller populations are found in the southern portion of the north parcel near Tank Farm Road (Figure 4.2-4). Purple needlegrass grassland occupies 11.5 acres at the Project Site.

California Walnut (*Juglans californic*a Wats.)
The southern California walnut is a deciduous tree or shrub with separate female and male inflorescences. As a tree, it maintains a single trunk less than 25 m in height; however, it can also take the form of a shrub with up to five trunks. According to the CNPS, southern California walnut is on the watch list (i.e., List 4.2, species with a limited distribution in the state). It is further classified as 0.2, which is fairly endangered in California. CNPS states that the walnut forest is a "much fragmented, rare, and declining vegetation community." It is known to be threatened by urbanization, grazing, invasion by non-native plants, and possibly a decline in natural recruitment processes. A further, but not well-documented, threat is the possibly hybridization with the cultivated non-native walnuts (e.g., *Juglans regia*). Several stands of southern California walnut are found at the Project Site, along the East Fork of San Luis Obispo Creek (Padre 2008c) (Figure 4.2-4). These are small stands consisting of mature, mostly multi-stemmed specimens with a non-native annual grassland understory.

4.2.1.9 Regional Wildlife Species of Concern

The following species accounts briefly present ecological and range information and legal status for those special-status animal species known to occur, or with potential to occur at the Project Site. Potential for occurrence is based on the presence of suitable habitat and known occurrences in the vicinity of the Project Site. These conclusions are supported by CNDDB 2010 query results and review of reported occurrences from other environmental documents and range maps, in addition to results of surveys conducted on the Project Site. The nine USGS quads queried for CNDDB information are listed in Section 4.2.1.8, Regional Plant Species of Concern . Information regarding known and potential occurrences in the vicinity was supplemented by additional sources, including regional wildlife guides and checklists, such as *The Birds of San Luis Obispo County, California* (Edell 1996) and *The Birds of Santa Barbara County, California* (Lehman 1994); contacts with other biologists who conduct field surveys in the vicinity; and files maintained by the biologists who prepared this document (Olson, Storrer, personal observations).

Table 4.2-3 defines wildlife species of concern in the context of this analysis.

Table 4.2-3 Definitions of Wildlife Species of Concern

Wildlife Species of Concern
• Animals listed or proposed for listing as threatened or endangered under the Federal Endangered Species Act (50 CFR 17.11 for listed animals and various notices in the Federal Register for proposed species). • Animals that are candidates for possible future listing as threatened or endangered under the Federal Endangered Species Act (Federal Register Vol. 62, No. 182, pp. 49397-49411, September 19, 1997). • Animals that meet the definitions of rare or endangered species under the CEQA (State CEQA Guidelines, Section 15380). • Animals listed or proposed for listing by the State of California as threatened and endangered under the California Endangered Species Act (14 CCR 670.5). • Animal species of special concern to the CDFW (Remsen 1978 for birds; Williams 1986 for mammals; Moyle et al. 1989 for fish; and Jennings and Hayes 1994 for amphibians and reptiles). • Animal species that are fully protected in California (California Fish and Game Code, Section 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]).

Table 4.2-4 lists special status wildlife species known or with potential to occur at the Project Site. The list was compiled based on field surveys of the Project Site and CNDDB search completed in 2007 (CEMC 2007). A more recent CNDDB query was completed for the EIR to update known and potential for occurrence (CNDDB 2010).

Invertebrates

California Linderiella (Linderiella occidentalis), Longhorn Fairy Shrimp (Branchinecta longiantenna), and Vernal Pool Fairy Shrimp (Branchinecta lynchi)

These three fairy shrimp are aquatic species in the family Branchinectidae. All three have delicate elongate bodies, large stalked compound eyes, no carapaces, and 11 pairs of swimming legs. Fairy shrimp are known to occur in neutral to slightly alkaline vernal pools throughout the California Central Valley and in rock outcrop and vernal pools along the Interior Coast Ranges, south of the Sacramento River Delta.

Table 4.2-4 Regional Wildlife Species of Concern

Common Name Scientific Name	Status	General Habitat Associations	Known/Potential Occurrence at the Project Site
Invertebrates			
Monarch butterfly (overwintering) *Danaus plexippus*	SA	Sheltered stands of both native and non-native trees including Eucalyptus and oak groves,	Dense, sheltered stands of Eucalyptus and oak groves are not present within Project Site. Nearest known location: Prefumo Creek, south of Madonna Road, San Luis Obispo, about 3 miles from the Project Site (CNDDB 2010)
Morro Bay blue butterfly *Plebejus icarioides moroensis*	SA	Stabilized dunes, coastal areas	Suitable habitat is not present within Project Site. Nearest known location: Morro Bay, 12 miles west northwest (CNDDB 2010)
Morro shoulderband snail *Helminthoglypta walkeriana*	FE	Coastal dune and coastal scrub	Habitat associations do not occur within the Project Site. Nearest known occurrence: Elfin Forest, Los Osos Baywood Park (CNDDB 2010), 10 miles west.
California linderiella *Linderiella occidentalis*	SA	Vernal pools and other seasonally inundated features	Vernal pools are present within the Project Site; and California linderiella is known to occur on the Project Site (Rincon 2005; Padre 2012a)
Vernal pool fairy shrimp *Branchinecta lynchi*	FT	Vernal pools and other seasonally inundated features	Species known to occur within the Project Site (Rincon 2003, 2012a)
Longhorn fairy shrimp *Branchinecta longiantenna*	FE	Vernal pools and other seasonally inundated features	Vernal pools are present within Project Site; however, species not observed during field surveys. Nearest known location: Soda Lake, more than 45 miles northeast (Rincon 2003)
Sandy beach tiger beetle *Cicindela hirticollis gravida*	SA	Sandy areas adjacent to brackish-water	Suitable habitat is not present within the Project Site. Nearest known location: Morro Strand Beach, about 12 miles west-northwest (CNDDB 2010)
Globose dune beetle *Coelus globosus*	SA	Coastal sand dunes	Suitable habitat not present within the Project Site. Nearest known location: three miles north of Pt. Buchon (CNDDB 2010)
Atascadero june beetle *Polyphylla nubila*	SA	Sand dunes	Suitable habitat not present within the Project Site. Nearest known location: San Luis Obispo, location unknown (CNDDB 2010)
San Luis Obispo pyrg *Pyrgulopsis taylori*	SA	Freshwater habitats	Potential habitat exists in the East Fork of San Luis Obispo Creek along eastern side of the project Site. Nearest known location: San Luis Obispo Creek, Cuesta Pass approximately 7 miles north (CNDDB 2010)
Mimic tyronia (California brackish water snail) *Tyronia imitator*	SA	Coastal lagoons, estuaries, salt marshes	Suitable habitat not present within the Project Site. Nearest known location: Los Osos Creek marsh,12 miles west (CNDDB 2010)

Table 4.2-4 Regional Wildlife Species of Concern

Common Name Scientific Name	Status	General Habitat Associations	Known/Potential Occurrence at the Project Site
Fish			
South-central Calif. coast steelhead *Oncorhynchus mykiss irideus*	FT	Coastal streams	Potential habitat present within adjacent East Fork of San Luis Obispo Creek during high flow periods. Nearest known location: Acacia Creek at Tank Farm Road (F. Otte, City of San Luis Obispo Biologist, personal communication, 9/25/07).
Tidewater goby *Eucyclogobius newberryi*	FE, CSC	Brackish water habitats	Suitable habitat is not present within the Project Site. Nearest known location; San Luis Obispo Creek, 2.5 miles upstream from creek mouth (CNDDB 2010).
Reptiles			
Black legless lizard *Anniella pulchra nigra*	CSC	Sand dunes and sandy soils	Habitat associations absent from the Project Site. Nearest known location suppressed by CDFW (CNDDB 2010)
Silvery legless lizard *Anniella pulchra pulchra*	CSC	Sandy soils, sparse vegetation	Habitat associations absent from the Project Site. Nearest known location: Cuesta College and Camp San Luis Obispo, six miles from the Project Site (CNDDB 2010)
Coast (California) horned lizard *Phrynosoma coronatum frontale*	CSC	Most common in lowlands along sandy washes with scattered low bushes	Species not observed during field surveys. Nearest known location is El Chorro Regional Park, six miles from the Project Site (CNDDB 2010)
Southwestern pond turtle *Actinemys marmorata*	CSC	Vegetated ponds and slow moving streams with deep pools present	Riparian habitat present within the Project Site. Nearest known location: Observed in Acacia Creek west of the Project Site (Rincon 2000; EXTRIX 1998)
Two-striped garter snake *Thamnophis hammondii*	CSC	Riverine wetlands	Potential habitat present; however, habitat is fragmented and degraded. Species not observed during field surveys. Nearest recorded location at Santa Rosa Creek, south side of Hwy 41, 4.5 miles NE of Cambria (CNDDB 2010)
Amphibians			
California red-legged frog *Rana draytonii*	FT, CSC	Riparian vegetation associated with slow moving water	Potential habitat present; however, fragmented and degraded. Protocol level surveys for CRLF were negative (Padre 2008d). One-day, one-night, dry season survey in July 2012 was negative (Padre August 2012b). Nearest known locations; tributaries to San Luis Obispo Creek northeast of Project Site (CNDDB 2010)
Western spadefoot toad *Spea hammondii*	CSC	Grassland habitats, or valley-foothill hardwood woodland, associated with vernal pools	Potential habitat present within the Project Site; however, species not observed during field surveys. Nearest known location; northeast of Santa Margarita, more than 15 miles northeast (CNDDB 2010)

Table 4.2-4 Regional Wildlife Species of Concern

Common Name Scientific Name	Status	General Habitat Associations	Known/Potential Occurrence at the Project Site
California tiger salamander *Ambystoma californiense*	FT, CSC	Seasonal water sources for breeding	Seasonal wetlands present; however, disturbed and degraded. Species not observed during field surveys. Habitat assessment concluded occurrence likely precluded by several factors (Rincon 2003a). Nearest known location; one mile north of San Luis Obispo (CNDDB 2010)
Coast range newt *Taricha torosa torosa*	CSC	Coastal drainages	Suitable habitat not present within the Project Site. Further, species not observed during surveys. Nearest known location is within unnamed tributary to Santa Margarita Creek, five miles north-northeast of San Luis Obispo (CNDDB 2010).
Birds			
Golden eagle *Aquila chrysaetos*	CSC (nesting and wintering),	Mountainous, hilly terrain, and open fields	Observed within the Project Site during field surveys (CEMC 2007). Uncommon transient while foraging.
Northern harrier *Circus cyaneus*	CSC (nesting), M	Wetlands and open fields	Observed within the Project Site during field surveys in winter spring of 2003-04 (Rincon 2004). Winter visitor while foraging.
Cooper's hawk *Accipiter cooperi*	CSC (nesting), M	Riparian forest	Observed within the Project Site during field surveys in fall/winter of 2003-04 (Rincon 2004). Likely present year-round; possible breeder.
Ferruginous hawk *Buteo regalis*	CSC (wintering), M	Grasslands	Observed within the Project Site during field surveys in November 2003 (Rincon 2004). Uncommon transient and winter visitor.
Sharp-shinned hawk *Accipiter striatus*	CSC (nesting), M	Mixed woodlands	Observed within the Project Site during field surveys in winter of 2004 (Rincon 2004). Uncommon winter visitor.
White-tailed kite *Elanus leucurus*	FP, M	Oak woodland, open grasslands, meadows,	Observed within the Project Site during field surveys in winter and early spring of 2003-04 (Rincon 2004). Year-round resident; possible breeder.
American peregrine falcon *Falco peregrinus anatum*	SE (nesting), FP, M	Potentially present in all habitats.	Observed within the Project Site in April 2003 (Rincon 2004). Expected as a rare transient while foraging. Nearest known breeding locations within Price Canyon and Morro Bay (CNDDB 2010).
Prairie falcon *Falco mexicanus*	CSC (nesting), M	Dry, open terrain	Open grassland habitat present within the Project Site. Location information suppressed (CNDDB 2010). Rare transient.

Table 4.2-4 Regional Wildlife Species of Concern

Common Name Scientific Name	Status	General Habitat Associations	Known/Potential Occurrence at the Project Site
Burrowing owl (burrow sites) *Athene cunicularia*	CSC, M	Open, dry annual or perennial grasslands	Observed within the Project Site during winter of 2008 (Padre 2008e). Other known occurrence: two miles east-northeast of Cuesta College, Camp San Luis Obispo (CNDDB 2010). Winter visitor; nesting possible, but not confirmed through focused field surveys in spring of 2008 (Padre 2008e).
Grasshopper sparrow *Ammodramus savannarum*	CSC (nesting), M	Dense grasslands on rolling hills, lowland plains, valley and lower mountain slopes	Grasslands are present within the Project Site, however, highly degraded and grazed by cattle. Possible spring/summer resident, though not observed on site during field surveys. Nearest known location: Santa Margarita Ranch, more than 10 miles northeast (CNDDB 2010).
California black rail *Laterallus jamaicensis*	ST, FP, M	Marshes, swamps, meadows	Marsh habitat present in the Project Site. Species not observed at the Project Site during focused surveys in May of 2003 (Rincon 2004).
California clapper rail *Rallus longirostris obsoletus*	FE, SE, FP, M	Salt-water and brackish marshes	Suitable habitat not present within the Project Site. Nearest known location: Morro Bay, approximately 11 miles west-northwest (CNDDB 2010). Not expected to occur.
Western snowy plover *Charadrius alexandrinus nivosus*	FT (nesting), CSC (nesting), M	Sandy beaches, salt pond levees and shores of large alkali lakes	Suitable habitat not present within the Project Site. Nearest known location: Pismo State Beach, 10 miles south (CNDDB 2010). Not expected to occur.
California horned lark *Eremophila alpestris actia*	CSC, M	Grasslands, meadows, alkali flats	Observed within the Project Site during field surveys in winter/spring of 2003-04 (Rincon 2004) and May of 2003 (Rincon 2003a). Year-round resident and probable breeder.
Loggerhead shrike *Lanius ludovicianus*	CSC (nesting), M	Open grassland; brushy areas	Observed within the Project Site during field surveys in fall, winter, and early spring of 2003-04 (Rincon 2004). Winter visitor.
Purple martin *Progne subis*	CSC (nesting), M	Woodlands, low elevation coniferous forest	Suitable nesting habitat not present within the Project Site. Nearest known location: Trout Creek, west of Pozo Road (CNDDB 2010), more than 10 miles from the Project Site. Rare transient.
Tricolored blackbird *Agelaius tricolor*	CSC (nesting colony), M	Open water, wetlands	Seasonal wetlands are present within the Project Site. Observed during 2007 Padre field surveys. Transient and possible breeder. Nearest known location: Chorro Reservoir, Camp San Luis Obispo, six miles west (CNDDB 2010).
Western yellow-billed cuckoo *Coccyzus americanus occidentalis*	SE (nesting) M	Riparian forest	Mixed riparian habitat present within the Project Site, however, fragmented and degraded. Rare transient. Nearest known location: San Luis Obispo 1921, believed to be extirpated from site (CNDDB 2010).

Table 4.2-4 Regional Wildlife Species of Concern

Common Name Scientific Name	Status	General Habitat Associations	Known/Potential Occurrence at the Project Site
Mammals			
American badger *Taxidea taxus*	CSC	Shrub, forest and herbaceous habitats with friable soils	Suitable habitat is present within the Project Site. Nearest known location: Price Canyon, four miles southeast (CNDDB 2010).
San Diego desert woodrat *Neotoma lepida*	CSC	Moderate to dense vegetation with canopy cover, particularly abundant in rock outcrops and rocky cliffs	Habitat not present within the Project Site. Nearest known location: PG&E's Pt. Buchon property immediately south of Montana de Oro State Park, approximately 15 miles west (CNDDB 2010, Olson personal observations 2010).
Morro Bay kangaroo rat *Dipodomys heermanni morroensis*	FE, SE, FP	Coastal sage scrub on south side of Morro Bay	Suitable habitat is not present within the Project Site. Nearest known location: Los Osos Creek, more than 12 miles west (CNDDB 2010).
Townsend's big-eared bat *Corynorhinus townsendii*	CSC	Roosts in open hanging from walls, ceilings, common in mesic sites	Suitable habitat is not present within the Project Site. Nearest known location: unknown (CNDDB 2010).
Pallid bat *Antrozous pallidus*	CSC	Deserts, grasslands, shrublands, forests. Most common in open, dry habitats with rocky areas for roosting	Suitable roosting habitat not present within the Project Site. Nearest known location: Within under-city tunnel at Marsh and Chorro streets, three miles north (CNDDB 2010).
Big free-tailed bat *Nyctinomops macrotis*	CSC	High cliffs and rocky outcrops for roosting	Suitable roosting habitat not present within the Project Site. Nearest known location: Morro Bay State Park, 12 miles west-northwest (CNDDB 2010).
Western mastiff bat *Eumops perotis californicus*	CSC	Roosts in cliff faces, high buildings, trees, tunnels	Suitable roosting habitat not present within the Project Site. Nearest known location unknown (CNDDB 2010).

Notes: Species listed alphabetically by common name

Status Codes:

CSC	California Species of Special Concern (CDFW)	FSC	Federal Species of Concern
FP	Fully protected under Section 4700 of the California Fish and Game Code	FE	Federal Endangered (USFWS)
FT	Federal Threatened (USFWS)	SA	Special Animal (CDFW)
FP	Protected under the California Code of Regulations, Title 14, Chapter 5, Sections 41 and 42	SE	State Endangered (CDFW)
M	Migratory Bird Treaty Act of 1918	ST	State Threatened (CDFW)
A/P	General Habitat Absent/Present		

The Project Site has been the subject of wet and dry season fairy shrimp presence/absence survey protocol, conducted by Rincon Consultants, Inc. (Rincon), over a 3-year period from 2003 through 2005. A total of 86 seasonal wetland features were identified and surveyed to determine if the federally threatened vernal pool fairy shrimp (*Branchinecta lynchi* [VPFS]) occur using dry season sampling, wet season sampling, or both wet and dry season survey efforts. As a result of completing the wet/dry season survey protocol, 60 of the 86 pools sampled have either recorded positive identification of or are assumed to support the species based on observed hydrological connectivity to occupied pools (Rincon 2005). Three "potential pool locations" (totaling less than approximately 0.25 acres) were identified in the northeast portion of the Project Site during the Padre 2012 October surveys (Padre 2013). These potential pools are not included in Figures 4.2-2 or the final wetland acreage. These areas did not contain water during the time of the surveys and were not formally delineated. Final acreages will be finalized prior to any site disturbances.Additional surveys were conducted by Padre biologists during the 2011/2012 wet season within previously unoccupied habitat areas in order to evaluate the current occupancy of suitable habitat. These surveys resulted in observations of VPFS in five additional locations that were previously considered to be unoccupied habitat (Padre 2012a). The surveys identified an additional 0.8-acre of VPFS occupied habitat for a total of 32.6 acres of VPFS occupied habitat on the Project Site.

California linderiella, on the CDFW "Special Animals" list, , tend to live in large, fairly clear vernal pools and lakes. They have been found in very small pools and are tolerant of water temperatures from 41 to 85° F, making them the most tolerant fairy shrimp of the three species (USFWS 2003b). California linderiella were observed during fairy shrimp surveys and are known to occur within the Project Site. Longhorn fairy shrimp, a federally endangered species, tend to inhabit clear to rather turbid vernal pools. The longhorn fairy shrimp is known only from disjunct populations along the eastern margin of the central Coast Range from Concord to Contra Costa County south to Soda Lake in San Luis Obispo County (USFWS 2003). Regionally, they have been found in clear-water depressions in claypan pools around Soda Lake, San Luis Obispo County. Longhorn fairy shrimp were not detected during fairy shrimp surveys and therefore are not expected to occur within the Project Site.

San Luis Obispo Pyrg (Pyrgulopsis taylori)

The San Luis Obispo pyrg is a tiny gastropod that exists in freshwater habitats San Luis Obispo County. Pyrgulopsis species (i.e., springsnails or pyrgs) live in springs and other permanent waters that are poorly integrated on arid western landscapes. Pyrgulopsis spp. are gill-breathing animals that have an entirely aquatic life cycle. It is assumed that most species of this genus are restricted to a single spring, spring complex, or local watershed due to their direct mode of development (i.e., lack of a free swimming dispersal phase) (Rocky Mountain Center for Conservation Genetics and Systematics 2007). San Luis Obispo pyrg has been identified in San Luis Obispo Creek, near Cuesta Pass; however, due to the lack of permanent waters within the Project Site or adjacent Acacia Creek and the East Fork of San Luis Obispo Creek the potential for San Luis Obispo pyrg to occur is considered low. The species was not detected at the Project Site during extensive wet and dry season surveys for invertebrate fauna in 2003 (Rincon 2003a, 2003b) or in subsequent Padre protocol surveys of the entire area in 2011 and 2012 (Padre 2012a).

Fish

South-central California Coast Steelhead (Oncorhynchus mykiss irideus)

Steelhead are an anadromous form of rainbow trout that reproduce in freshwater, but spend much of their life cycle in the ocean, where increased prey density provides a greater growth rate and size. Steelhead have been divided into 15 evolutionary significant units (ESU) based on similarity in life history, location, and genetic markers. The south-central California coast ESU includes all naturally spawned populations of steelhead (and their progeny) in streams including and from the Pajaro River to, but not including, the Santa Maria River, California (NOAA Fisheries 2000). The south-central California coast ESU was listed as threatened by the National Oceanic and Atmospheric Administration (NOAA) Fisheries on August 18, 1997.

Both Acacia Creek and the East Fork of San Luis Obispo Creek are tributaries to San Luis Obispo Creek which is historically known to contain steelhead. In addition, steelhead have been observed within Acacia Creek directly upstream of the Project Site during the culvert replacement along Tank Farm Road in 2003 (F. Otte, City of San Luis Obispo Biologist, personal communication, 9/25/07). Based on previous occurrences and connectivity to San Luis Obispo Creek, potential exists for steelhead periodically to transit Acacia Creek and the East Fork of San Luis Obispo Creek for the purposes of spawning upstream during periods of heavy stream flow.

Amphibians

California Red-legged Frog (Rana aurora draytonii)

The California red-legged frog (CRLF) is a federally listed threatened species and a California species of special concern (Jennings and Hayes 1994, CNDDB 2010). The CNDDB has numerous records of occurrences of the CRLF within both a 5-mile and 10-mile radius of the Project Site; most occurrences were recorded within the last five years. These occurrences are mostly to the north of the site in tributaries of San Luis Obispo Creek, and significantly downstream of the site, near Avila Beach. In addition, the Project Site is within the current and historic range of the species. Furthermore, the fragmented woody riparian cover and perennial aquatic habitat of the east fork of San Luis Obispo Creek, although discontinuous and degraded, does provide suitable habitat for the CRLF.

USFWS (1997) protocol level CRLF surveys (i.e., two daytime and two nighttime surveys) were conducted by Rincon within suitable habitat areas within the Project Site including seasonally ponded areas, along Acacia Creek and the East Fork of San Luis Obispo Creek in May 2003. No CRLF were observed during these surveys and mostly adult and juvenile northern Pacific treefrogs and bullfrogs were observed within the East Fork of San Luis Obispo Creek. In addition, no CRLF were observed during surveys conducted by EXTRIX in 1998 within the Project Site. Furthermore, CRLF surveys were conducted in Acacia Creek by Rincon in July 2000 (Rincon 2000). No CRLF were observed during these surveys and an abundance of adult and juvenile bullfrogs were observed within Acacia Creek. CRLF surveys conducted in Acacia Creek upstream of Project Site (i.e., Damon-Garcia Sports Complex) and in the East Fork of San Luis Obispo Creek downstream of Project Site (i.e., San Luis Obispo Land Conservancy Filiponi Wetlands) revealed abundant bullfrogs and no CRLF (Rincon 2003). The potential for CRLF to occur in the portions of the East Fork of San Luis Obispo Creek and Acacia Creek adjacent to Project Site or in the seasonally ponded areas that exist within the Project Site is considered low

based on the previous surveys of the Project Site and adjacent areas, and the abundance of bullfrog tadpoles and adults within the East Fork of San Luis Obispo Creek and Acacia Creek.

The CRLF survey guidelines were revised in August of 2005 (USFWS 2005) to require more surveys at greater intervals than were done in 2003. Subsequent surveys conforming to the revised protocols were performed by Padre Associates in spring of 2008. These consisted of both non-breeding (one day and one nighttime) and breeding season (two day and four nighttime) surveys. The results of those surveys were also negative (Padre 2008d). Padre also conducted a one day, one night dry-season survey and habitat assessment for this species in July 2012; the results of those surveys were also negative (Padre 2012b) for this species.

California Tiger Salamander (Ambystoma californiense)

The Central California tiger salamander (CTS) is a federally threatened species and a California species of concern (Jennings and Hayes 1994, CNDDB 2010). This amphibious species typically spends most of its time in upland habitat within the burrow systems of ground squirrels, pocket gophers, and other burrowing rodents. They emerge from these retreats at night during rain events between late autumn through early spring and travel to breeding pools which are generally ephemeral (vernal). Use of permanent aquatic sites as breeding habitat is unlikely unless these features lack predators such as introduced fish and bullfrogs. A search and analysis of habitat for CTS (non-USFWS protocol surveys) within the Project Site was conducted by Rincon and herpetologist expert Larry Hunt, PhD., of Hunt and Associates Biological Consulting Services, in May 2003. CTS were not observed during these surveys; however, suitable upland and breeding habitat (seasonal pools) for CTS exists within the Project Site (Rincon, Phase I, 2003). Based on the absence of CTS during the field surveys, historic absence of the species from the site, known range of CTS, and abundance of predators (e.g., bullfrogs, carp) in the immediate area, CTS is not expected to occur within the Project Site.

Western Spadefoot Toad (Spea hammondii)

Western spadefoot toad is a California species of concern (Jennings and Hayes 1994, CNDDB 2010) that typically inhabits grasslands, scrub, chaparral, or valley-foothill hardwood woodlands. The western spadefoot toad is almost entirely terrestrial, however, it uses temporary pools for breeding. Historically, the western spadefoot toad ranged from Redding to northwestern Baja California. In California, the species was found throughout the Central Valley, and in the Coast Ranges and coastal lowlands from San Francisco Bay to Mexico. Suitable upland and breeding habitat (e.g., grasslands, vernal pools) exist within the Project Site; however, no western spadefoot toads have been detected during field surveys (Rincon 2003) or in subsequent Padre surveys of the entire area in 2008 and 2012 (Padre 2008d and 2012b)..

Reptiles

Western Pond Turtle (Clemmys marmorata)

The southwestern pond turtle is a federal species of concern and a California species of special concern (Jennings and Hayes 2004). It is an aquatic turtle inhabiting streams, marshes, ponds, and irrigation ditches within woodland, grassland, and open forest communities. However, it requires upland sites for nesting and over-wintering. Stream habitat must contain large, deep pool areas (6 feet) with moderate-to-good plant and debris cover, and rock and cobble substrates for escape retreats. Southwestern pond turtles were observed in the East Fork of San Luis Obispo Creek and in the perennial ponds located in the southwestern corner of the Project Site in May

2003 (Rincon, Phase I, 2003). In addition, southwestern pond turtles have been reported in upper reaches of Acacia and Orcutt creeks northeast of the Project Site (Rincon, 2000). Since pond turtles were observed upstream, within the creek channel, and in ponded areas in Project Site, overland movement of pond turtles between ponds and throughout upland areas during the nesting season within the Project area and occurrence of pond turtles within the creek channel is considered likely.

Two-striped Garter Snake (Thamnophis hammondii)

The two-striped garter snake is a California species of concern. It is an aquatic snake inhabiting perennial and intermittent streams with rocky beds bordered by willow thickets or other dense riparian vegetation. This species of snake uses small mammal burrows as over-wintering sites (Jennings 1994). It occurs historically and currently throughout southern California streams. No two-striped garter snakes were observed during the various field surveys conducted at the Project Site (Rincon 2003, Padre 2008d, Padre 2012b). Additionally, the likelihood of occurrence within the Project area is considered low due to only marginally suitable and isolated habitat being present in Acacia Creek and the East Fork of San Luis Obispo Creek.

Birds

Burrowing Owl (Athene cunicularia)

The Burrowing Owl Survey Report prepared for the Project describes the results of surveys for western burrowing owl conducted in 2008 (Padre 2008e). The report makes the following observations and conclusions regarding status of this species at the Project Site.

The western burrowing owl is listed as a Species of Management Concern by USFWS, a California Species of Special Concern by CDFW, and is also a migratory bird species protected under the Migratory Bird Treaty Act of 1918 (MBTA). The western burrowing owl primarily occurs within extensive grassland habitats and agricultural areas, and it frequently occupies California ground squirrel (*Spermophilus beecheyi*) burrows (Zeiner et al. 1990). A characteristic trait of the western burrowing owl is its diurnal activity patterns and use of existing underground small mammal burrows or crevices, which offer the owls protection, shelter, and nesting sites. The western burrowing owl is documented as an uncommon to common permanent resident of the interior valleys and plains of San Luis Obispo County, and an uncommon winter visitor to the coastal regions of the County (Shuford and Gardali 2008).

In summary, the Project Site contains optimal burrowing owl habitat consisting of low-lying grassland frequently grazed by cattle with a high concentration of ground squirrel burrows. During the Wintering Season Surveys, burrowing owls were observed within the Project Site; but were not observed during the spring nesting season. Results of the Nesting Burrowing Owl Survey conclude that burrowing owls were not utilizing the Project Site for purposes of nesting during their peak nesting period between April 15 and July 15 of 2008. However, because the Project Site consists of low-lying grassland habitat with a high concentration of potential owl burrows and burrowing owls have been observed in the area, the Project Site contains suitable habitat to support burrowing owls year-round. Although considered unlikely, western burrowing owls may potentially utilize the Project Site for the purposes of nesting due to the presence of suitable habitat.

California Black Rail (Laterallus jamaicensis)
The California black rail is listed as a threatened species under the California Endangered Species Act. It is also covered as a "fully protected" species under the California Fish and Game Code. The California black rail is now considered a casual visitor to the coastal regions of Southern California, where it formerly bred (Garret and Dunn 1981). A resident population at Morro Bay, San Luis Obispo County, may represent the southernmost extant coastal breeding locale (Eddleman et al. 1994).

California black rails inhabit saltwater, brackish, and freshwater marshes. Away from coastal estuaries and salt marshes, black rails are restricted to breeding in freshwater marshes with stands of tule, cattail, bulrush, and sedge (*Carex* spp.).

There is suitable nesting and foraging habitat in the southwestern and northern portions of the Project Site.) There is record of California black rail having been heard vocalizing during surveys of the Project Site in 1996 (CEMC 2008). A single daytime and three nighttime surveys for California black rail were conducted by Rincon Consultants in May of 2003 with negative results (Rincon 2003a). This species has not been reported as being seen or heard during repeated site visits conducted by Padre biologists from 2008 through 2012 (Padre 2008a-e, 2012a, Padre 2012b).

Tricolored Blackbird (Agelaius tricolor)
The tri-colored blackbird is a Priority 1 Species of Special Concern (breeding) according to the CDFW (Shuford and Gardali 2008). The species is a permanent but local resident of California, where it establishes breeding colonies in freshwater marsh habitat dominated by cattail and/or tule. The species makes extensive migrations outside the breeding season and the focus of protection is on nesting colonies. There is suitable nesting and foraging habitat in the southwestern and northern portions of the Project Site.

Tri-colored blackbirds were observed within the Project Site during surveys conducted in spring and summer of 2007 (CEMC 2007). The tri-colored blackbird should be considered a potential breeder on the basis of suitable habitat documented presence during the breeding season.

California Horned Lark (Eremophila alpestris actia)
The California horned lark is included in the CDFW List of Special Animals (CDFW 2009). The species is most typical of open grassland habitats with low, sparse vegetation. California horned larks were observed within the Project Site during surveys conducted by Padre (CEMC 2007) in spring and summer of 2007. The species should be considered a potential breeder on the basis of suitable habitat and documented presence during the breeding season.

Loggerhead shrike (Lanius ludovicianus)
Mainland populations of the loggerhead shrike are considered a Priority 2 Species of Special Concern (breeding) by the CDFW (Shuford and Gardali 2008). This species is typical of open grassland and sparse scrub habitats. It is more widespread during the non-breeding season, when local populations are augmented by northern migrants. Loggerhead shrikes were observed within the Project Site during surveys conducted by Padre (CEMC 2007) in spring and summer of 2007. The species should be considered a winter visitor and potential breeder on the basis of suitable habitat and documented presence during the breeding season.

Birds of Prey

The Cooper's hawk, sharp-shinned hawk, white-tailed kite, prairie falcon, northern harrier, red-tailed hawk, and golden eagle are wide ranging birds-of-prey that have been observed using the Project Site for the purposes of foraging and movement through the region (Rincon 2003; CEMC 2007). In addition, suitable foraging habitat exists within Project Site for the ferruginous hawk. Several of these species often utilize dense riparian corridors for the purposes of nesting (e.g., Cooper's hawk). However, no nests have been observed within the mixed riparian community areas in the Project Site. Nevertheless, use of the Project Site by these species for foraging activities is frequent and the likelihood of occurrence is considered high. Cooper's hawk, white-tailed kite, red-tailed hawk, red-shouldered hawk, and American kestrel have potential to nest at the Project Site.

Other Protected Bird Species

A number of bird species potentially occurring on the Project Site are protected during their nesting period under the provisions of the Federal Migratory Bird Treaty Act of 1918. Field surveys indicated that cliff swallows occupy nest sites within the culvert at Santa Fe Road and Tank Farm Road (Padre 2003). In addition, several tree-nesting species, including California scrub jay, northern mockingbird, American goldfinch, and lesser goldfinch were observed in the mixed riparian habitat on the eastern side of the Project Site.

Sensitive Habitats

The CNDDB inventories natural communities and ranked them according to their rarity and potential for loss. Based on a CNDDB query for the Project area, central dune scrub, central foredunes, coastal dune scrub, central maritime chaparral, coastal brackish marsh, northern coastal salt marsh, northern interior cypress forest, serpentine bunchgrass, chaparral/oak woodland habitat, valley needlegrass grassland, and coastal and valley freshwater marsh are considered sensitive natural communities that have the potential to occur within the Project area. However, based on past and recent field surveys, valley needlegrass grassland and coastal and valley freshwater marsh are the only sensitive habitats existing within the Project area. Specifically, valley needlegrass grassland has been ranked by the CNDDB globally as G1, and at the State level as S3.1 and coastal and valley freshwater marsh has been ranked by the CNDDB globally as G3, and at the State level as S2.1. A global sensitivity level of G1 is considered extremely endangered and means that less than 2,000 acres of this habitat exists worldwide, G3 means only 10,000 to 50,000 acres exist worldwide. A state sensitivity of S2 means only 2,000 to 10,000 acres of this habitat exist statewide and is considered very threatened, and S3 indicates only 10,000 to 50,000 acres exist statewide.

Furthermore, native perennial bunchgrass communities are considered rare by the CDFW. Native perennial bunchgrass habitat formerly exceeded approximately 5.35 million hectares in California, and an additional 3.87 million hectares of native perennial grassland existed with an oak overstory (EDAW 1999). Due to introduction of non-native annual grasses and grazing practices, currently the grassland habitat type that occurs throughout the state is dominated by introduced annual grasses. On the Project Site, purple needlegrass is primarily found in the far northeastern portion of the site in association with the ultramafic outcrop and derivative soils. Smaller populations are found in the southern portion of the north parcel near Tank Farm Road. Purple needlegrass grassland occupies 11.5 acres at the Project Site (Padre 2008c). Approximately 8.8 acres of the Project Site is composed of grassland with a significant

component of the native perennial bunchgrass, purple needlegrass (*Nasella pulchra*) (Figure 4.2-4). Within any given square meter, the percent cover of purple needlegrass varies from 0 percent to as high as 80 percent. Grasslands containing 10 percent cover or greater by native grasses are considered sensitive by the CDFW, as well as the City of San Luis Obispo (EDAW 1999).

A USACE wetland delineation of the entire site was completed in 1999 (EDAW 1999). This study determined that the Project Site contained 55.8 acres of USACE jurisdictional wetlands and 1.4 acres of Other Waters of the U.S. This was subsequently verified by the USDA Natural Resources Conservation Service (NRCS). A wetland delineation was also conducted in 2003 in accordance with CDFW wetland delineation guidelines (JENESIS 2003). This study determined that the Project Site contained 75.95 acres of state (one-parameter) wetlands, including the 55.8 acres previously identified as Federal wetlands and the 1.4 acres of Other Waters of the U.S. A more recent delineation of wetland resources at the Project Site was completed by Padre and WSP (Padre 2008a). The more recent delineation determined that there were 49 acres of Federal wetlands, 3.4 acres additional acres of "one-parameter" wetlands, and 3.9 acres falling under the category of Other Waters of the U.S. Padre 2013c (included in Bio-Appendix C.15) clarifies the acreages of wetland habitat with 52.0 acres of USACE Jurisdictional Wetland and Waters, 19.2 acres of non-USACE jurisdictional or isolated wetlands/waters, and an additional 16.85 of one parameter wetlands, for a total of 88.95 acres of one- parameter wetlands present on the project site.

San Luis Obispo Creek and its tributaries are known steelhead habitat and are considered an integral component of the south-central coast steelhead ESU (NOAA 2000). On April 30, 2002, the U.S. District Court for the District of Columbia approved a National Marine Fisheries Service (NMFS) consent decree withdrawing critical habitat designations for 19 salmon and steelhead populations on the west coast, including those contained in the south-central coast steelhead ESU (NOAA 2000). However, a more thorough analysis of steelhead critical habitat was conducted by NMFS, which resulted in the re-issuance of critical habitat designations for the south-central coast steelhead ESU in 2005, including San Luis Obispo Creek.

Wildlife Movement Corridors

Wildlife migration corridors are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Migration corridors may be local, such as between foraging and nesting or denning areas, or they may be regional in nature. Migration corridors are not unidirectional access routes; however, reference is usually made to source and receiver areas in discussions of wildlife movement networks. Habitat linkages are migration corridors that contain contiguous strips of native vegetation between source and receiver areas. Habitat linkages provide cover and forage sufficient for temporary habitation by a variety of ground-dwelling animal species. Wildlife migration corridors are essential to the regional ecology of an area because they provide avenues of genetic exchange and allow animals to access alternative territories as fluctuating dispersal pressures dictate.

The Project Site provides foraging habitat for an array of bird species as well as cover and forage for a variety of ground-dwelling animal species. Because of its size and rural character, it provides habitat for wide-ranging wildlife species. It also offers a seasonal refuge for migratory birds.

The East Fork of San Luis Obispo Creek adjacent to the Project Site may play an important role as a migration corridor and habitat linkage for wildlife species within the region. There is connectivity with agricultural lands and mountainous areas to the south. These migration corridors are especially critical through areas where human activities would otherwise prohibit or impair the movement of species between habitat areas. The importance of such corridors is underscored by the fact that urbanization has begun to encroach from the north, west, and east in the form of residential and commercial development and the San Luis Obispo Airport.

4.2.2 Regulatory Setting

The following sections discuss plans, policies, and regulations relevant to protection of biological resources and administered by federal, state, and local regulatory agencies detailed in the Project Execution Plan (CEMC 2007).

4.2.2.1 Protected Resources

Federal Authority

The Federal Endangered Species Act of 1973, as amended (FESA), administered by USFWS and the National Marine Fisheries Service (NMFS), provides protection to species listed as Threatened (FT) or Endangered (FE), or proposed for listing as Threatened (PFT) or Endangered (PFE). In addition to the listed species, the Federal Candidate species could potentially be listed in the future. Federal candidate (FC) species include taxa for which substantial information on biological vulnerability and potential threats exist, and are maintained in order to support the appropriateness of proposing to list the taxa as an endangered or threatened species.

Section 9 of the FESA prohibits the "take" of any member of a listed species. Take is defined as, "…to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Harass is "an intentional or negligent act or omission that creates the likelihood of injury to a listed species by annoying it to such an extent as to significantly disrupt normal behavior patterns that include, but are not limited to, breeding, feeding, or sheltering." Harm is defined as "…significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering."

Section 10 consultations are conducted when there is no Federal agency involvement in a project except compliance with FESA.

Under Section 7 of the FESA, Federal agencies must consult with the USFWS when any action the agency authorizes through a permit may affect a listed endangered or threatened species. This process usually begins as informal consultation. The Federal agency requests informal consultation. Discussions between the two agencies includes the listed species that are expected or have potential to occur in the proposed action area, and what effect the proposed action may have on those species.

When the Federal agency determines, through a biological assessment or other review, that its action is likely to adversely affect a listed species, the agency submits to the USFWS a request

for formal consultation. During formal consultation, the USFWS and the agency share information about the proposed project and the species likely to be affected. Formal consultation may last up to 90 days, after which the USFWS will prepare a biological opinion on whether the proposed activity will jeopardize the continued existence of a listed species. The Service has 45 days after completion of formal consultation to write the opinion.

Under the FESA, jeopardy occurs when an action is reasonably expected, directly or indirectly, to diminish a species' numbers, reproduction, or distribution so that the likelihood of survival and recovery in the wild is appreciably reduced. When the USFWS makes a jeopardy determination, it also provides the consulting Federal agency with reasonable and prudent alternative actions. These alternatives are often developed with input and assistance from the Federal agency. Alternatives must: be consistent with the purpose of the proposed project, be consistent with the Federal agency's legal authority and jurisdiction, be economically and technically feasible, and in the USFWS's opinion, avoid jeopardy.

In some cases, the USFWS finds that an action may adversely affect a species, but not jeopardize its continued existence. When this happens, the USFWS prepares an incidental take statement for the proposed Federal project. Under most circumstances, the ESA prohibits take, which is defined as harming (includes killing) or harassing a listed species. Incidental take – take that results from a Federal action but is not the purpose of the action – may be allowed when the USFWS approves it through an incidental take statement. The statement includes the amount or extent of anticipated take due to the Federal action, reasonable and prudent measures to minimize the take, and terms and conditions that must be observed when implementing those measures.

The U.S. Army Corps of Engineers (USACE) would be the lead Federal agency for the proposed Project, and would consult with USFWS and potentially NMFS to identify effects to endangered and threatened species as required under Section 7(a)(2) of the FESA. A Biological Assessment will be required as part of this consultation to provide sufficient information to determine the Project's potential to affect threatened or endangered species. The USACE must make one of three possible findings for each listed species (the USFWS and/or NMFS may or may not concur):

- *No effect*: The proposed action would not affect the listed species or critical habitat.
- *Not likely to adversely affect*: Effects of the proposed action on the listed species are expected to be discountable (extremely unlikely to occur), insignificant (minimal impact without take), or beneficial.
- *Likely to adversely affect*: An adverse effect may occur as a direct or indirect result of the proposed action, and the effect is not discountable, insignificant, or beneficial.

The USFWS also administers the Migratory Bird Treaty Act (MBTA) (16 USC 703-711) and the Bald Eagle and Golden Eagle Protection Act (16 USC 668-688). Under the MBTA, it is unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in Federal Code of Regulations 50 CFR 10, including feathers or other parts, nests, eggs or products, except as allowed by implementing regulations (50 CFR 21). The Bald Eagle and Golden Eagle Protection

Act prohibits the taking or possession of bald and golden eagles, their eggs, or their nests without a permit from USFWS.

State Authority

CDFW administers several laws and programs designed to protect fish and wildlife resources. Principal of these is the California Endangered Species Act of 1984 (CESA) that regulates the listing and take of state endangered (SE) and state threatened (ST) species (Fish and Game Code Section 2050). Under Section 2081 of CESA, CDFW may authorize the take of an endangered or threatened species, or candidate species by a permit or Memorandum of Understanding (MOU) for scientific, educational, or management purposes.

CDFW maintains lists of state candidate endangered (SCE) species and state candidate threatened (SCT) species. California candidate species are afforded the same level of protection as listed species. CDFW also designates species of special concern (CSC) that are species of limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. These species do not have the same legal protection as listed species, but may be added to official lists in the future. CDFW maintains the CSC list as a management tool to call attention to declining populations and focus efforts on decreasing threats to long-term viability. In addition, the CDFW is a trustee Agency (pursuant to CDFW Code Section 1802) for the State's fish and wildlife.

CDFW administers other state laws designed to protect wildlife and plants. Under Section 3511 of the Fish and Game Code, CDFW designates species that are afforded "fully protected" (FP) status. Under this protection, designated species can only be taken or possessed with a permit that may require an approved Natural Community Conservation Plan (NCCP). Section 3503 of the Fish and Game Code protects all birds-of-prey, their eggs, and their nests.

CDFW manages the California Native Plant Protection Act of 1977, which was enacted to identify, designate and, protect rare plants (Fish and Game Code Section 1900, et seq.). In accordance with CDFW guidelines, CNPS 1B list plants are considered "rare" under the Act, and are evaluated in California Environmental Quality Act (CEQA) reports.

Local Authority

Special-status species of the Project area are afforded protection by the County of San Luis Obispo under goals and polices contained in the County of San Luis Obispo General Plan, Agriculture & Open Space Element (1998) and the San Luis Obispo Area Plan (2002). These documents provide a framework of policies designed to protect special-status species and sensitive habitat areas.

Species within the Project area are also afforded protection by the City of San Luis Obispo under goals and polices contained in the City of San Luis Obispo General Plan, Chapter 6 Conservation and Open Space Element in regards to protected listed species and species of special concern, wildlife habitat and corridors, and trees and other plants.

4.2.2.2 Jurisdictional Waters and Wetlands

Federal Authority

The USACE is responsible for issuing permits for the placement of dredged or fill material into waters of the United States (waters) pursuant to Section 404 of the Clean Water Act (33 USC 1344). As defined by the USACE, waters are those that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; tributaries and impoundments to such waters; all interstate waters including interstate wetlands; and territorial seas (33 CFR 328.3(a)(3)).[1] Following a 2006 court case, the USACE and Environmental Protection Agency issued guidance to their field offices on how to implement the Court's decision (Rapanos v. United States and Carabell v. U.S. Army Corps of Engineers, 2006). In the guidance, the agencies offer three categories: (1) certain types of waters over which they "would assert jurisdiction" (traditional navigable waters, wetlands adjacent to such waters, relatively permanent non-navigable tributaries of such waters, and wetlands directly abutting such tributaries); (2) other types of waters they would consider case by case to determine whether they have a "significant nexus" with a traditional navigable water; and (3) other "features" over which they "generally would not assert jurisdiction," such as gullies, erosional features, and ditches excavated in and draining uplands (Briscoe 2007).

Wetlands are a special category of waters, and are defined as: "...those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas" (33 CFR 328.3(b)).

In non-tidal waters, the lateral extent of USACE jurisdiction is determined by the ordinary high water mark, which is defined as the "line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (33 CFR 328(e)).

In addition, a wetland definition has been adopted by the USFWS to include both vegetated and non-vegetated wetlands, recognizing that some types of wetlands may lack vegetation (e.g., mudflats, sandbar, rocky shores, and sand flats), but still provide functional habitat for fish and wildlife species (Cowardin et al. 1979). These wetlands are defined as "…lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this classification, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes; (2) the substrate is predominantly undrained hydric soil; and (3) the

[1] Based on the recent U.S. Supreme Court decision in Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers [2001], and guidance from the U.S. Army Corps of Engineers and U.S. Environmental Protection Agency [2001], the federal government no longer asserts jurisdiction over isolated waters and wetlands under Section 404 of the Clean Water Act based on the "migratory bird rule."

substrate is non-soil and is saturated with water or covered by shallow water at some time during the growing season of each year." Some of the USFWS-defined wetlands are not regulated by the federal government.

The upper (landward) limit of USFWS-defined wetlands are the boundary between land with predominantly hydrophytic cover and land with predominantly mesophytic or xerophytic cover; the boundary between soil that is predominantly hydric and soil that is predominantly non-hydric; or in the case of wetlands without vegetation or soil, the boundary between land that is flooded or saturated at some time each year and land that is not (Cowardin et al. 1979). The lower limit in inland areas is established at a depth of 6.6 feet below the water surface; unless emergent plants, shrubs, or trees grow beyond this depth, at which the deepwater edge of such vegetation is the boundary (Cowardin et al. 1979).

Section 404 Permits may be issued only for the "least environmentally damaging practicable alternative." That is, authorization of a proposed discharge is prohibited if there is a practicable alternative that would have less adverse impacts and lacks other significant adverse consequences.

Under Section 401 of the Clean Water Act, applicants for a federal license or permit such as a Section 404 Permit must obtain certification from the state (RWQCB), or a waiver of certification, that the activity would not adversely affect water quality.

State and Local Authority

Pursuant to Section 1602 of the California Fish and Game Code, CDFW requires a Streambed Alteration Agreement between CDFW and any state or local governmental agency, person, business, or public utility before the initiation of any construction project that would: (1) divert, obstruct, or change the natural flow or the bed, channel, or bank of any river, stream, or lake; (2) use materials from a streambed; or (3) result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake.

In August 1993, Governor Wilson announced his "California Wetlands Conservation Policy," created by Executive Order W-59-93. The goals of the policy are to: (1) ensure no overall net loss and achieve a long-term net gain in the quantity, quality, and permanence of wetlands acreage and values in California in a manner that fosters creativity, stewardship, and respect for private property; (2) reduce procedural complexity in the administration of [s]tate and federal wetlands conservation programs; and (3) encourage partnerships to make landowner incentive programs and cooperative planning efforts the primary focus of wetlands conservation and restoration.

The CDFW Commission Policies (CDFG Code, page 578-579, 2011) state that it is the policy of the Fish and Game Commission to "strongly discourage development in or conversion of wetlands. It opposes, consistent with its legal authority, any development or conversion which would result in a reduction of wetland acreage or wetland habitat values. To that end, the Commission opposes wetland development proposals unless, at a minimum, project mitigation assures there will be no net loss of either wetland habitat values or acreage." As further stated in the Fish and Game Commission Policies Recommended Wetland Definition Section: The

Commission's wetland policy is not a regulatory program; the role of the CDFW and Commission is primarily advisory "as in, but not limited to, the application of the California Environmental Quality Act". The section also states that the CDFW "has found the U.S. Fish and Wildlife Service (USFWS) wetland definition and classification system to be the most biologically valid…" Unlike USACE, the USFWS definition only requires the presence of one wetland indicator for an area to qualify as a wetland.

The Agriculture & Open Space Element of the County of San Luis Obispo General Plan identifies a series of unique plant or animal habitats including the following: habitat of rare, endangered, or threatened plant or animal species as classified by state and federal agencies and the CNPS; wetlands and marshes; and sensitive natural communities as identified in the CDFW Natural Diversity Data Base (such as valley needlegrass grassland).

The San Luis Obispo County General Plan has recognized the importance of wetlands. However, there is no inventory of the wetland resources within the County, so the identification and protection of these resources most often occurs when a development proposal is submitted on property that may include a wetland.

The City of San Luis Obispo General Plan, Chapter 6, identifies wetlands and vernal pools as valuable resources and addresses wetlands in regards to wildlife corridors, creek/wetland setbacks, open space buffers and mitigation requirements. The General Plan also provides mapping of the City's creeks and wetlands.

A preliminary analysis of the Project's consistency with applicable biological plans and polices is provided in Appendix E.

4.2.3 Significance Criteria

Criteria used in determining impact significance were based on guidelines contained in Appendix G of CEQA, but the criteria were expanded in consideration of specific characteristics of the Project Site and guidance from the City of San Luis Obispo.

Impacts would be considered significant if the proposed Project would result in:

- The potential for reduction, loss, or degradation of habitat for threatened, endangered, or special-status species;
- The potential for loss or "take" of any federal- and/or state-listed plant or animal species; fully-protected species; special-status species, or species protected by the MTBA);
- A net loss or permanent change in the extent or functional value of any habitat or biotic community considered biologically, scientifically, recreationally, or economically significant by federal, state, or local policies, statutes, and regulations;
- Adverse effect on Federal wetlands as defined in Section 404 of the Clean Water Act;
- Alteration or destruction of habitat that precludes reestablishment of native populations of plants and animals;

- Impairment of movement, migration, or dispersal of resident and migratory fish and wildlife species; or
- Substantial loss of habitat or population decline of any native fish, wildlife or plant species, or overall reduction in biological diversity.

The following three sections discuss impacts and mitigation measures and are divided into: (1) Section 4.2.4 which includes those impacts resulting from the proposed remediation of the Project Site and the land clearing within the proposed development parcels (2) Section 4.2.5 which includes the discussion of impacts for the City Development Plan, and (3) Section 4.2.6 for the County Development Plan Project elements. Each of the three sections discusses impacts for the seven bulleted significance criteria listed in Section 4.2.3.

4.2.4 Remediation Project Impacts and Mitigation Measures

Remediation would require soil excavation and associated ground disturbance within four Operational Units (OU) identified in the Project Execution Plan (CEMC 2007). This would result in loss of vegetation, wetlands, special status plant species, and wildlife habitat. In addition to the remediation targets, similar impacts are likely to occur through equipment staging and access, demolition and cleanup of features related to former land use, excavation at four identified on-site soil borrow sites, one off-site borrow site, and widening of existing roads to accommodate access to and hauling of backfill material. Site restoration is planned for those areas subject to temporary disturbance.

Impacts were quantified based on the results of field surveys, mapping, and information contained in the Remedial Action Plan and in Padre survey reports (Padre 2008a-c, Padre 2012, CEMC 2007; Avocet 2007). These quantifications are preliminary because remediation plans may be refined in light of testing and analysis of data obtained during project implementation and since various plant and wildlife population distributions are dynamic and thus subject to change.

For each identified impact, the following framework was used:

- Impact Discussion;
- Mitigation Measures; and
- Residual Impacts

The residual impact is the impact classification after any mitigation has been applied. If an impact is found to be *less than significant* then the residual impact would remain *less than significant* with or without mitigation. All residual impacts identified in this document have been classified according to the following criteria:

Class I - Significant and Unmitigable: Significant adverse impacts that cannot be effectively mitigated. No measures can be taken to avoid or reduce these adverse effects to insignificant or negligible levels.

Class II – Less Than Significant with Mitigation: These impacts are potentially similar in significance to those of Class I impacts, but can be eliminated or reduced below an issue area's significance criteria threshold by the implementation of mitigation measures.

Class III – Less Than Significant: An adverse impact that does not meet or exceed an issue's significance criteria threshold. Generally, no mitigation measures are required for such impacts, although they may still be recommended should the lead or responsible agency deem it appropriate to reduce the impact to the maximum extent feasible.

Class IV - Beneficial: Effects are beneficial to the environment.

In terms of the significance thresholds, the Project would create the following impacts due to soil remediation and restoration activities.

Impact #	Impact Description	Project Phase	Residual Impact
BIO.1	Site remediation has the potential to result in both short-term and long-term impacts to habitat for listed and special status species.	Remediation	Class II

Rare Plants

Plant taxa recognized as "rare" by the CNPS, including Congdon's tarplant, Cambria morning glory, San Luis Obispo owl's clover, and San Luis Obispo serpentine dudleya would be removed during excavation and backfill procedures necessary for soil remediation and related operations (e.g., equipment access and staging, soil borrow sites, site cleanup). Excavation and backfill would impact purple needlegrass grasslands similarly. The removal of several San Luis Obispo serpentine dudleya would result in a permanent loss of this species because its preferred habitat (rock outcrops) would be permanently lost with the disturbances expected at the Flower Mounds area. The Conceptual restoration plan (Padre 2009) accounts for the salvaging and curation of individuals of this species to be out-planted off site at a later date in suitable habitat. Table 4.2-5 summarizes the impacts to rare plant species habitat. It is important to note that impacts to rare plants were estimated based on surveys and mapping completed in 2003, 2008 (Padre 2008c), and 2012 (Padre 2013). Several of the rare plants species present at the Project Site (e.g., Congdon's tarplant, Cambria morning glory, and Hoover's button-celery) are annual species and plant numbers are variable each year, therefore, these populations would exhibit some deviation in distribution from year to year.

A "75% Basis of Design Report Landscape Restoration plan (Conceptual Restoration Plan) is proposed as part of the Project (Padre and WSP 2009). The Applicant states that its intention in preparing the Restoration Plan is to "inform the environmental analysis regarding the basic approach to mitigation impact associated with the project;" "the specifics of this particular plan would be included in the environmental analysis;" and that "it may change significantly following input from the CEQA process." The plan includes mitigation with at least a 1:1 on-site replacement ratio for unavoidable impacts as a result of anticipated remediation and development activities to rare plant species (e.g., Cambria morning glory, Congdon's tarplant, San Luis Obispo owl's clover, Hoover's button-celery, purple needlegrass grassland). Restoration of the Project Site would impact additional rare plant populations; however, these impacts would be, in most cases, temporary and mitigated through the restoration of the site which would enhance the existing habitat and increase ecosystem functions at the Project Site. Detailed descriptions of

each rare plant species, seed and propagule collection strategies, and propagation recommendations are outlined in the Botanical Resources Report (Padre and WSP 2008c).

Impacts to rare plant populations were quantified by comparing species distribution maps with information in the Remedial Action Plan (CEMC 2007; Avocet 2007). The proposed remediation activities would impact approximately 24.58 total acres of rare plant habitat, as shown in Table 4.2-5.

Table 4.2-5 Estimated Impacts to Rare Plant Species and Sensitive Habitat Areas

Species	Remediation Impacts (acres)	Mitigation Area (acres)
Cambria morning glory *Calystegia subacaulis* ssp. *episcopalis*	2.45	8.2
Castilleja densiflora ssp. *obispoensis* San Luis Obispo owl's clover	5.69	7.2
Congdon's tarplant *Centromadia parryi* ssp. *congdonii*	9.67	11.88
San Luis Obispo serpentine dudleya *Dudleya abramsii* ssp. *Bettinae*	0.04	0.00 Salvage and curation
Hoover's button-celery *Eryngium aristulatum* var. *hooveri*	0.00	0.02
Purple Needlegrass Grassland *Nassella pulchra*	6.73	>11.0
Total	**24.58**	

Source: CEMC 2007, Padre 2008c\

South coast steelhead

The south coast steelhead and critical habitat for this species are present in the San Luis Obispo Creek watershed and project vicinity. Proposed restoration efforts would include re-establishing connectivity to oxbows immediately adjacent to San Luis Obispo Creek and would include clearing of vegetation, grading, and subsequent re-planting of riparian species adjacent to the creek. Clearing and grading could result in short-term impacts to water quality resulting from project related sediments flowing into the creek. Sedimentation could occur during both the construction and the restoration phases up until the creek banks have become re-established with the proposed riparian community. Sedimentation is especially detrimental during steelhead spawning; however, this species is unlikely to be spawning in the project vicinity due to the lack of suitable habitat. The proposed action includes the installation of temporary sediment control fencing upgradient of grading activities to reduce the potential for surface flows. The Project would not result in any temporary or permanent structures in the creek that would restrict aquatic species' migrations. One of the restoration goals would be to increase functions and values for

this species within the project footprint which result in a beneficial impact to this species. Impacts to this species and habitat are expected to be short-term and mitigated to less than significant with the implementation of appropriate sediment control measures.

Vernal Pool Fairy Shrimp

Some habitat currently supporting the federally threatened VPFS would be permanently lost through remediation and restoration of the Project Site, primarily by removal of existing man-made storage reservoirs and containments.

One of the primary goals of the proposed restoration of the Project Site is to replace and improve the overall functions of the entire Project Site so as to end up with a net increase of functioning sensitive species habitat. The proposed restoration activities would restore and enhance VPFS habitat through (1) avoidance of habitat which will not be impacted by remediation or development activities; (2) habitat creation in areas previously containing upland habitat; and (3) habitat enhancement via the improvement of existing habitat functions by removing contaminated material, increasing hydrologic flow, and eliminating existing constricting features in areas containing disturbed or partially functioning habitat; and finally, (4) the preservation of habitat: the avoided, restored, and enhanced VPFS habitat will be protected and managed in perpetuity for the benefit of VPFS and other sensitive species. The proposed conceptual restoration approach was documented in the Conceptual Restoration Plan by Padre and WSP (Padre 2009). The report presents a landscape-level design at the 75 percent level of completion for the wetland habitat and special status species affected by the Project. Chevron prepared the document to provide guidance in developing the final restoration plan that would be developed with Chevron and Agency coordination.

The most recent survey results conducted by Padre (Spring 2012) updates the extent of occupied habitat to 32.6 acres of habitat on the Project Site and a total of 14.78 acres of VPFS habitat being impacted by Project remediation (12.9 acres) and restoration (1.88 acres). As described in the Conceptual Restoration Plan, the Applicant proposes to mitigate impacts to VPFS habitat by restoring seasonally inundated depressions, as well as creating vernal swale habitats within the upland ecosystems and remediated reservoirs. Repopulation of restored pools and populating newly created pools would be stimulated by inoculation, consisting of material collected from topsoil of impacted occupied VPFS habitat or, if needed, gathered from “donor” pools unaffected by remediation and restoration areas.

Table 4.2-6 Estimated Impacts to Sensitive Vernal Pool Fairy Shrimp Habitat

Occupied Habitat within Project Site	Remediation Impacts	Restoration Impacts
32.6 acres	12.9 acres	1.88 acres

Source: Padre 2012, Padre and WSP 2009

There is the potential that unoccupied habitat may become occupied prior to the onset of construction activities due to the movement of cysts by wildlife, wind dispersal, water dispersal, or other transport mechanisms. It is less likely that occupied habitats would become unoccupied in the absence of a significant change in site conditions (e.g., a change in hydrology that would

preclude VPFS from completing their lifecycle, or ground disturbance that would have removed or buried adults or cysts).

The Restoration Plan includes specific and detailed restoration of VPFS habitat (Padre and WSP 2009) at a level "greater than 1:1 acreage mitigation for unavoidable impacts." Typically, regulatory agencies, such as the USFWS and CDFW, who manage and permit sensitive wildlife habitat restoration efforts, require specific replacement ratios to ensure no net loss of sensitive species habitat. These replacement ratios often include ratios greater than 1:1 depending on the importance of the habitat, amount of area that is disturbed, other available habitat in the area, known methods of habitat replacement, probability of success, and the length of time required to replace that habitat. In addition to requiring no net loss of habitat, these agencies typically require the replacement or increase of a project site's functions and values as these values relate to biological resources, and specifically so as to replace the functions for the sensitive species in question. Both the USFWS and CDFW have consented to the general approach presented in the Applicant's Conceptual Restoration Plan, (the focus of which concentrates on an overall increase in habitat function as opposed to habitat replacement ratios) and both the USFWS and the CDFW have agreed conceptually with a replacement ratio of 1:1 for impacts to VPFS habitat in conjunction with a review of the Final Restoration Plan. The USFWS has had many discussions with the Applicant and has given support for the general approach of mitigating impacts to VPFS habitat by increasing onsite habitat functions and values. However, the Applicant has not submitted a final restoration plan for agency review and neither the USFWS or CDFW has conducted a review of the Applicant's Conceptual Restoration Plan, nor approved any part of that Plan (Jenny Marek, USFWS personal communication; Melissa Boggs, CDFW, personal communication.

In addition to the restoration and enhancement approach to reducing the long-term effects on VPFS habitat, the proposed project includes a preservation element which would result in at least 32.6 acres of VPFS habitat to be protected and managed in perpetuity for the benefit of this and other sensitive biological resources.

Restoration efforts that would eventually replace and potentially improve the existing VPFS habitat on site would result in a temporary loss of sensitive habitat on the Project Site until that habitat eventually becomes fully functioning. In addition, due to the extremely sensitive nature of creating vernal pool habitat and relocating soils with this species' cysts, there is a risk that some of the restoration efforts would not be successful.

Replacement ratios for the loss of sensitive species habitat would typically require greater than 1:1 ratios. However, the proposed project includes a restoration approach that focuses on an overall increase in habitat function, an approach which is agreeable to, and coordinated with the USFWS and CDFW. In addition, the proposed project includes a preservation element that would result in VPFS habitat being protected in perpetuity. Therefore, replacement ratios for the loss of VPFS habitat would be adequately mitigated with a 1:1 replacement ratio.

Mitigation Measures

BIO-1a *Prior to issuance of applicable grading permit, the Applicant shall prepare and submit a final restoration plan to the San Luis Obispo County Department of Planning and Building, City of San Luis Obispo, Department of Natural Resources, USFWS, USACE, and CDFW for review. The restoration plan shall be approved by San Luis Obispo County Department of Planning and Building USFWS, and CDFW in consultation with the City of San Luis Obispo, Department of Natural Resources. The final plan shall be revised as necessary to adequately mitigate actual disturbance to habitats for listed and special status species due to remediation.*

Conservation easement(s) shall be recorded on all property associated with the final restoration plan that is not designated for development. Draft conservation easement agreements, in a form approved by County Counsel and the City Attorney, shall be submitted for review and approval with the submittal of the final restoration plan. The final conservation easements shall be approved by the County and City in consultation with other resource agencies, and recorded, prior to final inspection of the restoration site(s) to protect biological resources in perpetuity.

BIO-1b *The Applicant shall conduct updated surveys of sensitive species habitats (including sensitive plant species, CRLF, wetland habitat, and VPFS habitat) within the Project Site within the appropriate season immediately prior to the onset of any ground disturbances associated with the Project in order to evaluate the current occupancy of suitable habitat for sensitive species and to refine the final habitat mitigation replacement acreages. Updated surveys for federally listed species shall be completed per the timing and methodology specified by resource agency protocol.*

BIO-1c *The final restoration plan shall provide for plant salvaging and replanting where appropriate (e.g., San Luis Obispo dudleya), restoration, and/or creation of habitat suitable for special status plant species including Cambria morning glory, Congdon's tarplant, San Luis Obispo owl's clover, Hoover's button-celery, San Luis Obispo serpentine dudleya, and purple needlegrass.*

To offset impacts to VPFS habitat, the final restoration plan shall require a minimum of a 1:1 creation or restoration replacement of all VPFS habitat impacted by remediation or restoration efforts (or at least 14.78 acres of VPFS habitat depending on final disturbance acreages). The restoration shall be designed to restore or enhance enough habitat to ensure the final restoration replacement ratio. The final plan shall also include defined schedules of restoration efforts, success criteria, weed management methods including for those areas not being remediated or developed to ensure weed species do not encroach into restored areas, monitoring schedules, reporting requirements, and a Long-Term Habitat Management and Evaluation Plan, (see mitigation measure BIO-5c). The objective of the Long-Term Habitat Management and Evaluation Plan shall be to assess if the restored habitats are functioning equal to or better than pre-Project conditions. The assessment of function shall be based on

indicators such as wildlife use and presence of sensitive species within the habitats compared to pre-Project conditions.

BIO-1d *Prior to issuance of applicable grading permit, the Applicant shall enter into an agreement with the County to fund and provide access for a County-approved (in consultation with the City) independent biological monitor who shall regularly review and monitor remediation and restoration efforts to ensure that conditions of approval are being enforced and that success criteria are being met. The independent biological monitor shall have the authority to temporarily halt activities if permit requirements and conditions are not being met.*

BIO-1e *If performance standards detailed in the Final Restoration Plan are not achieved in any restoration area, the Applicant shall submit and implement an alternative or adaptive mitigation strategy during the restoration and monitoring phase, for approval to the County or City, and appropriate resource agencies including the USFWS and CDFW.*

BIO-1f *The monitoring results collected as part of the Long-Term Habitat Management and Evaluation Plan shall be reported at least annually to the County, City, and appropriate resource agencies (i.e., USFWS and CDFW). The annual report shall document the effects of the proposed Project to the VPFS on the property and include acreage of occupied habitat that was impacted. The report shall contain a discussion of the problems encountered in implementing sensitive species habitat protection and other protective measures and recommendations for adaptive management to enhance the conservation of sensitive species habitat.*

BIO-1g *Remediation and restoration activities within 100 feet of potential or occupied VPFS habitat shall be scheduled to occur when the soil is dry to the touch both at the surface and one inch below the surface. After any precipitation event of greater than 0.2 inches, Project activities will only occur after the soil has dried sufficiently as described above, and no sooner than 48 hours after the rain event ends to reduce potential impacts to sensitive VPFS habitat outside of the construction and remediation boundaries. Project activities in upland areas can occur during the rainy season with appropriate habitat protection measures including exclusion fencing, biological monitoring, and sediment control measures to ensure that construction related materials do not enter VPFS habitat.*

BIO-1h *Only qualified, USFWS-approved, personnel with demonstrable field experience conducting VPFS cyst collection and reintroduction, consistent with the proposed Project activities, shall handle VPFS cysts, identify VPFS habitat, and conduct VPFS monitoring. The VPFS-qualified biologist shall assist with marking the limits of disturbance to habitats for listed and special status species. Work shall not be conducted in areas marked for avoidance.*

BIO-1i *The VPFS-qualified biologist shall conduct sensitive vernal pool branchiopod surveys within the appropriate season immediately prior to the start of construction activities per the timing and methodology specified by USFWS protocol. The VPFS-qualified biologist shall monitor during construction*

activities in the vicinity of habitats to be avoided. The final acreage of habitat loss shall be revised as necessary to adequately mitigate actual disturbance to habitats for listed and special status species due to remediation.

BIO-1j *The VPFS-qualified biologist shall conduct cyst collection efforts (cyst-bearing soil) and storage efforts from work areas prior to construction activities from the entire work area of each impacted pool when the ephemerally wetted areas are dry. The VPFS-qualified biologist shall follow USFWS standard procedures and guidance established in that agency's permitting process The cysts shall be stored in labeled containers that are adequately ventilated. The cysts shall be kept out of direct sunlight to prevent excessive heating of the soil. The cysts shall be kept out of direct contact with water. When restored VPFS habitat is constructed, the inoculum shall be placed within the surface layer of the soil in a manner following USFWS protocols and guidance.*

BIO-1k *Prior to issuance of applicable grading permits, the Project Applicant (via the USACE) shall consult with the USFWS and NMFS to obtain an Incidental Take Statement, pursuant to Section 7 of the federal Endangered Species Act to cover the Project's "take" (which includes the permanent and temporary loss of VPFS habitat and the potential impact to south-central coast steelhead habitat). The Applicant shall comply with all measures issued by USFWS and NMFS for the Project.*

BIO-1l *Prior to issuance of applicable construction permit, the Project Applicant shall be required to obtain all applicable Federal and State permits and/or agreements, including, but not necessarily limited to: a Section 404 Permit from the USACE; and a Section 1601 Streambed Alteration Agreement from the CDFW.*

Residual Impacts

A successfully implemented restoration effort, as detailed in the Conceptual Restoration Plan Draft, would result in a 1:1 replacement for habitat supporting sensitive plant species, therefore reducing impacts to these species to less than significant. One of the primary goals of the restoration effort would be the creation and enhancement of existing habitat on the Project Site so as to increase the overall biological function and value of the habitat for VPFS. Mitigation Measure BIO-1b, requiring updated surveys of VPFS habitat in the appropriate season immediately prior to the onset of any ground disturbances in order to refine the final habitat mitigation replacement acreages, Mitigation Measure BIO-1c, requiring a 1:1 replacement of all VPFS habitat impacted by remediation efforts, and the establishment of a conservation easement (BIO-1a) for all property associated with the final restoration plan that are not designated for development would reduce impacts to this species to less than significant. Areas impacted by remediation and restoration efforts would be restored to fully functioning habitat and would have the oversight of County and regulatory agencies. With the implementation of the recommended mitigation measures, the impact to VPFS habitat would be *less than significant with mitigation* (*Class II*).

Impact #	Impact Description	Project Phase	Residual Impact
BIO.2	Site remediation and restoration would result in the taking of listed specimens, special-status species, or species protected by the Migratory Bird Treaty Act.	Remediation	Class II for VPFS, and other Sensitive Species, MBTA, and Aquatic Species Class III for Ecological Risk

Rare Plants

Specimens of four rare plant species (Congdon's tarplant, Cambria morning glory, San Luis Obispo owl's clover, and San Luis Obispo serpentine dudleya) would be removed during remediation activities. Stands of purple needlegrass would also be removed. Padre (2009) reports that nine California walnut trees would be removed during restoration efforts and that part of the restoration efforts would include the outplanting of 865 one gallon walnut tree containers.

Estimates of population density for special status plants were based upon the surveys of field surveys (Padre and WSP 2008b). These estimates are useful in determining target densities for restoration, but they have limited application for assessing impacts because of the variability in population density from year to year, particularly for species with an annual growth habit. Impacts are better evaluated by quantifying affected acreage, as discussed with impact BIO.1 and shown in Table 4.2-5.

Vernal Pool Fairy Shrimp

Individuals (cysts) of the federal-threatened VPFS would be destroyed during soil remediation within natural and artificial wetlands.

Impacts to VPFS are better assessed by quantifying the area of affected habitat. Mitigation, consisting of enhancing existing habitat recreating suitable habitat and repopulating through inoculation, can be determined on this basis. It would not be possible to quantify the number of individual specimens destroyed during Project implementation. The loss of some of the cysts in remediation and relocation efforts would not be considered a substantial threat to the entire population which requires only a portion of the cysts to survive. Many of the onsite ponded areas in which this species has been found will be unaffected by remediation and restoration efforts, thereby ensuring a continued presence and source for repopulating enhanced and remediated habitat. The most recent survey results conducted by Padre (Spring 2012) determined that a total of 12.9 acres of VPFS habitat would be impacted by remediation and restoration. This is considered a significant impact but would be mitigated to less than significant with habitat remediation and enhancement and a restoration requirement of actually improving the function and value for this species' on site habitat.

Aquatic and Semi-aquatic Wildlife Species

Special-status aquatic and semi-aquatic vertebrate species, including the south-central California coast steelhead, two-striped garter snake, western pond turtle, and CRLF, are either known to occur or have the potential to occur within adjacent Acacia Creek and the east fork of San Luis

Obispo Creek. Although the two-striped garter snake, western pond turtle, and CRLF have not been observed during recent 2008 and 2012 Padre surveys, the nearby upland habitats is suitable upland habitat that could be used for forage and cover.

Remediation and development activities that are close to these streams could directly impact semi-aquatic species using adjacent upland habitats. Indirect impacts to animals using the aquatic environment could occur through inadvertent spills or sedimentation caused by equipment operation.

Due to the low likelihood that most of these species are present in the actual work disturbance area, potential impacts to aquatic and semi-aquatic wildlife species would be considered significant but mitigable.

Migratory Birds

Several native bird species protected by the MBTA and CDFW are known or expected to occur at the Project Site (Sections 3503, 3503.5, and 3800 of the Fish and Game Code). Birds are especially vulnerable to impacts when nesting. Remediation activities would necessitate vegetation removal and other ground disturbance, including soil excavation, which could result in nest destruction and loss of eggs, nestlings, or hatchlings which would be considered a significant but mitigable impact.

Ecological Risk

The primary objective of the predictive Ecological Risk Assessment (pERA, BBL 2004) prepared for the San Luis Obispo Tank Farm Surface Evaluation, Remediation, and Restoration Team (SERRT), was to evaluate the potential ecological risks at the site and to provide a screening-level evaluation of potential ecological risks. The pERA analyzed the effects to biological receptors from pre-remediation (Scenario 1) and a post-remediation scenario (Scenario 2) conditions on the Project Site using representative plant and animal species including aquatic and invertebrate species. The pERA specifically excluded evaluating risks to ecological receptors in reservoirs 5, 7, and all surface hydrocarbon expressions (all of which are included in the proposed remediation areas) because these areas were known to or potentially exceed toxicity thresholds.

In general, the pERA found only *de minimus* ("so minor as to disregard") or limited exceedances of thresholds (representing maximum potential exposure) for some contamination including lead, arsenic, total petroleum hydrocarbon (TPH), and polycyclic aromatic hydrocarbons (PAH). In other words, exposing biological receptors to the maximum concentrations detected in the field predicted no or only minor levels of effects. The pERA further concluded, in regard to the most sensitive resources, that,"limited exceedances of conservative benchmarks are not expected to adversely affect wetland plant or invertebrate populations." In addition to the ecological risk of exposure to hydrocarbons, the oil, sheen, liquid oil, pliable oil present on the Project Site, also has presented an oil entrapment hazard to wildlife, which would be eventually eliminated as part of the project activities. However, during the remediation and restoration efforts, wildlife could also come into contact with contaminated soils, oil, sheen, and other harmful hydrocarbon related material when more of this non-weathered material would be exposed.

The Applicant proposes that long-term monitoring of the Project Site be conducted after remedial actions have been implemented. The proposed remediation includes long term monitoring of groundwater to observe migration of petroleum products into the local groundwater. Long-term monitoring and water sampling would ensure that those actions taken under the Project (e.g., excavations and cap construction) would continue to meet their remedial objectives. Therefore, although most of the affected materials on-site would remain after remediation is complete, ongoing monitoring would determine whether maintenance activities are necessary.

Inspections would include looking for resurfacing of plastic hydrocarbon expressions at the excavation locations. Further recurrence of a surface expression would prompt evaluation and focused remedial actions.

The plants and wildlife currently on the Project Site, as evidenced by their presence, have already demonstrated some level of resiliency to the current effects of contaminants known to be present throughout the area. After the initial construction related disturbances, it is expected that remediation activities, which include the excavation or capping of contaminated material, would eventually reduce the exposure risk to most plant and wildlife species including sensitive resources. Therefore, impacts resulting from exposure to contaminated materials during or after remediation activities to sensitive wildlife or plant species are expected to be less than significant.

Mitigation Measures

BIO-2a *Prior to issuance of grading permit, the Applicant shall fund and implement a biological resources training program for all construction workers and their contractors to minimize potential impacts to sensitive wildlife species. Training shall occur prior to initial construction activities and again, annually and as needed for new workers. Prior to issuance of demolition permit, the training program shall be reviewed and approved by the County Department of Planning and Building in consultation with the Environmental Monitor (see EM-1) and City, and shall include a description of important biological resources within the Project Site and all applicable conditions, permit requirements, and protection measures implemented to protect those resources.*

BIO-2b *Prior to construction activities, all grading limits and construction boundaries shall be delineated by construction fencing. Sensitive species habitat shall be delineated with specific sensitive species labeling (e.g., permanent signage every 100 feet along the fence stating "No Entry — Sensitive Habitat."). The County shall approve the fencing prior to commencement of grading activities (including clearing and grubbing).*

BIO-2c *Prior to issuance of grading permit, the Applicant shall enter into an agreement with the County to fund a biological monitor, selected by the Applicant and approved by the County in consultation with the City and the USFWS to minimize potential impacts to sensitive species. The County-qualified biologist shall conduct sensitive species' (including CRLF) surveys immediately prior (within the appropriate season) to construction activities and shall monitor during*

construction activities in the vicinity of habitats to be avoided. Any sensitive species observed during the pre-construction surveys shall be relocated out of harm's way by a qualified and permitted biologist into the nearest suitable habitat as determined in consultation with the jurisdictional resource agency outside the disturbance area. Construction and sediment control fencing shall be inspected each work day during construction activities to ensure that sensitive species are not exposed to hazards.

The Applicant shall be responsible for conducting inspections of the work area each work day to ensure that excavation areas, restored habitats, and other open water habitat in the area do not have oil sheen, liquid oil, or any other potential exposure risk to wildlife. If any exposure risk is identified, the Applicant shall implement measures that could include, but are not limited to hazing, fencing, and wildlife removals to eliminate the exposure risk. The Applicant shall prepare and submit for approval, as part of the Final Long-Term Habitat Management and Evaluation Plan, an Oiled Wildlife Contingency Plan to the County and CDFW.

BIO-2d *To minimize potential impacts to nesting native bird species, and in compliance with the federal Migratory Bird Treaty Act and Sections 3503, 3503.5, or 3513 of the California Fish and Game Code, all activities resulting in ground disturbances during all phases of remediation, restoration, pipe removal, and construction activities involving vegetation removal/trimming shall be done, as feasible, outside the breeding season (February 15 through August 31). If vegetation must be removed during this period, then the Applicant shall retain a biologist acceptable to the County in consultation with the City to conduct surveys for nesting birds. Surveys shall be conducted within three days prior to vegetation removal or other construction-related disturbances. If nesting birds are observed within the vicinity, then a minimum 100-foot buffer from the nest would be established. The buffer would be delineated by orange construction fencing or other delineator approved by County in consultation with the City and signage and would remain in place until the nest is abandoned or the young have fledged. The qualified biologist shall be present when any buffer fencing is established., The qualified biologist shall monitor the nest to ensure that Project activities do not violate the Migratory Bird Treaty Act or the California Fish and Game Code. At minimum, the biologist would check for new active nests, and determine the status of ongoing active nests, weekly during the specified nesting season. The biologist would ensure that all fencing and signage was properly maintained, and would provide weekly, or less frequent if requested by the agencies, e-mail updates on the status of all monitored nests to the County, City, CDFW, and USFWS. If the biologist determines that nesting is being disrupted, the construction activities shall cease and wait until a new buffer area is determined, the young have fledged, or the nest is determined to have failed.*

BIO-2e *Hawks and owls nest earlier than most other native birds. If initial construction activities, ground disturbance, or vegetation clearing involving vegetation removal/trimming occurs from December 1 through August 31, the nest monitor would conduct a pre-construction survey within three days prior to vegetation*

removal or other construction-related disturbances focused on actively nesting hawks or owls. If any actively nesting hawks or owls are found, a 500-foot buffer would be established around the nest tree to help ensure that nesting is not disrupted. The buffer would be delineated by orange construction fencing and signage and would remain in place until the nest is either abandoned or the young have fledged. The nest monitor would be present when any buffer fencing is established.

Residual Impacts

Impacts to most of the sensitive wildlife species known or expected to occur on the Project Site would be mitigated through the replacement and enhancement of existing functions on the Project Site, making them *less than significant with mitigation* (*Class II*). Implementation of the proposed mitigation would further reduce impacts to individuals of most of the sensitive species known or potentially present on the Project Site.

Impacts to the federally threatened VPFS are best mitigated via the replacement and improvement of functions of occupied habitat (MM BIO-1a). The chance of failure for the proposed habitat restoration and enhancement would require adaptive management strategies that could include additional inoculations with existing VPFS inoculums and additional habitat enhancement. The loss of an unspecified number of individuals of the federally threatened VPFS would not result in a substantial and irreversible significant impact to the entire population, and therefore, impacts to this species are considered to be a *significant but mitigable (Class II*) impact. This species would further require and receive additional protection through the Section 7 Incidental Take permitting process.

Implementation of mitigation measures such as habitat replacement and enhancement (MM BIO-1a), worker orientation (MM BIO-2a), pre-construction surveys for sensitive species (MM BIO-2c) would reduce impacts to sensitive plant species to less than significant *with mitigation (Class II)*.

With implementation of mitigation measures including habitat replacement and enhancement (MM BIO-1a), worker orientation (MM BIO-2a), pre-construction surveys for aquatic and semi-aquatic species (MM BIO-2c), establishment and delineation of construction exclusion zones MM BIO-2b) potential impacts to special-status aquatic and semi-aquatic vertebrate species, including the south-central California coast steelhead, two-striped garter snake, western pond turtle, and CRLF would be reduced to less than significant *with mitigation (Class II)*.

Incidental take of nesting birds and violations of the MBTA can be minimized or avoided through timing of various remediation and construction activities (MM BIO 2d and 2e) and pre-Project surveys (MM BIO 2d and 2e) to locate and avoid active bird nests. Such impacts would be considered less than significant *with mitigation (Class II)*.

Exposing biological receptors to the maximum concentrations of TPH and PAH detected in the field predicted no or only minor levels of effects. Reducing the amount of available contaminated material via removal or capping would also reduce the potential for exposure risk. Excluding wildlife from exposed contaminated material and suitable handling of contaminated material during the remediation activities would reduce exposure risks during the remediation

phase. Impacts resulting from exposure to contaminated materials during or after remediation activities to sensitive wildlife or plant species are therefore, expected to be *less than significant (Class III)*.

Impact #	Impact Description	Project Phase	Residual Impact
BIO.3	Site remediation and restoration could result in short-term and permanent loss of biological functions of wetlands, native grasslands, habitats for rare plants and animals, and other biotic communities considered sensitive by federal, state, or local policies, statutes, and regulations.	Remediation	Class II

The proposed remediation and restoration would result in both short-term and permanent loss of sensitive habitats including native perennial grassland, seasonal wet meadow, freshwater marsh, and willow-cottonwood (CEMC 2007). In addition, the Project remediation and restoration efforts would result in impacts to San Luis Obispo Creek and its tributaries which are known steelhead habitat and are considered an integral component of the south-central coast steelhead ESU.

Table 4.2-6, below includes impacted acreages of these communities based on information from the Project Execution Plan. Activities that would cause disturbance to these habitats include excavation, backfilling, ripping with a backhoe, widening existing roads, and capping remediated areas with soil. The re-alignment of Santa Fe Road from San Luis Obispo Creek north to Tank Farm Road would include road widening with sidewalks on both sides, and the installation of an arched culvert over San Luis Obispo Creek. Impacts on those sensitive habitats that support federally and state-listed species, as well as special-status species, are discussed in Impacts BIO.1 and BIO.2. Impacts to federal wetlands are described in impact BIO.4.

Native Grasslands

On the Project Site, native grassland is primarily present in the northeastern portion of the Project Site and is described as Serpentine Bunchgrass Grassland (Padre 2009). Purple needlegrass is primarily found in the far northeastern portion of the site in association with the ultramafic outcrop and derivative soils. Smaller populations are found in the southern portion of the north parcel near Tank Farm Road. Purple needlegrass grassland occupies 11.5 acres at the Project Site (Padre 2008c). Approximately 8.8 acres of the Project Site is composed of grassland with a significant component of the native perennial bunchgrass, being purple needlegrass (Figure 4.2-4). Within any given square meter, the percent cover of purple needlegrass varies from zero percent to as high as 80 percent. Grasslands containing ten percent cover or greater by native grasses are considered sensitive by the CDFW, as well as the City of San Luis Obispo (EDAW 1999). Padre (2009) reports that 6.73 acres of purple needlegrass would be impacted by remediation and restoration efforts.

The proposed restoration and mitigation for impacts to native grasslands as described in the Conceptual Restoration Plan uses the following approach:

"emerging theories regarding California's pre-european landscape suggests that, rather than extensive bunch grasslands, extensive forb fields occupied the open slopes and foothills of the Coast Ranges and Sierra Nevada (Minnich 2008). Therefore this Basis of Design Report calls for the restoration of extensive forb fields with selected native grasslands in the uplands."

Wetlands

The Padre 2008 wetland delineation and subsequent revisions and clarifications (Padre 2013b and 2013b) determined that there were 52.9 acres of USACE Jurisdictional wetlands and waters, 19.2 acres of isolated, non-USACE jurisdictional wetlands/waters, and an additional 16.85 acres of one-parameter wetlands for a total of 88.95 acres of one-parameter wetlands on the Project Site (Padre 2008c). The CDFW and USFWS use the one-parameter wetland definition. Padre (2013c) states that the proposed remediation and restoration efforts would result in impacts to 29.04 acres of Waters of the U.S. including federal waters/wetland areas (Table 4.2-7). The Project would result in impacts to 42.93 acres of one-parameter wetlands. In addition, accidental spills and sediment and erosion from construction areas could flow into sensitive wetland habitats.

Table 4.2-7 Estimated Impacts to Wetlands/Waters of the U.S. including Federal and State Wetlands

	USACE Jurisdictional Wetlands/ Waters of the U.S.	Isolated Wetlands/Waters (non USACE jurisdictional)	Additional One-Parameter Wetlands	Total
Acres on Project Site	52.9 acres	19.2 acres	16.85 acres	88.95 acres
Acres of Proposed disturbance	29.04 acres	7.88 acres	6.01 acres	42.93 acres

Source: Padre 2013c, Padre and WSP 2008

The proposed restoration efforts include a re-alignment of Tank Farm Creek so as to improve hydrologic function from its existing configuration. The east and west forks of Tank Farm Creek would be routed into the North Marsh. The existing culverts that cross under Tank Farm Road would be abandoned, and a weir would be installed in box culverts to force water to pond in the North Marsh, which would thereby reduce the magnitude of the peak flow. Tank Farm Creek would be relocated to follow the course of the former auxiliary channel (away from the western property line), and a low-flow outlet would be installed within the existing culvert so that it releases water in a controlled manner earlier in a storm. In the southeastern portion of the Project, the proposed plan includes removing earthen "plugs" that separate wetland habitat from the East Fork San Luis Obispo Creek channel system, and thus re-engage them through grading and recontouring of the channels based on the historical contours of the creek system. The intended outcome of these riparian corridor restoration efforts would result in short term impacts to habitat and species inhabiting these areas but an overall improvement in habitat quality and function in the long term.

Mitigation Measure BIO-1b requires updated surveys of sensitive species habitats (including VPFS habitat) immediately prior to the onset of any ground disturbances in order to refine the

final habitat mitigation replacement acreages. The loss of VPFS habitat is a subset of the total loss of Waters of the U.S. and wetlands described below.

Steelhead (Evolutionary Sensitive Unit (ESU))
San Luis Obispo Creek and its tributaries are known steelhead habitat and are considered an integral component of the south-central coast steelhead ESU. Although riparian habitat associated with the steelhead ESU would be temporarily disturbed during the restoration phase of the Project, there are no long term impacts to this habitat and it is expected that the proposed restoration approach, described in the Conceptual Restoration Plan, which focuses special attention on improving the current faunal support and habitat functions, would substantially increase habitat value for this portion of the Steelhead ESU.

Mitigation Measures

BIO-3a *The final restoration plan shall require a 2:1 replacement of all native grassland (as defined by the County of San Luis Obispo and CDFW) impacted by remediation efforts of the Project (at least 6.73 impacted acres as described in Padre 2008c). Implementation of the native grassland restoration shall follow the plan, including locations to be restored, restoration techniques, a schedule of surveys to monitor the rate of recovery, success criteria, and remedial actions if success criteria are not met.*

BIO-3b *The final restoration plan shall require a 1:1 replacement of all Waters/wetlands of the U.S. and one-parameter wetlands (42.93 acres) temporarily impacted by remediation and restoration efforts) . Implementation of the wetland and habitat restoration shall follow the plan, including locations to be restored, restoration techniques, a schedule of surveys to monitor the rate of recovery, success criteria, and remedial actions if success criteria are not met.*

BIO-3c *Prior to issuance of grading permit, the Applicant shall demonstrate that all staging areas, equipment storage areas, stockpile sites, and refueling areas are located at least 100 feet from surface water bodies and wetland habitats to minimize the potential for releases into surface water or wetland habitat.*

BIO-3d *Prior to issuance of applicable grading permit, the Applicant shall prepare and submit a Storm Water Pollution Prevention Plan (SWPPP) for approval to the San Luis Obispo County Department of Planning and Building. The final plan shall be revised as necessary to include any updated contours of the final grading as determined in the final restoration plan. The SWPPP shall adequately mitigate any potential impacts resulting from storm water flow into sensitive habitats. The SWPPP shall ensure that all remediation and restoration activities, especially those activities occurring within the riparian and stream corridors that could result in turbidity or release of contaminated material into sensitive habitats employ measures such as sediment fences or other containment devices and construction best management practices to minimize the potential for impacts to sensitive habitats.*

Residual Impacts

Native grasslands: Mitigation measure BIO-1a requires the preparation and approval of a final restoration plan that would include details on the restoration and monitoring of native grassland habitat. Mitigation measure BIO-3a requires a 2:1 replacement of native grassland habitat disturbed during the remediation and restoration activities. The Conceptual Restoration Plan states that impacts to the sensitive native grassland habitat would be offset by the creation of approximately 45.2 acres of forb field habitat (which would greatly exceed the 2:1 or 3:1 replacement ratio that is typical mitigation for impacts to this habitat). This proposed restoration would improve overall general functions and values of habitat disturbed during remediation and restoration efforts and would also improve the functionality of the other existing open grassland on the Project Site. In addition, BIO-3a would require the 2:1 replacement ratio for all impacts to native grasslands as defined by the County of San Luis Obispo and the CDFW due to the temporal loss of this sensitive habitat and the potential for failure in restoration efforts. The implementation of the recommended restoration effort would reduce impacts to native grasslands to *less than significant with mitigation* (*Class II*).

Wetlands: The implementation of the restoration plan would result in a 1:1 replacement ratio for wetlands impacted due to Project remediation and restoration disturbances (Table 4.2-7). The Applicant-proposed mitigation included in the Conceptual Restoration Plan accounted for restoring 55.63 acres) for remediation and restoration impacts. The EIR-proposed mitigation requires a 1:1 habitat replacement for a total of 42.93 acres for one-parameter wetland impacts. It is expected that some of the replaced wetland habitat would also be suitable habitat for VPFS (BIO-1c requires the restoration of 12.9 acres of VPFS habitat). However, even if none of the VPFS habitat can be delineated as one-parameter wetland, the expected Applicant proposed acreage of 55.63 acres would be ample to replace both the required VPFS habitat and the one-parameter wetland requirement even if there was no overlap.

The wetland habitat would further require and receive additional protection through the Section 404 permitting process. With the intended improvement of functions through remediation and restoration and the implementation of the recommended mitigation measures, the impact to wetlands would be reduced to *less than significant with mitigation* (*Class II*).

Steelhead ESU: The final restoration plan shall be designed to improve the value and function of the existing riparian ecosystem. The restored habitat within the riparian habitat and the adjoining watershed shall mitigate the temporary disturbance to habitats comprising potential movement and dispersal habitat for migratory fish. As such, the movement and dispersal habitat would be restored and would function as a habitat linkage for dispersal of migratory fish species. This sensitive habitat would further require and receive additional protection through consultation with the NMFS during the Section 404 permitting process. With the intended improvement of functions through remediation and restoration and the implementation of the recommended mitigation measures, the impact to the steelhead ESU wetlands would be reduced to *less than significant with mitigation* (*Class II*).

Impact #	Impact Description	Project Phase	Residual Impact
BIO.4	Site remediation would adversely affect federal wetlands as defined in Section 404 of the Clean Water Act and State Wetlands.	Remediation	Class II

The proposed remediation would affect federally protected wetland areas within the Project Site, including natural watercourses, such as North Marsh, and man-made containment areas. Remediation activities that would cause disturbance include excavation backfilling, ripping with a backhoe, widening existing roads, and capping remediated areas with soil.

Proposed restoration activities are designed to improve the value and function of the existing on-site wetlands (Padre and WSP 2009). As detailed in the Conceptual Restoration Plan and clarified in Padre 2013c, the proposed remediation and restoration activities would impact a total of 29.04 acres of federal wetland habitat. The Applicant would obtain a Section 404 permit prior to disturbance of wetland areas. Consultation with the USFWS and NMFS would be completed during the Section 404 permitting process. The Applicant would comply with all measures issued by USFWS and NMFS for the Project.

The potentially significant impact to wetlands would be mitigated with the proposed mitigation of 1:1 habitat replacement (MM BIO-3b). In addition, with the re-establishment of normal water flow throughout the site, other additional degraded wetlands could recover and provide additional habitat functions. Padre reports that an additional 11.37 acres of degraded habitat would recover naturally with the return of historical water connectivity (Padre and WSP 2009). The natural recovery of degraded wetlands, combined with mitigation measures, particularly restoration of on-site, existing wetlands, would further reduce this impact.

Mitigation Measures

BIO-4a *The final restoration plan (MM BIO-1a) shall be implemented to improve the value and function of existing wetlands on site that would result in a 1:1 ratio of restored wetlands to wetlands lost due to Project disturbances. Implementation of wetland restoration shall follow the plan, including locations of existing wetlands to be restored, restoration techniques, schedule of surveys to monitor the rate of recovery, success criteria, and remedial actions if success criteria are not met. The final plan shall also include a Long-Term Habitat Management and Evaluation Plan (MM BIO-1c) that will include performance standards to assess whether the restored wetland habitats are functioning similar to pre-Project conditions.*

BIO-4b *Prior to issuance of applicable grading permit, the Applicant shall obtain a Section 404 permit prior to disturbance of wetland areas. Consultation with the USFWS and NMFS shall be completed during the Section 404 permitting process. The Applicant shall comply with all measures issued by USFWS and NMFS for the Project. These measures could include, but are not limited to habitat restoration, habitat enhancement, biological resources training, biological monitoring, sensitive species relocation effort, restoration monitoring and reporting, and agency approval of restoration efforts.*

Residual Impacts

Mitigation measure BIO-1a requires the preparation and approval of a final restoration plan. The implementation of this plan would result in a 1:1 replacement ratio of restored wetlands to wetlands lost due to remediation and restoration disturbances. This sensitive habitat would further require and receive additional review through the Section 404 and Section 401 permitting process. With the intended improvement of functions through remediation and restoration and the implementation of the recommended mitigation measures, the impact to Federal wetlands would be reduced to *less than significant with mitigation* (*Class II*).

Impact #	Impact Description	Project Phase	Residual Impact
BIO.5	Site remediation and restoration would result in habitat alteration that precludes the re-establishment of native populations of plants and animals.	Remediation	Class II

The proposed remediation would affect natural vegetation types and land use types, including annual grassland, native perennial grassland, coyote brush scrub, seasonal wet meadow, freshwater marsh, disturbed rock outcrop, seasonal wet meadow/tarflat, willow-cottonwood/concrete-asphalt, and developed areas (CEMC 2007). Table 4.2-8 includes impacted acreages based on information from the Project Execution Plan, some of which has been modified and updated in Padre 2008c. Although three types of vegetation types would be disturbed, all provide habitat for diverse native plants and animals described above. Activities that would cause disturbance are similar to those that would impact wetlands, including excavation backfilling, ripping with a backhoe, widening existing roads, and capping remediated areas with soil. Impacts on federally and state-listed species, as well as special-status species, are discussed in Impacts BIO.1 and BIO.2. Impacts to federal wetlands are described in impact BIO.4.

Table 4.2-8 Preliminary Habitat Impacts of Remediation Project

Habitat Type/Land Use Type	Total Impacts (acres)
Annual grassland	98.92
Native perennial grassland	6.73*
Coyote brush scrub	0.91
Mixed riparian	0.69
Freshwater marsh	12.49
Seasonal wet meadow	21.51
Disturbed rock outcrop	2.54
Seasonal wet meadow/tarflat	7.07
Willow-cottonwood/concrete-asphalt	0.32

Source: CEMC 2007
*Source: Padre 2009

Proposed restoration activities are designed to improve the value and function of the existing on-site wetlands, and to restore terrestrial ecosystems (Padre and WSP 2009). The restored wetlands and terrestrial vegetation types would mitigate the loss and disturbance to habitats for non-sensitive, native populations of plants and animals. Re-establishment of such species would not be precluded.

Mitigation in the form of restoration of natural vegetation types would mitigate the impacts. The potential preclusion of the re-establishment of populations of native plants and animals is a potentially significant impact that can be mitigated. Implementation of the proposed mitigation (MM BIO-3b) would result in a 1:1 replacement of wetland habitat disturbed by remediation activities. In addition, as discussed in impact BIO.4, after more natural water-flow connectivity is re-established after restoration, some degraded wetlands would recover naturally, resulting in 11.37 acres of improved wetlands (Padre and WSP 2009). The overall results of the mitigation proposed in this EIR and the general approach proposed in the Conceptual Restoration Plan would result in improved habitats for native populations of plants and animals as follows (Padre and WSP 2009):

- Phreatophytic (deep rooted plants that derive water from ground water) woodland – 4.0 acres;
- Mixed hardwood/forb field – 27.0 acres;
- Coastal sage chaparral – 10.9 acres; and
- Forb field – 45.2 acres.

The restoration of wetlands and terrestrial vegetation types would provide sufficient habitat for native plants and animals to re-establish, as necessary to compensate for Project-related impacts.

Mitigation Measures

BIO-5a *The terrestrial ecosystem portion of the final restoration plan shall include success criteria for re-establishing populations of native plants and wildlife.*

BIO-5b *The final restoration plan, shall be implemented to restore at least 4.0 acres of phreatophytic woodland, 27.0 acres of mixed hardwood/forb field, 10.9 acres of coastal scrub chaparral, and 45.2 acres of forb field (Padre and WSP 2009). Implementation of the terrestrial habitat restoration shall follow the plan, including locations to be restored, restoration techniques, a schedule of surveys to monitor the rate of recovery, success criteria, and remedial actions if success criteria are not met.*

BIO-5c *The function of the restored terrestrial habitats shall be monitored. A Long-Term Habitat Management and Evaluation Plan shall be developed and appended to the final restoration plan. The habitat management and evaluation plan shall include methods to determine if the restored areas are meeting success criteria per the approved restoration plan. The complementary plan shall include surveys to monitor the occurrence of native plants and animals in restored habitats relative to their occurrence in similar onsite habitats prior to, or unaffected by, remediation and development.*

Residual Impacts

Implementing these mitigation measures would reduce the likelihood that the Project would preclude the re-establishment of populations of native plants and wildlife, either from Project-specific impacts, or from a broader, region-wide perspective. The impacts to the habitat would be reduced to *less than significant with mitigation* (*Class II*).

Impact #	Impact Description	Project Phase	Residual Impact
BIO.6	Site remediation and restoration would temporarily impede migration and dispersal of upland, aquatic, and semi-aquatic wildlife species.	Remediation	Class II

As described in the Project Execution Plan, the East Fork of San Luis Obispo Creek and associated Acacia Creek bordering the Project Site could be components of a migration corridor and habitat linkage for wildlife species within the region (CEMC 2007). These migration corridors are especially important because they are within an area where residential development and associated concentration of human activities have a tendency to impair the movement of species between habitat areas. Although the natural riparian scrub in the Acacia Creek riparian zone is discontinuous and wildlife habitat is fragmented, the wildlife habitat value is moderate due to its importance maintaining continuity with riparian habitats of the nearby East Fork of San Luis Obispo Creek and San Luis Obispo Creek to the west (CEMC 2007).

The Project Execution Plan also indicates that the existing riverine/slope wetlands associated with the North Marsh may also allow the dispersal of aquatic and semi-aquatic organisms (CEMC 2007). The North Marsh habitat feature may be utilized by medium- to large-sized mammals (e.g., mule deer and coyote) as a movement corridor between the Project Site and the adjacent South Hills Conservation Area to the northeast.

Other faunal groups that could be impacted by remediation and development include migratory birds and fish. The East Fork of San Luis Obispo Creek and associated tributaries (i.e., Acacia Creek) are known to support steelhead. Thus, there is potential for Project-related activities to affect or impair the movement of migratory fish. Migratory birds utilize the Project Site during migration and wintering periods, particularly when seasonal water is present.

The proposed remediation Project would affect natural vegetation types, including wetlands and terrestrial habitats that could contribute to the movement and dispersal corridors (referred to as migration corridors and habitat linkages) in the region. Activities that would cause disturbance include excavation backfilling, ripping with a backhoe, widening existing roads, and capping remediated areas with soil.

The remediation-related impacts to habitats would be temporary in nature and would be mitigated by restoration of on-site wetlands and terrestrial habitats. A final restoration plan, based on the proposed plan, shall be designed to improve the value and function of the existing on-site wetlands, and to restore terrestrial ecosystems (Padre and WSP 2009). The restored wetlands and terrestrial vegetation types shall mitigate the temporary disturbance to habitats comprising potential movement and dispersal habitat for migratory fish and wildlife species. As

such, the movement and dispersal habitat would be restored and would function as habitat linkages for dispersal of migratory fish and wildlife species. Considering that the current value of existing habitats on site is "moderate," the restored habitats on site would create habitat linkages similar or better than pre-Project conditions.

Mitigation Measures

BIO-6a *The terrestrial ecosystem portion of the final restoration plan shall be reviewed and approved by the San Luis Obispo County Department of Planning and Building in consultation with the City of San Luis Obispo Natural Resources Manager. The plan shall include provisions to maintain and re-establish habitat linkages.*

BIO-6b *The final restoration plan shall include consideration of on-site natural habitats and linkages to off-site, adjacent habitats, especially the South Hills Conservation Area.*

Residual Impact

The recommended mitigation measures would reduce impairment to movement, migration, and dispersal of migratory fish and wildlife species. To the extent possible, remediation activities shall be conducted outside of wintering season (MM BIO-1f) when disturbances to creeks and seasonal wetlands could have a potentially substantial effect on habitat linkages at a critical time of year for migrating wildlife. Remediation and restoration efforts would not substantially impair the corridors and habitat linkages used by such species. With the intended improvement of functions through remediation and restoration and the implementation of the recommended mitigation measures, the impact to wildlife migration and dispersal would be *less than significant with mitigation* (*Class II*).

Impact #	Impact Description	Project Phase	Residual Impact
BIO.7	Site remediation and restoration have the potential to reduce the size and diversity of plant and animal populations at the Project Site.	Remediation	Class II

Project implementation would include vegetation removal for remediation and restoration efforts. The immediate biological effects of excavations, pipeline removals, and re-grading for the purposes of restoration would be the permanent and essentially total loss of the plants and wildlife that exist within most of the graded areas. The more mobile wildlife species may be able to escape immediate mortality, but in most cases the long-term effect of increased competition for resources in nearby preserved areas would be a net loss of the number of individuals of each species displaced from the area of grading. Any construction activities or site visits occurring at night due to security, emergency or unexpected situations (e.g., security, night patrol, emergency actions, storm-water control, and over-night dewatering efforts) would increase the chance of wildlife mortalities on roads and access corridors because that is when a large number of wildlife species are most active. Any temporary loss of habitat would also reduce foraging habitat for species with larger home ranges. Table 4.2- for BIO.5 quantifies the maximum area of each plant

community that would be subject to disturbances due to remediation activities. Proposed restoration activities are designed to improve the value and function of the existing habitat, and to restore terrestrial ecosystems (Padre and WSP 2009). The increased acreages and the expected net gain in ecosystem functions would mitigate the temporary loss and disturbances to plant and animal populations on the Project Site and in the general Project area. Wildlife species are fully expected to recolonize restored areas. The success monitoring of restoration areas would partially be based on the return to functions as they relate to wildlife use. Any deviations from producing fully functioning habitat would require adaptive management. Because much of the current value of existing habitats on site is "moderate," the restoration of on-site habitats are expected to actually increase the diversity and abundance of plant and wildlife populations.

Mitigation Measures

BIO-7a *A qualified biologist shall conduct surveys throughout areas proposed to be disturbed to determine the presence of wildlife species prior to ground disturbance. The biologist shall be on site during initial site disturbances (i.e., brush removal, top soil disturbances). Wildlife species encountered during the initial disturbances shall be relocated to suitable habitat out of potential danger. All handling and relocation of sensitive and non-sensitive wildlife species shall be conducted by biologists with appropriate authorizations and permits (CDFW and USFWS). Remediation activities, including restoration efforts shall be regularly monitored throughout the remediation and restoration phases to ensure that wildlife species have not entered work areas. The biological monitor shall conduct regular site inspections of the remediation and restoration activities to ensure that all applicable mitigation measures are being enacted. The biological monitor shall have the authority to temporarily halt activities if permit requirements and conditions are not being met. The biological monitor shall prepare an annual summary report describing site visit observations and shall provide this report to the City, County, and regulatory agencies (including CDFW, USACE, and USFWS) for review.*

BIO-7b *To minimize the potential for road mortality of wildlife, all nighttime traffic shall be minimized during the remediation and restoration phases and permitted only for activities required for safety reasons, emergencies, or equipment staging and vehicle maintenance necessary to comply with traffic and air quality mitigation measures; all hauling activities shall be restricted to daylight hours, defined as the hours after sunrise and before sunset.*

BIO-7c *The Stockpiling Plan required by Mitigation Measure WR-3c shall also include methods to keep wildlife from coming into contact with stockpiled contaminated soils.*

Residual Impact

The recommended mitigation measures would eventually restore, enhance, and increase functions for existing plant and wildlife habitats on the Project Site in the long-term if site restoration is successful. However, the restoration efforts would require several years for the restored habitat to become mature enough to provide adequate functions and values for plants and wildlife species. These short-term impacts are mitigated through increased replacement ratios for the more sensitive habitat types (i.e., wetlands, sensitive species habitat, and native

grasslands). With the intended improvement of functions through remediation and restoration and the implementation of the recommended mitigation measures, the impact to plant and wildlife populations diversity and abundance would be *less than significant with mitigation* (*Class II*).

4.2.5 City Development Plan Impacts and Mitigation Measures

The development of the Project under the City Development Plan would include approximately 803,000 square feet of commercial and industrial floor area with associated parking, landscaping, open space, bicycle and pedestrian trails. The City development could also include land for the City to construction public facilities such as a transit maintenance yard and storage faculty or a fire station and training facility. The development for each of these land use designations under the City Development Plan would predominantly consist of offices and light manufacturing facilities. The development would occur in five phases and take place over a 2 to 25 year period. Many of the impacts to biological resources within the City Development Plan footprint would have already occurred during the remediation phase of activities and would likewise be mitigated with the described mitigation for each impact. Those impacts which would occur in the remediation phase are included in the discussions below but do not have the Summary Box statement of impact with new impact numbers, descriptions, and class. Impact statements and accompanying Impact Summary are only included below for new impacts or substantially different levels (i.e., different Impact Class) of City Development Plan Impacts.

Sensitive Species Habitat: The proposed City Development Plan components of the Project would include permanent conversion of sensitive species habitat to commercial, recreational, and open space uses and would include impacts to sensitive plant species habitats. These species habitats would be impacted during the initial remediation phase of activities. The Development phase of activities would result in permanent loss of these species' habitat. However, MM BIO 1a 1b, and 1c requires the replacement of all these species habitats and therefore mitigates long term/permanent loss of habitat.

Sensitive Plant Habitat: The City Development Plan would permanently impact approximately 5.57 total acres of habitat for Cambria morning glory and 4.14 acres of purple needlegrass, as shown in Table 4.2-9.

Table 4.2-9 Estimated Impacts to Rare Plant Species and Sensitive Habitat Areas

Species	Development Impacts (acres)	Mitigation Area (acres)
Cambria morning glory *Calystegia subacaulis ssp. episcopalis*	5.57	8.2
San Luis Obispo owl's clover *Castilleja densiflora* ssp. *obispoensis*	0.00	7.2
Congdon's tarplant *Centromadia parryi* ssp. *congdonii*	0.00	11.88
San Luis Obispo serpentine dudleya *Dudleya abramsii* ssp. *bettinae*	0.00	0.00 Salvage and curation

Table 4.2-9 Estimated Impacts to Rare Plant Species and Sensitive Habitat Areas

Species	Development Impacts (acres)	Mitigation Area (acres)
Hoover's button-celery *Eryngium aristulatum* var. *hooveri*	0.00	1,000 ft^2
Purple Needlegrass *Nassella pulchra*	4.14	To be included in all upland restoration
Total	**9.71**	

Notes : ft^2 = square feet
Source: Padre 2008b, Padre and WSP 2009

The permanent loss of native grassland habitat is discussed below in impact BIO.8.

Vernal Pool Fairy Shrimp Habitat: The City Development Plans would be located in areas with occupied VPFS habitat, therefore resulting in a permanent loss of this species' habitat. In addition, several ponded areas representing suitable VPFS habitat that did not have any evidence of use by this species but could potentially be used in the future would also be permanently lost in the development of area.

This species habitat would be impacted during the initial remediation phase of activities. The Development phase of activities would result in permanent loss of these species' habitat. However, MM BIO 1c requires the replacement of this species habitat at a 1:1 replacement ratio and preserves this habitat in perpetuity, therefore mitigating long term/permanent loss of habitat. Implementation of the final restoration plan accounts for this permanent loss of VPFS and wetland habitat; MM BIO-1a requires the 1:1 replacement of all VPFS habitat that is disturbed and would therefore re-establish habitat for listed and special-status plants. The habitat enhancement and restoration efforts and the proposed mitigation measures discussed under impact BIO.1 would restore other suitable portions of the Project Site with treatments that would mitigate the development impacts to sensitive species habitat to less than significant.

4.2.5.1 City Development Plan Impacts to Sensitive Species

The impacts to listed species, special-status species, and species protected by the Migratory Bird Treaty Act resulting from the proposed City Development Plan portions of the overall Project would be similar to what is described for the remediation phase of work except that sensitive species habitat in the development area would not be able to be restored. Impacts to sensitive wildlife species known or expected to occur on the Project Site would be impacted during the initial remediation phase of activities and would likewise be mitigated through the replacement and enhancement of existing functions on the remainder of the Project Site (MM BIO-1 and 3). Implementation of the proposed mitigation described for BIO.2 would further reduce impacts to individuals of sensitive species known or potentially present on the Project Site.

Because the City development phase of work is proposed in only a small portion of and currently, unoccupied VPFS habitat and this habitat would be replaced via the proposed

mitigation restoration, the impacts to individuals of the federally threatened VPFS would be mitigated to *less than significant (Class II)*.

4.2.5.2 City Development Plan Impacts to Sensitive Habitats

Impact #	Impact Description	Project Phase	Residual Impact
BIO.8	The City Development Plan would result in a permanent loss of biological functions of wetlands, native grasslands, habitats for rare plants and animals, and other biotic communities considered sensitive by federal, state, or local policies, statutes, and regulations.	Development	Class II

The City Development Plan would result in the permanent loss of biological function of wetlands, native grasslands, habitats for rare plants and animals, and other biotic communities considered sensitive by federal, state, or local policies, statutes, and regulations.

Purple needlegrass is primarily found in the far northeastern portion of the Project Site, in association with the ultramafic outcrop and derivative soils. Purple needlegrass grassland occupies 11.5 acres at the Project Site (Padre 2008c). Valley needlegrass grassland has been ranked by the CNDDB globally as G1which is considered extremely endangered and means that less than 2,000 acres of this habitat exists worldwide. Although the remediation phase would disturb some of this habitat, the development phase of the Project would result in the permanent loss of 4.14 acres of this sensitive habitat.

Mitigation measure BIO-3a requires a 2:1 replacement of all native grassland impacted by remediation efforts of the project (at least 4.14 impacted acres as described in Padre 2008c). The Conceptual Restoration Plan proposes mitigation for the loss of needlegrass bunch grass by including this species in the general seed species mix, outplanting over 6,500 one-gallon containers of needlegrass bunch grass, and calls for the restoration of extensive forb fields (45.2 acres, greatly exceeding the 2:1 or 3:1 replacement ratio that is typical mitigation for impacts to this habitat) with selected native grasslands in the upland portion of the restoration efforts. All of this effort, after the short term impacts of restoration, would greatly improve and enhance the overall functions of the existing native grassland community on the Project Site, therefore reducing this impact to *less than significant with mitigation (Class II)*.

The EIR-proposed mitigation (MM BIO-3a) requires a 1:1 habitat replacement for a total of 42.93 acres for one-parameter wetland impacts. Table 4.2-10 provides the area of impacts for the development phase of the project. Loss of wetland habitat in the development phase would represent a permanent loss of this habitat.

In addition to the impacts to native grasslands, sensitive plant and wildlife habitats and populations in the vicinity of the City Development Plan footprint would be exposed to construction related noises, trash, dust, and human presence throughout the duration of the construction phase which could consist of periods of disturbances lasting up to 25 years.

Table 4.2-10 Area of Development Phase Wetland Impacts

	USACE Jurisdictional Wetlands/Waters	Isolated wetlands/waters (non USACE-jurisdictional)	Additional One-parameter wetlands (CDFW and USFWS)	Total
Acres on Site	52.9 acres	19.2 acres	16.85 acres	88.95 acres
Area of Disturbances (during remediation and restoration)	29.04 acres	7.88 acres	6.01 acres	42.93 acres
Area of Development Impacts	1.83 acres	1.02 acres	0.86 acres	3.71 acres

The operation phase of the development area would also result in increased human presence, increased lighting, and new and increased usage of the roads and bike paths near plant and wildlife habitat (i.e., vernal pools, native grasslands, and fairy shrimp habitat) that are extremely sensitive to disturbances.

Mitigation Measures

BIO-8a *The final restoration plan shall include criteria that would require the restoration of at least a 2:1 replacement ratio (4.14 acres as defined by Padre 2008c) of all "native grasslands" habitat permanently lost in the development elements of the project. Restored native grassland habitat shall meet standards and criteria as defined by the County of San Luis Obispo and CDFW within the proposed restoration of 45.2 acres of forb field habitat. Implementation of the terrestrial habitat restoration shall follow the plan, including locations to be restored, restoration techniques, a schedule of surveys to monitor the rate of recovery, success criteria, and remedial actions if success criteria are not met.*

BIO-8b *The function of the restored native grassland habitats shall be monitored. A Long-Term Habitat Management and Evaluation Plan shall be developed and appended to the final restoration plan. The habitat management and evaluation plan shall include methods to determine if the restored areas are meeting success criteria per the approved restoration plan including criteria of plant and wildlife species in restored habitats and to compare such results to pre-Project conditions. The complementary plan shall include surveys to monitor the occurrence of native plants and animals in restored habitats relative to their occurrence in similar habitats prior to remediation and development.*

BIO-8c *Hikers, pets, and bikers shall be excluded from sensitive habitats within the Project Site. The final SLO City and County-approved restoration plan shall include a fencing plan element with specific details on location, requirements of permanent and seasonal exclusion zones, and type of fencing to ensure that wildlife movement is not restricted. The fencing plan shall include information on placement of signs, educational placards, type of fencing required, method of*

exclusions, and monitoring and repair of exclusion devices, and shall include, at the least, a description and figure of those areas (i.e., VPFS habitat, vernal pool habitat, riparian habitat, and habitat in the process of being restored) that would require full time exclusion.

BIO-8d *The final restoration plan shall require a 2:1 replacement of the 3.71 acres of USACE Jurisdictional Waters/wetlands, isolated waters/wetlands, and one-parameter wetlands (for a replacement of 7.42 acres) permanently impacted by the City Development Plan. Implementation of the wetland and habitat restoration shall follow the plan, including locations to be restored, restoration techniques, a schedule of surveys to monitor the rate of recovery, success criteria, and remedial actions if success criteria are not met.*

Residual Impacts

Implementation of Mitigation Measures and BIO-3a through 3c and BIO-8a through 8d would reduce permanent City Development Plan impacts to sensitive habitats.. MM AE-3b requires the preparation and approval of a lighting operation schedule that would describe the number, location and amounts of lights, and the proposed hours of operation for the entire property. The lighting schedule shall propose the minimum number of lights, level of illuminance, and hours of operation allowed by City codes and ordinances, including the City's Night Sky Ordinance. The approved lighting schedule shall become a required condition of the lease between the property owner and the tenant.

Implementation of Mitigation Measures and BIO-3a through 3c, BIO-8a through 8d, and MM AE-3b would reduce City Development Plan impacts to sensitive habitats to less than significant with mitigation (Class II).

4.2.5.3 City Development Plan Impacts to Federal Wetlands

The City Development Plan component of the Project would permanently impact 1.83 acres of Waters of the U.S. including Federal wetland areas as defined in Section 401 and Section 404 of the Clean Water Act.

Such areas would be converted permanently to other land uses. Unlike the remediation phase, no wetland areas would be restored in place. Therefore, there would be no temporary impacts. Mitigation measure BIO-3b requires that disturbed wetland habitat be restored at a 1:1 replacement ratio, that restoration efforts focus results on a net gain of functioning wetland habitat, and that all of the restored areas be preserved in perpetuity. The habitat enhancement and restoration efforts and the proposed mitigation measures discussed under impacts BIO.1 and BIO.3 would restore other suitable portions of the Project Site with treatments that would mitigate the development impacts to Federal wetlands to less than significant. In addition, as required in Section 401 of the Clean Water Act, an application for a Section 404 Permit would also require certification from the RWQCB that the activity would not adversely affect water quality.

4.2.5.4 City Development Plan Impacts to Habitats that Would Affect Native Populations of Plants and Animals.

The City Development Plan portion of the Project would have the potential to result in habitat alteration that precludes the re-establishment of native populations of plants and animals. According to the Project Execution Plan, the City Development Plan would result in impacts to native vegetation types, similar to the impacts of the remediation Project (CEMC 2007). The City Development Plan would result in a permanent loss of habitats within the area of development and would therefore, preclude wildlife or plant species from recolonizing these areas. However, the proposed restoration activities for the entire Project area are designed to improve the value and function of the existing on-site terrestrial ecosystems. The restored habitats throughout the entire Project area would mitigate the loss and disturbance to habitats for native populations of plants and animals in the City Development Plan portion of the Project boundary.

Mitigation in the form of restoration of natural vegetation types would mitigate the impacts to native wildlife and plant species. The potential preclusion of re-establishment of populations of native plants and animals is a potentially significant impact that can be mitigated to less than significant (Class II).

4.2.5.5 City Development Plan Impacts to Wildlife Migration and Dispersal

Impact #	Impact Description	Project Phase	Residual Impact
BIO.9	The City Development Plan would permanently impede migration and dispersal of upland, aquatic, and semi-aquatic wildlife species.	Development	Class II

The City Development Plan would result in impacts that could permanently impede migration and dispersal of upland, aquatic, and semi-aquatic wildlife species. The City Development Plan would result in impacts similar, although greater, than those described in the remediation phase. The development would result in a permanent loss of native vegetation types in the northeastern portion of the Project Site that comprise movement and dispersal habitat to numerous wildlife species. Permanent structures, buildings, and bike paths and increased human presence in the area would reduce or eliminate the ability for wildlife species to freely move through the area. In addition, the City Development Plan on the eastern portion of the Project Site is near the riparian habitat associated with Acacia Creek and the East Fork of San Luis Obispo Creek which are expected to support a large portion of wildlife movement in the general area.

The restoration of native habitats would assist in maintaining and re-establishing corridors and habitat linkages that can be used by migrating and dispersing animals. Protection measures reducing the threat of sedimentation and erosion and restoration of the East Fork of San Luis Obispo Creek would reduce the level of impacts to migratory fish. The amounts to be restored include (Padre and WSP 2009):

- Wetlands – 45.67 acres;
- Phreatophytic woodland – 4.0 acres;

- Mixed hardwood/forb field – 27.0 acres;
- Coastal sage chaparral – 10.9 acres; and
- Forb field – 45.2 acres.

Mitigation Measures

BIO-9a *To reduce impacts to wildlife migration, the Applicant shall include in the approved final restoration plan (MM BIO-1a) landscape designs for planting of native vegetation along the northern portion of the City Development Plan area. The native vegetation landscaping shall be designed to provide wildlife species cover and refuge during migration. The landscaping shall be designed to shield migrating wildlife from human presence, noise, and lighting from residential and recreational activities in the City and County Development Plan footprint. Due to the 2 to 25 year duration of development phase, such planting shall occur on the onset of the development phase.*

BIO-9b *To reduce cumulative impacts to wildlife migration the Applicant shall include in the final restoration plan (MM BIO-1a) a fencing plan element with specific details on location and requirements for the purpose of restricting wildlife movement through the development area but allowing movement through the open space areas.*

Residual Impacts

The recommended mitigation measures would reduce impairment to movement, migration, and dispersal of migratory fish and wildlife species. To the extent possible, remediation activities shall be conducted outside of wintering season (MM BIO-1f) when disturbances to creeks and seasonal wetlands would have a potentially substantial effect on habitat linkages at a critical time of year for migrating aquatic wildlife. Mitigation that restricts public access into sensitive habitat portions of open space areas (MM BIO-8c) would reduce some of the effects of increased human presence in natural areas. With the intended improvement of functions through remediation and restoration and the implementation of the recommended mitigation measures, the impact to wildlife migration and dispersal would be *less than significant with mitigation (Class II)*.

4.2.5.6 City Development Plan Impacts to Plant and Animal Populations

Impact #	Impact Description	Phase	Residual Impact
BIO.10	The City Development Plan has the potential to reduce the size and diversity of plant and animal populations at the Project Site.	Development	Class II

The City Development Plan would result in impacts that have the potential to reduce the size and diversity of plant and animal populations at the Project Site. The City Development Plan element of the Project would include vegetation removal and a permanent loss of plant and wildlife habitat. The effects of construction activities would result in a permanent and total loss of the plants and wildlife that exist within the graded areas. Any permanent loss of habitat would also reduce foraging habitat for species with larger home ranges. In addition, plant and wildlife populations in the vicinity of the City Development Plan footprint would be exposed to construction related noises, trash, dust, and human presence throughout the duration of the

construction phase which could consist of periods of disturbances lasting up to 25 years. The operation phase of the City Development Plan area would also result in increased human presence, increased lighting, and increased usage of the roads and bike paths near plant and wildlife habitat (i.e. vernal pools, native grasslands, and fairy shrimp habitat) that are extremely sensitive to disturbances.

Mitigation that restricts public access into the sensitive habitat portions of open space areas (MM BIO-8c) would reduce some of the effects of increased human presence in natural areas. The Applicant-proposed and recommended Restoration Plan (MM BIO-1a) would restore, enhance, and increase functions for existing plant and wildlife habitats on the Project Site.

Mitigation Measure

BIO-10 Prior to issuance of applicable grading permit the Applicant shall submit a lighting plan to the City for approval. All Project lighting shall be designed to shielded spillage of light into adjacent preserved open space areas. Any structural part of the light fixture providing this shielding shall be permanently affixed. Outdoor lighting for buildings shall be restricted to lights required by code for lighting building exteriors and for safety and security needs. The lighting for the ball field shall not be on during period when there are no activities at the fields. In no case shall the lights at the ball fields be on between the hours of midnight and 7:00 AM. After initial installation of Project lighting, a City-approved biologist shall conduct a field inspection to confirm that the proper lamps have been installed and that light spillage into Open Space areas has been minimized to the maximum extent feasible without compromising safety or other critical night-lighting requirements.

Residual Impacts

Implementation of the intended improvement of functions through remediation and restoration, and the implementation of the recommended mitigation measures (Mitigation measures BIO-7a, 7b, and 9a) would reduce the impact to plant and wildlife population's diversity and abundance to *less than significant with mitigation* (*Class II*).

4.2.6 County Development Plan Impacts and Mitigation Measures

The County Development Plan component of the Project would create commercial facilities that include 433,000 sq. ft. of business park space, and 370,000 sq. ft. for service and light manufacturing businesses. The County Development Plan differs from the City Development Plan in that it would include the construction of an on-site wastewater treatment plant on approximately one acre located within the same boundary as the City Development Plan envelope. In addition, the County Development Plan would rely on use of groundwater drawn from wells on the Project Site for water.

Analysis of impacts for the County Development Plan elements of the Project considered all of the seven bulleted significance criteria listed in Section 4.2.3. Many of the impacts to biological resources within the County Development Plan footprint would have already occurred during the remediation phase of activities and would likewise be mitigated with the described mitigation for each impact. Those impacts which would occur during the remediation component of the Project are included in the discussions below but do not have the Summary Box statement of impact

with new impact numbers, descriptions, and class. Impact statements and the accompanying Impact Summary are only included below for new impacts or substantially different levels (i.e., different Impact Class) of impact.

All of the impacts described above for the remediation and City Development Plan components of the Project would be identical to the impacts resulting from the County Development Plan. Implementing the County Development Plan elements of the Project would result in:

(1) temporary and permanent impacts to sensitive species habitat (impact BIO.1) through the loss of VPFS habitat;

(2) the "take" of a federally-listed species (VPFS); fully-protected species; special-status species, or species protected by the MTBA (identical to those species described above under Impact BIO.2);

(3) a permanent change in the extent or functional value of wetland and native grassland habitat (Impact BIO.3);

(4) adverse effects on federal wetlands (Impact BIO.4);

(5) alteration or destruction of habitat for native populations of plants and animals (Impact BIO.5);

(6) alteration or impairment of a migration corridor for resident and migratory wildlife species (Impact BIO.6); and

(7) a substantial loss of wildlife and plant habitat (Impact BIO.7).

The recommended mitigation measures which focus on replacing and improving overall functions and values to the existing habitats on the Project Site that are discussed above (MM BIO-1 through BIO-10) would substantially reduce impacts to sensitive habitats, sensitive species, plant and wildlife populations, federal wetlands, wildlife migration patterns, and impairment to movement, migration, and dispersal of migratory fish and wildlife species. Implementing the mitigation measures would reduce most of these impacts to less than significant. The impacts resulting from the construction of the on-site wastewater treatment plant and drawing groundwater from on site are discussed below.

Impact #	Impact Description	Phase	Residual Impact
BIO.11	The County Development Plan, specifically the wastewater treatment plant component would result in short-term and permanent loss of biological functions of wetlands, habitats for rare plants and animals, and other biotic communities considered sensitive by federal, state, or local policies, statutes, and regulations.	Development	Class II

As detailed in the Chevron Tank Farm Development Wastewater Treatment and Disposal Feasibility Assessment (Heimel 2011, Appendix A.2) the on-site wastewater treatment and disposal facility would process wastewater generated by implementing the County Development Plan. The proposed wastewater treatment would include a variety of treatments including the use of spray fields, "polishing" wetlands (which would discharge into Tank Farm Creek, and/or live discharge into the East Fork of San Luis Obispo Creek).

The proposed wastewater discharge into the East Fork of San Luis Obispo Creek would result in impacts to sensitive habitats, specifically, the riparian habitat and steelhead ESU located within San Luis Obispo Creek and its tributaries, which are known steelhead habitat and are considered an integral component of the south-central coast steelhead ESU. In addition, the use of open settling basins or "polishing" wetlands would become attractive nuisances for both sensitive and common aquatic wildlife species, including sensitive amphibian species such as the federally threatened CRLF which is known to be present in tributaries of San Luis Obispo Creek, and federally listed VPFS which could become established in ponds.

Potential impacts to water quality, sensitive habitats, and aquatic species downstream of proposed discharge location would include increased risk of spills and the accidental discharge of unfavorable water conditions including saline or chlorinated waters and/or the release of untreated water during high stormwater flows. Any of these scenarios have the potential to result in mortality or injury to aquatic species, interfere with sensitive life stages of aquatic and amphibious species, and reduce the functions of existing habitat within the Project area and downstream of the proposed discharge. It is expected that discharge into the East Fork of San Luis Creek would be required to be monitored, sampled, and meet specific standards that comply with RWQCB and NOAA Fisheries regulations. Impacts to sensitive resources and habitats would be expected only for accidental releases and high flow events during storm conditions.

Mitigation Measures

BIO-11a Prior to issuance of applicable grading permit, the Applicant shall prepare a spill/discharge plan with specific measures that would prevent untreated discharge or accidental releases, such as saline or chlorinated water and/or untreated water during storm events into the East Fork of San Luis Obispo Creek to reduce exposure risks to aquatic species located downstream of proposed discharge. The discharge plan shall be approved by the County and shall include specific measures such as the use of stormwater basins, a complete water sampling schedule, and methods for stormwater handling.

BIO-11b Prior to issuance of applicable grading permit the Applicant shall demonstrate to the County that all open basins, including "polishing wetlands" or settling basins, that

would require regular maintenance and/or vegetation management, containing any Project-related fluids shall be designed to exclude all wildlife, including birds, bats, and amphibians.

Residual Impacts

Implementing mitigation measures, as well as preventative maintenance and routine sampling and inspections would reduce the likelihood and severity of potential spill and exposure impacts to sensitive biological resources to *less than significant with mitigation* (*Class II*).

Impact #	Impact Description	Phase	Residual Impact
BIO.12	The County Development Plan, specifically the use of groundwater, would result in impacts to wetland areas and VPFS by drawing down surface water levels.	Development	Class III

As part of the County Development Plan, water for the development would be provided by on-site groundwater wells. The water supply wells would be developed in the deep saturated zone (greater than 50 feet below ground surface). The wetlands and VPFS habitat at the site are supported by water from the shallow saturated zone. To determine the degree of hydraulic communication between the shallow, and deep (e.g., greater than 50 feet) saturated zones, aquifer tests were performed on two properties situated along Tank Farm Road. These tests involved the installation of two "water supply" wells constructed in accordance with County of San Luis Obispo well construction standards (minimum annular seal depth of 50 feet). The tests were monitored by one or more observation wells completed in the shallow saturated zone (<30 feet) and located at varying distances and directions from the water supply wells. The water supply wells were pumped for 24 hours while water levels in both the supply and observation wells were continuously recorded using pressure transducers and data loggers. The aquifer tests revealed that sustained drawdowns in excess of 20 feet in the supply wells had no significant effect on water levels in the shallow saturated zone. The conclusion of both aquifer tests was that the degree of communication between the shallow and deep (e.g., greater than 50 feet) saturated zones is limited (Avocet 2011). This would indicate that use of the groundwater wells would not impact the wetlands or VPFS habitat.

In addition, during the drought of 1987-1990, the City of San Luis Obispo pumped as much as 2,000 AFY from the groundwater basin at a time when groundwater recharge was at a very low level. Groundwater level at the Project Site during that time was 15 feet or less below normal groundwater levels, but within the normal fluctuations at the site (Cleath 2013).

Based upon the historical wetland and VPFS surveys that have occurred at the Project Site, these normal fluctuations in groundwater have not appeared to impacts these wetland areas. Therefore, impacts of groundwater use at the site would be considered a less than significant impact to wetlands and VPFS habitat.

Mitigation Measures

No mitigation measures are required since the impact is less than significant.

Residual Impacts
The residual impacts would be *less than significant (Class III)*.

4.2.7 Cumulative Impacts and Mitigation Measures

As stated in Chapter 3.0, Cumulative Scenario and Methodology, under the CEQA Guidelines, "a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the environmental impact report ("EIR") together with other projects causing related impacts." Section 15130 of the CEQA Guidelines requires that an Environmental Impact Report (EIR) discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in section 15065(c).

The Cumulative Projects list shown in Table 3-1 identifies specific City and County Development Plans that, depending on location and timing could, in combination with the proposed remediation, restoration and City and County Development Plan elements of the Project, result in cumulative impacts to biological resources. Each of the seven bulleted Significance Criteria included in Section 4.2.3 were considered as they relate to impacts to biological resources andare discussed in this section as they relate to the Project's contribution to cumulative impacts.

4.2.7.1 Cumulative Impacts to Sensitive Species Habitat

Several of the Cumulative Projects listed in Table 3-1 would result in the loss of hundreds of acres of habitat, some of which is potentially used in various functions for sensitive plant and animal species. It is assumed that those projects converting open space, native and non-native grasslands, and agricultural fields to residential and commercial purposes would result in permanent conversion of sensitive species habitat to commercial, residential, and recreational uses and would include impacts to sensitive plant and wildlife species habitats. The City and County Development Plan components of the Project would result in the permanent loss of sensitive species habitat and would increase the cumulative impact to this resource.

However, the implementation of the final restoration plan would re-establish and improve habitat for listed and special-status plants and wildlife within the Project Site. The habitat enhancement and restoration efforts and the proposed mitigation measures discussed under impact BIO.1 would restore suitable portions of the Project Site with treatments and would increase overall functions on the Project Site that would mitigate the remediation and County Development Plan impacts to sensitive species habitat to less than significant. Therefore, although the Project would result in impacts to sensitive species habitat, the overall long term impacts would be considered to have significant but mitigable contribution to cumulative impacts (*Class II*) to sensitive species habitat.

4.2.7.2 Cumulative Impacts to Sensitive Species

Several of the Cumulative Projects listed in Table 3-1, combined, would result in the loss of hundreds of acres of both native and non-native habitats, some of which is potentially used in

various functions for sensitive plant and animal species. It is assumed that some of these projects would result in impacts to listed specimens, special-status species, and species protected by the Migratory Bird Treaty Act.

However, the implementation of the final restoration plan as required in mitigation measure BIO-1a would re-establish and improve habitat for listed and special-status plants and wildlife on the Project Site. Impacts to sensitive plant and wildlife species known or expected to occur on the Project Site would be mitigated through the replacement and enhancement of existing functions on the Project Site. Implementation of the proposed mitigation described for BIO.2 would further reduce impacts to individuals of sensitive species known or potentially present on the Project Site. The habitat enhancement and restoration efforts and the proposed mitigation measures discussed under impact BIO.1 would restore suitable portions of the Project Site with treatments and would increase overall functions within the Project area that would mitigate the remediation and County Development Plan impacts to sensitive species to less than significant. Therefore, although the Project would result in impacts to sensitive species, the overall long term impacts would be considered to have a significant but mitigable contribution to cumulative impacts (*Class II*) to sensitive species.

4.2.7.3 Cumulative Impacts to Sensitive Habitats

Several of the Cumulative Projects listed in Table 3-1 would result in the loss of hundreds of acres of habitat, some of which potentiality supports wetlands, native grasslands, habitats for rare plants and animals, and other biotic communities considered sensitive by federal, state, or local policies, statutes, and regulations. It is assumed that those projects converting open space, native and non-native grasslands, and agricultural fields to residential and commercial purposes would result in permanent conversion of these sensitive habitats to commercial, residential, and recreational uses. The City and County Development Plan components of the Project would result in the permanent loss of sensitive habitats and would increase the cumulative impact to this resource.

The implementation of the final restoration plan would re-establish and improve functions of the existing sensitive habitats, including wetlands, native grasslands, riparian habitat, and sensitive species habitat located within the Project boundary. The habitat enhancement and restoration efforts and the proposed mitigation measures discussed under impact BIO.1 would restore suitable portions of the Project Site with treatments and would increase overall functions within the Project area that would mitigate the remediation and City and County Development Plan impacts to sensitive habitats to less than significant. Implementation of Mitigation Measures and BIO-3a through 3c, and BIO-8a through 8d would reduce impacts to sensitive habitats to less than significant with mitigation. Therefore, although the Project would result in short and long term increases in cumulative impacts to sensitive habitats, the overall long term impacts would be considered to have a significant but mitigable contribution (*Class II*) to cumulative impacts to sensitive habitats.

4.2.7.4 Cumulative Impacts to Federal Wetlands

Several of the Cumulative Projects listed in Table 3-1 would result in the loss of habitat, some of which potentiality support federal wetlands. The remediation and restoration component of the Project would result in impacts to 29.04 acres of Waters of the U.S. including federal wetland areas. The City and County Development Plan component of the Project would permanently impact 1.83 acres of Waters of the U.S. In addition, accidental spills and sediment and erosion from construction areas and operational activities (i.e., discharge from the proposed wastewater treatment plant under the County Development Plan) could flow into sensitive wetland habitats. Project related impacts would increase the cumulative impact to federal wetlands as defined in Section 404 of the Clean Water Act.

Applicant-proposed mitigation includes wetland natural recovery and wetland restoration elsewhere on the Project Site in suitable areas that would restore wetlands at a 1.7:1 replacement ratio and would result in a net gain of functioning wetland habitat. The habitat enhancement and restoration efforts and the proposed mitigation measures discussed under impact BIO.1 would restore federal wetlands within the Project Site. Although the proposed Project would result in short term increases in cumulative impacts to federal wetland habitats, the overall long term impacts would be considered to have a significant but mitigable contribution to cumulative impacts (*Class II*) to federal wetlands.

4.2.7.5 Cumulative Impacts to Habitats that Would Affect Native Populations of Plants and Animals.

Cumulative impacts to habitats supporting native populations of plants and animals would be similar to those described above in Section 4.2.7.1. Cumulative Projects would result in the loss of hundreds of acres of habitat supporting native populations of plants and animals. The Project would result in increased impacts to these habitats in the general area. The proposed City and County Development Plan elements of the Project would result in a permanent loss of habitat that precludes the re-establishment of native populations of plants and animals. However, the proposed restoration activities for the entire Project area are designed to improve the value and function of the existing on-site terrestrial ecosystems. The restored habitats throughout the Project Site would mitigate the loss and disturbance to habitats for native populations of plants and animals in the City and County Development Plan boundaries.

Although the Project would result in short term increases in cumulative impacts to native plant and wildlife habitat, the overall long term impacts would be considered to have a significant but mitigable contribution (*Class II*) to cumulative impacts to this resource.

4.2.7.6 Cumulative Impacts to Wildlife Migration and Dispersal

Several of the Cumulative Projects listed in Table 3-1 would result in the loss of hundreds of acres of habitat, some of which is used in various functions for migration and dispersal of wildlife species. Depending on the location and size of the cumulative projects, those projects converting open space, native and non-native grasslands, and agricultural fields to residential and commercial purposes would result in permanent conversion of migration corridors to

commercial, residential, and recreational uses. Those cumulative projects located closer to the Project (from Table 3-1 and shown in Figure 3-1: the proposed DeBlauw, Cowan Prado Road, Cowan Calle Malva, and the Medical Office Complex on Prado Road) are all located in undeveloped areas immediately to the north and west of the major permanent City and County Development Plan components of the Project. Wildlife movement in the general area would be constricted by the proposed City and County Development Plan projects located on the portion on the west and the proposed Project located on the eastern edge of the open area. Although the general improvements to the habitat, as proposed in the restoration plan, would generally improve the area in terms of wildlife migration, the City and County Development Plan components of the Project would result in the permanent impact and restriction of wildlife movement in the area and would increase the cumulative impact to this resource.

The recommended mitigation measures would reduce impairment to movement, migration, and dispersal of migratory fish and wildlife species. Remediation activities shall be conducted outside of wintering season (MM BIO-1g) when disturbances to creeks and seasonal wetlands could have a potentially substantial effect on habitat linkages at a critical time of year for migrating aquatic wildlife. Mitigation that restricts public access into open space areas (MM BIO-8c) would reduce some of the effects of increased human presence in natural areas. With the intended improvement of functions through remediation and restoration and the implementation of the recommended mitigation measures, the Project's contribution to the cumulative impacts to wildlife migration and dispersal would be *less than significant with mitigation* (*Class II*).

4.2.7.7 Cumulative Impacts to Plant and Animal Populations

Cumulative impacts to habitats supporting native populations of plants and animals would be similar to those described above in Section 4.2.7.5. Although the Project would result in short term increases in cumulative impacts to native plant and wildlife, the overall long term impacts would be considered to have a significant but mitigable contribution to cumulative impacts to this resource (*Class II*).

4.2.8 Mitigation Monitoring Program

4.2.8.1 Remediation Project Mitigation Monitoring Plan

Mitigation Measure	Plan Requirements and Timing	Compliance Verification		
		Method	Timing	Responsible Party
BIO-1a	Prior to issuance of applicable grading permit, the Applicant shall prepare and submit a final restoration plan to the San Luis Obispo County Department of Planning and Building, City of San Luis Obispo, Department of Natural Resources, USFWS, USACE, and CDFW for review. The restoration plan shall be approved by San Luis Obispo County Department of Planning and Building USFWS, and CDFW in consultation with the City of San Luis Obispo, Department of Natural	Review of restoration plan.	Prior to grading permit issuance	County Department of Planning and Building City Natural Resource Manager USFWS USACE

Mitigation Measure	Plan Requirements and Timing	Compliance Verification		
		Method	Timing	Responsible Party
	Resources. The final plan shall be revised as necessary to adequately mitigate actual disturbance to habitats for listed and special status species due to remediation. Conservation easement(s) shall be recorded on all property associated with the final restoration plan that is not designated for development. Draft conservation easement agreements, in a form approved by County Counsel and the City Attorney, shall be submitted for review and approval with the submittal of the final restoration plan. The final conservation easements shall be approved by the County and City in consultation with other resource agencies, and recorded, prior to final inspection of the restoration site(s) to protect biological resources in perpetuity.			CDFW
BIO-1b	The Applicant shall conduct updated surveys of sensitive species habitats (including sensitive plant species, CRLF, wetland habitat, and VPFS habitat) within the Project Site within the appropriate season immediately prior to the onset of any ground disturbances associated with the Project in order to evaluate the current occupancy of suitable habitat for sensitive species and to refine the final habitat mitigation replacement acreages. Updated surveys for federally listed species shall be completed per the timing and methodology specified by resource agency protocol.	Review of restoration plan.	Prior to grading permit issuance	County Department of Planning and Building City Natural Resource Manager USFWS USACE CDFW
BIO-1c	The final restoration plan shall provide for plant salvaging and replanting where appropriate (e.g., San Luis Obispo dudleya), restoration, and/or creation of habitat suitable for special status plant species including Cambria morning glory, Congdon's tarplant, San Luis Obispo owl's clover, Hoover's button-celery, San Luis Obispo serpentine dudleya, and purple needlegrass. To offset impacts to VPFS habitat, the final restoration plan shall require a minimum of a 1:1 creation or restoration replacement of all VPFS habitat impacted by remediation or restoration efforts (or at least 14.78 acres of VPFS habitat depending on final disturbance acreages). The restoration shall be designed to restore or enhance enough habitat to ensure the final restoration replacement ratio. The final plan shall also include defined schedules of restoration efforts, success criteria, weed management methods including for those areas not being remediated or developed to ensure weed species do not encroach into restored areas, monitoring schedules, reporting requirements, and a Long-Term Habitat Management and Evaluation Plan, (see mitigation measure BIO-5c). The objective of the Long-Term Habitat Management and Evaluation Plan shall be to assess if the restored habitats are functioning equal to or	Review of restoration plan.	Prior to grading permit issuance	County Department of Planning and Building City Natural Resource Manager USFWS USACE CDFW

Mitigation Measure	Plan Requirements and Timing	Compliance Verification		
		Method	Timing	Responsible Party
	better than pre-Project conditions. The assessment of function shall be based on indicators such as wildlife use and presence of sensitive species within the habitats compared to pre-Project conditions.			
BIO-1d	Prior to issuance of applicable grading permit, the Applicant shall enter into an agreement with the County to fund and provide access for a County-approved (in consultation with the City) independent biological monitor who shall regularly review and monitor remediation and restoration efforts to ensure that conditions of approval are being enforced and that success criteria are being met. The independent biological monitor shall have the authority to temporarily halt activities if permit requirements and conditions are not being met.	Approve independent biological monitor.	Biologist selected prior to grading permit issuance	County Department of Planning and Building City Natural Resource Manager USFWS USACE CDFW
BIO-1e	If performance standards detailed in the Final Restoration Plan are not achieved in any restoration area, the Applicant shall submit and implement an alternative or adaptive mitigation strategy during the restoration and monitoring phase, for approval to the County or City, and appropriate resource agencies including the USFWS and CDFW.	County Department of Planning and independent biological monitor to conduct regular monitoring.	Throughout construction and restoration phases	County Department of Planning and Building
BIO-1f	The monitoring results collected as part of the Long-Term Habitat Management and Evaluation Plan shall be reported at least annually to the County, City, and appropriate resource agencies (i.e., USFWS and CDFW). The annual report shall document the effects of the proposed Project to the VPFS on the property and include acreage of occupied habitat that was impacted. The report shall contain a discussion of the problems encountered in implementing sensitive species habitat protection and other protective measures and recommendations for adaptive management to enhance the conservation of sensitive species habitat.	County Department of Planning and Building and independent biological monitor to review annual Long-term Habitat and Management Plan annually.	Throughout construction and restoration phases	County Department of Planning and Building
BIO-1g	Remediation and restoration activities within 100 feet of potential or occupied VPFS habitat shall be scheduled to occur when the soil is dry to the touch both at the surface and one inch below the surface. After any precipitation event of greater than 0.2 inches, Project activities will only occur after the soil has dried sufficiently as described above, and no sooner than 48 hours after the rain event ends to reduce potential impacts to sensitive VPFS habitat outside of the construction and remediation boundaries. Project activities in upland areas can occur during the rainy season with appropriate habitat protection measures including exclusion fencing, biological monitoring, and sediment control measures to ensure that construction related materials do not enter	County Department of Planning and independent biological monitor to review annual schedule and conduct regular monitoring.	Throughout construction and restoration phases	County Department of Planning and Building

Mitigation Measure	Plan Requirements and Timing	Compliance Verification		
		Method	Timing	Responsible Party
	VPFS habitat.			
BIO-1h	Only qualified, USFWS-approved, personnel with demonstrable field experience conducting VPFS cyst collection and reintroduction, consistent with the proposed Project activities, shall handle VPFS cysts, identify VPFS habitat, and conduct VPFS monitoring. The VPFS-qualified biologist shall assist with marking the limits of disturbance to habitats for listed and special status species. Work shall not be conducted in areas marked for avoidance.	County Department of Planning and independent biological monitor to conduct regular monitoring.	Throughout construction and restoration phases	County Department of Planning and Building USFWS
BIO-1i	The VPFS-qualified biologist shall conduct sensitive vernal pool branchiopod surveys within the appropriate season immediately prior to the start of construction activities per the timing and methodology specified by USFWS protocol. The VPFS-qualified biologist shall monitor during construction activities in the vicinity of habitats to be avoided. The final acreage of habitat loss shall be revised as necessary to adequately mitigate actual disturbance to habitats for listed and special status species due to remediation.	County Department of Planning and independent biological monitor to conduct regular monitoring.	Prior to construction phase and prior to each ground disturbance in VPFS habitat throughout construction and restoration phases	County Department of Planning and Building USFWS
BIO-1j	The VPFS-qualified biologist shall conduct cyst collection efforts (cyst-bearing soil) and storage efforts from work areas prior to construction activities from the entire work area of each impacted pool when the ephemerally wetted areas are dry. The VPFS-qualified biologist shall follow USFWS standard procedures and guidance established in that agency's permitting process The cysts shall be stored in labeled containers that are adequately ventilated. The cysts shall be kept out of direct sunlight to prevent excessive heating of the soil. The cysts shall be kept out of direct contact with water. When restored VPFS habitat is constructed, the inoculum shall be placed within the surface layer of the soil in a manner following USFWS protocols and guidance.	County Department of Planning and independent biological monitor to conduct regular monitoring.	Prior to construction phase and prior to each ground disturbance in VPFS habitat throughout construction and restoration phases	County Department of Planning and Building
BIO-1k	Prior to issuance of applicable grading permits, the Project Applicant (via the USACE) shall consult with the USFWS and NMFS to obtain an Incidental Take Statement, pursuant to Section 7 of the federal Endangered Species Act to cover the Project's "take" (which includes the permanent and temporary loss of VPFS habitat and the potential impact to south-central coast steelhead habitat). The Applicant shall comply with all measures issued by USFWS and NMFS for the Project.	County Department of Planning to review issuance of applicable permits.	Prior to grading permit issuance	County Department of Planning and Building
BIO-1l	Prior to issuance of applicable construction permit, the Project Applicant shall be required to obtain all	County Department of	Prior to grading	County Department

Mitigation Measure	Plan Requirements and Timing	Compliance Verification		
		Method	Timing	Responsible Party
	applicable Federal and State permits and/or agreements, including, but not necessarily limited to: a Section 404 Permit from the USACE; and a Section 1601 Streambed Alteration Agreement from the CDFW.	Planning to review issuance of applicable permits.	permit issuance	of Planning and Building
BIO-2a	Prior to issuance of grading permit, the Applicant shall fund and implement a biological resources training program for all construction workers and their contractors to minimize potential impacts to sensitive wildlife species Training shall occur prior to initial construction activities and again, annually and as needed for new workers. Prior to issuance of demolition permit, the training program shall be reviewed and approved by the County Department of Planning and Building in consultation with the Environmental Monitor (see EM-1) and City and shall include a description of important biological resources within the Project Site and all applicable conditions, permit requirements, and protection measures implemented to protect those resources.	County Department of Planning and Building to review and approve training program and schedule in conjunction with the City of San Luis Obispo	Prior to construction phase and as necessary, (at least annually) thereafter throughout construction and restoration phases	County Department of Planning and Building
BIO-2b	Prior to construction activities, all grading limits and construction boundaries shall be delineated by construction fencing. Sensitive species habitat shall be delineated with specific sensitive species labeling (e.g. permanent signage every 100 feet along the fence stating "No Entry — Sensitive Habitat."). The County shall approve the fencing prior to commencement of grading activities (including clearing and grubbing).	County Department of Planning and Building and City Natural Resources Manager to review and approve fencing plan and independent biological monitor to conduct regular monitoring.	Fencing plan approved prior to permit issuance and regular monitoring conducted throughout construction and restoration phases	County Department of Planning and Building
BIO-2c	Prior to issuance of grading permit, the Applicant shall enter into an agreement with the County to fund a biological monitor, selected by the Applicant and approved by the County in consultation with the City and the USFWS to minimize potential impacts to sensitive species. The County-qualified biologist shall conduct sensitive species' (including CRLF) surveys immediately prior (within the appropriate season) to construction activities and shall monitor during construction activities in the vicinity of habitats to be avoided. Any sensitive species observed during the pre-construction surveys shall be relocated out of harm's way by a qualified and permitted biologist into the nearest suitable habitat as determined in consultation with the jurisdictional resource agency outside the disturbance area.	Approve Project biologist.	Project biologist approved prior to construction phase; monitoring conducted throughout construction and restoration phases	County Department of Planning and Building City Natural Resource Manager USFWS CDFW

Mitigation Measure	Plan Requirements and Timing	Compliance Verification		
		Method	Timing	Responsible Party
	Construction and sediment control fencing shall be inspected each work day during construction activities to ensure that sensitive species are not exposed to hazards. The Applicant shall be responsible for conducting inspections of the work area each work day to ensure that excavation areas, restored habitats, and other open water habitat in the area do not have oil sheen, liquid oil, or any other potential exposure risk to wildlife. If any exposure risk is identified, the Applicant shall implement measures that could include, but are not limited to hazing, fencing, and wildlife removals to eliminate the exposure risk. The Applicant shall prepare and submit for approval, as part of the Final Long-Term Habitat Management and Evaluation Plan, an Oiled Wildlife Contingency Plan to the County and CDFW.			
BIO-2d	To minimize potential impacts to nesting native bird species, and in compliance with the federal Migratory Bird Treaty Act and Sections 3503, 3503.5, or 3513 of the California Fish and Game Code, all activities resulting in ground disturbances during all phases of remediation, restoration, pipe removal, and construction activities involving vegetation removal/trimming shall be done, as feasible, outside the breeding season (February 15 through August 31). If vegetation must be removed during this period, then the Applicant shall retain a biologist acceptable to the County in consultation with the City to conduct surveys for nesting birds. Surveys shall be conducted within 3 days prior to vegetation removal or other construction-related disturbances. If nesting birds are observed within the vicinity, then a minimum 100-foot buffer from the nest would be established. The buffer would be delineated by orange construction fencing or other delineator approved by the County in consultation with the City and signage and would remain in place until the nest is abandoned or the young have fledged. The qualified biologist shall be present when any buffer fencing is established. The qualified biologist shall monitor the nest to ensure that Project activities do not violate the Migratory Bird Treaty Act or the California Fish and Game Code. At minimum, the biologist would check for new active nests, and determine the status of ongoing active nests, weekly during the specified nesting season. The biologist would ensure that all fencing and signage was properly maintained, and would provide weekly, or less frequent if requested by the agencies, e-mail updates on the status of all monitored nests to the County, City, CDFW, and USFWS. If the biologist determines that nesting is being disrupted, the construction activities shall cease and wait until a new buffer area is determined, the young have fledged, or the nest is determined to have failed.	County Department of Planning and City Natural Resources Manager to approve Project biologist.	Project biologist approved prior to construction ; surveys conducted and monitoring conducted throughout construction and restoration phases	Applicant and County Department of Planning and Building

Mitigation Measure	Plan Requirements and Timing	Compliance Verification		
		Method	Timing	Responsible Party
BIO-2e	Hawks and owls nest earlier than most other native birds. If initial construction activities, ground disturbance, or vegetation clearing involving vegetation removal/trimming occurs from December 1 through August 31, the nest monitor would conduct a pre-construction survey within 3 days prior to vegetation removal or other construction-related disturbances focused on actively nesting hawks or owls. If any actively nesting hawks or owls are found, a 500-foot buffer would be established around the nest tree to help ensure that nesting is not disrupted. The buffer would be delineated by orange construction fencing and signage and would remain in place until the nest is either abandoned or the young have fledged. The nest monitor would be present when any buffer fencing is established.	County Department of Planning and City Natural Resources Manager to approve Project biologist.	Project biologist approved prior to construction ; surveys conducted and monitoring conducted throughout construction and restoration phases	Applicant and County Department of Planning and Building
BIO-3a	The final restoration plan shall require a 2:1 replacement of all native grassland (as defined by the County of San Luis Obispo and CDFW)impacted by remediation efforts of the project (at least 6.73 impacted acres as described in Padre 2008c). Implementation of the native grassland restoration shall follow the plan, including locations to be restored, restoration techniques, a schedule of surveys to monitor the rate of recovery, success criteria, and remedial actions if success criteria are not met.	County Department of Planning and Building and City Natural Resources Manager to review and approve restoration plan.	Prior to grading permit issuance	County Department of Planning and Building
BIO-3b	The final restoration plan shall require a 1:1 replacement of all Waters/wetlands of the U.S. and one-parameter wetlands (42.93 acres) temporarily impacted by remediation and restoration efforts Implementation of the wetland and habitat restoration shall follow the plan, including locations to be restored, restoration techniques, a schedule of surveys to monitor the rate of recovery, success criteria, and remedial actions if success criteria are not met.	County Department of Planning and Building to review and approve restoration plan and independent biological monitor to conduct regular monitoring.	Plan approved prior to grading permit issuance and monitoring conducted throughout construction and restoration phases	County Department of Planning and Building
BIO-3c	Prior to issuance of grading permit, the Applicant shall demonstrate that all staging areas, equipment storage areas, stockpile sites, and refueling areas are located at least 100 feet from surface water bodies and wetland habitats to minimize the potential for releases into surface water or wetland habitat.	County Department of Planning and Building independent biological monitor to conduct regular monitoring.	Monitoring conducted throughout construction and restoration phases	County Department of Planning and Building
BIO-3d	Prior to issuance of applicable grading permit, the	County	Monitoring	County

Mitigation Measure	Plan Requirements and Timing	Compliance Verification		
		Method	Timing	Responsible Party
	Applicant shall prepare and submit a Storm Water Pollution Prevention Plan (SWPPP) for approval to the San Luis Obispo County Department of Planning and Building. The final plan shall be revised as necessary to include any updated contours of the final grading as determined in the final restoration plan. The SWPPP shall adequately mitigate any potential impacts resulting from storm water flow into sensitive habitats. The SWPPP shall ensure that all remediation and restoration activities, especially those activities occurring within the riparian and stream corridors that could result in turbidity or release of contaminated material into sensitive habitats employ measures such as sediment fences or other containment devices and construction best management practices to minimize the potential for impacts to sensitive habitats	Department of Planning and Building independent biological monitor to conduct regular monitoring.	conducted throughout construction and restoration phases	Department of Planning and Building
BIO-4a	The final restoration plan (MM BIO-1a) shall be implemented to improve the value and function of existing wetlands on site that would result in a 2:1 ratio of restored wetlands to wetlands lost due to Project disturbances. Implementation of wetland restoration shall follow the plan, including locations of existing wetlands to be restored, restoration techniques, schedule of surveys to monitor the rate of recovery, success criteria, and remedial actions if success criteria are not met. The final plan shall also include a Long-Term Habitat Management and Evaluation Plan (MM BIO-1c) that will include performance standards to assess whether the restored wetland habitats are functioning similar to pre-Project conditions.	County Department of Planning and Building to review and approve restoration plan and independent biological monitor to conduct regular monitoring.	Plan approved prior to grading permit issuance and monitoring conducted throughout construction and restoration phases	County Department of Planning and Building
BIO-4b	Prior to issuance of applicable grading permit, the Applicant shall obtain a Section 404 permit prior to disturbance of wetland areas. Consultation with the USFWS and NMFS shall be completed during the Section 404 permitting process. The Applicant shall comply with all measures issued by USFWS and NMFS for the Project. These measures could include, but are not limited to habitat restoration, habitat enhancement, biological resources training, biological monitoring, sensitive species relocation effort, restoration monitoring and reporting, and agency approval of restoration efforts.	County Department of Planning to review issuance of applicable permits.	Prior to grading permit issuance	County Department of Planning and Building
BIO-5a	The terrestrial ecosystem portion of the final restoration plan shall include success criteria for re-establishing populations of native plants and wildlife.	County Department of Planning and Building to review and approve restoration plan and independent biological	Plan approved prior to grading permit issuance and monitoring conducted throughout construction	County Department of Planning and Building

Mitigation Measure	Plan Requirements and Timing	Compliance Verification		
		Method	Timing	Responsible Party
		monitor to conduct regular monitoring.	and restoration phases	
BIO-5b	The final restoration plan shall be implemented to restore at least 4.0 acres of phreatophytic woodland, 27.0 acres of mixed hardwood/forb field, 10.9 acres of coastal scrub chaparral, and 45.2 acres of forb field (Padre and WSP 2009). Implementation of the terrestrial habitat restoration shall follow the plan, including locations to be restored, restoration techniques, a schedule of surveys to monitor the rate of recovery, success criteria, and remedial actions if success criteria are not met.	County Department of Planning and Building to review and approve restoration plan and independent biological monitor to conduct regular monitoring.	Plan approved prior to grading permit issuance and monitoring conducted throughout construction and restoration phases	County Department of Planning and Building
BIO-5c	The function of the restored terrestrial habitats shall be monitored. A Long-Term Habitat Management and Evaluation Plan shall be developed and appended to the final restoration plan. The habitat management and evaluation plan shall include methods to determine if the restored areas are meeting success criteria per the approved restoration plan. The complementary plan shall include surveys to monitor the occurrence of native plants and animals in restored habitats relative to their occurrence in similar onsite habitats prior to, or unaffected by, remediation and development.	County Department of Planning and Building to review and approve restoration plan and independent biological monitor to conduct regular monitoring.	Plan approved prior to grading permit issuance and monitoring conducted throughout construction and restoration phases	County Department of Planning and Building
BIO-6a	The terrestrial ecosystem portion of the final restoration plan shall be reviewed and approved by the San Luis Obispo County Department of Planning and Building in consultation with the City of San Luis Obispo Natural Resources Manager. The plan shall include provisions to maintain and re-establish habitat linkages.	County Department of Planning and Building to review and approve restoration plan and independent biological monitor to conduct regular monitoring.	Plan approved prior to grading permit issuance and monitoring conducted throughout construction and restoration phases	County Department of Planning and Building
BIO-6b	The final restoration plan shall include consideration of on-site natural habitats and linkages to off-site, adjacent habitats, especially the South Hills Conservation Area.	County Department of Planning and Building to review and	Plan approved prior to grading permit	County Department of Planning and Building

Mitigation Measure	Plan Requirements and Timing	Compliance Verification		
		Method	Timing	Responsible Party
		approve restoration plan and independent biological monitor to conduct regular monitoring.	issuance and monitoring conducted throughout construction and restoration phases	
BIO-7a	A qualified biologist shall conduct surveys throughout areas proposed to be disturbed to determine the presence of wildlife species prior to ground disturbance. The biologist shall be on-site during initial site disturbances (i.e., brush removal, top soil disturbances, etc). Wildlife species encountered during the initial disturbances shall be relocated to suitable habitat out of potential danger. All handling and relocation of sensitive and non-sensitive wildlife species shall be conducted by biologists with appropriate authorizations and permits (CDFW and USFWS). Remediation activities, including restoration efforts shall be regularly monitored throughout the remediation and restoration phases to ensure that wildlife species have not entered work areas. The biological monitor shall conduct regular site inspections of the remediation and restoration activities to ensure that all applicable mitigation measures are being enacted. The biological monitor shall have the authority to temporarily halt activities if permit requirements and conditions are not being met. The biological monitor shall prepare an annual summary report describing site visit observations and shall provide this report to the City, County and regulatory agencies (including CDFW, USACE, and USFWS) for review.	County Department of Planning and Building independent biological monitor to conduct regular monitoring.	Monitoring conducted throughout construction and restoration phases	County Department of Planning and Building
BIO-7b	To minimize the potential for road mortality of wildlife, all nighttime traffic shall be minimized during the remediation and restoration phases and permitted only for activities required for safety reasons, emergencies, or equipment staging and vehicle maintenance necessary to comply with traffic and air quality mitigation measures; all hauling activities shall be restricted to daylight hours, defined as the hours after sunrise and before sunset.	County Department of Planning and Building independent biological monitor to conduct regular monitoring.	Monitoring conducted throughout construction and restoration phases	County Department of Planning and Building
BIO-7c	The Stockpiling Plan required by Mitigation Measure WR-3c shall also include methods to keep wildlife from coming into contact with stockpiled contaminated soils.	Review of Plan Site Inspections	During remediation and Construction phases.	County Department of Planning and Building

4.2.8.2 City Development Plan Mitigation Monitoring Plan

Mitigation Measure	Plan Requirements and Timing	Compliance Verification		
		Method	Timing	Responsible Party
BIO-8a	The final restoration plan shall include criteria that would require the restoration of at least a 2:1 replacement ratio (4.14 acres as defined by Padre 2008c) of all "native grasslands" habitat permanently lost in the development elements of the project. Restored native grassland habitat shall meet standards and criteria as defined by the County of San Luis Obispo and CDFW within the proposed restoration of 45.2 acres of forb field habitat. Implementation of the terrestrial habitat restoration shall follow the plan, including locations to be restored, restoration techniques, a schedule of surveys to monitor the rate of recovery, success criteria, and remedial actions if success criteria are not met.	San Luis Obispo City and County Department of Planning and Building to review and approve restoration plan and independent biological monitor to conduct regular monitoring.	Plan approved prior to grading permit issuance and monitoring conducted throughout construction and development phases	San Luis Obispo City and County Department of Planning and Building
BIO-8b	The function of the restored native grassland habitats shall be monitored. A Long-Term Habitat Management and Evaluation Plan shall be developed and appended to the final restoration plan. The habitat management and evaluation plan shall include methods to determine if the restored areas are meeting success criteria per the approved restoration plan including criteria of plant and wildlife species in restored habitats and to compare such results to pre-Project conditions. The complementary plan shall include surveys to monitor the occurrence of native plants and animals in restored habitats relative to their occurrence in similar habitats prior to remediation and development.	San Luis Obispo City and County Department of Planning and Building to review and approve restoration plan and independent biological monitor to conduct regular monitoring.	Plan approved prior to grading permit issuance and monitoring conducted throughout construction and development phases	San Luis Obispo City and County Department of Planning and Building
BIO-8c	Hikers, pets, and bikers shall be excluded from sensitive habitats within the Project Site. The final SLO City and County-approved restoration plan shall include a fencing plan element with specific details on location, requirements of permanent and seasonal exclusion zones, and type of fencing to ensure that wildlife movement is not restricted. The fencing plan shall include information on placement of signs, educational placards, type of fencing required, method of exclusions, and monitoring and repair of exclusion devices, and shall include, at the least, a description and figure of those areas (i.e., VPFS habitat, vernal pool habitat, riparian habitat, and habitat in the process of being restored) that would require full time exclusion.	San Luis Obispo City and County Department of Planning and Building to review and approve restoration plan and independent biological monitor to conduct regular monitoring.	Plan approved prior to grading permit issuance and monitoring conducted throughout construction and development phases	San Luis Obispo City and County Department of Planning and Building
BIO-8d	The final restoration plan shall require a 2:1 replacement	San Luis	Plan	San Luis

Mitigation Measure	Plan Requirements and Timing	Compliance Verification		
		Method	Timing	Responsible Party
	of the 3.71 acres of USACE Jurisdictional Waters/wetlands, isolated waters/wetlands, and one-parameter wetlands (for a replacement of 7.42 acres) permanently impacted by the City Development Plan. Implementation of the wetland and habitat restoration shall follow the plan, including locations to be restored, restoration techniques, a schedule of surveys to monitor the rate of recovery, success criteria, and remedial actions if success criteria are not met.	Obispo City and County Department of Planning and Building to review and approve restoration plan and independent biological monitor to conduct regular monitoring.	approved prior to grading permit issuance and monitoring conducted throughout construction and development phases	Obispo City and County Department of Planning and Building
BIO-9a	To reduce impacts to wildlife migration, the Applicant shall include in the approved final restoration plan (MM BIO-1a) landscape designs for planting of native vegetation along the northern portion of the City Development Plan area. The native vegetation landscaping shall be designed to provide wildlife species cover and refuge during migration. The landscaping shall be designed to shield migrating wildlife from human presence, noise, and lighting from residential and recreational activities in the City and County Development Plan footprint. Due to the 2-25 year duration of development phase, such planting shall occur on the onset of the development phase.	City and County Department of Planning and Building to review and approve restoration plan and independent biological monitor to conduct regular monitoring.	Plan approved prior to grading permit issuance and monitoring conducted throughout development phase	City and County Department of Planning and Building
BIO-9b	To reduce cumulative impacts to wildlife migration the Applicant shall include in the final restoration plan (MM BIO-1a) a fencing plan element with specific details on location and requirements for the purpose of restricting wildlife movement through the development area but allowing movement through the open space areas.	City and County Department of Planning and Building to review and approve restoration plan and independent biological monitor to conduct regular monitoring.	Plan approved prior to grading permit issuance and monitoring conducted throughout development phase	County Department of Planning and Building
BIO-10	Prior to issuance of applicable grading permit the Applicant shall submit a lighting plan to the City for approval. All Project lighting shall be designed to shielded spillage of light into adjacent preserved open space areas. Any structural part of the light fixture providing this shielding shall be permanently affixed.	San Luis Obispo City and County Department of Planning and Building	Plan approved prior to grading permit issuance and	San Luis Obispo City and County Department of Planning and Building

Mitigation Measure	Plan Requirements and Timing	Compliance Verification		
		Method	Timing	Responsible Party
	Outdoor lighting for buildings shall be restricted to lights required by code for lighting building exteriors and for safety and security needs. The lighting for the ball field shall not be on during period when there are no activities at the fields. In no case shall the lights at the ball fields be on between the hours of midnight and 7:00 AM. After initial installation of Project lighting, a City-approved biologist shall conduct a field inspection to confirm that the proper lamps have been installed and that light spillage into Open Space areas has been minimized to the maximum extent feasible without compromising safety or other critical night-lighting requirements.	to review and approve plan and independent biological monitor to conduct regular monitoring.	monitoring conducted throughout development phase	

4.2.8.3 County Development Plan Mitigation Monitoring Plan

All mitigation measures identified for the City Development Plan would apply to the County Development Plan. See the Mitigation Monitoring Plan for the City Development Plan above for a list of these measures.

Mitigation Measure	Plan Requirements and Timing	Compliance Verification		
		Method	Timing	Responsible Party
BIO-11a	Prior to issuance of applicable grading permit the applicant shall prepare a spill/discharge plan with specific measures that would prevent untreated discharge or accidental releases, such as saline or chlorinated water and/or untreated water during storm events into the East Fork of San Luis Obispo Creek to reduce exposure risks to aquatic species located downstream of proposed discharge. The discharge plan shall be approved by the County and shall include specific measures such as the use of stormwater basins, a complete water sampling schedule, and methods for stormwater handling.	County Department of Planning and Building to review and approve spill/discharge plan and independent biological monitor to conduct regular monitoring.	Plan approved prior to grading permit issuance and monitoring conducted throughout construction and restoration phases	County Department of Planning and Building
BIO-11b	Prior to issuance of applicable grading permit the applicant shall demonstrate to the County that all open basins, including “polishing wetlands” or settling basins, that would require regular maintenance and/or vegetation management, containing any Project-related fluids shall be designed to exclude all wildlife, including birds, bats, and amphibians.	County Department of Planning and Building to review and approve spill discharge plan and independent biological monitor to conduct	Plan approved prior to grading permit issuance and monitoring conducted throughout construction and restoration phases	County Department of Planning and Building

Mitigation Measure	Plan Requirements and Timing	Compliance Verification		
		Method	Timing	Responsible Party
		regular monitoring.		

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