

Biological Assessment

for

Grover Beach Conference Center

APN 060-381-010, 011

Grover Beach
San Luis Obispo County
California



Prepared for

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Executive Summary

- This biological assessment examines the vicinity of two parcels in the City of Grover Beach. Our primary emphasis is on the proposed conference center site (APN 060-381-10), a 12.87 acre± property owned by the State of California, managed by the Parks Department.

The proposed conference center is located west of Hwy 1, between La Sage Drive and Grand Avenue. The project area for this report includes the stormwater outfall structure at the intersection of Grand Avenue and Hwy 1, just east of Meadow Creek, the Grand Avenue bridge over Meadow Creek, and the vacant lot at the entrance to Pismo Beach State Beach.

The second area is the proposed transportation hub improvement zone (also known as a multi-modal expansion site) adjacent to existing Amtrak and bus transfer facilities. The property is approximately 2+/- acres (APN 060-020-024 and a portion of 060-263-034), owned by the County of San Luis Obispo, within the City Limits of Grover Beach.

The proposed transportation hub is located between Highway 1 and Union Pacific Railroad.

- Five habitat types are present in the project area in which 88 species of plants were identified during botanical surveys in the spring and summer of 2005. This document was amended in 2009 to include update biological resource review and a delineation of wetland habitat within the multi-modal expansion site.
- Biological resources that may be impacted by the proposed project include common wildlife species, nesting birds, wetlands, ruderal grassland, landscaped areas and willow woodland habitat. Mitigation recommendations are provided for potential impacts to these resources.
- No impacts to rare species are anticipated.

1.0 Introduction

This Biological Assessment provides information regarding biological resources that could be affected by development of the Grover Beach Conference Center on a 12+ acre site and a 2+/- acre site in Grover Beach. We report results of a botanical survey conducted from April to July 2005, a wildlife survey of the property, a habitat inventory, and database and literature searches of rare species reports within five miles of the property. The goal of this assessment is to provide agencies and decision makers with information regarding biological resources on the property and potential impacts to biological resources from proposed development of the property. We identify natural communities on the site, discuss rare and special status species that may occur or could be affected by the proposed development, and provide lists of species that were found or are expected to occur. An evaluation of the effect of development on biological resources is included, and mitigation recommendations are provided.

1.1 Project location and description

The property is located in the City of Grover Beach approximately 200 yards from the mean high tide line of the Pacific Ocean (USGS Oceano quad at approximately N 35° 07' 22" and W 120° 37' 55', see Figure 1). The parcel is bordered by Meadow Creek on the east, West Grand Avenue on the south, beach dunes of Pismo State Beach on the west, and La Sage Drive on the north (see Figures 2, 3). The conference center property is topographically flat. Current land use designation is planned commercial. Zoning on the property is C-P-C, Coastal Planned Commercial (City of Grover Beach Zoning Map, amended November 1, 2000). Existing structures on the property consist of a restaurant, restroom facility, picnic area, and parking lot. Future development will be proposed to replace existing restaurant facilities. The area proposed for development is presently a vacant lot, which is used as a parking and turn-around area for West Grand Avenue traffic (see Figure 3).

The proposed project is a conference center on Assessor's Parcel Number 060-381-010, currently a vacant lot, and -011, currently a golf course (City of Grover Beach Assessor's map, County of San Luis Obispo, CA Book 060 page 381). The project is in the conceptual development stage. During the preparation of this document, no site plan was available for review.

Improvements to the transit facility adjacent to Amtrak's station southeast of the project may be proposed. Assessor's Parcel Number 060-020-024 and the northern portion of 060-263-034 are owned by the County of San Luis Obispo (City of Grover Beach Assessor's map, County of San Luis Obispo, CA Book 060 page 20.). The parcels are between Union Pacific Railroad tracks and Highway 1, south of Amtrak's Grover Beach Station and Grover Beach Chamber of Commerce, north of a County recreational vehicle storage yard and campground.

1.2 Responsible parties

<p>Property Owner of Conference Center Site (APN 060-381-010, 011) State of California Operated by State Parks Department Contact: Juventino Ortiz, State Park Superintendent, Coastal Sector, San Luis Obispo County</p>	<p>Property Owner of Multi-modal Transit Expansion Site (APN 060-020-024 and 060-263-034) County of San Luis Obispo Contact: Jan DeLio, County Parks and Recreation Department</p>
<p>Biological Consultant LynneDee Althouse Althouse and Meade, Inc. 1875 Wellsona Road Paso Robles, CA 93446 805-467-1041</p>	<p>Lead Agency City of Grover Beach Community Development Director 154 South 8th Street Grover Beach, CA 93433 805-473-4520</p>
<p>Project Engineer for Multi-modal Expansion Site Tom Martin Rick Engineering 711 Tank Farm Rd. STE 110 San Luis Obispo, CA 93401 (805) 544-0707</p>	<p>Project Planning (for concept design) EDA, Inc. 1998 Santa Barbara Street San Luis Obispo, CA 93401 805-549-8658</p>

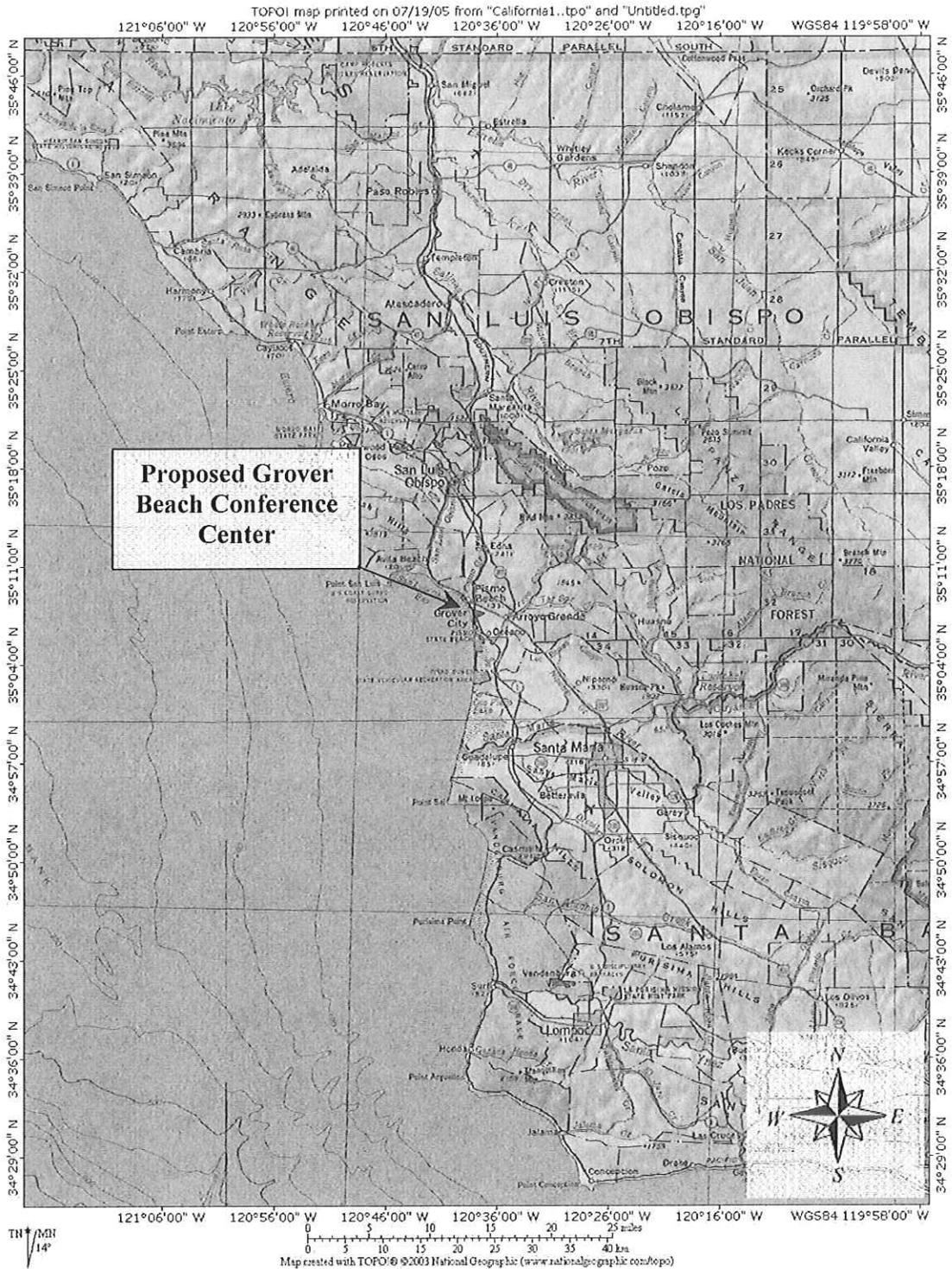


FIGURE 1. The proposed project is located in Grover Beach, at the entrance to Pismo State Beach on Grand Avenue and Highway 1, San Luis Obispo County, California. The site is in the Oceano USGS 7.5 minute quadrangle.

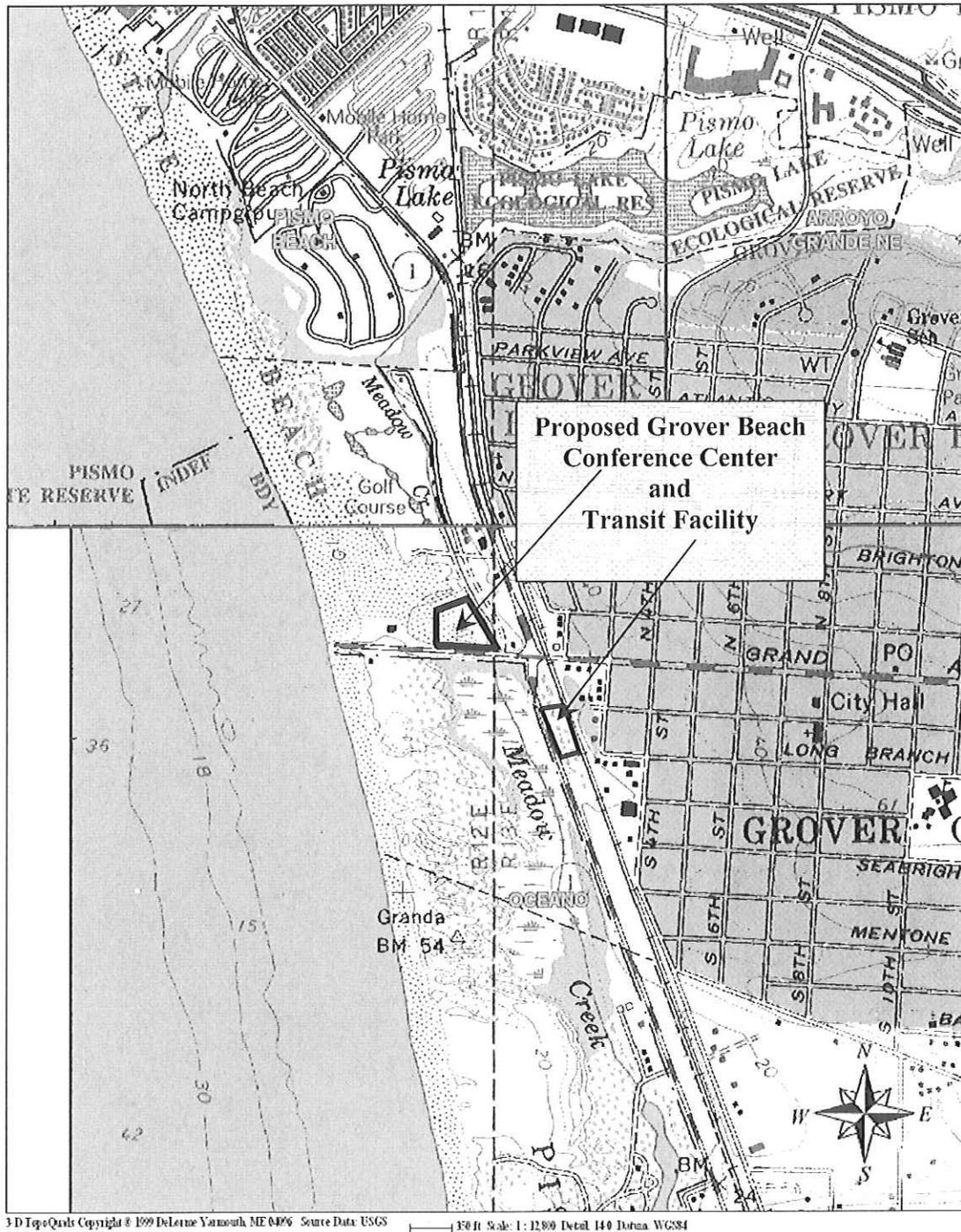


FIGURE 2. The Grover Beach Conference Center is proposed on a vacant lot on Grand Avenue approximately 200 yards from the mean high tide line. Meadow Creek borders the property on the east, Grand Avenue on the south, dunes on the west, and La Sage Drive on the north. The project site is approximately 12.87 acres, the approximate boundaries of which are shown in black.

2.0 Methods

The project area was surveyed for biological resources between December 2004 and August 2005. Daniel E. Meade, Ph.D., LynneDee Althouse, and Jason Dart, biologists, conducted the surveys. Surveys for plant and animal species were conducted in all areas of the project site. Particular attention was placed on mapping environmental constraints within the development area. Biologists surveyed the site on foot in order to compile species lists and search for rare plants and animals. All habitat types on the site were inspected, described, and catalogued. Photographs were taken of site landscape features, habitats, and rare species. Wildlife observations, including animal presence, nests, tracks, and sign, were documented. Identification of botanical resources included field observations and laboratory analysis of collected material. All plant and animal species observed on the site were recorded. We also inspected areas outside of the property boundaries that could be influenced by development activities on the property. Some specimens collected during our site visits will be deposited in the Hoover Herbarium.

A protocol level survey for California red-legged frog (*Rana aurora draytonii*) was conducted on May 21 and 23, 2005 by Susan V. Christopher. The survey was conducted according to U.S. Fish and Wildlife Service (1997) protocol.

We conducted a search of the California Natural Diversity Database (CNDDDB April 29, 2005 data) and the California Native Plant Society (CNPS) On-line Inventory of Rare and Endangered Vascular Plants of California for rare species that could occur on or near the project site (Table 3). The search area included San Luis Obispo, Pismo Beach, Arroyo Grande NE, and Lopez Mountain quadrangles (7.5 minute USGS). Rare species lists produced by these database searches were then cross-referenced with the known habitat types on the property to identify all potential rare species that could occur on or near the project site (Table 3, section 3.6.2). Each rare species with a potential for occurrence on or near the project site is then individually addressed in regards to the specific habitats on the property (sections 3.6.3 & 3.6.4).

Additional rare species research reviewed previous biological reports in the area and searched on-line museum and herbarium specimen records for locality data within San Luis Obispo County. The Museum of Vertebrate Zoology (MVZ), the University Herbarium, and the Jepson Herbaria (all at the University of California, Berkeley), maintain on-line databases of specimen records that were reviewed. Additional rare species with a potential for occurrence on or near the subject property were then added to the list provided in section 3.6.2.

3.0 Results

3.1 Existing conditions

The conference center project is proposed on a vacant lot with disturbed grassland vegetation and ruderal areas (Figure 1). A wetland and riparian corridor is present on the east side of the property. Landscape trees remain along the north end of the parcel, with very little other native vegetation present (Photo 1). Ice plant is dominant in large patches, and bare ground remains where vehicles and horse trailers use the site as a turn-around. A habitat map is provided in Appendix A, Figure 4. No rare plant habitat is present on the project site. The property includes an existing paved parking lot, restaurant, and public restrooms (Figure 1, Photo 2).

West and south of the project site is a coastal dune scrub habitat that supports rare plants and animals. Dominant plants in the dune habitat are native shrubs, including mock heather, silver bush lupine, tree lupine, and coastal buckwheat (Photo 3). The invasive European beach grass is present in large patches covering dune slopes. Dune wetlands are dominated by arroyo willow shrubs. Several rare plants may occur in the dune habitat adjacent to the project site.

Meadow Creek is an intermittent stream that conveys run-off from a watershed of approximately six square miles upstream from the project site. The stream runs parallel to the Pacific Ocean as it passes through the eastern end of the project site. It is a channelized drainage on site, and continues south of the site supporting mature willow woodland, wetland, and freshwater marsh habitats as it approaches the Oceano Airport and Arroyo Grande Creek. Wetland conditions are present within the banks of the drainage on the project site. Bulrushes are the dominant emergent vegetation in the wetland areas (Photo 4). A small area of wetland extends to the upper bank terrace on the west side of the drainage.

The proposed transit site contains a dense willow woodland. The woodland shelters many homeless individuals. Weedy vegetation surrounds the site and native plants dominate the central canopy.



FIGURE 3. Aerial photograph of the project site and surrounding lands. The project site is largely a disturbed ruderal grassland habitat. The project site is indicated by the solid yellow line. Additional areas of the property (indicated by the dashed yellow line) were surveyed and included in this report due to their possible incorporation into the project design.



Photo 1. Landscape trees planted in the northern end of the property are the only trees on the site. View is to the north.



Photo 2. The site includes a paved parking lot, restaurant, and public restrooms. View is to the north.

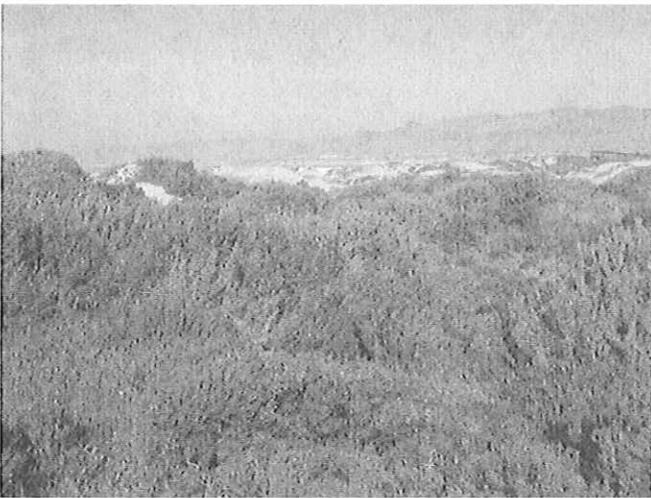


Photo 3. Dune habitat is present on the west and south sides of the project site. Dune habitat supports rare plants and animals.



Photo 4. The wetland habitat on site is associated with the drainage along the eastern end of the property. Bulrushes and willows are dominant.

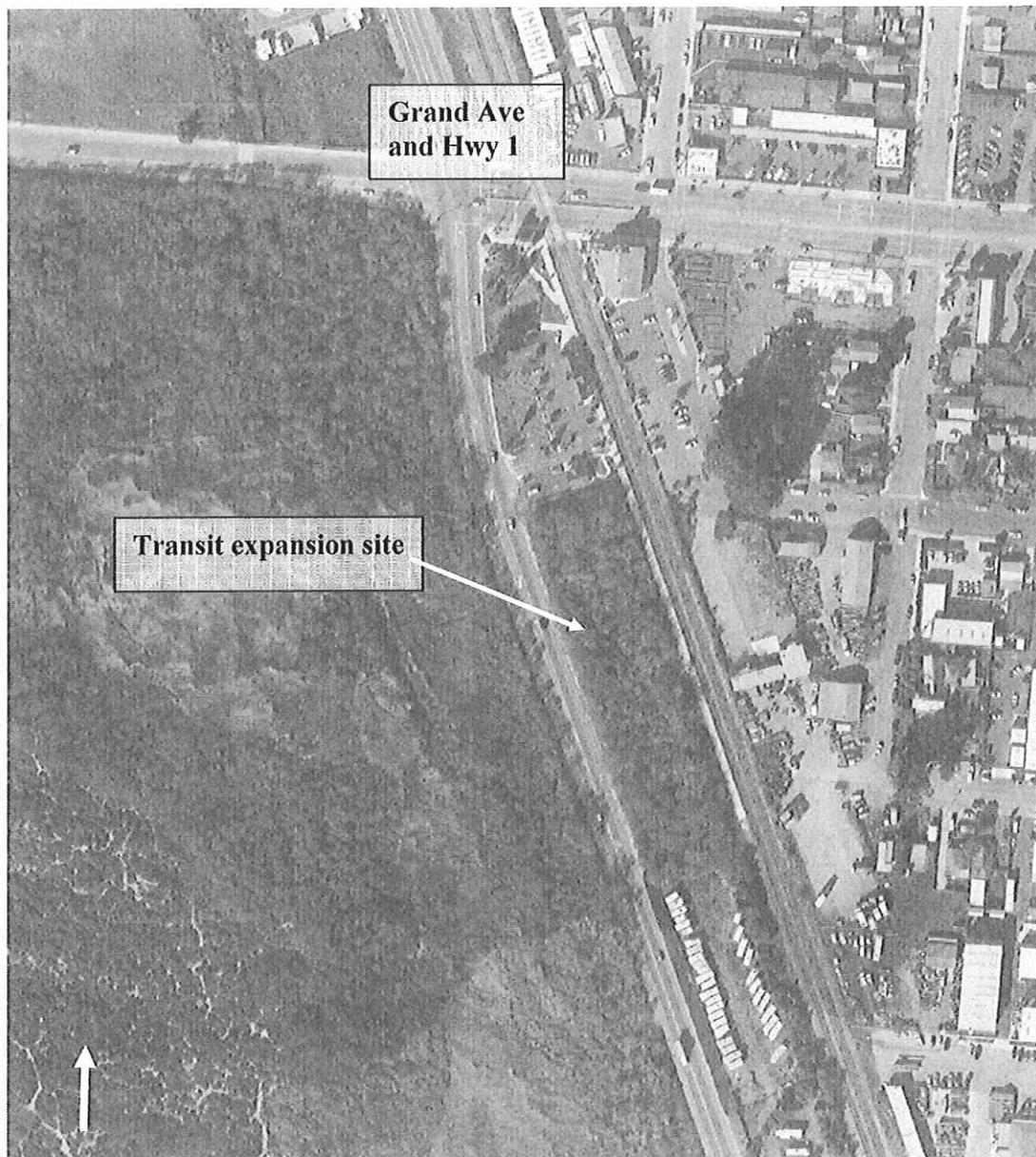


Photo 5. The proposed transit expansion site is dominated by a dense willow woodland. The site is between Union Pacific Railroad, Highway 1, Amtrak's Grover Beach Station, and a mobile home sales/storage yard. State Park property is west of Highway 1, the City of Grover Beach is east of the railroad.

3.2 Soils

The U.S. Department of Agriculture map in the Soil Survey of San Luis Obispo County, California, Coastal Part (1984) maps one soil type on the property: Corralitos Variant loamy sand, 0 to 2 percent slopes (124).

The soils on the property are Corralitos Variant loamy sand. This very deep, somewhat poorly drained, nearly level soil is on alluvial fans and flood plains. Slopes are 0 to 2

percent. This soil formed in alluvium weathered from sedimentary rocks. Areas are elongated or irregular in shape and range from 30 to 80 acres. The natural vegetation is mainly annual grasses.

Permeability of this Corralitos Variant soil is rapid, and the available water capacity is low. Surface runoff is slow. The hazard of water erosion is slight, and the hazard of soil blowing is high. The effective rooting depth is limited by a seasonal high water table at a depth of 2 to 3 feet from about December through March. The rooting depth increases to 60 inches as the water table drops during drier periods. This soil is subject to occasional, brief flooding.

The Corralitos Variant soil is in capability unit IIIw-2 (14), irrigated and capability unit IVw-2 (14), nonirrigated. Class IIIw-2 means that the soil has severe limitations that reduce the choice of plants or require special conservation practices, or both. Class IIIw-2 also indicated that water in or on the soil interferes with plant growth or cultivation. There is also a problem or limitation of wetness caused by poor drainage or flooding. Class IV soils have very severe limitations that reduce the choice of plants or that require very careful management, or both.

The current dominant vegetation type found on the property is annual grasses; a vegetation type consistent with the United States Department of Agriculture soils description.

3.3 Habitat types

We identified five habitat types during our site surveys (see map in Appendix A, Figure 4). The dominant habitat is ruderal grassland, with a wetland riparian corridor in Meadow Creek on the east side of the property, a non-native landscape dominated by ice plant, a highly disturbed soil area created by vehicle traffic, and an area of landscape trees in the north end of the property.

3.3.1 Ruderal grassland

Ruderal grassland occurs over most of the property. This habitat type is consistent with vegetation typically growing on undisturbed areas of Corralitos Variant sandy loam. Introduced plants found on the property in this habitat area include rip-gut brome (*Bromus diandrus*), California burclover (*Medicago polymorpha*), wild oat (*Avena fatua*), annual rye grass (*Lolium multiflorum*), bull mallow (*Malva nicaeensis*), ice plant (*Carpobrotus edulis*, *C. chilensis*), and wild radish (*Raphanus sativus*).

3.3.2 Wetland riparian (associated with Meadow Creek)

Meadow Creek drains a watershed of approximately six square miles above the project site, including the watershed in Canyon No. 1 and Canyon No. 2 east of U.S. Highway 101. Downstream of the subject property additional urban runoff is contributed to the creek from approximately 2.5 square miles of the City of Grover Beach. Meadow Creek is captured by the coastal dunes and spreads into an estuary near Oceano Airport and the confluence with Arroyo Grande Creek.

The portion of Meadow Creek that crosses the property was channeled for flood control and much of the original habitat value has been lost. The channel sides are steep, and

provide little usable habitat for species such as California red-legged frog, or southwestern pond turtle. The riparian corridor on the property (along the eastern edge) is narrow and choked with tules and rushes. In the southeast corner of the property, riparian habitat extends to the existing fence line adjacent to the grassland habitat. Elsewhere, non-native species (e.g. pampas grass) begin at the top of the stream bank. Creek flow is slow through the property and the water quality appears degraded.

Habitat appropriate for California red-legged frog (*Rana aurora draytonii*, CRLF) is not present on the property. Exotic predators such as bullfrogs are present, water quality appears degraded, pools are choked with vegetation, banks are steep, upland habitat is very limited, and vegetation free bank side resting areas are non-existent. Meadow Creek does not possess the necessary habitat attributes to support CRLF. The Recovery Plan for California Red-legged Frog (U.S. Fish and Wildlife Service, 2002) lists reasons for the decline of CRLF, and threats to survival. Among these reasons are predation by introduced species, lack of upland habitat (including proximity to roads), the alteration, fragmentation, and degradation of habitat, and channelization of creeks (which reduces or eliminates breeding sites) and increases suitability for predators such as bullfrogs, non-native fish, and raccoons. Degraded water quality condition can have profound impacts on native amphibians. Pesticides, fertilizers, heavy metals, and hydrocarbons increase mortality of frogs in all life stages.

The project location, in the midst of a City and adjacent to Highway 1, is not a site where CRLF reintroduction should be attempted. The habit of CRLF is to move from breeding areas overland (up to 1.2 miles). This behavior will result in a constant source of mortality in the surrounding City.

The existing condition of Meadow Creek is not appropriate habitat for southwestern pond turtle. Pond habitats with clear surfaces and protected log or rock basking sites are preferred by pond turtles. Pond turtles engage in a significant amount of terrestrial behavior including nesting (Reese and Welsh, 1997) that requires habitat conditions not currently at the site.

The recommended 50-foot setback from the riparian boundary would allow plenty of room for riparian restoration. This area provides an opportunity to mitigate (on-site) for impacts caused by the proposed project. In addition, the Grover Beach Local Coastal Program specifies that development on the project site incorporate restoration and enhancement of the portion of Meadow Creek between the Golf Course and the mobile home park.

3.3.3 *Non-native landscape (Ice plant dominant)*

Hottentot fig (*Carpobrotus edulis*) is the dominant species in the area adjacent to La Sage Avenue. Also known as ice plant, this species is an invasive weed along coastal California. It is a ground hugging, succulent perennial that roots at its nodes, and has a robust ability to colonize ground and exclude native plants. Hottentot fig also exists on the dune (west) side of the existing retaining wall on the western edge of the project. Opportunities for on-site mitigation of project impacts include removal of this plant.

3.3.4 *Highly disturbed soil*

Two areas are highly disturbed: one dominated by weed species, and the other with a large area of bare ground.

Weedy species

Near the existing parking lot at La Sage Drive, weedy, non-native species are dominant. A frequent disturbance regime in this area caused by gophers, pedestrians, and occasional vehicles results in dominance by telegraph weed (*Heterotheca grandiflora*), wild radish (*Raphanus sativus*), rip-gut brome (*Bromus diandrus*), and storkbill filaree (*Erodium botrys*).

Bare compacted soil (area used as Grand Avenue turn-around)

This area is highly compacted as a result of frequent vehicle traffic. Spotty vegetation grows in the margins, while the center is mostly bare. This area is used daily by equestrians who park trucks and trailers for horse loading and unloading. The equestrians access the beach from this location.

3.3.5 *Landscape trees*

Tree species present include Monterey pine, blue gum Eucalyptus, Persian silk tree, and acacia. The Monterey pines are significantly diseased; three have died this past year and the three remaining are likely to die in the next year. This community provides low-quality habitat for birds. Nesting birds were not observed in the trees during the spring of 2005.

3.3.6 *Willow woodland*

Willow woodland vegetation is dominated by Arroyo willow (*Salix lasiolepis*) and an understory of blackberry (*Rubus ursinus*). This vegetation type occupies the proposed transit center, south of the existing Amtrak station.

3.4 Plant list

The 80 species of plants identified on the property consist of a majority of introduced species (Table 1). No rare plants were identified within the project area. One sensitive species was identified in adjacent dune habitat.

TABLE 1. Eighty-eight species of plants were identified during a floristic survey of the property. No rare species were identified in the project area.

Scientific Name	Status	N = Native I = Introduced	Common Name
Trees			
<i>Acacia</i> sp.	None	Planted	Acacia
<i>Albizia julibrissin</i>	None	Planted	Persian silk tree
<i>Cupressus macrocarpa</i>	None	Planted	Monterey cypress
<i>Eucalyptus globulus</i>	None	Planted	Blue-gum eucalyptus
<i>Myoporum laetum</i>	None	Planted	Myoporum
<i>Pinus radiata</i>	None	Planted	Monterey pine
<i>Populus balsamifera</i>	None	Native	Black cottonwood
<i>Quercus agrifolia</i>	None	Native	Coast live oak
<i>Washingtonia filifera</i>	None	Planted	Palm
Shrubs			
<i>Baccharis pilularis</i>	None	Native	Coyote brush
<i>Eriastrum densifolium</i> ssp. <i>densifolium</i>	None	Native	Giant woolly-star
<i>Ericameria ericoides</i>	None	Native	Mock heather
<i>Eriogonum parvifolium</i>	None	Native	Coastal buckwheat
<i>Hedera helix</i>	None	Introduced	Ivy
<i>Lupinus arboreus</i>	None	Native	Tree lupine
<i>Lupinus chamissonis</i>	None	Native	Silver bush lupine
<i>Rhamnus californicus</i>	None	Native	Coffeeberry
<i>Rosa californica</i>	None	Native	California rose
<i>Rubus ursinus</i>	None	Native	California blackberry
<i>Salix lasiolepis</i>	None	Native	Arroyo willow
<i>Senecio blochmaniae</i>	None	Native	Blochman's groundsel
<i>Toxicodendron diversilobum</i>	None	Native	Poison oak
Herbs			
<i>Achillea millefolium</i>	None	Native	Yarrow
<i>Ambrosia chamissonis</i>	None	Native	Beach bursage
<i>Ambrosia psilostachya</i>	None	Native	Western ragweed
<i>Anagalis arvensis</i>	None	Introduced	Scarlet pimpernel
<i>Brassica nigra</i>	None	Introduced	Black mustard
<i>Calystegia macrostegia</i> ssp. <i>cyclostegia</i>	None	Native	Morning glory

Scientific Name	Status	N = Native I = Introduced	Common Name
<i>Carex</i> sp.-on the dunes	None	Native	Sedge
<i>Carpobrotus chilensis</i>	None	Introduced	Sea fig
<i>Carpobrotus edulis</i>	None	Introduced	Hottentot fig
<i>Chamaesyce</i> sp.	None		Spurge
<i>Chenopodium californicum</i>	None	Native	California goosefoot
<i>Conyza bonariensis</i>	None	Introduced	Horseweed
<i>Croton californicum</i>	None	Native	Croton
<i>Cynodon dactylon</i>	None	Introduced	Bermudagrass
<i>Cyperus rotundus</i>	None	Introduced	Purple nutsedge
<i>Dudleya lanceolata</i>	None	Native	Lance-leaved dudleya
<i>Epilobium</i> sp.	None	Native	Willow herb
<i>Erigeron blochmaniae</i> (on adjacent dunes)	List 4	Native	Blochman's leafy daisy
<i>Erodium botrys</i>	None	Introduced	Storkbill filaree
<i>Erodium cicutarium</i>	None	Introduced	Redstem filaree
<i>Erodium moschatum</i>	None	Introduced	Greenstem filaree
<i>Foeniculum vulgare</i>	None	Introduced	Fennel
<i>Gazania linearis</i>	None	Introduced	Gazania daisy
<i>Gnaphalium palustre</i>	None	Native	Marsh cudweed
<i>Heliotropium currasavicum</i>	None	Introduced	Wild heliotrope
<i>Hesperocnide tenella</i>	None	Native	Western nettle
<i>Heterotheca grandiflora</i>	None	Introduced	Telegraph weed
<i>Juncus mexicanus</i>	None	Native	Mexican rush
<i>Lactuca serriola</i>	None	Introduced	Wire lettuce
<i>Lessingia filaginifolia</i> var. <i>filaginifolia</i>	None	Native	California aster
<i>Malva nicaeensis</i>	None	Introduced	Bull mallow
<i>Medicago polymorpha</i>	None	Introduced	California bur medic
<i>Melilotus officinalis</i>	None	Introduced	Sweet clover
<i>Oxalis pes-caprae</i>	None	Introduced	Bermuda buttercup
<i>Picris echioides</i>	None	Introduced	Prickly ox-tongue
<i>Plantago lanceolata</i>	None	Introduced	Plantain
<i>Raphanus sativus</i>	None	Introduced	Wild radish
<i>Rumex crispus</i>	None	Introduced	Curly dock
<i>Scirpus americanus</i>	None	Native	American tule
<i>Senecio vulgaris</i>	None	Introduced	Common groundsel
<i>Solanum xanti</i>	None	Native	Nightshade
<i>Sonchus asper</i>	None	Introduced	Sow thistle
<i>Sonchus oleraceus</i>	None	Introduced	Common sow thistle
<i>Spergularia arvensis</i>	None	Introduced	Stickwort
<i>Taraxacum officinale</i>	None	Introduced	Dandelion

Scientific Name	Status	N = Native I = Introduced	Common Name
<i>Thysanocarpus curvipes</i>	None	Native	Lace pod
<i>Tribulus terrestris</i>	None	Introduced	Puncture vine
<i>Urtica urens</i>	None	Native	nettle
<i>Vicia villosa</i> ssp. <i>varia</i>	None	Introduced	Vetch
Grasses			
<i>Ammophila arenaria</i>	None	Introduced	European beach grass
<i>Avena barbata</i>	None	Introduced	Slender wild oat
<i>Avena fatua</i>	None	Introduced	Wild oat
<i>Bromus diandrus</i>	None	Introduced	Ripgut brome
<i>Bromus tectorum</i>	None	Introduced	Cheat grass
<i>Cortaderia selloana</i>	None	Introduced	Pampas grass
<i>Cynodon dactylon</i>	None	Introduced	Bermuda grass
<i>Distichlis spicata</i>	None	Native	Salt grass
<i>Ehrharta calycina</i>	None	Introduced	Veldt grass
<i>Elymus</i> sp.	None	Native	Creeping ryegrass
<i>Hordeum marinum</i> ssp. <i>gussonianum</i>	None	Native	Meadow barley
<i>Leptochloa fascicularis</i>	None	Introduced	Sprangletop
<i>Leymus triticoides</i>	None	Native	Creeping wild rye
<i>Poa annua</i>	None	Introduced	Annual bluegrass
<i>Lolium multiflorum</i>	None	Introduced	Ryegrass
<i>Pennisetum clandestinum</i>	None	Introduced	Kikuyu grass
<i>Vulpia myuros</i>	None	Introduced	Annual fescue

3.5 Wildlife list

The project site attracts numerous species of birds adapted to urban settings, including gulls, blackbirds, and crows. The surrounding riparian and dune habitats support many species of migrant and resident birds. Forty-eight bird species were identified in the vicinity of the project site. Meadow Creek contains perennial water and was found to harbor chorus frogs, bullfrogs, and mosquito fish. Common reptiles may also be present in the project area, and in adjacent dune habitats.

Nesting birds may occur in the grassland habitat on the property, and possibly in some of the landscape vegetation. Nesting birds are protected from disturbance by The Migratory Bird Treaty Act of 1918, as regulated by the United States Fish and Wildlife Service.

TABLE 2. The 121 animal species that were observed or could occur on or near the property include 2 fish, 5 amphibians, 10 reptiles, 88 birds, and 16 mammals. Many invertebrates also occur in the aquatic and terrestrial habitats at the project site. The Special Status column contains the listing status of the organism under the Federal Endangered Species Act, the State Endangered Species Act, or by the CDFG (see Appendix A for status definitions). Species that were observed on the property during our surveys are designated by the ✓ mark in the fourth column.

Common name	Scientific name	Special status	Found on the property	Habitat type
Fish				
Mosquito Fish	<i>Gambusia affinis</i>	None	✓	Rivers, creeks, lakes, ponds
Three-spine Stickleback	<i>Gasterosteus aculeatus</i>	None		Rivers, creeks, lakes, ponds
Amphibians				
Black-bellied Slender Salamander	<i>Batrachoseps nigriventris</i>	None		Oak woodlands, moist areas, found under cardboard on the site
Western Toad	<i>Bufo boreas</i>	None		Grassland, woodland
Pacific Chorus Frog	<i>Pseudacris regilla</i>	None	✓	Many habitats near water
California Red-legged Frog	<i>Rana aurora draytonii</i>	FT ¹		Streams, creeks, and ponds
Bullfrog	<i>Rana catesbeiana</i>	None	✓	Perennial streams, ponds
Reptiles				
Silvery Legless Lizard	<i>Aniella pulchra pulchra</i>	CSC ²		Sandy habitats
Southwestern Pond Turtle	<i>Clemmys marmorata pallida</i>	CSC		Lakes, ponds, streams
Ringneck Snake	<i>Diadophis punctatus</i>	None		Woodlands, grasslands, chaparral
California Alligator Lizard	<i>Elgaria multicarinata</i>	None		Open grassland, woodland, chaparral
California Kingsnake	<i>Lampropeltis getulus</i>	None		Woodland, grassland, streams
California Whipsnake	<i>Masticophis lateralis</i>	None		Chaparral, scrub
Gopher Snake	<i>Pituophis melanoleucus</i>	None		Woodland, grassland
Western Fence Lizard	<i>Sceloporus occidentalis</i>	None	✓	Wide range
California Red-sided Garter Snake	<i>Thamnophis sirtalis infernalis</i>	None		Many habitats near water
Side-blotched Lizard	<i>Uta stansburiana</i>	None		Dry habitats

¹ FT = Federally Threatened

² CSC = California Special Concern species

Common name	Scientific name	Special status	Found on the property	Habitat type
Birds				
Allen's hummingbird	<i>Selasphorus sasin</i>	None	✓	Riparian, chaparral and woodland
American Coot	<i>Fulica americana</i>	None	✓	Ponds, lakes
American Crow	<i>Corvus brachyrhynchos</i>	None	✓	Many habitats, esp. urban
American Goldfinch	<i>Carduelis tristis</i>	None	✓	Weedy fields, woodlands
American Kestrel	<i>Falco sparverius</i>	None	✓	Open, semi-open country
American Robin	<i>Turdus migratorius</i>	None		Streamsides, woodlands
Anna's Hummingbird	<i>Calypte anna</i>	None	✓	Many habitats
Band-tailed Pigeon	<i>Columba fasciata</i>	None	✓	Woodland, urban
Barn Owl	<i>Tyto alba</i>	None		Agricultural, woodlands
Barn Swallow	<i>Hirundo rustica</i>	None		Riparian, grasslands, lakes
Belted kingfisher	<i>Cerle alcyon</i>	None		Riparian, lakes and streams
Bewick's Wren	<i>Thryomanes bewickii</i>	None	✓	Riparian woodland, scrub
Black Phoebe	<i>Sayornis nigricans</i>	None	✓	Near water
Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	None		Woodlands
Black-throated Gray Warbler	<i>Dendroica nigrescens</i>	None		Oak, riparian woodlands
Blue-gray Gnatcatcher	<i>Poliophtila caerulea</i>	None	✓	Chaparral, scrub
Brewer's Blackbird	<i>Euphagus cyanocephalus</i>	None	✓	Open habitats
Bushtit	<i>Psaltriparus minimus</i>	None	✓	Woodlands, chaparral
California Gull	<i>Larus californicus</i>	None	✓	Beach, lake, urban
California Towhee	<i>Pipilo crissalis</i>	None		Brushy habitats
Cedar Waxwing	<i>Bombycella cedrorum</i>	None		Wooded habitat with berry bushes; urban
Chestnut-backed Chickadee	<i>Poecile hudsonica</i>	None	✓	Mixed woods
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	None		Urban; open areas near water
Common Raven	<i>Corvus corax</i>	None		Riparian, chaparral and woodlands
Common Tern	<i>Sterna hirundo</i>	None	✓	Beach, pelagic
Common Yellowthroat	<i>Geothlypis trichas</i>	None	✓	Marshes, streamsides
Cooper's Hawk	<i>Accipiter cooperii</i>	CSC	✓	Oak, riparian woodland
Dark-eyed Junco	<i>Junco hyemalis</i>	None		Oak woodland
Downy Woodpecker	<i>Picoides pubescens</i>	None	✓	Oak, riparian woodlands

Common name	Scientific name	Special status	Found on the property	Habitat type
European Starling	<i>Sturnus vulgaris</i>	None	✓	Agricultural, livestock areas
Forsters Tern	<i>Sterna forsteri</i>	None	✓	Beach, pelagic
Golden-crowned Sparrow	<i>Zonotrichia atricapilla</i>	None	✓	Dense woodlands, brushy areas
Great Blue Heron	<i>Ardea herodias</i>	None		Water habitats, grasslands
Great Egret	<i>Ardea alba</i>	None		Water habitats, grasslands
Great Horned Owl	<i>Bubo virginianus</i>	None		Woodland, grassland
Green Heron	<i>Butorides virescens</i>	None		Marshes, riparian, ponds
Hairy Woodpecker	<i>Picoides villosus</i>	None		Riparian and woodlands
Heermann's Gull	<i>Larus heermanni</i>	None	✓	Beach, pelagic
Hermit Thrush	<i>Catharus guttatus</i>	None	✓	Woodland and brush
Hooded Oriole	<i>Icterus cucullatus</i>	None		Oak, riparian woodlands
House Finch	<i>Carpodacus mexicanus</i>	None	✓	Riparian, grasslands, chaparral, and woodlands
House Sparrow	<i>Passer domesticus</i>	None	✓	Urban
House Wren	<i>Troglodytes aedon</i>	None		Shrubby areas
Hutton's Vireo	<i>Vireo huttonii</i>	None		Oak, riparian woodlands
Killdeer	<i>Charadrius vociferous</i>	None	✓	Beach, pond, lake margins
Lesser Goldfinch	<i>Carduelis psaltria</i>	None		Riparian, oak woodlands
Loggerhead Shrike	<i>Lanius ludovicianus</i>	CSC	✓	Open habitats with shrubs
MacGillivray's Warbler	<i>Oporornis tolmiei</i>	None		Oak, riparian woodlands
Mallard	<i>Anas platyrhynchos</i>	None	✓	Lakes, ponds, streams
Marsh Wren	<i>Cistothorus platensis</i>	None	✓	Marshes, wetlands
Mourning Dove	<i>Zenaida macroura</i>	None	✓	Open and semi-open habitats
Northern Flicker	<i>Colaptes auratus</i>	None	✓	Woodlands
Northern Mockingbird	<i>Mimus polyglottos</i>	None		Riparian, chaparral and woodlands. Also urban
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	None		Riparian, lakes
Orange-crowned Warbler	<i>Vermivora celata</i>	None	✓	Oak, riparian woodlands
Pacific-slope Flycatcher	<i>Empidonax difficilis</i>	None		Riparian, oak woodlands
Phainopepla	<i>Phainopepla nitens</i>	None		Oak, riparian, scrub
Purple Finch	<i>Carpodacus purpureus</i>	None		Riparian and woodlands
Red-shouldered Hawk	<i>Buteo lineatus</i>	None	✓	Oak, riparian woodlands

Common name	Scientific name	Special status	Found on the property	Habitat type
Red-tailed Hawk	<i>Buteo jamaicensis</i>	None	✓	Open, semi-open country
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	None	✓	Marshes, fields
Rock Dove	<i>Columba livia</i>	None	✓	Urban areas
Ruby-crowned Kinglet	<i>Regulus calundula</i>	None	✓	Oak, riparian woodlands
Sanderling	<i>Calidris alba</i>	None	✓	Beach shoreline
Say's Phoebe	<i>Sayornis saya</i>	None	✓	Open country, grassland
Sharp-shinned Hawk	<i>Accipiter striatus</i>	CSC		Oak, riparian woodland
Song Sparrow	<i>Melospiza melodia</i>	None	✓	Oak, riparian woodland
Spotted Towhee	<i>Pipilo erythrophthalmus</i>	None		Dense brushy areas
Townsend's Warbler	<i>Dendroica townsendii</i>	None		Riparian, oak woodlands
Tree Swallow	<i>Tachycineta bicolor</i>	None	✓	Oak, riparian woodlands, open areas near water
Turkey Vulture	<i>Cathartes aura</i>	None	✓	Open country
Vaux's Swift	<i>Chaetura vauxi</i>	None	✓	Open habitats
Violet-green Swallow	<i>Tachycineta thalassina</i>	None		Oak, riparian woodlands, open areas near water
Warbling Vireo	<i>Vireo gilvus</i>	None		Oak, riparian woodlands
Western Bluebird	<i>Sialia mexicana</i>	None		Woodland near open areas
Western Kingbird	<i>Tyrannus verticalis</i>	None		Grasslands, savanna
Western Meadowlark	<i>Sturnella neglecta</i>	None	✓	Grasslands
Western Screech Owl	<i>Otus kennicottii</i>	None		Oak woodland
Western Scrub Jay	<i>Aphelocoma californica</i>	None		Oak, riparian woodlands
Western Tanager	<i>Piranga ludoviciana</i>	None		Oak, riparian woodlands
Western Wood Pewee	<i>Contopus sordidulus</i>	None		Riparian woodlands
Whimbrel	<i>Numenius phaeopus</i>	None	✓	Beach shoreline
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>	None	✓	Oak, riparian woodlands
Wilson's warbler	<i>Wilsonia pusilla</i>	None		Oak, riparian woodlands
Wrentit	<i>Chamaea fasciata</i>	None	✓	Riparian, chaparral
Yellow Warbler	<i>Dendroica petechia brewsteri</i>	CSC		Riparian woodlands
Yellow-breasted Chat	<i>Icteria virens</i>	CSC		Riparian woodlands
Yellow-rumped Warbler	<i>Dendroica coronata</i>	None	✓	Woodlands, brush, open country
Mammals				
Coyote	<i>Canis latrans</i>	None		Open woodlands, brushy areas, wide ranging.

Common name	Scientific name	Special status	Found on the property	Habitat type
American Beaver	<i>Castor canadensis</i>	None	✓	Lakes, ponds, streams
Opossum	<i>Didelphis marsupialis</i>	None		Woodlands, streams
Bobcat	<i>Lynx rufus</i>	None		Chaparral and woodlands
Striped Skunk	<i>Mephitis mephitis</i>	None		Mixed woods, brush, semi-open country
California Vole	<i>Microtus californicus</i>	None		Grassland meadows
California Myotis	<i>Myotis californicus</i>	None		Tunnels, hollow trees, crevices
Mule Deer	<i>Odocoileus hemionus</i>	None		Many habitats
Brush Mouse	<i>Peromyscus boylei</i>	None		Shrubby habitats
California Mouse	<i>Peromyscus californicus</i>	None		Oak woodland, chaparral
Deer Mouse	<i>Peromyscus maniculatus</i>	None		All dry land habitats
Raccoon	<i>Procyon lotor</i>	None	✓	Streams, lakes, rock cliffs, dens in trees
Western Harvest Mouse	<i>Reithodontomys megalotis</i>	None		Grassland, dense vegetation near water
Desert Cottontail	<i>Sylvilagus audubonii</i>	None		Brushy areas
Valley Pocket Gopher	<i>Thomomys bottae</i>	None		Variety of habitats
Red Fox	<i>Vulpes fulva</i>	None		Forest and open country

3.6 Rare species

A search of the CNDDDB and the CNPS On-line Inventory of Rare and Endangered Vascular Plants of California for the Pismo Beach, Arroyo Grande NE, and Oceano quadrangles found 56 special status species known to be present in the area. The search area included all quadrangles within five miles of the project site. Three additional rare species were added to the list from our knowledge of the area. These species are marked with an asterisk (Table 3). No rare plants and no rare animals were identified within the project site, and none are expected to occur. One rare plant was identified in dune habitat adjacent to the property.

3.6.1 *Introduction to California Native Plant Society (CNPS) List 1B*³

Plant species are considered rare when their distribution is confined to localized areas, when there is a threat to their habitat, when they are declining in abundance, or are threatened in a portion of their range. The inclusion of a plant species in the CNPS listing is in some cases subjective, and disagreements do exist (CNPS 1988). The listing categories range from species with a low threat (List 4) to species that are presumed extinct (List 1A). The 1038 plants of List 1B are rare throughout their range. All but a few species are endemic to California. All of them are judged to be vulnerable under present circumstances, or to have a high potential for becoming vulnerable. Vulnerability is due to limited or vulnerable habitat, low numbers of individuals per population (even though they may be wide ranging), or limited number of populations. Most of the plants of List 1B have declined significantly over the last three centuries in California. For an explanation of the CNPS listing scheme and CNDDDB status codes, see Appendix C.

All of the plants constituting List 1B meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection Act) or Secs. 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and are eligible for state listing. It is mandatory that they be fully considered during preparation of environmental documents relating to the California Environmental Quality Act (CEQA).

3.6.2 *Potential rare species list*

Table 3 lists all 59 special status species known to be present in the vicinity of the project site. Federal and state status, global and state rank, CNPS Rarity-Endangerment-Distribution (R-E-D) code and Listing status (plants), and the CDFG designation (animals) for each species is given. Typical blooming period, habitat preference, the potential for occurrence for each species in the vicinity of the project site, and the significance of impacts is also listed.

³ Plants considered to be rare, threatened or endangered in California and elsewhere are placed on the California Native Plant Society List 1B

TABLE 3. Fifty-six rare species and 4 sensitive natural communities were found in the CNDDDB and CNPS database search for areas in the San Luis Obispo, Lopez Mountain, Pismo Beach Arroyo Grande NE, and quadrangles. Three additional rare species were added to the list from our knowledge of the area. These species are marked with an asterisk (*). No rare species have the potential to occur on site. Three sensitive natural communities occur adjacent to the project site. The potential for occurrence of each species on the subject property is stated in the column, "Potential habitat". Numerous sensitive species are expected to occur in dune habitat outside the project site. No impacts are anticipated to dune habitats or sensitive species occurring in dune habitats.

Common Name	Scientific Name	Federal/State status Global/State Rank CNPS rank	Blooming Period	Habitat Preference	Potential Habitat?	Significance of Impacts
Plants						
1 Hoover's Bent Grass	<i>Agrostis hooveri</i>	None/none G3/S2.2 2-2-3 List 1B	April - July	Sandy soil in oak woodland habitat. SLO, Santa Barbara Counties	No. Oak woodland habitat is not found on site.	Not Significant
2 Santa Lucia Manzanita	<i>Arctostaphylos luciana</i>	None/none G2/S2.2 2-2-3 List 1B	February - March	Shale outcrops, slopes, chaparral, 500-700 m. SCoRO, near San Luis Obispo	No. The project site is outside the known range of the species..	Not Significant
3 Morro Manzanita	<i>Arctostaphylos morroensis</i>	Threatened/none G2/S2.2 2-2-3 List 1B	December - March	Sand dunes; <200 m. s CCo (Morro Bay, SLO County)	No. The project site is outside the known range of the species..	Not Significant
4 Pecho Manzanita	<i>Arctostaphylos pechoensis</i>	None/none G2/S2.2 2-2-3 List 1B	November - March	Shale outcrops, chaparral, coniferous forest; <850 m. s CCo (Pecho Hills, SLO)	No. The project site is outside the known range of the species.	Not Significant
5 Santa Margarita Manzanita	<i>Arctostaphylos pilosula</i>	None/none G2/S2.2 3-2-3 List 1B	December - March	Shale outcrops, slopes, chaparral; 300-1100 m. (near Santa Margarita)	No. The project site is outside the known range of the species.	Not Significant
6 Sand Mesa Manzanita	<i>Arctostaphylos rudis</i>	None/none G2/S2.2 2-2-3 List 1B	November - February	Sandy soils, chaparral. <100m. s CCo (Nipomo, Burton Mesa, Pt. Sal, sw SLO, nw SB Counties)	No. Appropriate back dune maritime chaparral habitat not present on site.	Not Significant
7 Wells' Manzanita	<i>Arctostaphylos wellsii</i>	None/none G2/S2.1? 2-3-3 List 1B	December - May	Sandstone outcrops in chaparral, oak woodland. <400m. s CCo (hills se of San Luis Obispo)	No. Appropriate back dune maritime chaparral habitat not present on site.	Not Significant
8 Marsh Sandwort	<i>Arenaria paludicola</i>	Endangered/ Endangered G1/S1.1 3-3-2 List 1B	May - August	Boggy meadows, marshes <300 m. s CCo (Nipomo Mesa, SLO County, Santa Ana River), SCo	No Appropriate habitat not present on the project site.	Not Significant
9 San Luis Mariposa Lily	<i>Calochortus obispoensis</i>	None/none G2/S2.1 2-2-3 List 1B	May - July	Dry serpentine gen in chaparral. 100-500 m. Endemic to SLO County	No. Appropriate soil and habitat type not found on site.	Not Significant

Common Name	Scientific Name	Federal/State status Global/State Rank CNPS rank	Blooming Period	Habitat Preference	Potential Habitat?	Significance of Impacts	
Plants							
10	San Luis Obispo Mariposa Lily	<i>Calochortus similans</i>	None/none G2/S2.3 2-1-3 List 1B	April - May	Sand, often granitic, grassland to oak woodland & yellow-pine forest; <1100 m. Endemic to SLO County	No. Appropriate soil and habitat type not found on site.	Not Significant
11	Cambria Morning-glory	<i>Calystegia subacaulis</i> ssp. <i>episcopalis</i>	None/none G3T1/S1.2 3-2-3 List 1B	April - May	Dry, open scrub, woodland, or grassland, often serpentine; <500 m. c SCoRO Endemic to SLO County	No. Appropriate soil and habitat type not found on site.	Not Significant
12	Obispo Indian Paintbrush	<i>Castilleja densiflora</i> ssp. <i>obispoensis</i>	None/none G5T2/S2.2 2-2-3 List 1B	April	Coastal grassland, <100 m. Endemic to SLO County	No. Appropriate grassland habitat not present on site.	Not Significant
13	Congdon's Tarplant	<i>Centromadia parryi</i> ssp. <i>congonii</i>	None/none G4T1/S1.1 3-3-3 List 1B	May - (November)	Grassland habitat, often in alkaline clay soils; <100 m. CW	No. Appropriate soil and habitat type not found on site.	Not Significant
14	Brewer's Spineflower	<i>Chorizanthe breweri</i>	None/none G2/S2.2 3-1-3 List 1B	May - August	Chaparral, foothill woodland on serpentine; <800 m. Endemic to SLO County	No. Appropriate soil and habitat type not found on site.	Not Significant
15	Straight-awned Spineflower	<i>Chorizanthe rectispina</i>	None/none G1/S1.2 3-1-3 List 1B	May - July	Chaparral, dry woodland in sandy soil; 200-600m. Endemic to SLO County	No. Appropriate soil and habitat type not found on site.	Not Significant
16	Chorro Creek Bog Thistle	<i>Cirsium fontinale</i> var. <i>obispoense</i>	Endangered G2T1/S1.2 3-2-3 List 1B	February - July	Serpentine seeps and streams; <300 m. Endemic to SLO County	No. Appropriate soil and habitat type not found on site.	Not Significant
17	La Graciosa Thistle	<i>Cirsium loncholepis</i>	Endangered/ Threatened G2/S2.2 3-3-3 List 1B	May - August	Wetlands in dunes; <50 m. s SLO, n Santa Barbara Counties	No. Appropriate dune wetland habitat not found on site.	Not Significant
18	Surf Thistle	<i>Cirsium rhotophilum</i>	None/(Threatened G2/S2.2 2-2-3 List 1B)	April - June	Dunes, bluffs; <20 m. s CCo s SLO, n Santa Barbara Counties	No. Appropriate dune habitat is not found on site.	Not Significant
19	Pismo Clarkia	<i>Clarkia speciosa</i> ssp. <i>immaculata</i>	Endangered/Rare G4T1/S1.1 3-3-3 List 1B	May - July	Sandy hills near coast; <100 m. s CCo (+/- Pismo to Edna, SLO County)	No. Appropriate habitat conditions not found on site.	Not Significant

Plants						
Common Name	Scientific Name	Federal/State status Global/State Rank CNPS rank	Blooming Period	Habitat Preference	Potential Habitat?	Significance of Impacts
20 Leafy Tarplant	<i>Deinandra increscens</i> ssp. <i>foliosa</i>	None/none G4G5T2/S2.2 2-2-3 List 1B	June - September	Sandy soils in valley and foothill grassland; 300-500 m. s SCoR	No. Appropriate habitat conditions not found on site.	Not Significant
21 Dune Larkspur	<i>Delphinium parryi</i> ssp. <i>blochmaniae</i>	None/none G4T3/S2.2 3-2-3 List 1B	April - May	Coastal chaparral, dunes, in sand. 0-200 m. s CCo	No. Appropriate habitat type not found on site.	Not Significant
22 Beach Spectaclepod	<i>Dithyrea maritima</i>	None/Threatened G2/S2.1 3-3-2 List 1B	March - May	Sandy soils, dunes; <50 m. s CCo, SCo, Baja CA	No. Appropriate habitat type not found on site.	Not Significant
23 San Luis Obispo Dudleya	<i>Dudleya abramsii</i> ssp. <i>murina</i>	None/none G3T2/S2.3 2-1-3 List 1B	May - June	Serpentine outcrops; 120-300 m. Endemic to SLO County	No. Appropriate serpentine outcrops not found on site.	Not Significant
24 Blochman's Dudleya	<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>	None/none G2T2/S2.1 2-3-2 List 1B	April - June	Open, rocky slopes, often serpentine or clay soils; <450 m. s CCo, SCo	No. Appropriate soil and habitat type not found on site.	Not Significant
25 Blochman's Leafy Daisy	<i>Erigeron blochmaniae</i>	None/none G2/S2.2 2-2-3 List 1B	July - August	Sand dunes and hills; <30 m. s CCo	No. Appropriate habitat conditions not found on site. This species was identified in dune habitat adjacent to the project site.	Not Significant
26 Indian Knob Mountain Balm	<i>Eriodictyon altissimum</i>	Endangered/Endangered G2Q/S2.2 3-3-3 List 1B	March - June	Sandstone ridges, chaparral; +/- 250 m. Endemic to SLO County	No. The project site is outside the known range of the species.	Not Significant
27 Hoover's Button-celery	<i>Eryngium aristulatum</i> var. <i>hooveri</i>	None/none G5T2/S2.1 3-3-3 List 1B	July	Vernal pools, lagunas; 0-1000 m. s SnFrB, SCoR	No. Appropriate soil and habitat type not found on site.	Not Significant
28 Mesa Horkelia	<i>Horkelia cuneata</i> ssp. <i>puberula</i>	None/none G4T2/S2.1 2-3-3 List 1B	February - (September)	Dry, sandy coastal chaparral; gen 70-700 m. SCoRO, SCo. More inland than other subspecies	No. Appropriate habitat conditions not found on site.	Not Significant
29 Kellogg's Horkelia	<i>Horkelia cuneata</i> ssp. <i>sericea</i>	None/none G4T1/S1.1 3-3-3 List 1B	April - September	Old dunes, coastal sand hills; <200 m. CCo	No. Appropriate habitat conditions not found on site.	Not Significant

Plants						
Common Name	Scientific Name	Federal/State status Global/State Rank CNPS rank	Blooming Period	Habitat Preference	Potential Habitat?	Significance of Impacts
30 Jones's Layia	<i>Layia jonesii</i>	None/none G1/S1.1 3-2-3 List 1B	March - May	Open serpentine or clay slopes; <400 m. Endemic to SLO County	No. Appropriate soil and habitat type not found on site.	Not Significant
31 San Luis Obispo County Lupine	<i>Lupinus ludovicianus</i>	None/none G2/S2.2 3-2-3 List 1B	April - July	Open, grassy limestone in oak woodland; 50-500 m. Endemic to SLO County	No. Appropriate habitat type not found on site.	Not Significant
32 Nipomo Mesa Lupine	<i>Lupinus nipomensis</i>	Endangered/ Endangered G1/S1.1 3-3-3 List 1B	March - May	Stabilized sand dunes; <25m. s CCo (Nipomo dunes, sw SLO County)	No. Project site is south of the known range of the species.	Not Significant
33 Crisp Monardella	<i>Monardella crispa</i>	None/none G2/S2.2 2-2-3 List 1B	April - August	Unstable coastal dunes; <100 m. s CCo (SLO, Santa Barbara Counties)	No. Appropriate soil and habitat type not found on site.	Not Significant
34 San Luis Obispo Monardella	<i>Monardella frutescens</i>	None/none G2/S2.2 2-2-3 List 1B	May - September	Stabilized dunes, sandy scrub; <200 m. s CCo (SLO, SB Counties)	No. Appropriate soil and habitat type not found on site.	Not Significant
35 Palmer's Monardella	<i>Monardella palmeri</i>	None/none G2/S2.2 2-2-3 List 1B	June - August	Serpentine soils in chaparral forest; 200-800 m. SCoRO	No. Appropriate soil and habitat type not found on site.	Not Significant
36 Gambel's Water Cress	<i>Rorippa gambelii</i>	Endangered/ Threatened G1/S1.1 3-3-2 List 1B	April - September	Marshes, stream banks, lake margins; <1250m. s CCo, SCo, to Mexico	No. Appropriate marsh habitat not found on site.	Not Significant
37 Black-flowered Figwort	<i>Scrophularia atrata</i>	None/none G2/S2.2 2-2-3 List 1B	March - July	Calcareous (sometimes diatomaceous) soils; <500 m. s SCoRO	No. Appropriate soil and habitat type not found on site.	Not Significant

	Common Name	Scientific Name	Federal/State status Global/State Rank DFG Rank	Nesting/ Breeding period	Habitat Preference	Potential Habitat?	Significance of Impacts
Animals							
38	Oso Flaco Robber Fly	<i>Ablautus schlingeri</i>	None/none G1/S1 None	n/a	Sand dunes.	No. Appropriate dune habitat not found on site.	Not Significant
39	Cooper's Hawk*	<i>Accipiter cooperii</i>	None/none G5/S3 CSC	Spring - Summer	Wooded and semi-open riparian, open fields. Nests in dense trees, esp. coast live oak.	No. Appropriate nesting habitat not found on site.	Not significant
40	Sharp-shinned Hawk	<i>Accipiter striatus</i>	None/none G5/S3 CSC	Spring	Riparian, coniferous, and deciduous woodlands near water	No. Appropriate nesting habitat not found on site.	Not significant
41	Silvery Legless Lizard*	<i>Aniella pulchra pulchra</i>	None/none G3G4T3T4Q/S3 CSC	May - September	Sandy or loose loamy soils under sparse vegetation. Soil moisture essential.	No. Appropriate habitat conditions not found on site, but likely in adjacent habitat.	Not significant
42	Oso Flaco Flightless Moth	<i>Areniscythis brachypterus</i>	None/none G1/S1 None	n/a	Open, coastal sand dune slopes in San Luis Obispo County	No. Appropriate dune habitat not found on site.	Not Significant
43	Vernal Pool Fairy Shrimp	<i>Branchinecta lynchi</i>	Threatened/none G3/S2S3 None	Rainy season	Clear water sandstone depression pools, grassed swale, earth slump, or basalt flow depression pools.	No. Vernal pool habitat does not occur on site.	Not Significant
44	Western Snowy Plover	<i>Charadrius alexandrinus nivosus</i>	Threatened/none G4T3/S2 CSC	Spring - Summer	Sandy beaches, salt pond levees, & shorelines of large alkali lakes. Needs friable soils for nesting.	No. Appropriate breeding habitat not found on site.	Not Significant
45	Sandy Beach Tiger Beetle	<i>Cicindela hirticollis gravida</i>	None/none G5T4/S1 None	n/a	Adjacent to non-brackish water near the coast from San Francisco to N. Mexico. Clean, dry, light-colored sand in the upper zone.	No. Appropriate breeding habitat not found on site.	Not Significant
46	Southwestern Pond Turtle	<i>Clemmys marmorata pallida</i>	None/none G3G4T2T3Q/S2 CSC	April - August	Permanent or semi-permanent streams, ponds, lakes.	No. Appropriate pool habitat is not present in the drainage on site.	Not Significant
47	Monarch Butterfly	<i>Danaus plexippus</i>	None/none G5/S3 None	September - March (aggregations)	Roosts located in wine-protected tree groves with nectar and water nearby.	No. Appropriate habitat for over-wintering aggregations is not found on site.	Not Significant

	Common Name	Scientific Name	Federal/State status Global/State Rank DFG Rank	Nesting/Breeding period	Habitat Preference	Potential Habitat?	Significance of Impacts
Animals							
48	Tidewater Goby	<i>Eucyclogobius newberryi</i>	Endangered/none G3/S2S3 CSC	n/a	Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	No. Appropriate lagoon habitat not present on site.	Not Significant
49	Morro Bay Blue Butterfly	<i>Icaricia icarioides moroensis</i>	None/none G5T1T3/S1S3 None	n/a	Stabilized dunes of coastal SLO and Santa Barbara Counties. Larval food plant thought to be <i>Lupinus chamissonis</i> .	No. Appropriate dune habitat not found on site.	Not Significant
50	Loggerhead Shrike*	<i>Lanius ludovicianus</i>	None/none G4/S4 FSC/SSC	March 1 through August 31	Open areas with appropriate perches near shrubby vegetation for nesting.	No. Appropriate breeding habitat not found on site.	Not Significant
51	White Sand Bear Scarab Beetle	<i>Lichnanthe albipilosa</i>	None/none G1/S1 None	n/a	Found only in coastal sand dunes of SLO County, near Dune Lake, some distance from the surf.	No. Appropriate dune habitat not found on site.	Not Significant
52	Rude's Longhorn Beetle	<i>Necydalis rudei</i>	None/none G1G2/S1S2 None	n/a	Sand dunes at Oso Flaco Lake. Larvae live in root crown and lower stem of mock heather.	No. Appropriate dune habitat not found on site.	Not Significant
53	Steelhead Trout South/Central ESU	<i>Oncorhynchus mykiss</i>	Threatened/none G5T2/S2 None	February - April	Fed listing refers to runs in coastal basins from Pajaro River south to, but not including, the Santa Maria River.	No. The drainages on site are not appropriate for steelhead.	Not Significant
54	Coast (California) Horned Lizard	<i>Phrynosoma coronatum (frontale)</i>	None/none G4T3T4/S3S4 CSC	May - September	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes.	No. Appropriate habitat is not found on site.	Not Significant
55	California Red-legged Frog	<i>Rana aurora draytonii</i>	Threatened/none G4T2T3/S2S3 CSC	January - March	Lowlands and foothills in or near sources of deep water with dense, shrubby or emergent riparian vegetation.	No. Appropriate habitat is not present in Meadow Creek on site.	Not Significant
56	California Least Tern	<i>Sterna antillarum browni</i>	Endangered/Endangered G4T2T3Q/ S2S3 None	Spring - Summer	Nests on sand beaches, alkali flats, bare flat ground from San Francisco Bay to N. Baja California. Colonial breeder.	No. Appropriate breeding habitat not found on site.	Not Significant

Animals						
Common Name	Scientific Name	Federal/State status Global/State Rank DFG Rank	Nesting/Breeding period	Habitat Preference	Potential Habitat?	Significance of Impacts
57	American Badger	None/none G5/S4 CSC	February - May	Needs friable soils in open ground with abundant food source such as California ground squirrels.	No. The project site is too close to urban areas and high vehicle traffic.	Not Significant
58	Oso Flaco Patch Butterfly	None/none G4G5T1T2/ S1S2 None	Spring	Sand dune habitat around Oso Flaco Lake, SLO County. Feeds on <i>Castilleja affinis</i>	No. Project site is outside the known range of the species.	Not Significant
59	Mimic Tryonia	None/none G2G3/S2S3 None	N/A	Inhabits coastal lagoons, estuaries, salt marshes from Sonoma to San Diego Counties.	No. Appropriate habitat is not found on site.	Not Significant
Sensitive Natural Communities						
Common Name	Federal/State status Global/State rank	Potential habitat?	Significance of Impacts			
1	Central Dune Scrub	None/none G2/S2.2	No. Dune habitat is not present on the project site, but is present adjacent to the site.	Not Significant		
2	Central Foredunes	None/none G1/S1.2	No. Dune habitat is not present on the project site, but is present adjacent to the site.	Not Significant		
3	Central Maritime Chaparral	None/none G2/S2.2	No. Maritime chaparral habitat is not present on site.	Not Significant		
4	Coastal and Valley Freshwater Marsh	None/none G3/S2.1	No. Marsh habitat is not present in Meadow Creek within the project site, but is present adjacent to the site..	Not Significant		

3.6.3 Special status species that could occur on or near the project site

The degraded condition of the habitats on the project site has eliminated the potential for rare species occurrence on site. Appropriate conditions are present for numerous rare species in the adjacent dune habitats on Pismo State Beach and in the riparian woodland habitat of Meadow Creek south of the project site.

3.6.4 Sensitive natural communities

No sensitive natural communities occur on the conference center site. Central foredunes and central dune scrub habitats are present adjacent to the project site on the west and south sides. Coastal and valley freshwater marsh is present in Meadow Creek, both upstream and downstream of the project site. The channelized section of stream passing through the project site contains a small bulrush series wetland, but is not a freshwater marsh. The proposed project will not impact sensitive natural communities.

Willow woodland vegetation is considered riparian vegetation by the Department of Fish and Game. Willows grow along Meadow Creek and form the riparian zone, vegetation associated with the wetted channel. At the transit center site, there is no drainage directly associated with the willows between Highway 1 and the railroad, yet vegetation is associated with an old floodplain that maintains enough moisture to support willows and cottonwoods.

4.0 Discussion

4.1 General discussion of property conditions

The project site is a portion of a larger property along West Grand Avenue at the entrance to Pismo State Beach that has an existing restaurant, parking lot, public restroom facility, and boardwalk access to the dunes. The project site has long been cleared of dune vegetation and natural topography, and remains today as a vacant dirt lot. A handful of remnant landscape trees in poor health provide the only vegetation structure on the site, supporting some bird species foraging in between natural habitats to the south, east and west. The poor quality habitats on project site will not support rare plants or sensitive animals. The channelized wetland riparian corridor of Meadow Creek that passes along the eastern property boundary represents the only environmental constraint to development of the site (see map in Appendix A, Figure 5). Sensitive dune habitat is present adjacent to the site on the west and south sides that may harbor rare species.

4.2 Discussion of potential impacts and mitigation measures

The proposed project does not yet have a completed site plan for review. We anticipate the project will be constrained to the ruderal habitats on site and will not impact the adjacent dune, riparian, or wetland habitats. No rare species will be impacted by the development of the ruderal habitats on site. If appropriate riparian set-backs are observed, the project will not result in direct or indirect impacts to riparian and wetland habitats or to water quality in Meadow Creek. Take or displacement of some common wildlife species may result during construction of the conference center. Tree removal

could impact nesting birds if conducted during the nesting season (March 1 through August 31). No birds are expected to use the ruderal grassland habitat on site for nesting.

Sections 4.2.1 through 4.2.3 address potential impacts to biological resources from development of the 10-acre project site. We include in our analysis impacts to both common and rare species, as well as to habitats that are not sensitive. The consideration of impacts to common species and habitats contributes to understanding cumulative impacts to the environment that may result from their loss. Sections 5.1.1 through 5.1.3 address mitigation measures for each of the identified biological resources.

4.2.1 Loss of habitat impacts

A. Ruderal grassland, disturbed, and non-native habitats: Development of the 10-acre property will result in the loss of ruderal grassland habitat and other disturbed and non-native habitat types.

B. Riparian: The riparian habitat in Meadow Creek could be impacted by development of the site. Impacts must be mitigated for at a ratio of 2 to 1 in aerial extent (habitat impacted to habitat replaced). Replacement habitat must have functions and values equivalent or improved from the impacted habitat.

C. Wetland: Wetland habitat in Meadow Creek could be impacted by development of the site. Filling of federal wetlands requires authorization and mitigation in kind or replacement at a ratio of 2 to 1 (typically) as required by the Corps of Engineers. The Corps will likely require a declaration of restrictive covenants and a deed restriction over wetland and adjacent upland habitat that is preserved, created, and enhanced. The state nexus regarding federal wetland is the required certification of a project by the Regional Water Quality Control Board under section 401 of the Clean Water Act when federal wetlands are filled. Impacts to state wetlands are generally addressed by the lead agency in consultation with the Department of Fish and Game.

D. Sensitive natural communities: No habitats listed by the Department of Fish and Game as sensitive natural communities occur on the conference center site. No impacts will occur to sensitive natural communities. Sensitive dune habitats are present adjacent to the project site, and should be carefully protected from impacts related to development of the site. Impacts to dune habitat are considered potentially significant, but mitigable.

4.2.2 Common wildlife impacts

A. Nesting habitat: Take of nesting birds could occur if tree removal or trimming is conducted during nesting season (March 1 through August 31). Take of common nesting birds is prohibited by federal and state code, and can be avoided by pre-construction surveys and appropriate timing of construction.

B. Reduction of movement corridors: Development of the entire parcel will prevent common wildlife species from crossing the property. The property is not considered a primary wildlife movement corridor in the area. The riparian corridor will not be impacted and is the primary movement corridor for small mammals on the property.

C. Displacement and/or take: Common wildlife species currently living on the property or using the property as transients will be displaced by development of the site. Take of common species may occur during construction activities. Anticipated displacement and/or take of common wildlife species on the project site will not substantially reduce their habitat or threaten the sustainability of their populations.

4.2.3 Rare species impacts

No rare species are expected to occur on the project site. Some rare plants and animals may occur in the natural habitats adjacent to the project site. If project implementation does not impact dune or riparian habitat adjacent to the project site, no impacts to rare species are anticipated.

5.0 Mitigation Recommendations

5.1 Biological resource mitigation recommendations

We recommend the following biological resource (BR) mitigation measures to prevent or mitigate for impacts to rare species and nesting birds.

5.1.1 Loss of habitat mitigations

A. Ruderal grassland, disturbed, and non-native habitats: The loss of ruderal and non-native habitat types does not require mitigation except where it affects listed species. The wildlife documented utilizing this habitat on the property are common species for which habitat loss does not require mitigation. Loss of habitat will not result in significant impacts to these common species.

B. Riparian: The riparian habitat is defined as the area between the outer edges of the riparian vegetation. The California Department of Fish and Game and San Luis Obispo County regulations require building set-backs from the edge of riparian habitat to protect this resource. We recommend a 50 foot set-back from the riparian habitat, unless otherwise negotiated with the Department of Fish and Game.

BR-1 Riparian habitat shall be protected from direct and indirect impacts where practicable. Riparian habitat protections include avoiding direct impacts to drainages such as culverts and crossings. Minimize indirect impacts by providing bio-filtration of storm water and designing detention for residential and roadway discharges.

BR-2 If impacts to the riparian zone are proposed, the following steps must be completed depending upon jurisdictional areas affected:

1. Permits must be obtained, as appropriate, from the California Department of Fish and Game (DFG Code 1600), the U.S. Army Corps of Engineers (Section 404 of the Clean Water Act), the Regional Water Quality Control Board (Section 401 of the Clean Water Act)

2. A mitigation, monitoring, and reporting plan will be prepared and approved by the County and other jurisdictional agencies, as appropriate (i.e., California Department of Fish and Game, U.S. Army Corps of Engineers, and the Regional Water Quality Control Board). Riparian mitigation will increase the aerial extent of riparian habitat on site at a two-to-one ratio (created riparian area to impacted riparian area). Functions and values of the created riparian zone must be comparable to the existing habitat.
3. Mitigation implementation and success will be monitored for three to five years, depending on the jurisdictional agencies' requirements.

BR-3 If site disturbance is proposed within 50 feet of riparian habitats, riparian protection and enhancement shall be monitored during construction.

1. Orange silt fence will be installed at the edge of proposed disturbance boundary.
2. The boundary will be labeled with highly visible signs that indicate "Riparian Protection Zone – No construction equipment or ground disturbance allowed"

BR-4 Habitat enhancements are to be required if impacts to the riparian zone are proposed. Enhancements shall include planting native trees and shrubs in order to increase the width and density of riparian habitat proportional to disturbed area at a two to one ration (enhanced area to disturbed area).

C. Wetland: Jurisdictional wetlands are present on the property and could be impacted by development of the site.

BR-5 Wetlands shall be protected from direct and indirect impacts where practicable. Minimize indirect impacts by providing bio-filtration of storm water and maintaining local hydrologic conditions that sustain existing wetland conditions. If ground disturbance is within 50 feet of wetlands they will be protected by:

1. Orange silt fence will be installed at the edge of proposed disturbance boundary.
2. The boundary will be labeled with highly visible signs that indicate "Riparian/Wetland Protection Zone – No construction equipment or ground disturbance allowed"

BR-6 Compliance monitoring during construction shall be required if ground disturbance is proposed within 50 feet of wetlands.

BR-7 If impacts to wetlands are proposed, the following steps will be taken:

1. Permits must be obtained, as appropriate, from the California Department of Fish and Game (DFG Code 1600-1616), the U.S. Army Corps of Engineers (Section 404 of the Clean Water Act),

the Regional Water Quality Control Board (Section 401 of the Clean Water Act)

2. An on-site monitor will be required during construction.
3. A mitigation, monitoring, and reporting plan will be prepared and approved by the County and other jurisdictional agencies, as appropriate (i.e., California Department of Fish and Game, U.S. Army Corps of Engineers, and the Regional Water Quality Control Board). Wetland mitigation will increase the aerial extent of wetland habitat on site at a two-to-one ratio (created wetland area to impacted wetland area). Function and values of the created wetland must be comparable to the existing wetland.
4. Mitigation implementation and success will be monitored for three to five years, depending on the jurisdictional agencies' requirements.

BR-8

Waters of the U.S. (Clean Water Act Section 404) were identified on site. Road improvements and drainage crossings may require bridges, culverts, and road widening that may impact waters and wetlands.

1. All of the permitting steps for wetlands (above) will be required.
2. Culverts shall be oversized and placed slightly below grade to allow small animal movement on natural substrate.

D. Sensitive Natural Communities: Impacts to sensitive dune habitats shall be avoided where practicable. A boardwalk for public access may impact a portion of dune habitat. Impacts to dune habitat shall be mitigated for by enhancing the adjacent dune habitat at a ratio of 2 to 1 (enhanced dune area to impacted dune area). Enhancements shall include replanting native dune vegetation and removal of exotic species. Rare species may be present in dune habitats. If impacts to sensitive natural communities are anticipated, the following biological resource mitigation shall be implemented:

BR-9

Prior to issuance of grading and building permits, A mitigation, monitoring, and reporting plan (MMRP) shall be prepared for the project that addresses the proposed impacts to sensitive communities and rare species, and describes mitigation plantings, monitoring schedule, and success criteria, and recommends remediation measures if success criteria are not met. The MMRP shall identify appropriate mitigation sites, methodologies, and costs for completion of a program that will result in no net change in the populations of impacted sensitive communities and rare species. Execution of the MMRP is to result in full mitigation of significant impacts to sensitive natural communities and rare species. All aspects of the MMRP must be approved by the City.

5.1.2 Common wildlife mitigations

A. Nesting habitat: Migratory non-game native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R. Section 10.13). Sections 3503, 3503.5 and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests including raptors and other migratory non-game birds (as listed under the Federal MBTA).

BR-10 **Immediately prior to ground disturbance activities,** if work occurs between March 1st and August 31st, nesting bird surveys shall be conducted. To avoid impacts to nesting birds, grading and construction activities that affect trees shall not be conducted during the breeding season from March 1st to August 31st. If construction activities must be conducted during this period, nesting bird surveys shall take place within one week of ground disturbance. If surveys do not locate nesting birds, construction activities may be conducted. If nesting birds are located, no construction activities shall occur within 200 feet of nests until chicks are fledged. Construction activities shall observe a 300 foot buffer for raptor nests.

B. Reduction of movement corridors: Impacts to the riparian zone should be minimized to protect local wildlife movement corridors on the property.

BR-11 Open space fences should not include game wire, no-climb wire, or impenetrable fencing, or should have animal passages at 150 foot intervals. Exterior lights shall be shielded to direct lighting to the ground.

C. Displacement and/or take: Wildlife expected to occur on the property includes common species such as red fox, mule deer, coyote, striped skunk, raccoon, black-tailed jackrabbit, and several species of rodents. Mitigations for impacts to common wildlife species are usually not required.

5.1.3 Rare species mitigations

The proposed project is not expected to impact rare species, so no mitigation is required. If the proposed project is changed or expanded, and rare species are likely to be impacted, focused surveys shall be required to identify the extent of occurrence, and to quantify the impacts. Complete description of mitigation requirements will be included in a mitigation, monitoring, and reporting plan (see BR-9).

6.0 References

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- United States Department of Agriculture, National Cooperative Soil Survey. 1983. Soil Survey of San Luis Obispo County, California, Paso Robles Area.
- United States Fish and Wildlife Service. 1996. National List of Plant Species that Occur in Wetlands: 1996 National Summary. U.S. Department of the Interior publication, Biological Report 88(24).

APPENDIX A –Maps

- **Habitat Overlay on Aerial Photograph**
- **Constraints Overlay on Aerial Photograph**

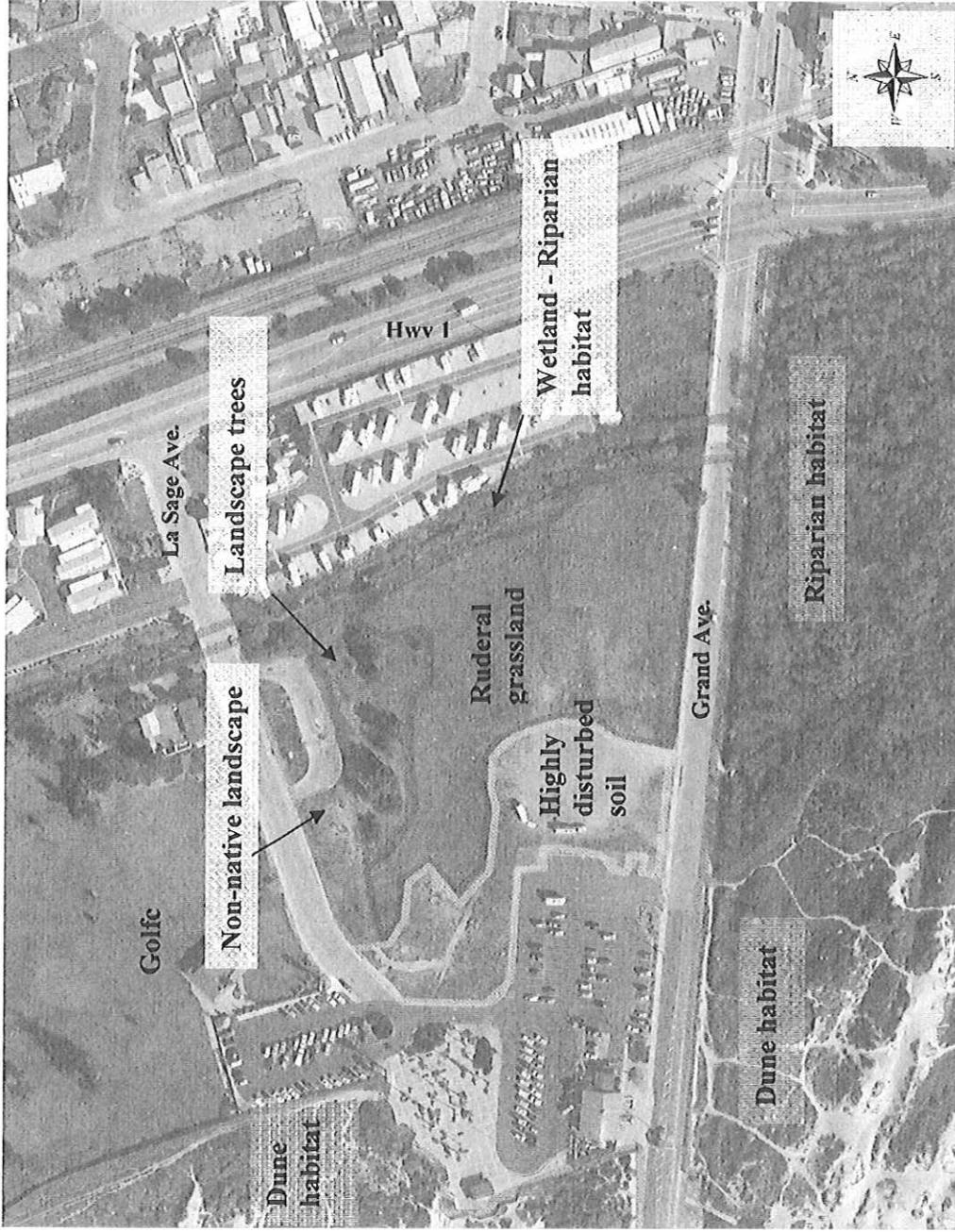


FIGURE 4: Habitat types in the vicinity of the property are outlined above.

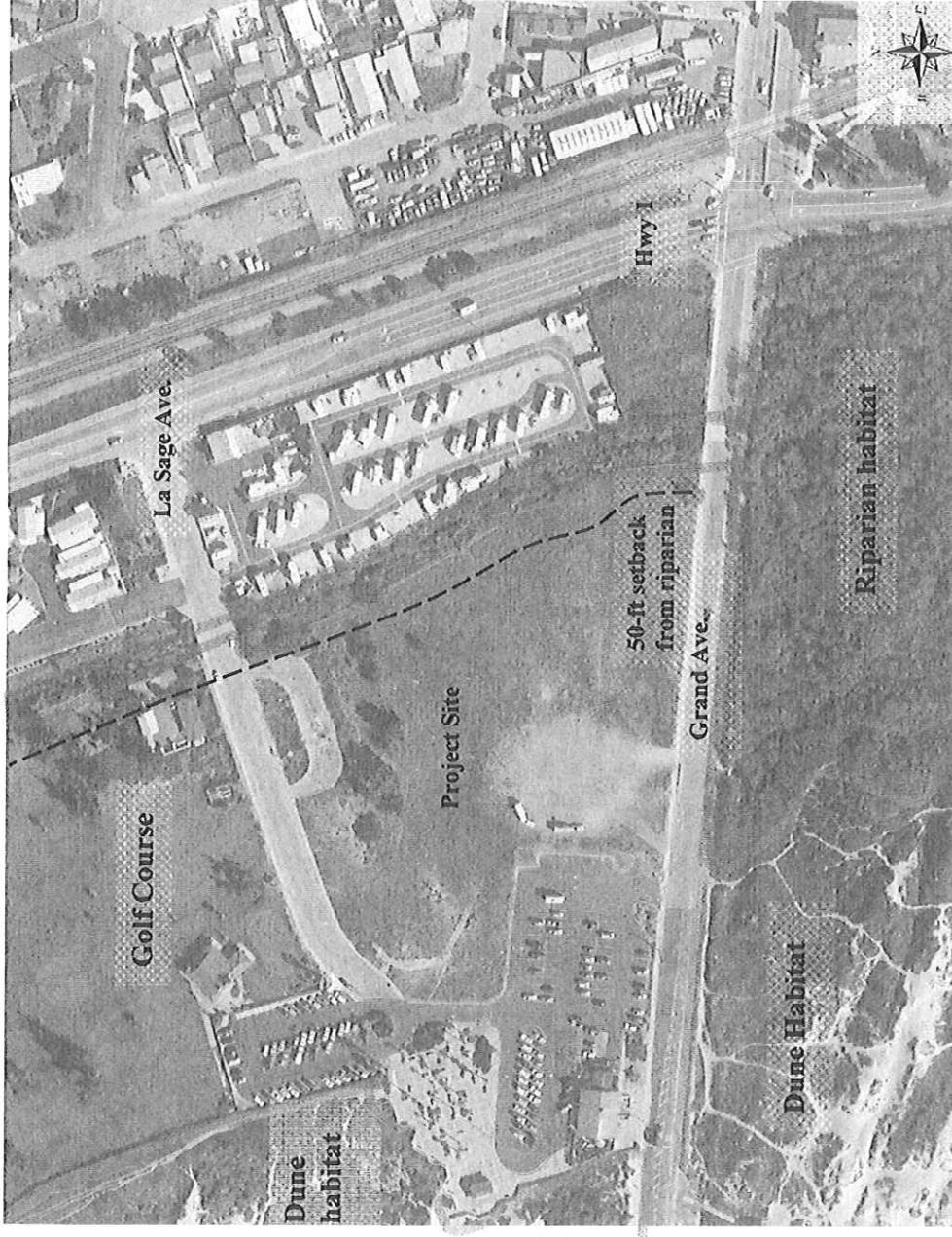


FIGURE 5: Constraints map on aerial photograph. Riparian areas contain wetlands and provide potential habitat for rare animal species such as California red-legged frog. Dunes are unique habitats that contain numerous rare plant species. The ruderal area is dominated by weedy, introduced species that thrive in disturbed habitats. The ruderal field also contains non-native trees planted many years ago.

APPENDIX B – Status Codes

Status Codes

Element Ranking

NDDDB Codes

Each plant is given a number based on its taxonomy and accession into the natural diversity database (NDDDB).

Global Ranking

- G1 = Less than 6 viable element occurrences (EO's), OR less than 1,000 individuals, OR less than 2,000 acres
G2 = 6-20 EO's OR 1,000-3,000 individuals OR 2,000-10,000 acres.
G3 = 21-100 EO's OR 3,000-10,000 individuals OR 10,000-50,000 acres.
G4 = Apparently secure. This rank is clearly lower than G3 but factors exist to cause some concern; i.e., there is some threat, or somewhat narrow habitat.
G5= Population or stand demonstrably secure to ineradicable due to being commonly found in the world.

State Ranking

(Same as Global ranking, plus threat designation attached to the S-rank)

- S1 = Less than 6 viable element occurrences (EO's), OR less than 1,000 individuals, OR less than 2,000 acres.
 S1.1 = very threatened
 S1.2 = threatened
 S1.3 = no current threats known
S2 = 6-20 EO's OR 1,000-3,000 individuals OR 2,000-10,000 acres.
 S2.1 = very threatened
 S2.2 = threatened
 S2.3 = no current threats known
S3 = 21-100 EO's OR 3,000-10,000 individuals OR 10,000-50,000 acres.
 S3.1 = very threatened
 S3.2 = threatened
 S3.3 = no current threats known
S4 = Apparently secure within California. This rank is clearly lower than S3 but factors exist to cause some concern; i.e., there is some threat, or somewhat narrow habitat. NO THREAT RANK.
S5= Population or stand demonstrably secure to ineradicable in California. NO THREAT RANK.

Note: By adding a question mark to the rank: e.g., S2? This represents more certainty than S2S3, but less than S2.

California Native Plant Society's (CNPS) Lists and R-E-D Code (Rarity, Endangerment, Distribution)

1A = Presumed extinct in California.

1B = Rare or Endangered in California and elsewhere.

2 = Rare or Endangered in California, more common elsewhere.

3 = Plants for which we need more information (Review list).

4 = Plants of limited distribution (Watch list).

R (Rarity)

1 Rare, but found in sufficient numbers and distributed widely enough that the potential for extinction is low at this time.

2 Distributed in a limited number of occurrences, occasionally more if each occurrence is small.

3 Distributed in one to several highly restricted occurrences, or present in such small numbers that it is seldom reported.

E (Endangerment)

1 Not endangered.

2 Endangered in a portion of its range.

3 Endangered throughout its range.

D (Distribution)

1 More or less widespread outside California.

2 Rare outside California.

3 Endemic to California.

APPENDIX C – California Red-legged frog survey