IV. ENVIRONMENTAL IMPACT ANALYSIS
C. BIOLOGICAL RESOURCES

INTRODUCTION

The information presented in this section is based on a site survey conducted by WRA on December 1, 2010 and the Biological Evaluation for the 721 Oddstad Boulevard Project prepared by Live Oak Associates, Inc. (see Appendix D).

ENVIRONMENTAL SETTING

The project site consists of an approximately 2.13-acre, rectangular-shaped property (APN 023-593-160) located in the southern portion of Pacifica in the northwestern region of San Mateo County, California, across the street from San Pedro Valley County Park. The site is bordered by the middle fork of San Pedro Creek to the southwest, the north fork of San Pedro Creek to the northwest, a shopping center to the northeast (Park Mall), and Oddstad Boulevard to the southeast. The surrounding land use is mixed residential and commercial. Historically, the site was farmed and used as a commercial nursery, and several outbuildings and a dilapidated greenhouse remain on-site. The site is relatively level at approximately 100 feet National Geodetic Vertical Datum (USGS 1980).

Two soils types are found on-site: Urban Land and Urban Land-Orthents, cut and fill complex. Neither of these soils types is known to be hydric (USDA 1961). These soils do not appear on the San Mateo County hydric soils list (USDA 2010).

The area of the site experiences a mild coastal climate of cool summers and winters, with temperatures generally ranging from 60°F to 70°F and 50°F to 60°F, respectively. Summer high temperatures occur in September, with temperatures rising to 70°F to 80°F and winter low temperatures ranging from 40°F to 50°F, generally lowest in January (USDA 1961). Annual precipitation in the general vicinity of the site averages 29.5 inches, most of which falls between October and March (NRCS 2011). Nearly all precipitation falls in the form of rain, though heavy fog also contributes to overall levels of precipitation.

Biotic Habitats

The following section provides a brief overview of the habitat types present within the project site, including landscape position. All plant species have been named according to *The Jepson Manual* (Hickman 1993). A list of all plant and wildlife species observed on the site during site surveys is presented below in Table IV.C-1 and IV.C-2, respectively.

Table IV.C–1
Plant Species Observed on the Project Site

Scientific Name	Common Name	Wetland Indicator Status
APIACEAE – Carrot Family		
*Conium maculatum**	Poison hemlock	FACW
*Foeniculum vulgare**	Sweet fennel	FACU
*Torilis arvensis**	Field hedge parsley	UPL
ASTERACEAE - Sunflower Family		
Artemisia douglasiana	Mugwort	FACW
Baccharis pilularis	Coyote brush	UPL
Baccharis salicifolia	Mulefat	FACW
*Carduus pycnocephalus**	Italian thistle	UPL
*Centaurea calcitrapa**	Purple star thistle	UPL
*Cichorium intybus**	Chicory	UPL
*Gnaphalium luteo-album**	Everlasting cudweed	UPL
*Senecio vulgaris**	Common groundsel	NI*
*Silybum marianum**	Milk thistle	UPL
Xanthium spinosum	Spiny cocklebur	FAC+
BORAGINACEAE – Borage Family		
*Echium candicans**	Pride of Madeira	UPL
*Myosotis discolor**	Forget-me-not	NI*
*Myosotis latifolia**	Broadleaf forget-me-not	UPL
BRASSICACEAE – Mustard Family		
*Brassica rapa**	Common mustard	UPL
*Raphanus sativus**	Wild radish	UPL
EQUISETACEAE – Horsetail Family		
Equisetum telmateia	Giant horsetail	OBL
FABACEAE – Legume Family		
*Medicago polymorpha**	Burclover	UPL
*Vicia sativa**	Spring vetch	FACU
GERANIACEAE – Geranium Family		
*Geranium dissectum**	Wild geranium	UPL
JUNCACEAE – Rush Family		
Juncus effusus	Soft rush	OBL
MALVACEAE – Mallow Family		
*Malva parviflora**	Cheeseweed mallow	UPL
ONAGRACEAE – Evening Primrose Family		
Epilobium brachycarpum	Panicled willowherb	UPL
PAPAVERACEAE – Poppy Family		
Eschscholzia californica	California poppy	UPL
POACEAE - Grass Family		
*Agrostis viridis**	Bentgrass	OBL
*Arundo donax**	Giant reed	FACW
*Avena barbata**	Slender wild oats	UPL
*Bromus diandrus**	Ripgut brome	UPL
*Bromus hordeaceus**	Soft chess	FACU-
*Bromus madritensis**	Foxtail chess	NI
*Cortaderia jubata**	Pampas grass	UPL
*Cynosurus echinatus**	Dogtail grass	UPL
*Ehrharta erecta**	Panic veldtgrass	UPL
*Holcus lanatus**	Velvetgrass	FAC

Scientific Name	Common Name	Wetland Indicator Status
*Hordeum murinum**	Foxtail barley	NI
*Lolium multiflorum**	Italian ryegrass	UPL
Phalaris californica	Canary grass	FAC
*Poa annua**	Annual bluegrass	FACW-
*Polypogon monspeliensis**	Rabbitsfoot grass	FACW
PRIMULACEAE – Primrose Family		
*Anagallis arvensis**	Scarlet pimpernel	FAC
SALICACEAE – Willow Family		
Salix laevigata	Red willow	UPL
Salix lasiolepis	Arroyo willow	FACW
SOLANACEAE – Nightshade Family		
Solanum sp.	Nightshade	Not Listed
URTICACEAE – Nettle Family		
Urtica dioica	Stinging nettle	FACW

Source: Live Oak Associates, Inc. November 4, 2009. Biological Evaluation for 721 Oddstad Boulevard
OBL = Obligate
FACW = Facultative Wetland
FAC = Facultative
FACU = Facultative Upland
UPL = Upland
+/- = Higher/lower end of category
NI = No investigation
** Introduced, non-native species*

Table IV.C–2
Wildlife Species Observed on the Project Site

Common Name	Scientific Name
BIRDS	
Allen's hummingbird	*Calypte anna*
Black phoebe	*Sayornis nigricans*
Violet-green swallow	*Tachycineta thalassina*
Common yellowthroat	*Geothlypis trichas*
MAMMALS	
Black-tailed deer	*Odocoileus hemionus*
Botta's pocket gopher	*Thomomys bottae*

Source: Live Oak Associates, Inc. November 4, 2009. Biological Evaluation for 721 Oddstad Boulevard

Urban Creek

San Pedro Creek is a perennial stream comprised of a total of five tributaries. The upper reaches are comprised of three main tributaries: the south, middle, and north forks. The south fork converges with the middle fork off-site near the border of San Pedro Valley County Park (southeast of the site). The north and middle forks of San Pedro Creek border the site at the point of their convergence where the main channel of the stream then flows to the Pacific Ocean. The middle fork of San Pedro Creek originates approximately 1.4 miles east of the project site in unincorporated San Mateo County and runs through San Pedro Valley County Park and passes under Oddstad Boulevard in a culvert before daylighting again on-site. The reach of the north fork associated with the project site measures approximately 110 linear feet

and is channelized off-site near the northernmost point of the property boundary. The reach of the middle fork associated with the site measures approximately 510 linear feet from where it emerges from under Oddstad Boulevard to the confluence with the North Fork.

Both reaches are littered with urban debris. Biotic values for the reaches of the north and middle forks of San Pedro Creek associated with the project site are low to moderate, offering some canopy cover and an understory comprised of a mixture of native and non-native plant species. Portions of the channels of the two forks of the stream occur within the property boundary. Both of these reaches of San Pedro Creek are considered to be a part of an urban creek system (Live Oak, 2009).

The canopy of the channelized reach of the north fork is dominated by blue gum eucalyptus (*Eucalyptus globulus*) on the opposite bank from the site (i.e., the west bank). While existing vegetation on the project side of the north fork is denser than that on the middle fork, both reaches share a similar vegetation matrix. The overstory and shrub layers include red willow (*Salix laevigata*), arroyo willow (*Salix lasiolepis*), nightshade (*Solanum* sp.), and mulefat (*Baccharis salicifolia*), while understory plants include poison hemlock (*Conium maculatum*), mugwort (*Artemisia douglasiana*), stinging nettle (*Urtica dioica*), forget-me-not (*Myosotis discolor*), foxtail barley (*Hordeum murinum*), velvetgrass (*Holcus lanatus*), panic veldtgrass (*Ehrharta erecta*), and bentgrass (*Agrostis viridis*). Additionally, the middle fork also supports a large stand of non-native, invasive giant reed (*Arundo donax*).

Healthy riparian systems offer a diversity of vegetative layers that tend to support a diverse array of native wildlife as well as provide movement corridors for wildlife. The reaches of San Pedro Creek associated with the project site, by contrast, offer only a low to moderate biotic value for wildlife due to a general lack of structural diversity, the dominance of the site by non-native, invasive plant species, channelization of the north fork, and the presence of residential and commercial buildings under the drip line or within 30 feet of the top of bank.

Riparian systems serve as dispersal corridors and islands of habitat for an estimated 83 percent of amphibians and 40 percent of reptiles in California (Brode and Bury 1984). Leaf litter and decaying logs provide a moist microclimate suitable for amphibians such as the Ensatina (*Ensatina eschscholtzii*), Arboreal Salamander (*Aneides lugubris*), California Slender Salamander (*Batrachoseps attenuatus*), Sierran Treefrog (*Pseudacris sierrae*), and Western Toad (*Bufo boreas*). Reptiles that may utilize riparian systems include the Western Fence Lizard (*Sceloporus occidentalis*), Western Skink (*Eumeces skiltonianus*), Southern Alligator Lizard (*Elgaria multicarinata*), and Western Terrestrial Garter Snake (*Thamnophis elegans*). None of these species were noted during reconnaissance surveys of the site.

Many bird species, both residents and winter migrants, depend on riparian plant communities for foraging and breeding habitat. Allen's Hummingbird (*Selasphorus sasin*), Common Yellowthroat (*Geothlypis trichas*), Black Phoebe (*Sayornis nigricans*), and California Towhee (*Pipilo crissalis*) were observed within this habitat during the Live Oak's June 2009 site visit. Other resident species that may be found in this habitat include Anna's Hummingbird (*Calypte*

anna), Acorn Woodpecker (*Melanerpes formicivorus*), Say's Phoebe (*Sayornis saya*), Hutton's Vireo (*Vireo huttoni*), and Western Scrub-jay (*Aphelocoma californica*). Raptors, including the Cooper's Hawk (*Accipiter cooperi*), Red-shouldered Hawk (*Buteo lineatus*), Red-tailed Hawk (*B. jamaicensis*) and Great Horned Owl (*Bubo virginianus*), may also be found in this habitat; however, only one Red-tailed Hawk was observed during reconnaissance visits to the site. Winter migrants may include the Sharp-shinned Hawk (*Accipiter striatus*) and Ruby-crowned Kinglet (*Regulus calendula).* Summer migrants may include the Ash-throated Flycatcher (*Myiarchus cinerascens*) and Black-headed Grosbeak (*Pheucticus melanocephalus*).

The structural and floral diversity of riparian zones attract and provide an abundant food source for a variety of mammalian species. Constituent mammals of riparian woodlands include Deer Mouse (*Peromyscus maniculatus*), Dusky-footed Woodrat (*Neotoma fuscipes*), Brush Rabbit (*Sylvilagus bachmani*) and Western Gray Squirrel (*Sciurus griseus*); however, none of these species was observed during site visits. Additional mammals that may occur in the area include various bat species, Coyote (*Canis latrans*), Gray Fox (*Urocyon cinereoargenteus*), Ringtail (*Bassariscus astutus*), Raccoon (*Procyon lotor*), Mountain Lion (*Puma concolor*), and Bobcat (*Lynx rufus*). Black-tailed Deer (*Odeocoileus hemionus columbiana*) were observed on-site during Live Oak's June 2009 survey.

Ruderal Field

The majority of the site consists of ruderal, non-native annual grassland habitat, which supports plant species adapted to both xeric and mesic environments. An abandoned greenhouse and several other small abandoned structures are present along the southwestern boundary of the site.

Dry (xeric) portions of the ruderal field are dominated by grasses and forbs of European origin, including slender wild oats (*Avena barbata*), foxtail barley, Italian wild rye (*Lolium multiflorum*), soft chess (*Bromus hordeaceus*), foxtail chess (*Bromus madritensis*), purple star thistle (*Centaurea calcitrapa*), Italian thistle (*Carduus pycnocephalus*), common mustard (*Brassica rapa*), and wild geranium (*Geranium dissectum*). Native vegetation occurring in this area includes coyote brush (*Baccharis pilularis*), panicled willowherb (*Epilobium brachycarpum*), and California poppy (*Eschscholzia californica*). Moist (mesic) portions of the ruderal field habitat support hydrophytic vegetation, including giant horsetail, soft rush (*Juncus effusus*), and rabbitsfoot grass (*Polypogon monspeliensis*).

The abandoned greenhouse was inundated at the time of Live Oak's June 2009 survey; the ponded water was attributed to a broken water pipe that has been capped since the time of the survey[1]. The greenhouse was overgrown with hydrophytic vegetation, including giant horsetail, poison hemlock, and rabbitsfoot grass. Pampas grass (*Cortaderia jubata*) was also observed

[1] *Personal communication between Live Oak Associates, Inc. and JC Engineering.*

growing in the greenhouse. The greenhouse was not inundated during the December 2010 site visit conducted by WRA.

Non-native annual grasslands can provide important habitat to many terrestrial vertebrates. As many as 25 species of reptiles and amphibians, 100 species of birds, and 50 species of mammals are known to use grassland habitats of central California (Mayer and Laudenslayer 1988). A number of these species are expected to utilize grasslands occurring on the site throughout all or part of the year as breeding and/or foraging habitat. However, a particular habitat's importance to the wildlife of a region can be affected by many factors, including the proximity of suitable nesting sites, the amount of available escape cover, the availability of water and food, as well as the amount of human disturbance. Many of the species that occur in the riparian area also occur in the grassland openings and rangeland of the site.

Reptile species, such as the Western Fence Lizard, California Alligator Lizard, skink, Ensatina, and Western Terrestrial Garter Snake may move from nearby habitats to grasslands on-site to forage for insects, small mammals, and birds.

Many resident and migratory birds breed and forage in grassland habitats and in grassland openings in mixed woodlands. Resident bird species likely to occur in non-native grasslands on-site include Mourning Dove (*Zenaida macroura*), Western Scrub-jay, American Crow (*Corvus brachyrhynchos*), and Red-winged Blackbird (*Agelaius phoeniceus*), During the site reconnaissance conducted by Live Oak Associates in June 2009, House Finch (*Carpodacus mexicanus*) and Violet-green Swallow (*Tachycineta thalassina*) were observed on-site. The following raptors may also forage for birds, small mammals, and reptiles in this habitat: White-tailed Kite (*Elanus leucurus*), Red-tailed Hawk, and American Kestrel (*Falco sparverius*).

Mammals are common within the annual grassland habitat present on the site. The grassland on-site supports Botta's Pocket Gopher (*Thomomys bottae*), the burrows of which were observed during the June site reconnaissance. Other small mammals likely to occur on-site include California Meadow Vole (*Microtus californicus*), Western Harvest Mouse (*Reithrodontomys megalotis*), and Ornate Shrew (*Sorex ornatus*). Small mammals often attract predators, including the reptile and bird species previously discussed. The larger mammals mentioned above that occur along the riparian corridor could also occur in the ruderal field habitat portion of the site.

Vegetation and Wildlife

The plants species listed in Table IV.C-1 were observed during the field survey conducted by Live Oak Associates on 12 June 2009. All plants have been named according to *The Jepson Manual* (Hickman 1993). The U.S. Fish and Wildlife Service (USFWS) wetland indicator status of each plant has been shown following its common name.

Special-Status Plants and Animals

Federal and state endangered species legislation gives special-status to several plant and animal species known to occur in the vicinity of the project site. In addition, state resource agencies and professional organizations, whose lists are recognized by agencies when reviewing environmental documents, have identified as sensitive some species occurring in the vicinity of the project site. Such species are referred to collectively as "species of special-status" and include plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered under the Federal Endangered Species Act (FESA) or the California Endangered Species Act (CESA); animals listed as "fully protected" under the California Fish and Game Code; animals designated as "Species of Special Concern" by the California Department of Fish and Game (CDFG); and plants listed as rare or endangered by California Native Plant Society (CNPS) [see regulatory setting section, below]. Collectively, these plants and animals are referred to as "special-status species."

For the purposes of this Draft EIR, all the special-status species addressed in the Live Oak 2009 Biotic Assessment, as well as additional special-status species identified in recent queries of the California Natural Diversity Data Base (CNDDB 2011) the CNPS Inventory (2011), and lists produced by the USFWS (2011), are addressed and evaluated. Those additional special-status species and those known to occur in habitats similar to those found on the project site are listed in Table IV.C-3. Sources of information for this table included:

- *California's Wildlife, Volumes I, II, and III* (Zeiner et. al 1988-1990)
- CNDDB (CDFG 2011)
- *Endangered and Threatened Wildlife and Plants* (USFWS 2009)
- *Annual Report on the Status of California State Listed Threatened and Endangered Animals and Plants* (CDFG 2009)
- *The CNPS's Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2011)
- CDFG publication "*Amphibians and Reptile Species of Special Concern in California*" (Jennings and Hayes 1994)
- CDFG publication "*California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California*" (Shuford and Gardali 2008)

In addition, the USFWS official species list for the quadrangles surrounding and including (Montara Mountain [448c]) the Study Area was consulted (USFWS 2011). The specific habitat requirements and the locations of known occurrences of each special-status species were the principal criteria used for inclusion in the list of species potentially occurring on the site.

A search of published accounts for all of the relevant special-status plant and animal species was conducted for the Montara Mountain United States Geologic Survey (USGS) 7.5-minute

quadrangle in which the project site occurs, and for the five surrounding quadrangles (Montara Mountain, Half Moon Bay, San Mateo, Woodside and San Francisco South) using the CNDDB Rarefind3 2011. All species listed as occurring in these quadrangles on CNPS Lists 1A, 1B, 2, 3, or 4 were also reviewed. This information was used to evaluate the potential for special-status plant and animal species that occur on-site. Thirteen special-status plants and 15 special-status animals occur in the vicinity of the study area. These species, and their potential to occur in the study area, are listed in Table IV.C-3.

Special-status Plant Species

Reconnaissance-level surveys were conducted on 21 April 2009 by Live Oak Associates and on December 1, 2010 by WRA for habitats capable of supporting special-status plant species. The CNDDB (2011) and CNPS (2011) records were queried to determine which special-status plant species could occur within habitats found at the project site. Specifically, the habitats queried were valley and foothill grassland, and riparian scrub at elevations that occur within the project site (0 to 120 feet, to be conservative in the analysis). Lastly, any additional species listed on the USFWS list (2011) were added. All of the species identified in these queries were compiled and considered for their potential to occur within the site.

Following an analysis of the microhabitat conditions associated with all of the species considered, and the edaphic (soil-related) factors that favor their occurrence, 19 species were determined to potentially occur on the site from the species originally considered for occurrence. Of these 19, 12 were considered unlikely to be present within the project area and seven were considered to be absent from the project area. Table IV.C-3 discusses the potential for occurrence of these special-status plant species in the general vicinity of the project site.

The majority of the species were rejected for occurrence based on one or more of the following reasons:

1. The species has a very limited range of geographic location and has never been observed in the vicinity of the project site.
2. Common plants which are nearly always associated with the special-status species, and which indicate the presence of suitable, intact habitat, are absent from the project site.
3. Specific, soil characteristics, such as serpentine soils or adobe clays, are absent from the project site.

Serpentine soils, outcrops, and inclusions are completely absent from the site; as such, those species that are uniquely adapted to serpentine conditions would not occur on the site. In addition to these factors, the project site is predominantly disturbed or is dominated by ruderal, non-native, invasive plant species. The plant species that occur in this habitat are tolerant of, or favored by, frequent disturbance, which tends to favor robust, fast-growing annuals which out-compete native plants, which are then unlikely to occur.

Certain species are not considered further: species that occur in habitats not present on the site (e.g., marshes, swamps and vernal pools, coniferous forest, chaparral, coastal scrub, etc.) or at elevations well above that of the site, species considered to be extirpated from the County by CNPS, and species the known distribution of which does not include the area of the site.

Sensitive habitats identified in the CNDDB (2011) query included valley needlegrass grassland, serpentine bunchgrass, Northern maritime chaparral, and Northern coastal salt marsh. None of these habitat types were identified within the study area. In addition, The CDFG List of California Vegetation Alliances (2009) was consulted for sensitive community types that may occur within the study area (state or globally sensitive, level 1-3). No sensitive alliances were observed on-site.

Special-status Wildlife Species

Animal species that are absent from the impact area of the site due to lack of suitable habitat or because the site is located outside their currently known range include Myrtle's Silverspot (*Speyeria zarene myrtleae*), Callippe Silverspot (*Speyeria callippe callippe*), Mission Blue (*Plebejus icariodes missionensis*), San Bruno Elfin (*Callophrys mossii bayensis*), Bay Checkerspot (*Euphydryas editha bayensis*), Tidewater Goby (*Eucyclogobius newberryi*), California Tiger Salamander (*Ambystoma californiense*), California Clapper Rail (*Rallus longirostris obsoletus*), Western Snowy Plover (*Charadrius alexandrinus nivosus*), Black Swift (*Cypseloides niger*), Bank Swallow (*Riparia riparia*), Alameda Song Sparrow (*Melospiza melodia pusillula*), Big Free-tailed Bat (*Nyctinomops macrotis*), Salt-marsh Harvest Mouse (*Reithrodontomys raviventris*), and American Badger (*Taxidea taxus*).

Although the previously listed plant and animal species are included in the special-status species search results for the five quadrangles related to the site, they are not included in Table IV.C-3 due to lack of suitable habitat on-site or within the immediate vicinity of the proposed project. Additionally, sufficient information regarding these species exists to evaluate the potential impacts the project may or may not have on them. Based upon this evaluation, only two species have the potential to occur on-site that merit additional discussion: Steelhead (*Oncorhynchus mykiss*) and Saltmarsh Common Yellowthroat (*Geothlypis trichas sinuosa*). A further discussion of the California Red-legged Frog (*Rana draytonii*), San Francisco Garter Snake (*Thamnophis sirtalis tetrataenia*), and monarch butterfly has also been included due to multiple sightings of the species in the project vicinity and the species' listing status. A habitat assessment and a search of historic records were conducted to establish the likely presence or absence on the site for these species. Below are detailed discussions that include an analysis of their legal status, ecology, and the suitability of the site and the waters adjacent to the site to support them.

Table IV.C–3
Special-Status Species That Could Occur in the Project Vicinity

Species	Status	Habitat	Occurrence in the Study Area
PLANTS			
Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act			
White-rayed pentachaeta (*Pentachaeta bellidiflora*)	FE, SE, CNPS List1B.1	Habitats: Valley and foothill grasslands, often on serpentinite, and cismontane woodlands. Elevation: 35-620 meters. Blooms: March-May.	**Absent**. The site supports poor habitat for this species. The nearest documented occurrence is approximately 3 miles northeast of the site (CNDDB 2011), but that population is believed to be extirpated.
Hickman's cinquefoil (*Potentilla hickmanii*)	FE, SE, CNPS List 1B.1	Habitats: Coastal bluff scrub, closed-cone coniferous forest, vernally mesic meadows and seeps, and freshwater marshes and swamps. Elevation: 10-149 meters. Blooms: April-August.	**Unlikely.** The site supports poor habitat for this species due to ongoing human disturbance. The nearest occurrence is less than 3 miles southwest of the site (CNDDB 2011).
Adobe sanicle (*Sanicula maritima*)	CR, CNPS List 1B.1	Habitats: Chaparral, coastal prairie, meadows and seeps, and valley and foothill grasslands on clay soils or serpentinite. Elevation: 30-240 meters. Blooms: February-May.	**Absent**. The site supports poor habitat for this species due to ongoing human disturbance. The nearest documented occurrence is from 1895 and is more than 3 miles from the site (CNDDB 2011), but that population is believed to be extirpated.
Other Special-Status Plants listed by the California Native Plant Society (CNPS)			
Franciscan onion (*Allium peninsulare* var. *franciscanum*)	CNPS List 1B.2	Habitats: Cismontane woodlands and valley and foothill grasslands on clay or volcanic soils or often on serpentinite. Elevation: 52-300 meters. Blooms: May-June.	**Unlikely.** The site supports poor habitat for this species due to ongoing human disturbance. The nearest and most recent documented occurrence of this species is from 1932, approximately 2.5 miles southeast of the site (CNDDB 2011).
Bent-flowered fiddleneck (*Amsinckia lunaris*)	CNPS List 1B.2	Habitats: Coastal bluff scrub, cismontane woodland, and valley and foothill grasslands. Elevation: 3-500 meters. Blooms: March-June.	**Absent.** The site supports poor habitat for this species due to ongoing human disturbance. The nearest occurrences of this species are more than 6 miles from the site (CNDDB 2011).
Alkali milk-vetch (*Astragalus tener* var. *tener*)	CNPS List 1B.2	Habitats: Playas, valley and foothill grasslands on adobe clay, and vernal pools, all on alkaline soils. Elevation: 1-60 meters. Blooms: March-June.	**Absent.** The site supports poor habitat for this species due to ongoing human disturbance. Additionally, alkaline soils are not present. The nearest documented occurrence from this species is from 1868, more than 5 miles from the site (CNDDB 2011).
Bristly sedge (*Carex comosa*)	CNPS List 2.1	Habitats: Coastal prairie, lake margins, marshes and swamps, and valley and foothill grasslands. Elevation: 0-625 meters. Blooms: May-September.	**Absent.** The site supports poor habitat for this species due to ongoing human disturbance. The nearest documented occurrence of this species is from 1866, more than 5 miles from the site (CNDDB 2011).

Species	Status	Habitat	Occurrence in the Study Area
Pappose tarplant (*Centromadia parryi* ssp. *parryi*)	CNPS List 1B.2	Habitats: Chaparral, coastal prairie, meadows and seeps, coastal salt marshes and swamps, and vernally mesic valley and foothill grasslands. Often occurs on alkaline soils. Elevation: 2-420 meters. Blooms: May-November.	**Unlikely.** The site supports poor habitat for this species due to ongoing human disturbance. The nearest documented occurrence of this species is from 2006, approximately 2.5 miles northwest of the site (CNDDB 2011).
Western leatherwood (*Dirca occidentalis*)	CNPS List 1B.2	Habitats: Broadleafed upland forests, closed-cone coniferous forests, chaparral, cismontane woodlands, North Coast coniferous forests, riparian forests, and riparian woodlands, in mesic areas. Elevation: 50-395 meters. Blooms: January-March.	**Unlikely**. Riparian habitat along the northwest and southwest edges of the site provides marginal to poor habitat for this species. The nearest documented occurrence of this species is approximately 3 miles southeast of the site (CNDDB 2011). Additionally, this species was not observed on the site during the June 2009 field survey.
San Francisco wallflower (*Erysimum franciscanum*)	CNPS List 4.2	Habitats: Chaparral, Coastal dunes, Coastal scrub, Valley and foothill grassland/often serpentinite or granitic, sometimes roadsides. Elevation: 0-550 meters Blooms: March-June	**Unlikely.** No serpentinite or granitic soils present on-site. The nearest documented occurrence of this species is approximately 3 miles southwest of the site on a steep gravelly slope above San Pedro Point California (Consortium of California Herbaria (2011).
Fragrant fritillary (*Fritillaria liliacea*)	CNPS List 1B.2	Habitats: Cismontane woodland, coastal prairie, coastal scrub, and valley and foothill grassland, often on serpentinite. Elevation: 3-410 meters. Blooms: February-April.	**Unlikely.** The site supports poor habitat for this species. The nearest documented occurrence of this species is more than 3 miles from the site (CNDDB 2011).
San Francisco gumplant (*Grindelia hirsutula* var. *maritima*)	CNPS List 1B.2	Habitats: Coastal bluff scrub, coastal scrub, and valley and foothill grassland. Occurs on sandy soils or serpentinite. Elevation: 15-400 meters. Blooms: June-September.	**Unlikely.** The site supports poor habitat for this species. The nearest documented occurrence of this species is more than 8 miles from the site (CNDDB 2011).
Diablo helianthella (*Helianthella castanea*)	CNPS List 1B.2	Habitats: Broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grassland. Elevation: 60-1300 meters. Blooms: March-June.	**Unlikely.** The site supports poor habitat for this species. The nearest documented occurrence of this species is more than 7 miles from the site (CNDDB 2011).
Pale yellow hayfield tarplant (*Hemizonia congesta* ssp. *congesta*)	CNPS List 1B.2	Habitats: Valley and foothill grasslands, sometimes on roadsides. Elevation: 20-560 meters. Blooms: April-November.	**Unlikely.** The site supports poor habitat for this species. The nearest documented occurrence of this species is more than 5 miles from the site (CNDDB 2010).

Species	Status	Habitat	Occurrence in the Study Area
Harlequin lotus (*Lotus formosissimus*)	CNPS List 4.2	Habitats: Broadleafed upland forest, Coastal bluff scrub, Closed-cone coniferous forest, Cismontane woodland, Coastal prairie, Coastal scrub, Meadows and seeps, Marshes and swamps, North Coast coniferous forest, Valley and foothill grassland/wetlands, roadsides. Elevation: 0-700 Blooms: March-July	**Unlikely.** The site supports poor habitat for this species. The nearest documented occurrence of this species is more than 8 miles east of the site between Crystal Springs and Millbrae, California (Consortium of California Herbaria (2011) .
Davidson's bush-mallow (*Malacothamnus davidsonii*)	CNPS List 1B.2	Habitats: Chaparral, cismontane woodland, coastal scrub, and riparian woodland. Elevation: 185-855 meters. Blooms: June-January.	**Unlikely**. Riparian habitats of the site provide marginal to poor habitat for this species. Additionally, the site's elevation is below that at which this species is known to occur. The nearest documented occurrence of this species is less than 3 miles from the site (CNDDB 2011).
San Francisco campion (*Silene verecunda* ssp. *verecunda*)	CNPS List 1B.2	Habitats: Sandy soils in coastal bluff scrub, chaparral, coastal prairie, coastal scrub, and valley and foothill grassland. Elevation: 30-645 meters. Blooms: March-June.	**Unlikely.** The site supports poor habitat for this species. The nearest documented occurrence of this species is from 1900 and is more than 3 miles from the site (CNDDB 2011).
Saline clover (*Trifolium depauperatum* var. *hydrophilum*)	CNPS List 1B.2	Habitats: Marshes and swamps, mesic and alkaline valley and foothill grasslands, and vernal pools. Elevation: 0-300 meters. Blooms: April-June.	**Absent.** The site supports poor habitat for this species. The nearest documented occurrence of this species is from 1886 and is more than 10 miles from the site (CNDDB 2011).
San Francisco owl's-clover (*Triphysaria floribunda*)	CNPS List 1B.2	Habitats: Coastal prairie, coastal scrub, and valley and foothill grassland, usually on serpentinite. Elevation: 10-160 meters. Blooms: April-June.	**Absent.** The site supports poor habitat for this species. The nearest documented occurrence of this species is more than three miles from the site. No occurrences of this species in the region have been documented since 1965 (CNDDB 2011).

Species	Status	Habitat	Occurrence in the Study Area
ANIMALS			
Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act			
Monarch (*Danaus plexippus*)	Winter roost sites monitored by CDFG	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, Monterey cypress), with nectar and water sources nearby.	**Possible.** Eucalyptus grove northwest of the project site provides potential winter roost habitat for this species.
Steelhead (*Oncorhynchus mykiss irideus*)	FT	Migrate up fresh water rivers or streams in the spring and spend the remainder of the time in the ocean.	**Present.** Steelhead are known to occur in the middle fork of San Pedro Creek a portion of which passes through the site or is otherwise adjacent to the site – they are unable to migrate upstream along the north fork beyond the site due to the channelization. It is presumed that steelhead spawn in the upper reaches of the middle fork near the headwaters and within San Pedro Valley County Park where the habitat is better for the species. The reaches of the stream associated with the project are not believed to support suitable breeding habitat for the species, and they are not expected to be able to navigate the channelized portion of the north fork. Steelhead are presumed to pass through the reach of the middle fork associated with the project (510 feet) on their way to reaches within San Pedro Valley County Park.
California Red-legged Frog (*Rana draytonii*)	FT, SSC	Permanent rivers, streams and stock ponds of the Sierra foothills and coast range, preferring deep pools with overhanging vegetation, or dense shrubby or emergent riparian vegetation for shading. Must have continuous water between 11 and 20 weeks for successful breeding and upland estivation habitat.	**Absent.** The reaches of the stream adjacent to the site do not support suitable habitat for the red-legged frog, due to the urban nature of the stream, various barriers to movement and predators, and isolation from known or potential habitat due to the developed nature of the area. Although there are 9 observations of the species within 3 miles of the site there is no potential for connectivity due to established urban development.
Western Pond Turtle (*Actinemys marmorata*)	SSC	Open slow-moving water of rivers and streams of central California with rocks and logs for basking.	**Absent.** There are no CNDDB observations of western pond turtles within 3 miles of the site. The reaches of San Pedro Creek adjacent to the site lack appropriate basking sites for the species.

Species	Status	Habitat	Occurrence in the Study Area
San Francisco Garter Snake (*Thamnophis sirtalis tetrataenia*)	FE, SE	Heavily vegetated ponds, reservoirs and streams of San Mateo County that support an ample population of native or introduced frogs for prey. Adjacent upland habitat supporting small mammal burrows is necessary for winter hibernation.	**Absent.** No suitable breeding habitat exists on-site for the SFGS. In addition, the site lacks a suitable prey base (moderate or abundant frog population). The site is an in-fill site surrounded by development and isolated from known historic populations of the species, the nearest of which is nearly 3 miles northeast of the site near Sneath Lane.
Peregrine Falcon (*Falco peregrinus*)	SE	Individuals breed on cliffs in the Sierra or in coastal habitats; occurs in many habitats of the state during migration and winter.	**Unlikely.** No peregrine falcons were observed on-site during either site visit, and the site does not support suitable breeding habitat. Furthermore there are no CNDDB observations of the species within 3 miles of the site. Wintering or migrating peregrine falcon may occasionally forage over the site.
Northern Harrier (*Circus cyaneus)*	SSC	Nests and forages in grassland habitats, usually in association with coastal salt and freshwater marshes. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas. May also occur in alkali desert sinks.	**Unlikely.** Project site is surrounded by urbanization. Typical open grassland habitat is not present.
White-tailed Kite (*Elanus leucurus*)	FP	Open grasslands and agricultural areas throughout central California.	**Possible.** Suitable breeding habitat exists within 250-feet of the site for this species and a small amount of foraging habitat is available in the open grassland of the site. However, no kites were observed during site surveys, nor have there been CNDDB observations within 3 miles of the site.
Long-eared Owl (*Asio otus*)	SSC	Riparian bottomlands grown to tall willows and cottonwoods; also, belts of live oak paralleling stream courses. Require adjacent open land productive of mice and the presence of old nests of crows, hawks, or magpies for breeding.	**Unlikely.** Surrounding urbanization reduces potential foraging habitat. In addition, human disturbance in vicinity of riparian habitat along stream likely preclude nesting attempts.
Burrowing Owl (*Athene cunicularia*)	SSC	Open, dry grasslands, deserts and ruderal areas. Requires suitable burrows. This species is often associated with California ground squirrels.	**Absent.** The site does not support appropriate breeding habitat (i.e., ground burrows of suitable size or refuge piles) for burrowing owls. Furthermore, there are not CNDDB observations of the species within 3 miles of the site.

Species	Status	Habitat	Occurrence in the Study Area
Vaux's Swift (*Chaetura vauxi*)	SSC	Redwood, Douglas fir, and other coniferous forests. Nests in large hollow trees and snags. Often nests in flocks. Forages over most terrains and habitats but shows a preference for foraging over rivers and lakes.	**Unlikely.** Typical nesting habitat is not present in the project site. This species may occasionally forage over the area during migration.
Olive-sided Flycatcher (*Contopus cooperi*)	SSC	Nesting habitats are mixed conifer, montane hardwood-conifer, douglas-fir, redwood, red fir and lodgepole pine. Most numerous in montane conifer forests where tall trees overlook canyons, meadows, lakes or other open terrain.	**Possible.** Documented occurrences in the vicinity of the project site (eBird 2011) during the breeding season suggest that this species may nest in the eucalyptus trees along the stream.
Loggerhead Shrike (*Lanius ludovicianus*)	SSC	Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub and washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	**Unlikely.** Project site is surrounded by urbanization. Typical open grassland habitat is not present.
Yellow Warbler (*Dendroica petechia*)	SSC	Frequents riparian plant associations. Prefers willows, cottonwoods, aspens, sycamores and alders for nesting and foraging. Also nests in montane shrubbery in open conifer forests.	**Unlikely.** Based on eBird data (2011), this species is typically a migrant through the project site; no observations were documented during the breeding season.
Saltmarsh Common Yellowthroat (*Geothlypis trichas sinuosa*)	SSC	Resident of the San Francisco Bay region, in fresh and salt water marshes. Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.	**Present.** The yellowthroat observed in the project site in June 2009 was likely associated with riparian habitat along the stream. According to Shuford, and Gardali. (2008), this subspecies breeds in riparian and tidal marsh areas throughout San Mateo County.
Yellow-breasted Chat (*Icteria virens*)	SSC	Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forage and nest within 10 feet of ground.	**Absent.** Although this species may rarely migrate through the area, suitable nesting habitat is not present. Not known to breed in San Mateo County (Shuford and Gardali 2008).

Species	Status	Habitat	Occurrence in the Study Area
Bryant's Savannah Sparrow (*Passerculus sandwichensis alaudinus*)	SSC	Associated with the coastal fog belt, primarily between Humboldt and northern Monterey Counties. Occupies low tidally influenced habitats, adjacent to ruderal areas; often found where Pickleweed communities merge into grassland. Infrequently found in drier grasslands. Builds nests in taller grasses and rushes along roads, levees, and water conveyance canals.	**Absent.** Typical open grassland and wetland habitats are not present in the project site.
Tricolored Blackbird (*Agelaius tricolor*)	SSC	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	**Absent.** Suitable areas of emergent wetlands and other nesting substrate are not present in the project site.
Pallid Bat (*Antrozous pallidus*)	SSC	Grasslands, chaparral, woodlands, and forests of California; most common in dry rocky open areas providing roosting opportunities.	**Unlikely.** The site provides marginally suitable foraging habitat for pallid bats. However, roosting habitat is absent from the site, and there are no CNDDB observations within 3 miles.
Townsend's Big-eared Bat (*Corynorhinus townsendii*)	SSC	Lives in a wide variety of habitats but most common in mesic sites. Day roosts highly associated with caves and mines. Need appropriate roosting, maternity, and hibernacula sites free from human disturbance.	**Unlikely.** Although the abandoned buildings may provide suitable cavern-like roost habitat, the species is unlikely to be present due to human disturbance and surrounding urbanization.
Western Red Bat (*Lasiurus blossevillii*)	SSC	This species is typically solitary, roosting primarily in the foliage of trees or shrubs. Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas. There may be an association with intact riparian habitat (particularly willows, cottonwoods, and sycamores).	**Unlikely.** Eucalyptus trees are generally not included in habitat descriptions of this bat. Low, dense riparian vegetation along stream does not provide high-quality roost habitat.
San Francisco Dusky-Footed Woodrat (*Neotoma fuscipes annectens*)	SSC	Found in hardwood forests, oak riparian and shrub habitats.	**Absent.** The habitat along the reaches of San Pedro Creek associated with site offer only marginal habitat for dusky-footed woodrats and no middens were observed. Furthermore, there are no CNDDB observations of the species within 3 miles of the site.

Species	Status	Habitat	Occurrence in the Study Area
Ringtail (*Bassariscus astutus*)	FP	Occurs in riparian and heavily wooded habitats near water.	**Unlikely.** Riparian habitat along San Pedro Creek offers only marginally suitable habitat for ringtail due to the general lack of vertical structure in the riparian vegetation and the highly urbanized reaches of the stream system adjacent to the project site. Furthermore, there are no CNDDB observations of the species within 3 miles of the site.

Explanation of Occurrences within the Study Area
***Present**: Species observed on the sites at time of field surveys or during recent past.*
***Possible**: Species not observed on the sites, but it could occur there from time to time.*
***Unlikely**: Species not observed on the sites, and would not be expected to occur there except, perhaps, as a transient.*
***Absent**: Species not observed on the sites, and precluded from occurring there because habitat requirements not met.*

STATUS CODES

Federal Endangered Species Act (ESA)
FE Federally Endangered
FT Federally Threatened
FPE Federally proposed for listing as Endangered
FPT Federally proposed for listing as Threatened

California Endangered Species Act (CESA)
SE State Endangered
ST State Threatened
SCE State candidate for listing as Endangered
SCT State candidate for listing as Threatened

California Department of Fish and Game
FP Fully Protected
SSC Species of Special Concern
WL Watch list

California Native Plant Society Listing (CNPS)
1A Plants Presumed Extinct in California
1B Plants rare, threatened, or endangered in California and elsewhere
2 Plants rare, threatened, or endangered in California but more common elsewhere
3 Plants about which information is needed-a review list
4 Plants of limited distribution-a watch list
.1 - seriously threatened in California (high degree/immediacy of threat)
.2 - fairly threatened in California (moderate degree/immediacy of threat)
.3 - not very threatened in California (low degree/immediacy of threats or no current threats known)

Source: Live Oak Associates, Inc. Biological Evaluation for 721 Oddstad Boulevard, November 4, 2009 and updated by WRA, January 2011.

Steelhead (*Oncorhynchus mykiss*)

Federally Threatened, State Species of Special Concern

The Central California coast Evolutionary Significant Unit (ESU) of Steelhead was listed as threatened by the National Marine Fisheries Service on 17 October 1997 (National Marine Fisheries Service 1997). The species was listed due to a presumed 85 percent decline in fish stocks between 1960 and 1997. These declines are presumed to be associated with negative effects caused by water development projects, predation by introduced fishes and invertebrates, modification of spawning streams by livestock grazing, agricultural activities, urbanization, water pollution, and overfishing (National Marine Fisheries Service 1997).

The Steelhead is a member of the rainbow trout complex of salmonids that is native to western North America and northeastern Asia (Moyle 2002). The taxonomy of this fish is very complex and also has a complicated history—largely due to indiscriminate mixing of stocks over the past 134 years (Moyle 2002). The species referred to in this report is the Central California coast ESU of steelhead by the National Marine Fisheries Service (1997).

Potential to Occur On-site

The data available on Steelhead activity in the immediate vicinity of the site are limited (Live Oak 2009 and San Pedro Creek Watershed Coalition).[2] The only suitable habitat for Steelhead associated with the project site occurs in the middle fork of San Pedro Creek because the channelizing and underground nature of the north fork (to the north of the property) greatly decreases the suitability of habitat for the species. Steelhead are likely unable to navigate the channelized, underground portion of the north fork.

The middle fork of San Pedro Creek associated with the site measures approximately 510 linear feet. It is assumed adult Steelhead pass the site in the middle fork on their way to and from spawning substrates located within San Pedro Valley County Park. Juvenile Steelhead are likely present in the riffle and run habitat of the reach adjacent to the project site as long as temperature conditions remain suitable.

Salt Marsh Yellowthroat (*Geothlypis trichas sinuosa*)

State Species of Concern

This subspecies of the common yellowthroat is found in freshwater marshes, coastal swales, riparian thickets, brackish marshes, and saltwater marshes. Their breeding range extends from Tomales Bay in the north, Carquinez Strait to the east, and Santa Cruz County to the south. This species requires thick, continuous cover such as tall grasses, tule patches, or riparian vegetation down to the water surface for foraging and prefers willows for nesting. It occurs year

[2] *San Pedro Creek Watershed Coalition. http://pedrocreek.org/fishcommittee.html*

round in the subspecies' breeding range and breeds from mid-March to late July. Fall and winter specimens identified as *sinuosa* document occurrence of some individuals south along the coast to San Diego and casually north to Eureka.[3]

Foster (1977) divided the breeding habitat of *sinuosa* into three broad types: woody swamp, brackish marsh, and freshwater marsh.[4] For the San Francisco Bay area as a whole, about 60% of yellowthroats occupy brackish marsh, 20% riparian woodland/swamp, 10% freshwater marsh, 5% salt marsh, and 5% upland. This yellowthroat occupies the ecotone between moist and upland situations, thus the proximity of various habitat types appears to enhance overall habitat suitability. Still, yellowthroats also use small and relatively isolated patches of habitat, including swales and seeps, where groundwater is close to the surface, but also occasionally nest in drier environments.[5] Yellowthroats build open-cup nests that are well concealed, typically near the ground in grasses, herbaceous vegetation (e.g., Poison Hemlock [*Conium maculatum*]), cattails, tules, and some shrubs (e.g., Coyote Brush [*Baccharis pilularis*]). Pairs can raise two broods and will renest following nest failure.[6]

Potential to Occur On-site

The yellowthroat is presumed on-site based on its association with riparian habitat and the June 2009 observation.

California Red-legged Frog (*Rana draytonii*)

Federally Threatened

The California Red-legged Frog (CRLF) was listed as Threatened by the USFWS under the authority of the Federal Endangered Species Act on May 23, 1996. The frog was listed because it had been extirpated from 70 percent of its historic range and remaining populations are currently threatened by a wide variety of human impacts (66 FR 14626). The critical habitat map for this species became effective in 2010. The project site is not within critical habitat for the CRLF. The nearest designated critical habitat is located southeast and east of the project site in San Pedro Valley County Park and adjacent parkland.

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[3] *Grinnell, J., and Miller, A. 1944. The distribution of the birds of California. Pac. Coast Avifauna 27.*

[4] *Foster, M. L. 1977. Status of the Salt Marsh Common Yellowthroat (Geothlypis trichas sinuosa) in the San Francisco Bay Area, California, 1975–1976. Calif. Dept. Fish & Game, Sacramento. Available at www.dfg.ca.gov/hcpb/info/bm_intro.shtml.*

[5] *Hobson, K., Perrine, P., Roberts, E. B., Foster, M. L., and Woodin, P. 1986. A breeding season survey of Salt Marsh Yellowthroats Geothlypis trichas sinuosa in the San Francisco Bay region. San Francisco Bay Bird Observatory report to U.S. Fish & Wildlife Services, Contract 84-57.*

[6] *Shuford, W.D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and CDFG, Sacramento.*

The CRLF is the largest native frog in California with adults attaining a length of 3.4-5.4 inches (85-138 mm) snout-to-vent length (SVL) (Jennings and Hayes 1994). The habitats observed to contain the largest densities of CRLF are associated with deep-water pools (27 inches [>0.7 meters] deep) with stands of overhanging willows (*Salix* spp.) and an intermixed fringe of cattails (*Typha latifolia*), tules (*Scirpus* spp.), or sedges (*Carex* sp.) (Hayes and Jennings 1988). However, CRLF have also been observed to inhabit stock ponds, sewage treatment ponds, and concrete pools completely devoid of vegetation (Storer 1925; Live Oak 2009). Continued survival of frogs in all aquatic habitats seems to be based on the continued presence of ponds, springs, or pools that are disjunct from perennial streams. Such habitats provide the continued basis for successful reproduction and recruitment year after year into nearby drainages that may lose frog populations due to stochastic events such as extreme flooding or droughts. Juvenile frogs are often observed sunning themselves during the day in the warm, surface-water layer associated with floating and submerged vegetation (Hayes and Tennant 1986). Adult frogs are largely nocturnal and are known to sit on stream banks or on the low hanging limbs of willow trees over pools of water where they can detect small mammal prey (Hayes and Tennant 1986, Jennings and Hayes 1994). Radio tracking studies conducted in lagoons and the lower portions of streams along the central coast of California show that adult CRLF will move within the riparian zone from well-vegetated areas to pools of water to hydrate during periods of time when many of the central coast streams are dry except for isolated pools (Rathbun et al. 1993). During wet periods (especially in the winter and early spring months), CRLF can move long distances (e.g., 1 mile) between aquatic habitats, often over areas that are considered to be unsuitable for frogs (e.g., roads, open fields, croplands, etc.). Such activities can result in frogs ending up in isolated aquatic habitats well away from the nearest known frog populations.

Potential to Occur On-site

Although CRLF have been documented by the CNDDB nine times within a three mile radius of the site, based on field observations and consultation with Dr. Mark Jennings, neither reach of San Pedro Creek associated with the project site offers suitable habitat for this species due mainly to the lack of deep pools, various barriers to movement, predators and a general lack of suitable upland habitat. The amount of urbanization between known populations of CRLF and the site has fragmented the landscape to an extent that CRLF are not expected to occur on the site or within its immediate vicinity. However, an individual CRLF may occasionally disperse along San Pedro Creek in winter. To avoid high flows during storm events, a dispersing frog may also enter adjacent uplands associated with the project site, but it would be unlikely to remain in the area due to the absence of surface water during the dry season.

San Francisco Garter Snake (*Thamnophis sirtalis tetrataenia*)

Federally Endangered, State Endangered

This snake was one of the first reptiles to be listed as Endangered by the USFWS in 1967 (USFWS 1985). The San Francisco garter snake (SFGS) is a medium sized (46-122 cm total

length), snake with 7 upper labial scales and a wide dorsal stripe of greenish yellow edged with black, bordered on each side by a broad red stripe followed by a black one (Barry 1978, Stebbins 1985). The belly is a bright greenish blue (often turquoise) and the top of the head is red (Stebbins 1985, Barry 1993).

SFGS are essentially restricted to San Mateo County, California (Stebbins 1959, Barry 1978). Historically, they occurred in aquatic habitats and adjacent uplands along the San Andreas Rift Zone from near Pacifica, southeast to the Pulgas Water Temple, and along an arc from the San Gregorio-Pescadero highlands, west to the coast, and south to Point Año Nuevo (Barry 1978, 1994; McGinnis 1984).

SFGS are most abundant in natural sag ponds or artificial waterways that have been allowed to develop a dense cover of vegetation (Barry 1993). This is due to the presence of large amphibian populations (especially native frogs), and many basking sites for juvenile and adult snakes that are relatively secure from potential predators (Barry 1994).

SFGS have disappeared from significant portions of their native range due to habitat loss from agriculture and urbanization--especially from housing developments and freeway construction (Medders 1976; USFWS 1985; Barry 1978, 1993). Declines also resulted from large numbers of snakes being collected for the pet trade (especially overseas) and SFGS continues to be illegally collected for pets despite stiff penalties for doing so (e.g., see Bender 1981). Today, about 70 percent of the remaining SFGS habitat is composed of artificially constructed aquatic sites such as farm ponds, channelized sloughs, and reservoir impoundments (Barry 1993). Such habitats are often managed in ways that are detrimental to the snake and its preferred prey of CRLF (Barry 1993, 1994; Larsen 1994, Jennings 1998).

Potential to Occur On-site

Although SFGS have been documented by the CNDDB two times within a three mile radius of the site, based on field observations and consultation with Dr. Mark Jennings, neither reach of San Pedro Creek associated with the project site offers suitable habitat for this species due mainly to the various barriers to movement, predators, isolation from historic populations, and a general lack of both prey and upland hibernation habitat. The presence of adjacent upland areas with abundant numbers of small mammal burrows is also important as hibernation sites for snakes during the winter (Larsen 1994). However, the amount of urbanization between known populations of SFGS and the site has fragmented the landscape to an extent that SFGS are not expected to occur on the site or within its immediate vicinity.

Monarch Butterfly (*Danaus plexippus*)

Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, Monterey cypress), with nectar and water sources nearby.

Potential to Occur On-site

The eucalyptus grove northwest of the project site, but outside the site itself, provides potential winter roost habitat for this species.

REGULATORY SETTING

There are a number of federal, state, and local regulations designed to protect biotic resources that are recognized as sensitive or of special importance. The following is a description of those regulations and how they apply to the biotic resources within the proposed project site.

Federal Regulations

Special-Status Species

The Federal Endangered Species Act (FESA) of 1973 prohibits federal agencies from authorizing, permitting, or funding any action that would jeopardize the continued existence of a plant or animal species listed or a candidate for listing as Threatened or Endangered under the ESA. If a federal agency is involved with a proposed action or project that may adversely affect a listed plant or animal, that agency must enter into consultation with the USFWS under Section 7 (a) (2) of the FESA.

Individuals, corporations, and state or local agencies with proposed actions or projects that do not require authorizing, permitting, or funding from a federal agency but that may result in the "take" of listed species or candidate species are required to apply to the USFWS for a Section 10(a) incidental take permit.

Project Applicability: As noted previously, no federally-listed or candidate special-status plant or animal species have been reported sighted on the project site other than the federally threatened steelhead.

Migratory Bird Treaty Act & Bald and Golden Eagle Protection Act

The Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711) makes it unlawful to possess, buy, sell, purchase, barter or "take" any migratory bird listed in Title 50 of the Code of Federal Regulations Part 10. "Take" is defined as possession or destruction of migratory birds, their nests or eggs. Disturbances that causes nest abandonment and/or loss of reproductive effort or the loss of habitats upon which these birds depend would be in violation of the MBTA.

The Bald and Golden Eagle Protection Act (16 U.S.C. 668) was passed in 1940 to protect bald eagles and was later amended to include golden eagles. Under the act it is unlawful to import, export, take, sell, purchase, or barter any bald eagle or golden eagle, their parts, products, nests, or eggs. Take includes pursuing, shooting, poisoning, wounding, killing, capturing, trapping, collecting, molesting, or disturbing eagles.

Project Applicability: The vast majority of birds found on the project site are protected under the MBTA, and by Fish and Game Code. Project construction has the potential to take nests, eggs, young or individuals of these protected species. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to the abandonment of nests.

Clean Water Act Section 404 & 401

The U.S. Army Corps of Engineers (Corps) and the U.S. Environmental Protection Agency (EPA) regulate the discharge of dredged or fill material into waters of the United States, including wetlands, under Section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344). Waters of the United States are defined in Title 33 CFR Part 328.3(a) and include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds. The lateral limits of jurisdiction in those waters may be divided into three categories – territorial seas, tidal waters, and non-tidal waters – and is determined depending on which type of waters is present (Title 33 CFR Part 328.4(a), (b), (c)). Activities in waters of the United States regulated under Section 404 include fill for development, water resource projects (such as dams and levees), infrastructure developments (such as highways and airports) and mining projects. Section 404 of the CWA requires a federal license or permit before dredged or fill material may be discharged into waters of the United States, unless the activity is exempt from Section 404 regulation (e.g., certain farming and forestry activities).

Section 401 of the Clean Water Act (33 U.S.C. 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States to obtain a certification from the state in which the discharge originates or would originate, or, if appropriate, from the interstate water pollution control agency having jurisdiction over the affected waters at the point where the discharge originates or would originate, that the discharge will comply with the applicable effluent limitations and water quality standards. A certification obtained for the construction of any facility must also pertain to the subsequent operation of the facility. The responsibility for the protection of water quality in California rests with the State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCBs). The RWQCB's Water Quality Control Plan for the North Coast Basin (Basin Plan) and the California Water Code define waters of the state as follows: '"Waters of the state' means any surface water or groundwater, including saline waters, within the boundaries of the state (Water Code §13050 (e))." This definition is broader than that of "waters of the United States" and consequently should always be considered when determining impacts upon water resources.

Project Applicability: Although a formal delineation has not been conducted on the site, jurisdictional waters are presumed to be present on and adjacent to the site in the form of the two forks of San Pedro Creek. San Pedro Creek is characterized as having a defined bed and

bank and is hydrologically connected to other Waters of the U.S., as the stream empties into the Pacific Ocean. The limit of Corps jurisdiction is the ordinary high water level.

The moist areas of the ruderal field likely meet the technical criteria of wetlands as defined by the Corps. Wetlands are only considered to be jurisdictional by the Corps if they connect to other Waters of the United States per the U.S Supreme Court decision *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (SWANCC Decision) and *Rapanos v. United States* and *Carabell v. U.S. Army Corps of Engineers* (referred together as the Rapanos decision). It is not known as to whether or not the field has been historically inundated or retains hydrologic characteristics by natural means. It has been suggested that the source of water responsible for the creation of these areas was a leaking underground pipe; however, to date, this has not been confirmed, and the leaking was presumably fixed in late June 2009 by capping the pipe. A formal wetland delineation would determine if a hydrologic connection is present.

State Regulations

California Endangered Species Act

The State of California enacted similar laws to the FESA, the California Native Plant Protection Act (NPPA) in 1977 and the California Endangered Species Act (CESA) in 1984. The CESA expanded upon the original NPPA and enhanced legal protection for plants, but the NPPA remains part of the California Fish and Game Code. To align with the FESA, CESA created the categories of "threatened" and "endangered" species. The State converted all animal species listed as "rare" under the FESA into the CESA as threatened species, but did not do so for rare plants. Thus, these laws provide the legal framework for protection of California-listed rare, threatened, and endangered plant and animal species. CDFG implements NPPA and CESA, and its Wildlife and Habitat Data Analysis Branch maintains the California Natural Diversity Database (CNDDB), a computerized inventory of information on the general location and status of California's rarest plants, animals, and natural communities. During the CEQA review process, CDFG is given the opportunity to comment on the potential of the proposed project to affect listed plants and animals.

Project Applicability: As noted previously, no state-listed or candidate special-status plant or animal species have been reported sighted on the project site.

The Natural Community Conservation Planning Act

The Natural Community Conservation Planning (NCCP) Act of 1991 represents an unprecedented effort by the State of California, and numerous private and public partners, to broaden its orientation and objectives beyond those of the CESA and FESA (refer to discussions above). The primary objective of the NCCP Act is to conserve natural communities at the ecosystem scale while accommodating compatible land use. The NCCP seeks to

anticipate and prevent the controversies and gridlock caused by species' listings by focusing on the long-term stability of wildlife and plant communities and including key interests in the process.

Project Applicability: See results for CESA and FESA, above.

Fully Protected Species & Species of Special Concern

The classification of "fully protected" was CDFG's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibian and reptiles, birds, and mammals. Most of the species on these lists have subsequently been listed under CESA and/or FESA. The Fish and Game Code sections (fish at §5515, amphibian and reptiles at §5050, birds at §3511, and mammals at §4700) dealing with "fully protected" species states that these species "…may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected species," although take may be authorized for necessary scientific research. This language makes the "fully protected" designation the strongest and most restrictive regarding the "take" of these species. In 2003, the code sections dealing with fully protected species were amended to allow CDFG to authorize take resulting from recovery activities for state-listed species.

Species of special concern (SSC) are broadly defined as animals not listed under the FESA or CESA, but which are nonetheless of concern to CDFG because they are declining at a rate that could result in listing or historically occurred in low numbers and known threats to their persistence currently exist. [7] This designation is intended to result in special consideration for these animals by CDFG, land managers, consulting biologist, and others, and is intended to focus attention on the species to help avert the need for costly listing under FESA and CESA and cumbersome recovery efforts that might ultimately be required. This designation also is intended to stimulate collection of additional information on the biology, distribution, and status of poorly known at-risk species, and focus research and management attention on them. Although these species generally have no special legal status, they are given special consideration under CEQA during project review.

Project Applicability: No fully protected special-status plant or animal species have been reported sighted on the project site. As noted in Table IV.C-3, species listed as special status by the CDFG have the potential to occur on-site.

[7] *The term Species of special concern (SSC) is defined in the CDFG CNDDB Special Animals List, January 2011.*

California Fish and Game Code Sections 3503 & 3513

According to Section 3503 of the California Fish and Game Code it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird (except English sparrows (*Passer domesticus*) and European starlings (*Sturnus vulgaris*)). Section 3503.5 specifically protects birds in the orders Falconiformes and Strigiformes (birds-of-prey). Section 3513 essentially overlaps with the MBTA, prohibiting the take or possession of any migratory non-game bird. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "take" by CDFG.

Project Applicability: As stated above under the MBTA, the vast majority of birds found on the project site are protected under the MBTA and the Fish and Game Code.

California Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 gave the California Fish and Game Commission the power to designate native plants as "endangered" or "rare" and protects endangered and rare plants from take.

Project Applicability: No State-listed plant species are expected to occur within the project area.

California Native Plant Society

The California Native Plant Society (CNPS) publishes and maintains an Inventory of Rare and Endangered Vascular Plants of California in both hard copy and electronic version.[8] The Inventory assigns plants to the following categories:

1A Plants Presumed Extinct in California

1B Plants rare, threatened, or endangered in California and elsewhere

2 Plants rare, threatened, or endangered in California but more common elsewhere

3 Plants about which information is needed-a review list

4 Plants of limited distribution-a watch list

.1 seriously threatened in California (high degree/immediacy of threat)

.2 fairly threatened in California (moderate degree/immediacy of threat)

.3 not very threatened in California (low degree/immediacy of threats or no current threats known)

Impacts to plants on lists 1 and 2 are typically assumed to meet CEQA's threshold of significance. The CNPS considers it to be mandatory that these species are fully considered

[8] *CNPS Rare and Endangered Vascular Plants of California Electronic Version: http://www.rareplants.cnps.org/. Accessed April 12, 2011.*

during the preparation of environmental documentation relating to CEQA. Therefore, this Draft EIR considers plants listed as 1 and 2 as special-status species. Very few list 3 and 4 plants meet the definitions of Section 1901 Chapter 10 Native Plant Protection Act or Sections 2062 and 2067 California Endangered Species Act of the CDFG Code and are eligible for state listing. However, the CNPS strongly recommends that these species be fully considered during the preparation of environmental documentation relating to CEQA. This may be particularly appropriate for the type locality of a List 4 plant, for populations at the periphery of a species range or in areas where the taxon is especially uncommon or has sustained heavy losses, or from populations exhibiting unusual morphology or occurring on unusual substrates. In addition, plants deemed significant by an experienced botanist may be considered to be significant under CEQA.

Project Applicability: Eleven plant species listed by the CNPS have the potential to occur within the project area based on historic occurrences in the project vicinity. However, these species are unlikely to occur on-site due to poor habitat quality (see Table IV.C-3).

Porter-Cologne Water Quality Control Act

Waters of the State are defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The RWQCB protects all waters in its regulatory scope, but has special responsibility for isolated wetlands and headwaters. These water bodies have high resource value, are vulnerable to filling, and may not be regulated by other programs, such as Section 404 of the CWA. Waters of the State are regulated by the RWQCB under the State Water Quality Certification Program, which regulates discharges of dredged and fill material under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. Projects that require a Corps permit, or fall under other federal jurisdiction, and have the potential to impact waters of the State are required to comply with the terms of the Water Quality Certification Program. If a proposed project does not require a federal license or permit, but does involve activities that may result in a discharge of harmful substances to waters of the State, the RWQCB has the option to regulate such activities under its State authority in the form of Waste Discharge Requirements or Certification of Waste Discharge Requirements.

Project Applicability*:* All channels within the project area fall under the jurisdiction of the RWQCB. Typically, the RWQCB claims jurisdiction up to the top-of-bank, but may extend jurisdiction to the edge of the riparian canopy dripline. In addition, the RWQCB claims jurisdiction over all wetland habitat on the site. Regardless of the Corps' determination of their regulatory authority over the on-site wetlands, if present, it is likely that the RWQCB will claim jurisdiction over these features. To accurately determine where jurisdiction is on the site, a formal jurisdictional delineation would be required.

California Fish and Game Code Section 1600

Streams, lakes, and riparian vegetation as habitat for fish and other wildlife species, are subject to jurisdiction by CDFG under Sections 1600-1616 of the California Fish and Game Code. Any activity that will do one or more of the following: 1) substantially obstruct or divert the natural flow of a river, stream, or lake; 2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or 3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake; generally require a 1602 Lake and Streambed Alteration Agreement. The term "stream," which includes creeks and rivers, is defined in the California Code of Regulations (CCR) as follows: "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation" (14 CCR 1.72). In addition, the term stream can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife.[9] Riparian is defined as, "on, or pertaining to, the banks of a stream;" therefore, riparian vegetation is defined as, "vegetation, which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself."[10] Removal of riparian vegetation also requires a Section 1602 Lake and Streambed Alteration Agreement from CDFG.

Project Applicability: The entire stream habitat located within the project area falls under the jurisdiction of the CDFG. Any impacts to this habitat, defined, typically, as including the stream channel up to the top-of-bank or to the edge of the riparian canopy dripline, whichever is greater, will require a Streambed Alteration Agreement from the CDFG.

Sensitive Vegetation Communities

Sensitive vegetation communities are natural communities and habitats that are either unique, of relatively limited distribution in the region, or of particularly high wildlife value. However, these communities may or may not necessarily contain special-status species. These sensitive natural communities are usually identified in local or regional plans, policies or regulations, or by CDFG (i.e., CNDDB) or the USFWS. Impacts to sensitive natural communities and habitats must be considered and evaluated under CEQA.

Project Applicability: The CNDDB (2011) lists four sensitive habitat types as occurring within the vicinity of the project site: valley needlegrass grassland, serpentine bunchgrass, Northern maritime chaparral, and Northern coastal salt marsh. None of these habitat types are present

[9] *California Department of Fish and Game. Environmental Services Division (ESD). 1994. A Field Guide to Lake and Streambed Alteration Agreements, Sections 1600-1607, California Fish and Game Code.*

[10] *California Department of Fish and Game. Environmental Services Division (ESD). 1994. Ibid.*

within the project area. In addition, upon review of the CDFG list of sensitive plant communities (2009) none of the community types are state or globally imperiled. However, the statewide loss of riparian, wetland, and aquatic habitat types has been significant and further discussion of these habitat types occurs below.

Local Regulations

City of Pacifica General Plan – Conservation Easement

- *Policy 2: Require the protection and conservation of indigenous rare and endangered species.*
    - Policy Applicability: Eleven plant species listed by the CNPS have the potential to occur within the project area based on historic occurrences in the project vicinity. However, these species are unlikely to occur on-site due to poor habitat quality (see Table IV.C-3).
- *Policy 3: Protect significant trees of neighborhood or area importance and encourage planting of appropriate trees and vegetation.*
    - Project Applicability: All trees associated with the project occur along the riparian corridor. The proposed project would be situated away from the riparian corridor and no trees measuring 50 inches in circumference are planned to be removed or trimmed. Additionally, the proposed project would replace existing invasive, non-native species along San Pedro Creek with native species.
- *Policy 7: Promote the conservation of all water, soil, wildlife, vegetation, energy, minerals, and other natural resources.*
    - Policy Applicability: The site improvements and building design would achieve a Silver LEED Certification or better. Rain water would be harvested and the parking is proposed to be underground to avoid a heat island effect. The proposed project would remove existing on-site nursery-related structures as well as invasive plant species and would landscape the site with native vegetation. The project includes the installation of on-site renewable energy/green power from solar panels and alternative transportation in the form of electric vehicles and vanpooling.

Ordinance-sized Trees

The City of Pacifica has a Heritage Tree Ordinance (Municipal Code, Section 4-12.02), which serves to protect heritage trees. Heritage trees are any trees within the City's boundary that measure 50-inches in circumference (approximately 16-inches in diameter) measured at 2-feet above natural grade, with the exception of eucalyptus; however, the ordinance also allows a

tree or grove of trees, including eucalyptus to be designated a heritage tree(s) by resolution of the City Council for special historical, environmental, or aesthetic value.

Project Applicability: All trees associated with the project occur along the riparian corridor. The proposed project would be situated away from the riparian corridor and no trees measuring 50-inches in circumference are planned to be removed or trimmed.

Habitat Conservation Plan, Natural Community Conservation Plan or Other Approved Local, Regional, or State Habitat Conservation Plan

Each of these types of conservation plans is generally designed to provide an effective framework to protect, enhance, and restore natural resources in specific areas, while improving and streamlining the environmental permitting process for impacts on threatened and endangered species.

Project Applicability: Neither the City of Pacifica or San Mateo County has a Habitat Conservation Plan (HCP) or Natural Community Conservation Plan in place, nor is either currently regulated by any other approved local, regional, or state HCP.

Coastal Commission and Local Coastal Program

Portions of Pacifica are in the Coastal Zone and are therefore under California Coastal Commission jurisdiction pursuant to The Coastal Act, Public Resources Code §§ 3000 et seq. The Project is not within the Coastal Zone and therefore is not subject to the Coastal Act or Coastal Commission jurisdiction.

ENVIRONMENTAL IMPACTS

Thresholds of Significance

This section describes potential impacts to biological resources that may occur as a result of the construction and operation of the proposed project. Development of the project area as proposed would ultimately result in conversion of some of the site's natural habitat into structures, pavement (roadway and parking areas), and landscaping. These proposed uses would have a number of impacts on the area's biological resources, which may constitute significant adverse effects. CEQA and the CEQA Guidelines provide guidance in evaluating project impacts and determining which impacts will be significant. CEQA defines "significant effect on the environment" as "a substantial adverse change in the physical conditions which exist in the area affected by the proposed project." Under CEQA Guidelines section 15065, a project's effects on biotic resources are deemed significant where the project would:

- "substantially reduce the habitat of a fish or wildlife species"
- "cause a fish or wildlife population to drop below self-sustaining levels"

- "threaten to eliminate a plant or animal community"
- "reduce the number or restrict the range of a rare or endangered plant or animal"

In addition to the section 15065 criteria that trigger mandatory findings of significance, Appendix G of the CEQA Guidelines provides a checklist of other potential impacts to consider when analyzing the significance of project effects. The impacts listed in Appendix G may or may not be significant, depending on the level of the impact. For biological resources, these impacts include whether the project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act?
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

This section describes the assumptions and thresholds of significance developed to evaluate impacts on the biological resources of the project site that would result from developing the proposed project. Two general assumptions that influence the assessment of impacts to the project site's biotic resources are as follows:

1. Direct impacts to plant and wildlife species are assumed to be correlated with the loss of habitats with which these species are associated. These losses would result from site excavation, grading, filling, infrastructure construction, or other damage to habitats such that they can no longer sustain a species, or so that the number of individuals that they sustain is reduced, and direct loss due to death or injury or disturbance by construction activities and human uses to the extent that the species cannot continue their lifecycle activities. The conversion of these natural communities to structures, landscaping, and infrastructure may therefore result in the loss of or reduction of use for some plant and animal species. The existing species are usually eliminated, but may be replaced with a suite of species that tolerate these development activities, but may not be as desirable, if suitable habitat is still

available. Removal of a sensitive habitat, such as wetlands, that is replaced by the development would be a permanent, direct impact. Direct impacts may also be temporary if they disturb a habitat that is subsequently restored or displace individuals of a given species that later return to the site.

2. Indirect impacts could also occur. If remaining fragments of undeveloped habitat are isolated from larger areas of contiguous habitat, the remaining habitats are expected to have lower biological values than those prevailing before development. Some species can no longer subsist in these smaller fragments, the fragments may be heavily influenced by surrounding stressors, or species may not reproduce successfully without exchange with other populations. Indirect impacts can occur in portions of the site not directly impacted, or to off-site habitats and species, due to such factors as degraded water quality; changes in hydrology; noise or dust from transport of soil or materials; disturbance of wildlife from human activities and domestic animals; predation by domestic and urban-adapted species; competition by introduced plant species; and other factors.

The following assumptions were made to complete this evaluation:

- Water quality treatment of runoff from the development will be located within the development footprint. The project would treat runoff, as described in Section IV.E (Hydrology and Water Quality).
- All site access for construction and the ultimate development would be from existing roadways only, specifically from Oddstad Boulevard.

Biological Resources Issues not Further Analyzed

The following issues were addressed in the Initial Study (see Appendix A) and Section IV.A of the Draft EIR and were determined to result in no impact or a less-than-significant impact and not warrant further analysis:

- Loss of or Temporary Impacts to Ruderal Habitat
- Temporary Loss of Urban Creek (Riparian) Habitat for Special-Status Plants
- Degradation of Water Quality in the Urban Creek Habitats and Downstream Waters
- Interfere with the Movement of Fish or Wildlife Species
- Conflict with Local Policies or Ordinances Protecting Biological Resources
- Conflict with the Provisions of an Adopted Habitat Conservation Plan

Project Impacts and Mitigation Measures

Impact BIO-1 Special-Status Wildlife Species

Impact BIO-1a: Disturbance to Raptors and Tree-Nesting Raptor Nests

One potential stick nest was observed during the June 2009 site visit in an off-site pine tree (*Pinus* sp.) that occurs within 250 feet of the site. There was no raptor activity noted in this tree, and it is likely the nest was not being used that year. Large trees such as the mature eucalyptus associated with the north fork of San Pedro Creek provide potential nesting habitat for raptors. If a raptor were to nest on the site (or within 250 feet) in the future prior to construction, such activities could result in the abandonment of active nests or direct mortality to these birds. Construction activities that adversely affect the nesting success of raptors or result in mortality of individual birds constitute a violation of state and federal laws and would be considered a ***potentially significant*** impact.

Mitigation Measure BIO-1a:

A qualified biologist shall conduct a pre-construction survey for tree-nesting raptors in all trees occurring within 250-feet of project building envelopes within 30 days of the onset of ground disturbance, if such disturbance will occur during the breeding season (1 February through 31 August). If nesting raptors are detected on the site during the survey, a construction buffer of 250 feet shall be established around each active nest for the duration of the breeding season or until it has been confirmed that all young have fledged and are independent. A qualified biologist shall monitor the site to ensure nesting raptors are not adversely affected by construction activities and to determine when young are independent. Pre-construction surveys during the non-breeding season are not necessary for tree-nesting raptors, as they are expected to abandon their roosts if disturbed by construction.

Implementation of the above measures would mitigate impacts to tree-nesting raptors to a ***less-than-significant*** level should they occur on-site prior to construction.

Impact BIO-1b: Impacts to Other Nesting Birds

The project site may contain or be adjacent to suitable nesting habitat for two CDFG Species of Special Concern: Olive-sided Flycatcher and Saltmarsh Common Yellowthroat. In addition, most actively nesting birds are protected under the Fish and Game Code and the Migratory Bird Treaty Act. Harm or disruption to nesting birds and/or their eggs or young as a result of project construction would be considered a violation of state and federal law, and therefore, would be considered a ***potentially significant*** impact.

Mitigation Measure BIO-1b:

To avoid impacting nesting birds (including CDFG Species of Special Concern), **one** of the following measures shall be implemented:

a) Conduct grading and construction activities from September 1st through January 31st, when birds are not likely to be nesting on the site;

   - OR -

b) Conduct pre-construction surveys for nesting birds if construction is to take place during the nesting season (February 1 through August 31). A qualified wildlife biologist shall conduct a pre-construction nest survey no more than 5 days prior to initiation of grading to provide confirmation of the presence or absence of active nests on or immediately adjacent to the Study Area. If active nests are encountered, species-specific measures shall be prepared by a qualified biologist and implemented to prevent abandonment of the active nest. At a minimum, grading in the vicinity of the nest shall be deferred until the young birds have fledged. A minimum exclusion buffer of 50 feet shall be maintained during construction, depending on the species and location. The perimeter of the nest-setback zone shall be fenced or adequately demarcated with staked flagging at 20-foot intervals, and construction personnel and activities restricted from the area. A survey report by the qualified biologist verifying that (1) no active nests are present, or (2) that the young have fledged, shall be submitted to the City prior to initiation of grading in the nest-setback zone. The qualified biologist shall serve as a construction monitor during those periods when construction activities occur near active nest areas to ensure that no inadvertent impacts on these nests occur.

Implementation of the above measure would mitigate impacts to nesting birds to a ***less-than-significant*** level should they occur on-site prior to construction.

Impact BIO-1c: Impacts to California Red-legged Frog

Depending on the time of year of proposed construction activities, build-out of the proposed project could have a direct effect on CRLF occurring in upland habitat. Individual CRLF that may disperse along San Pedro Creek in winter may on rare occasions enter upland habitat associated with the project site to avoid flows during flood events. Any potential direct effects to this species would be a ***potentially significant*** impact.

Mitigation Measure BIO–1c:

To minimize disturbance to dispersing or foraging CRLF, all grading activity within upland habitat (within 100 feet of aquatic habitat) shall be conducted during the dry season, generally

between May 1 and October 15, or before the onset of the rainy season,[11] whichever occurs first, unless exclusion fencing is utilized. Construction that commences in the dry season may continue into the rainy season if exclusion fencing is placed between the construction site and San Pedro Creek to keep the frog from entering the construction area. Additionally the following measures shall be implemented to lessen impacts to CRLF:

- Pre-construction surveys for CRLF shall be conducted prior to construction activities, and each day prior to the start of construction. If CRLF are observed in the construction area or access areas, they shall be removed from the area by a USFWS permitted biologist and temporarily relocated to nearby suitable aquatic habitat.
- Stream contours impacted by project related activities shall be returned to their original condition immediately following completion of restoration as much as feasible.
- Because dusk and dawn are often the times when CRLF are most actively foraging, all construction activities shall cease one half hour before sunset and shall not begin prior to one half hour before sunrise. Additionally, construction activities shall not occur during rain events, as CRLF are most likely to disperse during periods of precipitation.

Implementation of the above measures would mitigate impacts to CRLF to a ***less-than-significant*** level.

Impact BIO-1d: Impacts to Steelhead Habitat

Development of the proposed project would not have a direct affect on Steelhead, as no aquatic habitat would be altered. Therefore, no mitigation for impacts to adult or juvenile Steelhead is required. However, project construction, operation, and the restoration of vegetation along San Pedro Creek have the potential to indirectly impact the stream habitat through erosion and siltation (see also Impacts HYDRO-1 through HYDRO-3 in Section IV.E). Therefore, the proposed project activities could have a ***potentially significant*** impact.

Mitigation Measure BIO-1d:

The following measures shall be implemented to address potentially significant indirect impacts to stream habitat:

- The placement of fine mesh black fencing between the construction area and the banks of San Pedro Creek and wattles on the inside of fencing to minimize potential runoff into the stream.
- No construction activity shall occur within the bed or bank of the stream.

[11] *The rainy season includes periods when a ½-inch of rain or more is predicted within a 24-hour period and is generally between October and April.*

- Bio-swales shall be installed between the building envelope and the stream system to reduce any indirect impacts to the stream system after buildout.
- Appropriate Best Management Practices (BMP's) for the proposed project shall be developed in accordance with City regulations.

These measures would reduce potential indirect impacts to these species to a ***less-than-significant*** level.

Impact BIO-1e: Disturbance to Bat Species

No obvious signs of bats were observed on-site. However, there are several old outbuildings that offer potentially suitable roosting habitat for bats. All bat species are protected from disturbance during maternal roosting and winter hibernation. Impacts to bats would be ***potentially significant***.

Mitigation Measure BIO-1e:

One or more 3' x 3' portions of the roof on each existing on-site building shall be removed in the late afternoon at least three days prior to demolition, either between 15 February and 15 April or 15 August and 15 October. Demolition during these two times of the year will avoid the summer breeding season and the winter hibernation period. A qualified biologist shall determine the location of the openings to ensure bat roost habitat suitability is minimized.

Implementation of the above measure would mitigate impacts to bats to a ***less-than-significant*** level should they occur on-site prior to construction.

Impact BIO-2: Direct Impacts to Waters that May be Present On-site within Mesic (Moist) Ruderal Field Habitat (Jurisdictional Waters)

The 2009 Live Oak Biological Evaluation states that although a formal wetland delineation of the site has not been conducted, waters meeting the Corps' technical criteria for jurisdictional wetlands are presumed to be present on the site in the form of wetlands in the ruderal field, as well as those portions of the stream that occur within the property boundary. It was believed that the wetlands formed as a result of a leaking underground pipe. Because the pipe has presumably been repaired by capping the leak in late June 2009, Live Oak suggested that the site be revisited in one or two growing seasons to determine whether or not the mesic areas currently occurring in the ruderal field persist. Neither the Live Oak visit (2009) nor WRA's site visit (2010) identified any mesic areas within the ruderal field. However, until a formal wetland delineation is conducted to determine the extent to which any wetlands are present on the site, and given the proposed project involves grading of the entire site, impacts to wetlands would be ***potentially significant***.

Mitigation Measure BIO-2:

A formal wetland delineation shall be conducted on-site to determine the extent to which wetlands are present on the site. If the Corps determines that the wetland areas are Waters of the U.S. under Section 404 of the Clean Water Act, a Nationwide Permit and a Section 401 Water Quality Certification shall be required. However, if the Corps determines that the wetland areas are not jurisdictional, a Corps permit would not be required, and a Section 401 Water Quality Certification mayor may not be required.

If the wetland areas are determined to be jurisdictional by the Corps and/or RWQCB, the applicant shall provide mitigation for impacts to jurisdictional wetlands. The mitigation shall consist of compensatory mitigation at a ratio of at least 1: 1 (created or preserved to filled), unless otherwise dictated by the Corps and/or RWQCB. This mitigation requirement may be satisfied through the purchase of wetland credits at an agency approved mitigation bank or comparable mitigation site. The final mitigation proposal shall be reviewed and approved by the Corps and/or RWQCB.

If the Corps and RWQCB determine that the wetland areas are not jurisdictional, no compensatory wetland mitigation would be required due to the low value and function of the on-site wetlands.

Implementation of the above measures would mitigate potentially significant impacts to jurisdictional areas to a ***less-than-significant*** level should they occur on-site.

Impact BIO-3: Direct Impacts to Riparian Habitat within Urban Creek Habitat

Riparian habitat associated with the north and middle forks of San Pedro Creek is present on the site, and portions of the actual channels (i.e., bed and bank) occur within the project boundaries. The riparian zone of the creek encroaches into the site at an average of about 30 feet. The building improvements would be setback at least 30 feet from the riparian belt and an average of 48 feet total. The access road improvements would be set at least 25 feet away from the riparian belt. However, as shown in Figure III-8, two small portions totaling 213 square feet would encroach into the 25-foot setback because of space limitations caused by the only access point on the property.

For the purposes of this document, the primary purpose of a riparian buffer or setback is to minimize the effect of human development on the riparian system occurring on and adjacent to the site. Therefore, the existing condition of the riparian zone, including proximity of roads, development and trails, is critical for understanding the potential effects of any future development.

Although the proposed project would not result in a significant net loss of riparian habitat (e.g., woody vegetation) or other direct impacts to the urban stream system, indirect impacts including light and glare within the riparian corridor could occur as a result of the roadway being approximately 25 feet from the edge of the riparian belt. The proposed project has been

designed to reduce impacts to riparian habitat as a result of light and glare through the use of light pollution reduction features and vegetation massing. Light pollution reduction features include the use of automatic lights, maximization of interior luminaries, and limiting exterior lighting to 0.10 horizontal and vertical foot-candles (FTC) at the site boundary and no greater than 0.01 horizontal FTC beyond the site boundary. Additionally, due to the fact the driveway is close to the edge of the riparian corridor, the applicant would not use lighting along the driveway on the creek side and would plant a "screen" of red and arroyo willows to decrease the potential effects of car lights on the riparian system. Although a formal lighting and landscape plan have not been developed at this time, Figures III-21 and III-22 illustrate where landscaping and exterior lighting would be placed within the project site.

Other direct impacts to the riparian zone would be temporary and restoration of San Pedro Creek within the project area would be beneficial and would likely provide additional habitat for special-status species. However, many carnivores hunt under the cover of darkness, and during project operation, lighting or glare into the riparian corridor could cause stress to these animals, including limiting their ability to hunt normally. This is considered a ***potentially significant*** impact.

Mitigation Measure BIO-3a:

See Mitigation Measure BIO-1d above.

Mitigation Measure BIO-3b:

Compensation measures required to offset permanent encroachment impacts to the riparian corridor (approximately 213 square feet) of San Pedro Creek would: 1) help to improve the existing riparian corridor; and 2) increase the wildlife value on-site or for an off-site riparian system.

a) The first element of compensation for encroachment on the riparian system by the proposed project shall be to eradicate the giant reed (*Arundo donax*) and other non-native invasive species (i.e., forget-me-not) along the reach of riparian corridor associated with the site under the supervision of a qualified botanist. Once these invasive species are removed, native plants adapted to the local riparian system shall be planted to increase the structural diversity of the system and thus increase the wildlife value for the on-site riparian corridor. The applicant shall, prior to acquiring a grading permit, submit to the City for review and approval a Mitigation and Monitoring Plan that, at a minimum, details the plant mix (native plants consistent with this reach of the San Pedro Creek), planting location, the success criteria, and the monitoring schedule of the enhancement area. The enhancement plantings shall be installed at the inception of the proposed project and monitored for a period of five years. Drip irrigation shall be installed and maintained for a minimum of three years to ensure that the success criteria are met.

   - OR -

b) Due to the relatively small lot size (approximately 2.13 acres) and the configuration of the project, on-site mitigation for impacts from the roadway (approximately 213 square feet) to the riparian area may not be able to occur on-site. If mitigation could not occur on-site, either 1) a fee shall be paid to an organization that is restoring riparian systems in the watershed; 2) the applicant shall partner with City or County Parks to enhance a portion of a riparian system (preferably within the same watershed); or 3) mitigation credits shall be acquired through a mitigation bank to compensate for the encroachment into the riparian corridor (approximately 213 square feet). Compensation shall occur on a 1:1 enhancement to encroachment ratio.

Implementation of the above measures would mitigate potentially significant impacts to riparian areas to a ***less-than-significant*** level.

Impact BIO-4: Potential Spread of Non-native, Invasive Plant Species

Several non-native, invasive species occur on the site. Invasive species, particularly fast-growing herbaceous invaders, are often disturbance-adapted, and soil disturbance of the type that would occur during the construction of the proposed project is often followed by an aggressive invasion of the disturbed area by these species.

Under existing conditions, there are small populations of many non-native species throughout the project site; however, ground disturbance associated with the project would create new areas suitable for recruitment of these non-native species, many of which form dense, monotypic stands, eliminating any natural habitat that the area previously supported. Expansion of these invasive plant populations on the site would also increase the seed bank on the site allowing spread to natural habitats on the site not impacted by the proposed project. Invasion by these non-native species would degrade the functions and values of preserved natural habitat for native plants and wildlife species and reduce the potential for native species to use the landscaped areas within the new development. This is considered a ***potentially significant*** impact.

Mitigation Measure BIO–4:

To reduce the potential establishment or spread of non-native, invasive weed populations as a result of project activities, the following measures shall be implemented:

- Within areas subject to grading activities, concentrations of invasive species that could have a severe ecological impact on surrounding habitat (i.e., fennel, pampas grass) shall be removed prior to grading to limit the spread of seed to new areas.
- Maintain staging areas free of these weeds and their seeds for the duration of their use during project construction.
- If straw is used for road stabilization and erosion control, it shall be certified weed-free.

Implementation of the above measures would mitigate potentially significant impacts related to non-native, invasive weeds to a ***less-than-significant*** level.

CUMULATIVE IMPACTS

In the absence of project-specific mitigation, the impacts resulting from the project that are considered "less than significant with mitigation" would all contribute to cumulative impacts in the region. The overall cumulative effect of development is dependent on the degree to which significant vegetation and wildlife resources are protected or mitigated as part of individual developments. This includes preservation of areas of sensitive natural communities, protection of essential habitat for special-status plant and animal species, and avoidance of wetlands. Further environmental review of any specific development proposals in the vicinity of the site should generally serve to ensure that important biological and wetland resources are identified, protected and properly managed, and should serve to prevent any significant adverse development-related impacts. However, there may be significant impacts of an individual development cannot be fully mitigated and could contribute to significant cumulative impacts on biological and wetland resources as well.

Cumulative development contributes to an incremental reduction in the amount and connectivity of existing natural communities and wildlife habitat. Measures recommended to mitigate the proposed project's potential impacts on sensitive natural resources would serve to address much of the project's contribution to cumulative impacts. Some species may disperse through the ruderal habitat on the project site, but most wildlife presently using the site do so as part of their normal movements for foraging, mating, and caring for young. Although conversion of undeveloped habitat to residential development would diminish the existing wildlife foraging habitat on-site, restoration of San Pedro Creek within the immediate vicinity of the site helps offset the temporary loss of foraging habitat.

Implementation of the mitigation measures listed above would reduce the proposed project's potentially significant impacts to biological resources to less-than-significant levels. Therefore, cumulative impacts would be ***less than significant***.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Implementation of the mitigation measures listed above would reduce project impacts related to biological resources to a ***less-than-significant*** level.