Appendix C

Habitat Assessment

Rancho Palos Verdes Portuguese Bend Habitat Assessment
City of Rancho Palos Verdes, California

Prepared for:

City of Rancho Palos Verdes
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Revised January 2011

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RANCHO PALOS VERDES PORTUGUESE BEND HABITAT ASSESSMENT
CITY OF RANCHO PALOS VERDES, CALIFORNIA

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INTRODUCTION

Rincon Consultants herein present the results of the 2010 habitat assessment prepared for the proposed Portuguese Bend community development (Figure 1) of approximately 112 acres consisting of a total of 111 lots, 64 of which are developed and 47 are undeveloped. This assessment was prepared with respect to the proposed Zone 2 Landslide Moratorium Ordinance revisions which could facilitate the future development of up to 47 new single family residences on undeveloped lots within the Portuguese Bend community. Several of the undeveloped lots abut two of the ten Reserves that comprise the Palos Verdes Nature Preserve (PVNP), which was formed under the California Natural Community Conservation Planning (NCCP) Act of 1991. The intent of the survey was to identify where possible the presence or absence of habitat with the potential to contain rare, threatened, endangered, or special status (RTES) plants or wildlife species within the undeveloped lots of the Portuguese Bend community.

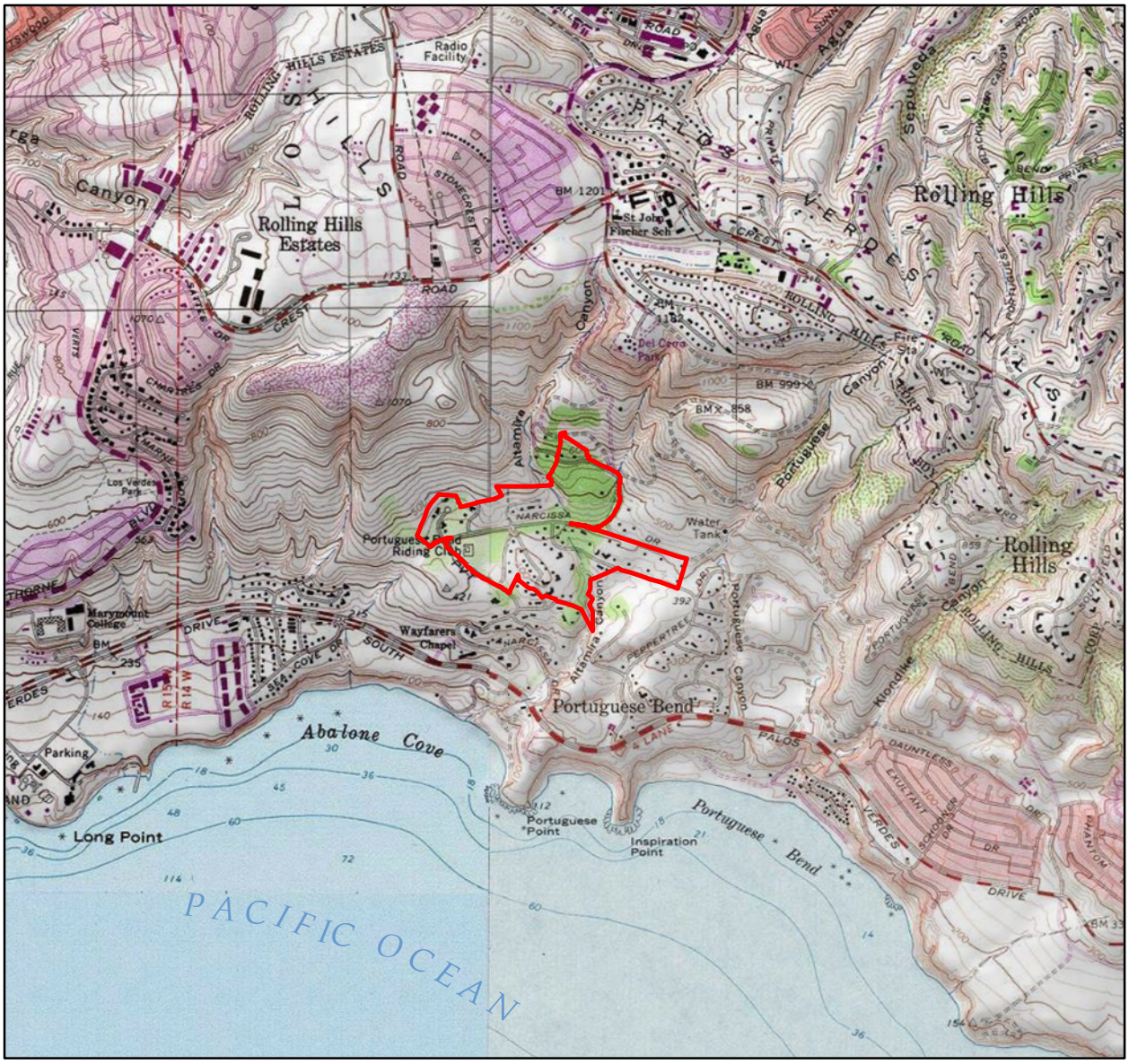
METHODOLOGY

Rincon Consultants' biologists Julie Broughton and Stephanie Lopez conducted a general habitat assessment survey of the undeveloped areas within the Portuguese Bend community associated with the proposed development to determine the quality of the habitat and the potential for presence of RTES plants or animals. A survey was conducted on May 4, 2010 to characterize the existing habitat conditions within the project boundary plus an additional 100-foot wide area at the perimeter (survey area - Figure 2). The reconnaissance-level survey included a rapid assessment of all vegetative habitat types to define relatively large, ecologically cohesive regions. Since access to individual lots was not provided, specific lot-by-lot searches for special status plant and animal species were not conducted. The field reconnaissance was performed via binocular survey from the roadside of the individual lots, and open space areas and the outside perimeter of lots were walked where access was available.

The survey effort was to be focused on those areas where undisturbed habitat types (i.e. coastal sage scrub and grassland) were thought to be present based on aerial photography. However, the survey effort indicated that almost all of the study area had been highly disturbed be various activities. Therefore, the survey concentrated on those areas containing irregular topography (i.e. slumps, swales, outcrops), changes or transitions in vegetative cover, and exposed rock outcrops because they represented the most suitable habitat for the target list of special-status species that were the focus of this investigation. General information gathered during the field reconnaissance included composition, habitat, site quality, dominant plant species, disturbance history and anthropogenic impacts. Assessment of the vegetative habitat types provides a method to define habitat quality and integrity for plant and animal distributions as well and the possible suitability for presence of special-status species. An aerial photograph with APN property boundaries was used during the field surveys to assist in accurately mapping the extent of habitats encountered.

EXISTING CONDITIONS

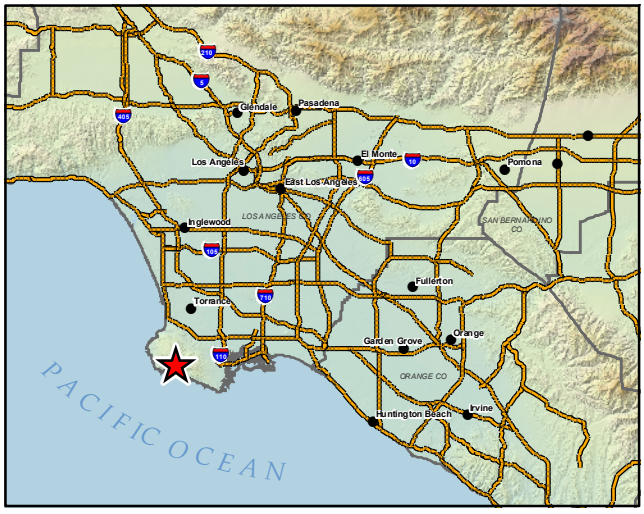
The habitats within the project boundary at the time of the survey included vacant individual residential lots and contained a high level of disturbance, landscaping and other human interaction. Readily available aerial photography examined prior to the survey suggested the presence of coastal sage scrub-dominated plant communities along the perimeter of the project



Map images copyright © 2010 ESRI and its licensors. All rights reserved. Used by permission. Additional data layer from Los Angeles County Assessor, August, 2010.

N 0 0.25 0.5 Miles

★ Project Location



Project Location Map Figure 1

Generalized Habitat Map
Figure 2

boundary. Furthermore, review of the maps prepared for the NCCP Preserve Properties (2004?) indicated the presence of host plants for Palos Verdes Blue Butterfly and coastal sage scrub adjacent to the northwestern portion of the site within the Upper Filiorum Reserve, and coastal sage scrub along Altamira Canyon. However, during the survey it was found that the perimeter of almost all of the study area had been recently mowed or 'weed-wacked' to approximately 10 inches in height, presumably for fire clearance. Binocular survey of the habitats outside the 100 foot wide buffer area observed patchy and highly disturbed coastal sage scrub habitat with limited distribution of California sage (*Artemisia californica*), California brittlebush (*Encelia californica*), blue elderberry (*Sambucus nigra* ssp. *canadensis*) and toyon (*Heteromeles arbutifolia*) surrounded by non-native annual herbs and grasses. The encelia-dominated coastal sage scrub mapped along Altamira Canyon at the northern project boundary was no longer intact, with the area grazed and mostly comprised of annual grassland with scattered native shrubs. Assessment of the existing habitats visible by the field reconnaissance, which was restricted to as visible from the roads of the study area and a 100 foot wide buffer area outside the project boundary, is best described by the following two habitat types. Please note that Figure 2 includes areas previously mapped as containing coastal sage scrub (maps available at http://palosverdes.com/rpv/planning/NCCP/index.cfm), and remnant stands may still be present, or could regrow in future years prior to development of individual lots.

Habitat Types

California annual grassland series/Ruderal/Disturbed Vegetation/Disturbed Areas. As described by Sawyer et al. (2009), this habitat series includes a collection of species-specific stands strongly dominated by annual or short-lived plants composed of many non-native and native annual species, lacking evenly distributed diagnostic native plants (usually under 5% relative cover) the composition of which varies among stands. The series is found at elevations ranging from 0 – 3900 feet. Biotic factors (precipitation, temperature, canopy cover and topography) can vary the composition even within a relatively small area (under 5 acres). While this is primarily defined as grassland, many annual herbaceous plants are commonly found within this habitat although the overall community height is no greater than 3 feet. As described by Holland (1986), the comparable anthropogenic-ruderal community includes plants and plant communities that thrive in disturbed areas commonly associated with waste areas, roadsides, agriculture, farming or similarly disturbed by human activity. Ruderal communities are dominated by non-native grasses or herbs originating from nearby cultivation, horticultural escapes or other outside sources (soil movement, animal disturbance).

The *2006 Initial Management And Monitoring Report For The Rancho Palos Verdes Draft Natural Community Conservation Plan And Habitat Conservation Plan* (Dudek, 2007) describes this habitat as either Disturbed Areas or Disturbed Vegetation and refers to plant associations on lands where the vegetation has been significantly altered. Disturbed Vegetation refers to habitats that occur on highly disturbed sites in urbanized areas (along roadsides, footpaths and previously graded areas) that support weedy broadleaf and grass species. Disturbed Areas refers to areas where vegetation has been significantly altered by frequent disking or mowing specifically associated with fire protection and little to no vegetation cover remains. These habitats support typically non-native weedy broadleaf species including Russian thistle (*Salsola tragus*), mustards (*Brassica* sps.), and annual non-native grasses.

The dominant species found within this habitat include tocalote (*Centaurea melitensis*), wild oats (*Avena fatua*), horehound (*Marrubium vulgare*), mustards (*Brassica nigra, Brassica campestris,*

Hirschfeldia incana), fennel (*Foeniculum vulgare*) and bromes (*Bromus diandrus, B. hordeaceus, B. madritensis* ssp. *rubens*). Around the perimeter of the Portuguese Bend community, this habitat had been mowed in a 100 foot swath presumably for prescribed fire clearance.

Exotic Woodland. This habitat includes non-native trees and shrubs planted in the past and naturalized along the Altamira Canyon drainage that bisects the Portuguese Bend community. Some of these introduced species are invasive and have dispersed into the adjacent grassland and native habitats. Within the survey area, this habitat abuts many of the developed properties and associated roadways. The dominant species found within this habitat include many non-native landscape trees including multiple gum trees (*Eucalyptus* sps.), pepper trees (*Schinus molle*), acacia (*Acacia* sps.), myoporum (*Myoporum laetum*), pines (*Pinus* sps.) and olive trees (*Olea europaea*). Some small remnant stands of coastal sage scrub vegetation are present in this habitat type along Altamira Canyon.

Wildlife

The following species were observed at the time of the survey: coyote (*Canis latrans*), California ground squirrel (*Spermophilus beecheyi*), Audubon's cottontail (*Sylvilagus audubonii*), western fence lizard (*Sceloporus occidentalis*), American crow (*Corvus brachyrhynchos*), red-tailed hawk (*Bufeo jamaicensis*), and mourning dove (*Zenaida macroura*). In addition to domesticated species such as dogs, cats, and horses, an extensive population (approximately 80 individuals) of Indian peacocks (*Pavo cristatus*) were observed scattered around the Portuguese Bend community.

SPECIAL-STATUS SPECIES

A list of special-status species targeted in this survey was developed based on a review of the California Natural Diversity Database RareFind3 (March 2010), species listed as part of the NCCP program, previous studies of the region, as well as Rincon staff knowledge of the area. Table 1 details the habitat requirements for special plants and Table 2 details the habitat requirements for wildlife.

Special-Status Species Definitions

Listed species are those taxa that are formally listed as endangered or threatened by the federal government (e.g. U.S. Fish and Wildlife Service [USFWS]), pursuant to the Federal Endangered Species Act (FESA) or as endangered, threatened, or rare (for plants only) by the State of California (i.e. California Fish and Game Commission), pursuant to the California Endangered Species Act (CESA) or the California Native Plant Protection Act. During the listing process for federal species, "critical habitat" may also be designated. Additional species are considered rare (but not formally listed) by various resource agencies, organizations with biological interests/expertise (e.g. Audubon Society, California Native Plant Society [CNPS], The Wildlife Society), and the scientific community. As part of the City's NCCP process, several taxa are included as "covered species" and are considered locally rare.

The CNPS' Inventory of Rare and Endangered Vascular Plants of California (CNPS 2001, 2006[1]) categorizes rare California plants into one of five lists (1A, 1B, 2, 3, and 4) representing five levels of species status, one of which is assigned to a sensitive species to indicate its status of rarity or endangerment and distribution. Most taxa also receive a threat code extension following the List (e.g. 1B.1, 2.3), which replaces the old R-E-D Code previously used by CNPS.

[1] Changes to the *Inventory* as published on CNPS website: http://www.cnps.org/programs/Rare_Plant/inventory/changes/changes_accepted.htm.

Table 1 provides a definition for each List code number, and Table 2 defines the Threat Code Extensions that indicates the level of endangerment within the state as determined by this organization. Please note that the CNPS Inventory is used as a tool by CDFG to help identify those plants that may qualify for listing under the CESA, with the formal list kept by CDFG being the *Special Vascular Plants, Bryophytes and Lichens List*.

Table 1. California Native Plant Society List Definitions

CNPS List	Definition
1A	Presumed Extinct in California
1B	Rare, Threatened, or Endangered in California and elsewhere
2	Rare, Threatened, or Endangered in California, but more common elsewhere
3	Need more information (a Review List)
4	Plants of Limited Distribution (a Watch List)

Table 2. California Native Plant Society List Threat Code Extensions

CNPS Threat Code Extension	Definition
.1	Seriously endangered in California (> 80% of occurrences threatened / high degree and immediacy of threat)
.2	Fairly endangered in California (20-80% occurrences threatened)
.3	Not very endangered in California (<20% of occurrences threatened)

The CNDDB Element Ranking system (Table 3) provides a numeric global and state-ranking system for all special-status species tracked by the CNDDB. The global rank (G-rank) is a reflection of the overall condition of an element (species or natural community) throughout its global range. The state rank (S-rank) is assigned much the same way as the global rank, except state ranks in California often also contain a threat designation attached to the S-rank.

Table 3. California Natural Diversity Database Element Ranking System

Global Ranking (G)	
G1	Less than 6 viable element occurrences (pops for species), OR less than 1,000 individuals, OR <809.4 hectares (ha) (2,000 acres [ac]).
G2	6 to 20 element occurrences OR 809.4 to 4,047 ha (2,000 to 10,000 ac).
G3	21 to 100 occurrences OR 3,000 to 10,000 individuals OR 4,047 to 20,235 ha (10,000 to 50,000 ac).
G4	Apparently secure; rank lower than G3, factors exist to cause some concern (i.e. there is some threat, or somewhat narrow habitat).
G5	Population, or stand, demonstrably secure to ineradicable due to being commonly found in the world.
GH	All sites are historic; the element has not been seen for at least 20 years, but suitable habitat still exists.
GX	All sites are extirpated; this element is extinct in the wild.
GXC	Extinct in the wild; exists in cultivation.
G1Q	The element is very rare, but there is a taxonomic question associated with it.
Subspecies Level: Subspecies receive a T-rank attached to the G-rank. With the subspecies, the G-rank reflects the condition of the entire species, whereas the T-rank reflects the global situation of just the subspecies or variety. For example: *Chorizanthe robusta* var. *hartwegii* is ranked G2T1. The G-rank refers to the whole species range (*Chorizanthe robusta*), whereas the T-rank refers only to the global condition of the variety (var. *hartwegii*).	
State Ranking (S)	
S1	Less than 6 element occurrences OR less than 1,000 individuals OR less than 809.4 ha (2,000 ac). S1.1 = very threatened S1.2 = threatened S1.3 = no current threats known
S2	6 to 20 element occurrences OR 3,000 individuals OR 809.4 to 4,047 ha (2,000 to 10,000 ac). S2.1 = very threatened S2.2 = threatened S2.3 = no current threats known
S3	21 to 100 element occurrences OR 3,000 to 10,000 individuals OR 4,047 to 20,235 ha (10,000 to 50,000 ac). S3.1 = very threatened S3.2 = threatened S3.3 = no current threats known
S4	Apparently secure within California; this rank is clearly lower than S3 but factors exist to cause some concern (i.e., there is some threat, or somewhat narrow habitat). NO THREAT RANK.
S5	Demonstrably secure to ineradicable in California. NO THREAT RANK.

SH	All California sites are historic; the element has not been seen for at least 20 years, but suitable habitat still exists.
SX	All California sites are extirpated; this element is extinct in the wild.
Notes	
1. Other considerations used when ranking a species or natural community include the pattern of distribution of the element on the landscape, fragmentation of the population/stands, and historical extent as compared to its modern range. It is important to take an aerial view when ranking sensitive elements rather than simply counting element occurrences.	
2. Uncertainty about the rank of an element is expressed in two major ways: by expressing the rank as a range of values (e.g. S2S3 means the rank is somewhere between S2 and S3), and by adding a ? to the rank (e.g. S2?). This represents more certainty than S2S3, but less than S2.	

Special Status Plants

Due to the highly disturbed and landscaped nature within the project boundary and the recently mowed condition of the 100 foot buffer area at the time of the May 2010 field reconnaissance, none of the eleven (11) special status plants are considered to be likely to be found within the survey area. Special status plants could potentially occur within the patchy coastal sage scrub outside the survey area but none were observed during the reconnaissance survey. Additionally no rare plants were found to be in the near vicinity of the Portuguese Bend community during previous botanical surveys conducted for the Draft NCCP/HCP (Dudek, April 2007). No critical habitat for listed threatened or endangered plants occurs within the survey area (U.S. Fish and Wildlife Service (USFWS) Critical Habitat Portal (http://criticalhabitat.fws.gov). The following table discusses the special status plant species and their regulatory status, habitat and ecological requirements.

Table 4. Habitat Requirements for Special Status Plant with the Potential for Occurrence

Common Name	Scientific Name	Status* Fed/State Listing/State Rank/CNPS/	Habitat Requirements and Potential for Occurrence
Aphanisma	*Aphanisma blitoides*	--/--/S1.1/1B.2/RPV	Sandy soil near the coast in coastal bluff scrub and coastal sage scrub at elevations between 10 to 200 feet. Small annual herb blooming April to May. *No potential for occurrence, habitat lacking.*
South coast saltscale	*Atriplex pacifica*	--/--/S2.2/1B.2/RPV	Coastal bluffs, coastal sage scrub and alkali playas from 0 – 450 feet. Prefers sandy openings between shrubs in xeric and mildly disturbed locales. Small, wiry, prostrate annual herb blooming March – October. *No potential for occurrence, habitat lacking.*
Parish's brittlescale	*Atriplex parishii*	--/--/S1.1/1B.1/	Shadscale scrub, alkali sink, freshwater wetlands, and wetland-riparian. Alkaline or clay soils below 1000 feet. Blooms June – October. *No potential for occurrence, habitat lacking.*
Davidson's saltscale	*Atriplex serenana var. davidsonii*	--/--/S2?/1B.2/	Coastal bluff scrub, Coastal scrub with alkaline soils at elevations between 30 – 650 feet. Blooms April – October. *No potential for occurrence, habitat lacking.*
Southern tarplant	*Centromadia parryi* ssp. *australis*	--/--/S2.1/1B.1/RPV	Salt marsh margins, mesic valley and foothill grasslands, vernal pools and alkaline areas below 1,400 feet. Blooms May – November. *No potential to occur on site, habitat lacking.*
Catalina crossosoma	*Crossosoma californicum*	--/--/S3.2/1B.2/RPV	Dry, rocky slopes and canyons in coastal sage scrub below 1,600 feet. Deciduous shrub blooming that can reach 16 feet, blooms February - May. *No potential to occur on site, habitat lacking.*

Table 4. Habitat Requirements for Special Status Plant with the Potential for Occurrence

Common Name	Scientific Name	Status* Fed/State Listing/State Rank/CNPS/	Habitat Requirements and Potential for Occurrence
Island green dudleya	*Dudleya virens* ssp. *insularis*	--/--/S2.2/1B.2/RPV	Steep slopes in chaparral, coastal bluff scrub and coastal sage scrub below 1,300 feet. Bright green perennial succulent with basal rosette from caudex, blooms April - June. *No potential to occur on site, habitat lacking.*
Santa Catalina island desert-thorn	*Lycium brevipes* var. *hassei*	--/--/S1.1/1B.1/RPV	Coastal bluff slopes in coastal bluff scrub and coastal sage scrub at elevations below 1,000 feet. Deciduous shrub that can reach 13 feet high, blooms June. *No potential to occur on site, habitat lacking.*
Lyon's pentachaeta	*Pentachaeta lyonii*	FE/SE/S2 /1B.1/RPV	Openings in chaparral and valley/foothill grasslands near the coast at elevations below 500 feet. Diminutive annual herb that blooms March - April. Normally found in soils derived from volcanic rocks. *No potential to occur on site, habitat lacking.*
Brand's star phacelia	*Phacelia stellaris*	FC/--/S1/1b.1/--	Coastal dunes and coastal scrub at elevations below 400 meters. Annual herb that blooms March – June. *No potential to occur on site, habitat lacking.*
Woolly seablite	*Suaeda taxifolia*	--/--/S2S3/4.2/RPV	Coastal bluffs and margins of salt marshes at elevations below 50 feet. Perennial herb that blooms May – October. *No potential to occur on site, habitat lacking.*

Source: DFG CNDDB Special Vascular Plants, Bryophytes, and Lichens List, April 2010; CNDDB 5-mile search radius, April 2010

FE = Federally Endangered; FT = Federally Threatened;
FC = Federal Candidate; FSC = Federal Species of Concern;
SE = State Endangered; SR = State Rare; RPV = listed in Rancho Palos Verdes Subarea Plan as sensitive.

S1=<6 Eos (viable element occurrences) or <1,000 individuals or <2,000 acres
S2=6-20 Eos or 1,000-3,000 individuals or 2,000-10,000 acres
S3=21-80 Eos or 3,000-10,000 individuals or 10,000-50,000 acres

Special Status Wildlife

Due to the highly disturbed and landscaped nature within the project boundary and the recently mowed condition of the 100 foot buffer area, none of the twelve (12) special status wildlife species are likely to be found within the survey area except on a rare, transient basis. Special status wildlife could potentially occur within the patchy coastal sage scrub outside the survey area, but no suitable habitat for these species, including larval and adult host plants, were observed within the study area boundaries. The following table discusses the listed wildlife species and their regulatory status, habitat and ecological requirements.

Table 5. Special Status Wildlife Species with the Potential for Occurrence

Common Name	Scientific Name	Status	Habitat Requirements and Potential for Occurrence
sandy beach tiger beetle	*Cicindela hirticollis gravida*	--/--/S1/--	Inhabits areas adjacent to non-brackish water along the coast, primarily within sand dunes. *No potential for occurrence, habitat lacking.*
coastal cactus wren	*Campylorhynchus brunnelcapillus*	--/--/S3/SSC/NCCP (San Diego & Orange Counties only)	Inhabits coast sage scrub habitat dominated by patches of tall *Opuntia* cactus. Only the sub-populations in Orange and San Diego Counties are considered special status (Shuford & Gardali, 2008). *Suitable nesting habitat not within study area, rarely a cactus wren may use landscaping shrubs on a transient basis.*

Table 5. Special Status Wildlife Species with the Potential for Occurrence

Common Name	Scientific Name	Status	Habitat Requirements and Potential for Occurrence
Western beach tiger beetle	*Cicindela latesignata latesignata*	--/--/S1/--	Mudflats and beaches. *No potential to occur on site, habitat lacking.*
monarch butterfly	*Danaus plexippus*	--/--/S3/--	Overwinters and roosts in wind-protected trees in close proximity to host milkweed plants (*Asclepius* sp.) and nectar food sources. Because this animal is abundant on a national basis, resource concerns are related to aggregate winter roosts. *While Monarchs occur in the study area, no winter aggregate areas are known to be present.*
El Segundo blue butterfly	*Euphilotes battoides allyni*	FE/--/S1/Xerces-CI/RPV	Remnant coastal dune habitats, with coast buckwheat as the larval food source. *No potential to occur on site, habitat and host plants absent.*
Mohave tui chub	*Gila bicolor mohavensis*	FE/FP/SE/S1/--	Found in lacustrine environments with deep pools and slow moving water. *No potential to occur on site, habitat lacking.*
Palos Verdes blue butterfly	*Glaucophsyche lygdamus palosverdesensis*	--/--/S1/RPV	Restricted to open coastal sage scrub habitats supporting preferred larval food source (milk vetch or deerweed). *Not expected to occur within study area; no host plants observed in visible survey area.*
San Diego desert woodrat	*Neotoma lepida intermedia*	--/--/S3?/SSC/	Prefers coastal scrub habitat. Constructs houses with twigs usually in rock outcrops, rocky cliffs and slopes. *Limited potential to occur in study area along drainages, habitat generally lacking.*
pocketed free-tailed bat	*Nyctinomops femorosaccus*	--/--/S3/SSC/	Prefers rock crevices in cliffs for roosting. Feeds on wide variety of flying insects. *Unlikely to roost in area as no rock crevices/cliffs present.*
Pacific pocket mouse	*Perognathus longimembris pacificus*	FE/S1/SSC/RPV	Coastal strand, sand dunes, ruderal vegetation on river alluvium, and open coastal sage scrub on marine terraces. *Not expected to be present given the altered landscape; suitable habitat generally lacking.*
Coastal California gnatcatcher	*Polioptila californica californica*	FT/SSC/RPV/NCCP	Coastal and inland sage scrub primarily below 2,000 feet. *Suitable habitat lacking within study area; occasional transient bird may occur in landscaping shrubs, along drainages, and in residual sage scrub stands.*
El Segundo flower-loving fly	*Rhaphiomidas terminatus terminatus*	--/--/S1/--	Confined to the El Segundo sand dunes ecosystem and portions of the Los Angeles River sandy alluvial plain. *No potential to occur on site, habitat lacking.*
California brackish water snail	*Tryonia imitator*	--/--/S1/--	Inhabits coastal lagoons, estuaries and salt marshes. Found only in permanently submerged areas. *No potential to occur on site, habitat lacking.*

Source: DFG CNDDB Special Animals list, July 2009; CNDDB 5-mile search radius, April 2010

FE = Federally Endangered; FT = Federally Threatened;
FC = Federal Candidate; FP= Federally Protected, Department of Fish and Game; FSC = Federal Species of Concern;
SE = State Endangered; SR = State Rare; SSC=Species of Special Concern, Department of Fish and Game; Xerces Society-CI=Critically Imperiled;
RPV = listed in Rancho Palos Verdes Subarea Plan as sensitive.
S1=<6 Eos (viable element occurrences) or <1,000 individuals or <2,000 acres
S2=6-20 Eos or 1,000-3,000 individuals or 2,000-10,000 acres
S3=21-80 Eos or 3,000-10,000 individuals or 10,000-50,000 acres

Coastal California Gnatcatcher. Coastal California gnatcatcher (CAGN) is listed as a federally threatened species (USFWS 1993) and a CDFG Species of Special Concern. Coastal California gnatcatcher is the northernmost of three subspecies currently recognized for the species. It is restricted to arid, lowland areas and has a range from southwestern California to northwestern Baja California. The remaining two subspecies occur within central and southern Baja California, Mexico. Within the U.S., the current range of the coastal California gnatcatcher is generally within San Diego, Orange, Los Angeles, eastern Ventura and western Riverside counties. It is a permanent resident of coastal sage scrub-dominated plant communities generally below 2,000 feet and while strongly associated with coastal sage scrub, it will also use chaparral, grassland, and riparian plant communities where they occur adjacent to or

intermixed with sage scrub. While it is found in coastal sage scrub, not all areas classified as coastal sage scrub are occupied (CDFG 2009). Shorter, less dense shrubs, without a chamise component, are generally used. The breeding season of the CAGN extends from about February 15 through August 31, with the peak of nesting activity occurring from mid-March through mid-May. CAGN normally requires at least five to ten acres of coastal sage scrub for nesting and foraging (Birds of North America, http://bna.birds.cornell.edu/bna), but near coast breeding pairs have been found in coastal sage scrub habitat in areas as small as two to three acres. CAGN have been observed breeding in small patches of suitable sage scrub surrounded by urban development, with the smallest such successful patch being 0.5 acres (Mock 2004). Despite the patchiness of CAGN distribution, the density of CAGN was highest in high-quality habitat and decreased as habitat quality decreased. Recent estimates of population size within more than 111,000 acres of quality habitat by Winchell and Doherty (2008), as reported by the US Fish and Wildlife Service (September 2010), indicate it is likely that more gnatcatchers are present in the U.S. portion of the range than was suggested by earlier estimates. Given that more than 600,000 acres of habitat has been modeled in southern California and the population range estimate by Winchell and Doherty (2008), potential population size within the United States may range from 5,000 – 10,000 pairs.

The survey area contains no intact coastal sage scrub habitat, with only some scattered stands of this vegetation type apparently left along Altamira Canyon. Because coastal California gnatcatchers are present within the adjacent Palos Verdes Nature Preserve, with known presence in the Upper Filiorum Reserve to the north of the study area (URS, July 2004), an occasional transient bird may be found on rare occasions within the study area, but no breeding or long term residency is likely or expected given the lack of suitable habitat. No protocol level studies are recommended for the study area as it does not contain the Primary Constituent Elements (PCEs) for the coastal California gnatcatcher, namely coastal sage scrub habitat or non-sage scrub habitat near to coastal sage scrub that could provide space for dispersal, foraging, and nesting.

Palos Verdes Blue Butterfly. Palos Verdes blue butterflies are small thumbnail-sized butterflies that were federally listed as endangered by the U.S. Fish and Wildlife Service in 1980. By 1983, biologists feared the Palos Verdes blue butterfly had become extinct when habitat supporting the only known population was developed (USFWS, March 6, 2010). After years of conducting annual surveys, researchers could not locate the Palos Verdes blue butterfly; however, in March 1994, a small population was discovered at Defense Fuel Support Point San Pedro (Mattoni, 1995). This was the only known wild population. Subsequently, the U.S. Navy funded the first Palos Verdes blue captive-rearing program facility, and the first release of butterflies into the wild occurred on this base in 2000.

Since then a captive rearing facility has been developed at America's Teaching Zoo at Moorpark College. A butterfly reintroduction occurred in 2008 at Linden H. Chandler Preserve in Rolling Hills Estates where habitat restoration efforts had occurred. On March 6, 2010, federally endangered Palos Verdes blue butterflies were released into 8 acres of restored coastal sage scrub habitat at Deane Dana Friendship Community Regional Park and Nature Center (Friendship Park) located in San Pedro, approximately 3 miles southeast of the Portuguese Bend community. The Palos Verde blue had been historically recorded at Friendship Park in 1981, but not observed for several decades. Future Palos Verdes blue butterfly recovery efforts are

planned to include continued rearing of butterflies in captivity for release back into the wild and additional habitat restoration and management efforts.

The Service is currently working with the City of Rancho Palos Verdes (USFWS, March 6, 2010) on a Habitat Conservation Plan (HCP) that would be coordinated with the existing NCCP. Per Mattoni 1995, suitable habitat that includes the food plant *Astragalus trichopodus lonchus* and common deerweed *(Lotus scoparius)* is present within the NCCP areas to the north of the Portuguese Bend community. URS (July 2004) reported historic sightings to the west of the study area (west of Narcissa Drive) and to the northeast (northeast of Vanderlip Road), but not within the study area. The proposed NCCP/NCP areas would be likely receptor sites for additional captive raised butterflies.

Within the survey area suitable habitat for the Palos Verdes blue butterfly is generally lacking because of the long term disturbance of the properties and management for fire prevention. None of the known host plants, either as vegetation, blooms or seed pods, were observed during the survey. Based on the above and the lack of known populations in this area over the last 30 years, areas within the project boundary and 100 foot wide buffer are not expected to support the Palos Verdes blue butterfly.

El Segundo Blue Butterfly. The El Segundo blue butterfly is restricted to remnant coastal dune habitat in southern California. During monitoring conducted for the Draft NCCP (Dudek, 2007) it was documented along and at the base of the cliff bluffs approximately 1.8 miles west of the study area. Its host plant is *Eriogonum parvifolium* and the larvae feed only on this flower and its seeds; adults use this plant as a major nectar source. No *Eriogonum parvifolium* were observed during the habitat assessment, and past regular maintenance of the study makes it highly unlikely that this plant is present. No El Segundo blue butterflies would be expected in this area.

Monarch butterfly. The monarch butterfly over-winters in southern California usually in tree groves or windbreaks near available water and nectar sources. This species commonly uses eucalyptus (*Eucalyptus* sp.), cypress (*Cupressus* sp.) and Monterey pine (*Pinus radiata*) for roosting. While the Monarch butterfly is relatively abundant throughout the North American continent, along the west coast the availability of winter roost sites where the butterflies aggregate by the thousands of individuals is considered a potential concern. The monarch butterfly's preferred food source is milkweed (*Asclepias* sp.) although adults may also feed off nectar from coyote bush (*Baccharis pilularis*) and mule fat (*Baccharis salicifolia*). Monarch butterflies are commonly found in small numbers within landscaped gardens and would be expected to occur within the study area and throughout the City of Rancho Palos Verdes.

Within the survey area suitable habitat for winter roost sites was present throughout, most centralized along the lower reach of Altamira Canyon within eucalyptus groves. Although roost sites were present, none of the preferred food source, milkweed, was observed during the survey. Further, neither the CNDDB nor the Xerces Society (2010) report any large winter aggregations in this area.

"Coastal" Cactus Wren. Cactus wren is resident in arid and semiarid regions from southern California, southern Nevada, extreme southwestern Utah, central Arizona, central New Mexico, and central and southern Texas south to into Mexico and Baja California. The species is considered "common" over most of its range. Based on current taxonomic classifications of this species, the *California Bird Species of Special Concern* indicates that only the San Diego cactus

wren (*Campylorhynchus brunneicapillus sandiegensis*) is considered a CDFG species of special concern (see also *Special Animals,* CDFG July 2009). At this time, the project area lacks the cactus stands typically used by this species and its presence is not expected within the project area.

San Diego Desert Woodrat. This woodrat is a CDFG Species of Special Concern that occurs in scrub areas with moderate to dense canopies. San Diego desert woodrat is a small mammal whose range extends from San Luis Obispo County in the north to San Diego County in the south. Two species of woodrat, big-eared (dusky-footed) woodrat (*Neotoma macrotis*) and San Diego desert woodrat (*Neotoma lepida intermedia*[2]) have ranges that overlap within the region. San Diego desert woodrat feeds on fruits, seeds and bark and is known to feed on cholla and buckwheat. Desert woodrats build elaborate dens with several chambers for nesting and food, as well as several entrances. Nests are usually made at the base of perennial vegetation with sticks, rocks, and other plant parts. They are often associated with large cactus patches, and within coastal sage scrub communities, it is almost invariably associated with prickly pear cactus. It also is found in rocky outcroppings on hillsides in coastal scrub. It's nearest known location is within the coastal scrub community located approximately 0.5 miles to the south of the study area. Given the lack of prickly pear cactus and coastal sage scrub plants within the study area, and the proximity of residences that likely have cats which are efficient predators of this species, it is unlikely that this animal maintains a substantial population within the study area. If present within the study area, San Diego desert woodrat are most likely limited to the area along Altamira Canyon within the "Neutral Lands" category of the NCCP (see Figure 2).

Critical Habitat

A search of the USFWS Critical Habitat Portal yielded one Critical Habitat designation in the project vicinity, that for the California gnatcatcher (CAGN). The 2007 habitat mapping overlies a portion of the study area as illustrated in Figure 2, primarily in the northwest portion of the study area and the "Neutral Lands" in the southern portion. Critical habitat mapping is intended to contain those lands essential for the conservation of a species, but any such land within the mapped boundary must also contain the known physical or biological features (Primary Constituent Elements or PCEs) within the geographical area that are essential to the species conservation. For CAGN, the PCEs are 1) dynamic and successional sage scrub habitats and 2) non-sage scrub communities like chaparral, grassland, riparian areas, near to suitable sage scrub habitats. Within the project area and 100 foot wide buffer area, neither coastal sage scrub habitat or key plant species associated with this habitat were found. Due to fire clearance requirements, it is expected that that 100 foot wide buffer area will continue to be highly disturbed and high quality coastal sage scrub habitat preferred by the CAGN will not be allowed to establish. The maintained grasslands of portions of the site are not considered to provide an important PCE under Item 2 above given the distance to quality coastal sage scrub habitat and the regular disturbance. It should also be noted that the designation of critical habitat does not place a regulatory burden on the private landowner; it only provides that federal agencies are to ensure that actions they fund, authorize, or carry out do not destroy or adversely modify critical habitat.

SPECIAL-STATUS COMMUNITIES

In addition to sensitive plant species, Rincon's review of the California Natural Diversity Database (CNDDB, RareFind3, June 2006; database current as of May 2010) yielded one

[2] *Recently reclassified as Neotoma bryanti intermedia.*

sensitive habitat within a five-mile radius of the project site; Southern Coastal Bluff Scrub. Presence or absence of this habitat area was determined using the vegetation classification systems described by Sawyer et al.'s *A Manual of California Vegetation* (2009) and by the CDFG's *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland, 1986) and surveying the project site for species associated with this sensitive habitat.

Southern Coastal Bluff Scrub is a low, sometimes prostrate scrub and is widespread along the southern California coastline as a very narrow band, often not extending more than about 100 feet inland (Holland and Keil 1990). Plants usually cling to nearly vertical rock faces just above the surf. Dominant plants associated with this habitat include California sagebrush (*Astemisia californica*), California buckwheat (*Eriogonum fasciculatum*), coast cholla (*Cylindropuntia prolifera*), and coast prickly pear (*Opuntia littoralis*). Dominant associated plants, vertical rock faces, and proximity to the surf which define this community type are lacking within the project area and buffer area.

PALOS VERDES NATURE PRESERVE

The Palos Verdes Peninsula Land Conservancy (PVPLC) serves as the management agency for the Palos Verdes Nature Preserve, previously referred to as the Portuguese Bend Nature Preserve, for the City of Rancho Palos Verdes. The Preserve was formed under a Natural Community Conservation Plan (NCCP) Subarea Plan to "maximize benefits to wildlife and vegetation communities while accommodating appropriate economic development within the City of Rancho Palos Verdes and region pursuant to the requirements of the NCCP Act and Section 10(a) of the ESA" (URS, July 2004). As a primary component of the NCCP, a Preserve design was proposed to conserve regionally important habitat areas and provide habitat linkages to benefit sensitive plants and wildlife. PVPLC manages the Preserve under an operating agreement with the City.

The Portuguese Bend Reserve and Upper Filiorum Reserve are located to the northeast and northwest of the Portuguese Bend community, respectively (see Figure 2). The Portuguese Bend Reserve does not directly adjoin the project site, but is on the other side of Narcissa Drive from the project site. The Upper Filiorum Reserve adjoins three of the lots within the project site in the northern portion of the site along Altamira Canyon, but is otherwise separated from the project site by an open space lot on the northwest and roadway on the northeast. The following further discusses these nearby reserves.

Portuguese Bend NCCP Reserve. The Portuguese Bend NCCP Reserve is a 399-acre area that was preserved in 2005. It consists of rolling hills, steep canyons and rock outcrops, with significant habitat and spectacular views of the Pacific Ocean and Santa Catalina Island. Located below and to the east of Del Cerro Park, it includes the areas known as the lemonade-berry parcel, eagle's nest, the badlands, the active landslide and the dirt extension of Crenshaw Boulevard. This area has numerous important trails and geologic features such as Ailor cliff and the pillow lava outcrop.

Upper Filiorum NCCP Reserve. The Upper Filiorum NCCP Reserve is a 191-acre area that was added to the NCCP December 31, 2009. This parcel connects the Three Sisters and Portuguese Bend NCCP Reserve Parcels and is a mix of steep hills and bowl-like, flatter areas covered in grasses and coastal sage scrub. It is known to contain a population of CAGN and host plants for the Palos Verdes Blue Butterfly. Currently the City is working on a trails plan for this area.

OTHER LAND USE REGULATIONS CONCERNING BIOLOGICAL RESOURCES

Rancho Palos Verdes General Plan. The goal of the City of Rancho Palos Verdes' General Plan is to conserve, protect, and enhance its natural resources, beauty, and open space for the benefit and enjoyment of its residents and the residents of the entire region. All future development is to recognize the sensitivity of the natural environmental and be accomplished in such a manner as to maximize the protection of it.

Rancho Palos Verdes Municipal Code. The City's Municipal Code provides another layer of environmental protection to lands located within the city limits. Title 17, Chapter 40, Section 040 of the City's Municipal Code provides the regulations for the Natural Overlay Control District (OC-1), which includes those areas of the General Plan within Resource Management (RM)-5 (Old Landslide Area), RM-6 (Hydrologic Factors), RM-7 (Marine Resource), RM-8 (Wildlife Habitat), and RM-9 (Natural Vegetation). Similar designations within the Coastal Specific Plan are also within this overlay district. According to the City's General Plan Natural Environment Element, Altamira Canyon is located within Resource Management (RM) District 6 – Hydrologic Factors, which is included within OC-1. Within this district it is the City's policy to prohibit activities which create excessive silt, pollutant runoff, increase canyon wall erosion, or potential for landslide. Performance criteria relevant to biological resources include restrictions against altering the course, carrying capacity or gradient of the drainage; developing uses within 50 feet of the edge of the drainage; clearing or thinning more than 20% of the vegetation within the district; and use of herbicides.

Neutral Lands. This category was developed under the NCCP Subarea Plan (URS, July 2004) to include those open space lands that would contribute to the Palos Verdes Nature Preserve function but cannot be developed because of extreme slopes, open space hazard zoning, or designation as homeowner's association open space. If agreements between the Preserve and landowners of the Neutral Lands are possible, such areas could be managed as part of the Preserve. In some instances, these lands are not prohibited from development, but it is recognized that development constraints already exist pursuant to the City's Municipal Code. Extreme slopes have a greater than 35% grade and occur in undeveloped canyons, such as Altamira Canyon. Open space hazard lands have unstable geologic conditions or other physical constraints requiring a detailed geotechnical investigation prior to removal from the open space hazard designation. Altamira Canyon in the southern portion of the study area is within the Neutral Lands category (see Figure 2) as it is within the RM-6 designation and controlled by the OC-1 regulations as discussed above.

Jurisdictional Drainages and Wetlands. Disturbed riparian habitat and drainage features located within the project boundary and 100 foot wide buffer may contain drainages or wetlands that are under the jurisdiction of the CDFG and/or the US Army Corps of Engineers. Altamira Canyon is an ephemeral drainage channel that originates at Crest Drive and ends at the Pacific Ocean, trending northwest to southeast and bisecting the study area. The northern reach of the drainage within the study area bisects landscaped private property and non-native California annual grassland habitat within undeveloped/underdeveloped lots. The drainage crosses under Narcissa Drive via a storm drain and continues southeast through a steep-banked channel categorized as "Neutral Lands" within the NCCP. Vegetation along this lower drainage feature is dominated by exotic woodland habitat. The drainage channel has hydrological features such as ordinary high water mark or bed, bank, and channel, but lacks

any native riparian habitat. The riparian habitat associated with the drainage throughout the project site is dominated by landscape shrubs and trees, primarily pepper trees, pines and eucalyptus, with an understory of non-native annuals and herbaceous perennials, exotic shrubs, and coastal sage scrub patches.

Based upon the reconnaissance level survey, the drainage feature located within the project boundary may be subject to USACE (US Army Corps of Engineer), Los Angeles RWQCB (Regional Water Quality Control Board) and/or CDFG (California Department of Fish and Game) jurisdiction. It should be noted that the regulatory agencies make the final jurisdictional determination.

Wildlife Corridors. The project area is surrounded to the northeast and northwest by the Portuguese Bend Reserve and Upper Filiorum Reserve creating a contiguous section of regionally important habitat areas and natural vegetation. While these contiguous habitat areas are an important corridor for all wildlife, the Portuguese Bend Reserve and Upper Filiorum Reserve include designated CAGN Critical Habitat. Altamira Canyon may also serve as a link for wildlife to pass through the study area; however, such movement is limited by existing residential land uses that are close to the drainage and the dominance of exotic woodlands within the drainage.

POTENTIAL IMPACTS AND RECOMMENDED MITIGATION MEASURES

This impact analysis is based on the following: a review of previous biological studies available for the general area; a field survey of the general study area (but not detailed investigation of each lot); available literature regarding the existing biological resources within the project area; and aerial photography.

Significance Criteria

The California Environmental Quality Act (CEQA), Chapter 1, Section 21001 (c) states that it is the policy of the State of California to "prevent the elimination of fish and wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities." Environmental impacts relative to biological resources may be assessed using impact significance criteria encompassing CEQA guidelines and federal, state and local plans, regulations, and ordinances.

The State CEQA Guidelines Appendix G provides the following general statements to determine if significant impacts to biological resources could occur if a project action would:

a) Have a substantial adverse effect (i.e. significantly reduce species population, reduce species habitat, restrict reproductive capacity), either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, regulations, or by CDFG or USFWS;
b) Have a substantial adverse effect (i.e. direct/indirect reduction) on any riparian habitat or other sensitive natural community identified in local or regional plans, policies regulations, or by the CDFG or USFWS;

c) Have a substantial adverse effect (i.e. direct/indirect reduction) on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to, marsh vernal pool, coastal, etc.) through direct removal, filling, or hydrological interruption, or other means;
d) Interfere substantially (i.e. direct/indirect reduction) 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;
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and
f) Conflict with the provisions of an adopted Habitat Preservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

The impact assessment contained in the sections below addresses these topical areas in accordance with the above section lists; i.e. BIO A discusses effects associated with item "a)", and BIO B discusses effects associated with item "b)", etc.

Section 15130 of the *State CEQA Guidelines* provides guidance on the discussion of cumulative impacts. Two conditions apply to determine the cumulative effect of a project; first, the overall effect on biological resources caused by existing and known or forecasted projects must be considered significant under the criteria discussed above; and second, the project must have a "cumulatively considerable" contribution to that effect. This section of the Biological Resources Assessment is based on the following considerations with respect to cumulative impacts to biological resources:

- The cumulative contribution of other approved and proposed projects to fragmentation of open space in the project vicinity;
- The loss of sensitive habitats and species;
- Contribution of the project to urban expansion into natural areas; and
- Isolation of open space within the vicinity by the proposed project and future projects.

Effect BIO A - Special-Status Species

As discussed above, no special status plant species would be expected to occur on a regular basis within the 47 lots or the adjacent maintained fuel management buffer because of past alteration of vegetation and the general lack of suitable habitat. In addition, the continued fuel management practices with or without the proposed project would virtually eliminate the ability of any sensitive plants to re-establish within these areas.

Most of the special status animals potentially in the area are not expected to be present because of the lack of habitat. Mobile special status wildlife, such as coastal California gnatcatcher, could rarely occur within the landscaping shrubs present in the study area on a transitory basis during dispersal, but are not likely to be resident or present for long periods of time because of the lack of suitable foraging or nesting habitat. Given the level and frequency of human disturbance onsite and the lack of suitable coastal sage scrub habitat, future development of the individual lots would not be expected to have a direct effect on coastal California gnatcatcher

individuals. As noted in Table 5 above, no suitable habitat for listed butterflies is present within the study area.

San Diego desert woodrat is the only special status animal anticipated to potentially occur within the site, possibly within the two lots in the south part of the study area along Altamira Canyon and within the RM-6 designated area. The drainage is steeply incised, with non-native ruderal areas located on the potentially developable upland areas. If developed, construction would not be expected to directly impact any woodrats that may be present as existing regulations under OC-1 would restrict construction to areas not likely occupied by woodrats.

Additional residences in the area would introduce a higher density of human disturbances, including light, noise, and feral animals, into the vicinity of this special status species, as well as others. However, these elements are already present given the existing residential land uses within the study area and to the north and south. A potential problematic effect, the domestic cat, is already present. Available literature on the size of domestic cat home ranges and the extent to which they enter into adjacent natural areas varies considerably, with estimated home ranges in the 0.5 – 5 acre range and the ability to range 250 – 600 feet from their core residence. It should be noted that feral cats, as compared to domestic cats, can have core home range sizes that exceed 400 acres and have an average movement distance of 5 miles (Guttilla and Stapp, 2010). Any woodrats that may be present at the site are already subject to predation pressures from these human associated animals. However, the data gathered by Kays and DeWan (2004) suggests that while small mammals are the most likely prey of domestic cats ranging from residences, their impact on small mammal populations in adjacent reserves is minor. This is in substantial difference to the effect of feral and farm-based rural cats. Therefore, while the increased human presence is considered adverse, it is not substantially different than existing conditions, and no significant effect is anticipated. Impacts to special status species would be **less than significant**. No mitigation is necessary.

Effect BIO B - Sensitive Plant Communities

The project site does not contain any sensitive plant communities because previously mapped coastal sage scrub areas have been reduced to isolated stands. No riparian habitat is associated with the primary drainage, with much of the cover in this area comprised of non-native woodlands. The area adjacent to the Upper Filiorum Reserve has already been cleared sufficiently to maintain adequate distance between the undeveloped lots and sensitive coastal sage scrub vegetation. Therefore, the proposed project based on current conditions would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. However, over time and depending on future fuel management activities, coastal sage scrub vegetation could become re-established in various areas within Zone 2 or in adjacent properties. As shown in Figure 2, some isolated patches of former coastal sage scrub (CSS) habitat may still be present within Altamira Canyon, which traverses several developed and undeveloped lots in Zone 2. In addition, several of the undeveloped lots in Zone 2 abut the City-owned Portuguese Bend Reserve, though fuel management of this Reserve already occurs and would continue under the NCCP Subarea Plan. Nonetheless, it is possible that the development of some of the undeveloped lots in Zone 2 might have significant impacts upon existing or regrowth CSS habitat, either through the direct

removal of habitat during construction or as a result of Fire Department-mandated fuel modification on- and/or off-site (i.e., in the Reserve) after construction of new residences is complete. In that event, effects to this sensitive plant community would be considered **significant and mitigation is required**.

Mitigation Measures. The following mitigation measure is recommended to provide for reduction of impacts to possible stands of CSS vegetation and to maintain consistency with the NCCP Subarea Plan and local ordinances (see Effect BIO E and BIO F, below).

BIO B-1 **Biological Survey.** For lots that are identified as containing sensitive habitat on the City's most-recent vegetation maps and/or that abut any portion of the current or proposed future boundary of the Palos Verdes Nature Preserve, the applicant shall be required to prepare a biological survey as a part of a complete application for the development of the lot. Said survey shall identify the presence or absence of sensitive plant and animal species identified in the City's adopted NCCP on the subject property, and shall quantify the direct and indirect impacts of the construction of the residence upon such species, including off-site habitat impacts as a result of Fire Department-mandated fuel modification. The applicant and/or any successors in interest to the subject property shall be required to mitigate such habitat loss through the payment of a mitigation fee to the City's Habitat Restoration Fund.

Effect BIO C - Wetland Habitat and Jurisdictional Drainages

Altamira Canyon divides the study area into east and west portions. This drainage was surveyed during the field reconnaissance from available access points, and within those limited areas it did not contain any riparian or wetland habitat. Review of readily available aerial photographs does not indicate the presence of extensive riparian habitat or possible wetland areas. However, the drainage would be subject to the jurisdiction of the CDFG under Section 1600 et. seq. of the Fish and Game Code and possibly contains "waters of the US" subject to the jurisdictional control of the US Army Corps of Engineers. This drainage passes through or is adjacent to eight lots that are undeveloped or underdeveloped and within which construction activities could potentially affect jurisdictional areas. The extent to which jurisdictional areas may be altered is unknown as no specific building plans are under consideration. At the time of individual lot construction is proposed, the potential for intrusion into jurisdictional areas will need to be assessed and the actual amount of possible fill or other disturbance within jurisdictional drainages determined. Regulatory policies by the jurisdictional agencies require mitigation for permanent loss of riparian habitat, wetlands, and waters of the US, and may also require mitigation for temporary losses. Because development of these lots may affect jurisdictional areas, this impact is considered **significant and mitigation is required**.

Mitigation Measures. The following mitigation measures are recommended to provide for habitat restoration and ensure that regulatory permits have been appropriately obtained prior to work within jurisdictional areas.

BIO C-1 **Agency Coordination.** The City shall review each application for construction and determine if proposed development is within the

drainage channel within Altamira Canyon. If so, the applicant shall be required to obtain permits, agreements, and/or water quality certifications or correspondence indicating that none are necessary from applicable state and federal agencies regarding compliance of the proposed development with state and federal laws governing work within jurisdictional waters. Such agencies would include the California Department of Fish and Game, the United States Army Corps of Engineers, and the Los Angeles Regional Water Quality Control Board. The applicant shall provide such permits and/or agreements prior to the granting of a building or grading permit.

BIO C-2 **Habitat Restoration.** In the event that an application for construction would result in the loss of riparian or wetland vegetation, the applicant shall restore such habitat at a minimum ratio of 1:1 for temporary loss and 3:1 for permanent loss. Such restoration can occur either on site or within disturbed areas of the Palos Verdes Nature Preserve as determined and approved by the City.

Effect BIO D - Wildlife Movement

Future development of the lots that would be allowed under the proposed project is likely to include landscape and other improvements that may remove existing trees within the various lots. While these trees are non-native pepper, eucalyptus, pine, acacia, and olive trees, they may nonetheless support birds that are protected by the Migratory Bird Treaty Act (MBTA) and the Fish and Game Code of California (3503, 3503.5, 3511, 3513 and 3800). These regulations protect almost all native nesting birds, not just special-status birds. A significant impact could occur as a result of harm to the reproductive success of species protected by the MBTA and the Fish and Game Code of California if any bird species are nesting in the existing trees at the time of tree removal. The impact to nesting birds as a result of tree removal would be **potentially significant unless mitigation is incorporated**.

Exterior night lighting and the noise associated with residential uses could potentially disrupt normal behavior and breeding for some wildlife species. However, such noise and light effects already exist in the area, and the increased density of residences would not be expected to substantially decrease the populations of common wildlife in the area. The introduction of additional landscape vegetation to these sites would potentially increase the local population levels of urban tolerant wildlife, primarily bird species such as Anna's hummingbird, western mockingbird, and California towhee. No significant impact is anticipated with respect to night lighting and noise given the existing residential use of the area.

The southern portion of Altamira Canyon within the project boundary that is designated RM-6 was also identified by the NCCP (URS, 2004) as a regionally important habitat area (RIHA) as it was mapped as containing coastal sage scrub along its steep slopes. A review of readily available photographs indicate that the vegetation in this area has apparently changed with the intrusion of additional non-native trees and other elements, and the coastal scrub vegetation appears reduced. The steep canyon slope is not optimal for CAGN, which prefers slopes of less

than 40%, and given the lack of suitable vegetation further north within the canyon, it is unlikely that it is used as a significant transit route that provides connectivity for the local CAGN population. That function is largely served by the adjacent preserve areas (for instance Upper Filiorum and Portuguese Bend Reserves). As this area is protected by the policies of the natural overlay district (OC-1), the proposed project would not be expected to cause a significant effect on possible CAGN movement.

Mitigation Measures. The following measures shall be implemented to reduce impacts related to nesting birds to a less than significant level.

BIO D-1 **Nesting Bird Surveys and Avoidance**. Tree pruning and removal shall be conducted outside of the bird breeding season (generally February 1 through August 31). If vegetation clearing (including tree pruning and removal) or other project construction is to be initiated during the bird breeding season, pre-construction nesting bird surveys shall be conducted by a qualified biologist. To avoid the destruction of active nests and to protect the reproductive success of birds protected by MBTA and the Fish and Game Code of California, nesting bird surveys shall be performed twice per week during the three weeks prior to the scheduled felling of the trees on the site. The surveys shall be conducted by a qualified biologist approved by the Community Development Director. If any active non-raptor bird nests are found, the tree(s) or vegetation shall not be cut down and a suitable buffer area (varying from 25-300 feet) depending on the particular species found is established from the nest, and that area is avoided until the nest becomes inactive (vacated). If any active raptor bird nests are found, a suitable buffer area (typically 250-500 feet from the nest) depending upon the species, the proposed work activity, and existing disturbances associated with land uses outside of the site, shall be determined and demarcated by the biologist with bright orange construction fencing, flagging, construction lathe, or other means to mark the boundary. All construction personnel shall be notified as to the existence of the buffer zone and to avoid entering the buffer zone during the nesting season. No ground disturbing activities shall occur within this buffer until the City-approved biologist has confirmed that breeding/nesting is completed and the young have fledged the nest. Nesting birds surveys are not required for construction activities occurring from September 1 to January 31.

The proposed project's potential impact related to nesting birds would be less than significant with implementation of pre-construction nesting bird surveys. The possible cumulative effect to wildlife movement is considered to be **less than significant**.

Effect BIO E - Local Policies and Ordinances

The City of Rancho Palos Verdes has not adopted a tree preservation ordinance. The City has established the Natural Overlay Control District (OC-1) to "Maintain and enhance land and water areas necessary for the survival of valuable land and marine-based wildlife and vegetation" and "Enhance watershed management, control storm drainage and erosion, and

control the water quality of both urban runoff and natural water bodies within the City" (Rancho Palos Verdes Municipal Code Section 17.40.040). As noted above, OC-1 has specific performance criteria and regulations that limit the potential for development within areas with important resources and any development that could proceed as a result of the proposed project would need to conform to those standards. While the project would provide for increased residential development within the Portuguese Bend community, the consistency of individual lot developments will need to be determined at such time that a lot is proposed for development. This is a standard requirement of the City planning process. As such, the proposed project would conform to this local policy and indirect impacts would be **less than significant**.

The City has a Coastal Sage Scrub Conservation and Management Ordinance, which is codified as Chapter 17.41 of the Rancho Palos Verdes Municipal Code. However, this ordinance only applies to parcels over two (2) acres in size that contain CSS habitat. Only one (1) of the undeveloped lots in Zone 2 exceeds this size threshold and contains CSS habitat. Consistency and any ordinance-required conservation actions would be determined at such time that this lot is proposed for development. As such, any conflicts of the proposed project with local policies or ordinances protecting biological resources are expected to be **less than significant**.

Effect BIO F - Conflict with Adopted Habitat Preservation Plan or Natural Communities Conservation Plan

As discussed above in the *Regulatory Setting*, the Rancho Palos Verdes City Council conceptually approved the Citywide Natural Communities Conservation Planning (NCCP) Subarea Plan in 2004. The plan identifies Biological Resource Areas and establishes the Palos Verdes Nature Preserve primarily for habitat preservation purposes. The Rancho Palos Verdes NCCP provides for conservation and protection of the habitat of the Palos Verdes blue butterfly and other special-status species, while permitting impacts from development to potential habitat for the covered species, including coastal sage scrub habitat. The City is currently working with CDFG to update, finalize, and authorize the NCCP. Several issues of compatibility of the Zone 2 proposed development with the NCCP are addressed below.

Fuel Modification. As stated in the NCCP Final EIR (URS, 2004), the existing distribution of native vegetation within the Subarea Plan area is highly fragmented and edge-affected by existing development. Fuel management activities outside of the Zone 2 property lines has already substantially altered the biological communities adjacent to the residential lots that could potentially be developed. The northwest portion of the study area contains the majority of the undeveloped/underdeveloped lots, and these lot boundaries are generally more than 200 feet from the boundary of the Upper Filiorum Reserve. An exception is that three lots along Altamira Canyon adjoin the Upper Filiorum Reserve property boundary along an approximate 450 foot linear boundary. The field reconnaissance indicated that this portion of the Reserve has already been subjected to fuel management activities that have reduced the habitat to a non-native grassland. Since no fuel management activities beyond that which has already occurred is expected for the individual lots, no additional impacts to the Reserve area are expected. It should be noted that the Portuguese Bend Reserve has been and will continue to be subjected to fuel management activities along the north edge of Narcissa Drive. For existing private development, the L.A. County Fire Department and L.A. County Department of Agricultural

Commissioner have reviewed the existing private development that abuts the Preserve and have determined the amount of brush clearance needed within the Preserve to provide the code required fuel modification zone for the protection of existing structures outside the Preserve. Development of residential structures in this eastern portion of the project site will not alter that existing practice.

Section 6.2.3 of the City-approved NCCP addresses Fire and Brush Management. It requires a brush management zone of a minimum of 50 feet from houses, buildings, or other structures with provision of up to 100 feet. In addition, brush management for new development is to occur outside Reserves. As discussed above, this level of brush management can be accommodated within the proposed project without affecting any additional Reserve lands.

Development Adjacent Reserves. Site specific project design issues are discussed in Section 6.2.2 of the current NCCP Subarea Plan. Issues associated with development relate to access and staging areas, fuel modification zones (discussed above), introduction of non-native species, night lighting, stormwater and urban runoff, increased noise levels, and access into Reserve lands. Each site to be developed in the proposed project (Zone 2) will need to be required to stay outside of the Reserve areas. Based on the location of the potentially developable lots and Reserve lands, no grading, access or staging areas are expected to affect Reserve lands. Nonetheless, construction activities on those lots that abut the Reserves could have an impact on wildlife and vegetation; therefore, the use of the Best Management Practices recommended under Section 6.2.2.2 are required to maintain consistency with the NCCP.

A Predator Control Plan (PCP) was developed as part of the *2006 Initial Management And Monitoring Report* (Dudek, 2007). It noted that brown-headed cowbirds were observed in the Portuguese Bend Reserve area and another reserve further to the southeast. The PCP recommended that a cowbird trapping program be implemented within the Portuguese Bend Reserve during the second year of the plan to reduce the potential for cowbirds to parasitize nests of native birds. One trap would be sufficient to cover this area. The status of this cowbird trapping program is unknown.

Brown-headed cowbirds are typically associated with land uses that have abundant grass seed, such as equestrian facilities, barns with livestock, and golf courses. Many of the residential lots currently within the study area have horses and other livestock, and an equestrian facility is located in the west portion of the project site. The proposed project would not alter the ability of lot owners to house livestock on their lots, and so would not change the extent to which such facilities could occur within the site under existing conditions. Development of the lots would not change the current presence of brown-headed cowbirds in the area, though it has the potential to increase the population of cowbirds in the local vicinity. Cowbird management is likely to be an ongoing management issue for the Palos Verdes Nature Preserve because of existing land uses that support cowbird populations. In the event that cowbird populations increase, the single trap recommended to control populations in the area of known coastal California gnatcatcher nesting is anticipated to be sufficient.

As previously stated, buildout of the residential lots could increase the number of domestic animals in the local area that could affect local wildlife. The PCP indicates that the extent of damage to NCCP focus species from feral animals is currently unknown, with additional data

to be gathered to determine if a feral animal trapping program is necessary. Based on the study conducted by Kays and DeWan (2004), 80% of observed domestic cat hunts occurred in a garden/yard or within the first 33 feet of the adjacent forest preserve. Radio-tracked domestic cats rarely entered the forest preserve during their study, with scent station recordings indicating that the domestic cats rarely ventured more than 130 feet into the preserve. A caveat of this finding was that the preserve was sufficiently large to sustain predators known to kill cats (coyotes and fishers), and these were domestic cats. Feral cats are known to range more widely into natural habitats, especially in the absence of such predators (such as on Santa Catalina Island, Guttilla and Stapp, 2010). Both the Upper Filiorum and Portuguese Bend Reserves adjoin residential land uses on their northern sides, and the project site already contains residences that support domestic cats. The possible increase in the number of residences as proposed by the project is not likely to cause a substantial increase in the number of domestic animal problems within these Reserves given the existing conditions.

As discussed under Effect BIO D above, increased exterior night lighting and the noise associated with residential uses could potentially disrupt normal behavior and breeding for some wildlife species. However, such noise and light effects already exist in the area, and the increased density of residences would not be expected to substantially decrease the populations of common wildlife in the area. In addition, Section 17.56.030 of the City's Municipal Code specifically restricts exterior lighting in residential zones (such as the proposed project), generally that "no outdoor lighting shall be permitted where the light source is directed toward or results in direct illumination of a parcel of property or properties other than that upon which such light source is physically located." No substantial conflict with the Reserves related to noise and lighting effects are anticipated.

Conformance with stormwater and urban runoff with the Natural Overlay Control District (OC-1) is a standard requirement of the City's planning process and approvals on the individual lots at such time that they are proposed for development would maintain consistency with the NCCP Subarea Plan.

Section 6.2.4 of the City-adopted NCCP Subarea Plan provides for locating any new fences within Reserves so as not to impede wildlife movement, and also recommends that signage be established for access control and education at the periphery of the Reserves. As noted above, the proposed Zone 2 development does not directly adjoin Reserve land, except for three lots along Altamira Canyon that adjoin the Upper Filiorum Reserve property boundary along an approximate 450 foot linear boundary. As part of the review process for these lots at such time that they are proposed for development, they would be reviewed for compliance with access features and fencing, including controls on access into the Reserve lands. Therefore, the project is considered to conform to the Subarea Plan requirements.

Habitat Protection. The Rancho Palos Verdes Coastal Sage Scrub Conservation Ordinance (Section 17.41 of the Municipal Code) was enacted to specifically preserve lands that contain coastal sage scrub habitat and to implement resource protection per Section 5.8.2 of the City – adopted NCCP (2004). Compliance with this ordinance would be required for the individual lots at such time that they are proposed for development. It is noted that very little vegetation within Zone 2 can be described as "coastal sage scrub" given past and current fuel modification

practices. Therefore, the proposed project is considered to be in conformance with the habitat protection features of the NCCP Subarea Plan.

Existing City ordinances, the standard City permit approval process, the adopted 2004 NCCP Subarea Plan, and future adoption of an Implementing Agreement for the NCCP would serve to minimize the potential for conflicts of future proposed development within the Zone 2 area from conflicting with the Draft NCCP/HCP. Therefore, this effect is considered to be **less than significant** under CEQA regulations. The proposed project would not have a cumulative effect with respect to conflicts with provisions of the adopted Natural Community Conservation Plan.

Mitigation Measures. The following applicable measures are recommended to enhance the value of the adjacent Reserves, to limit private access into Reserve lands, and to maintain consistency with the requirement that no fuel management for new development be allowed within the Reserves.

BIO F-1 **Structure Location**. To avoid the need for continued fuel management within the Upper Filiorum Reserve, all structures for those lots abutting the Upper Filiorum Reserve property boundary shall be located at least 100 feet from that boundary.

BIO F-2 **Perimeter Fences**. Lots adjoining the Upper Filiorum Reserve shall be fenced sufficient to prevent the ready egress of domestic animals into the Reserve. In addition, no gates or other means of ingress into the Reserve shall be permitted.

BIO F-3 **Construction Best Management Practices.** The following measures shall be required for those lots that abut Reserve lands as part of construction monitoring for the site:

- Contractors shall be educated regarding the off-site Reserve and the need to keep equipment and personnel within the project site prior to the initiation of construction.
- Temporary construction fencing shall be placed at the planned limits of disturbance adjacent to the Reserve.
- Construction should be scheduled to avoid the bird nesting season.
- Construction grading adjacent to drainages shall be scheduled for the dry season whenever feasible.

BIO F-4 **Construction Staging and Stockpiling Areas.** Grading and building plans submitted for City review and approval for those lots abutting Reserve lands shall identify areas for construction staging, fueling and stockpiling if needed. These areas shall be located as far as practical from Reserve lands, and not closer than 50 feet from the PVNP boundary.

LIMITATIONS

This Biological Habitat Assessment has been performed in accordance with good commercial, customary, and generally accepted biological investigation practices conducted at this time and in this geographic area. The biological investigations are limited by the scope of work

performed. The identification of potential special-status species habitat has been based on a suitability analysis level only and did not include definitive surveys for the presence or absence of the species that may be present. Definitive surveys for special-status wildlife and plant species generally require specific survey protocols requiring extensive field survey time to be conducted only at certain times of the year. No other guarantee or warranties, expressed or implied are provided.

The findings and opinions conveyed in this report are based on findings derived from site reconnaissance, review of the CNDDB Special-status Species Database, and specified historical and literature sources. Standard data sources relied upon during the completion of this report, such as the CNDDB, may vary with regard to accuracy and completeness. In particular, the CNDDB is compiled from research and observations reported to CDFG that may or may not have been the result of comprehensive or site-specific field surveys. Although Rincon believes the data sources are reasonably reliable, Rincon cannot and does not guarantee the authenticity or reliability of the data sources it has used. Additionally, pursuant to our contract, the data sources reviewed included only those that are practically reviewable without the need for extraordinary research and analysis.

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