13. Palos Verdes Peninsula and Coastline SEA

Location

General

The Palos Verdes Peninsula and Coastline Significant Ecological Area (SEA) is chiefly located offshore around the Palos Verdes Peninsula, but also includes terrestrial habitat in Portuguese Bend and several other disjunct drainages and ridgelines. All of the many offshore rocks within 12 nautical miles of the coast are part of the California Coastal National Monument that managed by the Bureau of Land Management in the U.S. Department of the Interior. Many endangered marine mammals use this habitat. The SEA includes the inshore part of the Point Vicente State Marine Conservation Area (SMCA) and the Abalone Cove SMCA. Most of the interior Peninsula canyons and slopes are critical habitat for the federally-threatened coastal California gnatcatcher (*Polioptila californica californica*). Many of the interior areas are also critical habitat for the federally-endangered Palos Verde blue butterfly (*Glaucopsyche lygdamus palosverdesensis*). The gnatcatcher favors the coastal sage scrub or chaparral vegetation; the butterfly favors flatter areas with grassland plants of the upper marine terraces, such as Ventura milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*), which is a principal food plant for its larvae. The gnatcatcher critical habitat covers virtually all of the terrestrial part of the SEA and extends well beyond the SEA on the Peninsula. The butterfly's critical habitat is chiefly in flatter areas of the marine terraces, but can include broader areas of the canyons.

The SEA is located at least partially in each of the following United States Geological Survey (USGS) 7.5' California Quadrangles: Torrance, San Pedro, and Redondo Beach

General Boundary and Resources Description

Most of the SEA is in the nearshore marine habitat and extends from the high tide line of the beach to about one mile offshore. The designated SEA traverses along the coastline of the Palos Verdes Peninsula from Flat Rock Point at the northern end of Bluff Cove to the west end of the breakwater of Los Angeles Outer Harbor. The terrestrial part of the SEA includes several non-contiguous ravines, canyons and streambeds that are adjacent to rural residential areas. The area known as Portuguese Bend is one of the largest inland areas within the SEA.

The SEA has the inshore part of the Point Vicente SMCA, which extends from mean high tide due east-west to three nautical miles offshore. The Point Vicente SMCA is like a reserve in that no take of any kind is permitted. The western line goes due east-west off an unnamed point about a 0.4 mile north of Point Vicente. The eastern line goes due north-south off Long Point. Adjacent is the Abalone Cove SMCA, which extends from mean high tide to 3 nautical miles offshore, also due north-south. The eastern boundary of the Abalone Cove SMCA extends off Portuguese Point.

Disjunct interior parts of the SEA include: 1) Agua Amarga Canyon, which drains to Lunada Bay (critical habitat for both the Palos Verdes blue butterfly and the coastal California gnatcatcher; 2) an area of coastal sage scrub and bluffs north of Point Vicente; 3) the upper bluff area of chaparral and grassland that is on the northeast side of Pacific Coast Highway at Point Vicente; 4) the beach and cliff area south of Pacific Coast Highway at Abalone Cove, Portuguese Point, Inspiration Point and Portuguese Bend; (5) the unbuildable areas of the Portuguese Bend Landslide, which include grassland, chaparral, and canyons and surround the community of Portuguese Bend on the north side of Pacific Coast Highway, and border the southern side of the community of Rolling Hills; 6) cliffs and headland areas with coastal bluff, coastal chaparral, and grassland extending from the east side of Portuguese Bend to the City of Los Angeles border at the west end of Royal Palms Beach

Park; 7) a lobe bordering the switchbacks of Palos Verdes Drive East that connects to the coast and covers the natural cliff, bluff, and chaparral vegetation up to about one mile inland; and 8) the intertidal area on the west side of Point Fermin.

The other disjunct interior parts of the SEA are within the community of Rolling Hills, with numerous natural parts of the canyons and ridges have been too steep to develop. These are designated as part of the SEA because the native vegetation is essential for the native birds and the migrants, which include those that use the Palos Verdes Peninsula as a rest stop and those that overwinter. They include the following canyons, which are on the north side of the Palos Verdes Range crest, and drain to the Los Angeles Basin: 9) Agua Negra Canyon on the west side of Crenshaw Avenue; 10) Agua Magna Canyon; 11) Sepulveda Canyon; 12) Blackwater Canyon, including two upland forks; and 13) George F. Canyon with all three upland forks.

Finally, the remaining disjunct interior parts of the SEA are in the Miraleste district of Rancho Palos Verdes, on the east side of Palos Verdes Drive East, naturally-vegetated canyons trend eastward to the flat area of San Pedro: 14) north of Rockinghorse Road; 15) north of Colt Road; 16) north of Coral Ridge Road; 17) Miraleste Canyon (north of Miraleste Road); and 18) two branches of San Pedro Canyon (south of Via Siena and north of Via Colinta).

The SEA is formed by the Palos Verdes Range, and is characterized by marine terraces atop rough terrain that is created by the erosion of the upland areas into many canyons. The flatter areas on the marine terraces are the areas that have been developed. Unparalleled headlands, rocky shoreline, and the land-sea interface provide for a tremendous variety of biotic resources in this area. It is one of the most biologically diverse and productive regions in the County, and contains several biotic communities, including rocky intertidal, kelp bed, coastal strand, and coastal sage scrub. One small sandy beach is periodically present on an ephemeral basis at Portuguese Bend. This 10 mile stretch of coastline, between Point Fermin and Bluff Cove, is the only sizeable rocky intertidal area in the County.

The Peninsula was once an island before sediments filled the Los Angeles Basin, and it has many biological associations today that originated during the time it was insular. A number of the uncommon plants, for example, are also only known from offshore islands, and some of the bird subspecies on the Peninsula are also only known elsewhere on the offshore islands. They are not found on the mainland except on the Palos Verdes Peninsula.

Rocky shores support a great number of species. This is primarily due to the interface of the ocean and the land, the highly diverse natural communities that both contain, and the oxygen and food-rich environment offered by this habitat. The natural features include a variety of substrates, both stable and unstable, the aeration of water and humidification of the air through wave splash, and the upwelling of nutrient-rich waters along the Southern California coast.

Subtidally, one can find representatives of every phylum of animals (major groupings, such as mollusks, echinoderms, jellyfish, etc.), many of which are not represented on land. Rocky substrates are as diverse as the intertidal areas. Sandy subtidal areas also support a great variety of species, but most are cryptic and submerge into the depths of the sand because of the high energy and unstable nature of their environment.

Kelp beds dominated by giant kelp (*Macrocystis pyrifera*) are an extremely productive habitat that provides food, attachment sites, and shelter for a diverse community of invertebrates, fishes, and sea mammals. They are an important nursery habitat for juvenile fishes. Kelp beds were originally common off the Southern California coast wherever rocks were present at shallow depths. However, due to man-made and natural phenomena, this habitat has been severely diminished in the region, and is now rare in the County. A kelp bed habitat restoration program was begun in the area in the 1960s, and appears to have been successful. Kelp has been reestablished west of Point Fermin, along Abalone Cove, and offshore of Halfway Point. Smaller colonies are now reestablishing at other locations offshore of the

southern coast of the Peninsula.

The coastal cliffs found in the area range in elevation from 100 to 300 feet and support coastal sage scrub and coastal strand bluff scrub. These and offshore rocks offer ideal roosting and feeding sites for numerous shorebirds, gulls, and other seabirds, including the fully-protected California brown pelican (*Pelecanus occidentalis californicus*). The area is an important stop for migrating birds as they fly along the coast or across the Santa Monica Bay. In addition, the bluff tops that are now abandoned agricultural fields are utilized by many species as wintering feeding grounds. One fully-protected species, the American peregrine falcon (*Falco peregrinus anatum*), and one very uncommon species of conservation concern, the prairie falcon (*F. mexicanus*), have been known to winter here in recent years.

The bluff tops and cliffs have been disturbed by pedestrian use, residential development, and agriculture. Only very small, isolated ravines remain in a natural state. The shoreline has suffered major biological impairment, commonly blamed on over-collection by humans and intense pollution. The health of the marine environment has been relatively poor due to human influences, such as outfalls with toxic contents, but appears to be slowly recovering.

Vegetation

Vegetation within the SEA is comprised of several terrestrial plant community types whose makeup is strongly influenced by the marine weather conditions. Coastal sage chaparral scrub occurs on the slopes, and southern willow scrub areas occur in the drainages of several isolated ravines distributed over the top of the peninsula. The immediate coast and cliffs support coastal dune and bluff scrub and coastal sage chaparral scrub. The abandoned agricultural fields and other disturbed areas that have become non-native grasslands provide raptor foraging areas with their populations of native reptiles and mammals.

Agua Amarga Canyon is the last remaining relatively undisturbed drainage on the coastal side of the Palos Verdes Peninsula. The SEA area is protected as a part of the Palos Verdes Peninsula Land Conservancy Preserves. Because of irrigation runoff, Agua Amarga has nearly perennial water. The canyon of Agua Amarga at Lunada Bay is quite spectacular, but not included in the SEA due to development on the coastal bluff adjacent to the descent to the beach. The main canyon has a complex of coastal sage scrub, chaparral, and riparian communities. Three forms of birds resident on the Peninsula that reside in Agua Amarga are insular forms of common birds: the dusky orange-crowned warbler (Vermivora celata ssp. sordida), the Channel Islands flycatcher (*Empidonax difficilis insulicola*, race of the western flycatcher), and Allen's hummingbird (*Selasphorus sasin sedentarius*). The dusky orange-crowned warbler is quite remarkable in that unlike other subspecies of the orange-crowned warbler, it is not a long-distance migrant. The federally-threatened coastal California gnatcatcher is also a resident in this canyon, and has critical habitat extending to the edge of the marine terrace bluff at the coast. Additionally, the canyon is critical habitat for the Palos Verdes blue butterfly. Vegetation also has insular forms. For example, the Catalina Island cherry (*Prunus ilicifolia* ssp. *lyonii*) and the southern island mallow (*Lavatera assurgentiflora* ssp. *glabra*) occur in the canyon. These animals and plants probably occur in all or many of the other terrestrial parts of the SEA as well.

Plant species observed or recorded in previous documentation within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium of the Los Angeles County SEAs.* Sensitive plant species and plant communities occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Descriptions and general locations of the each plant community present within the SEA are given below.

Coastal Bluff and Dune Scrub: Found close to the ocean where the substrate consists of fine, sandy soil that dries rapidly. In the SEA, it is limited to small sections of coastal strand and bluffs. Plants typical of the dune scrub include dune buckwheat (*Eriogonum parvifolium*), rattle pod (*Astragalus trichopodus* var. *lonchus*), bladderpod (*Peritoma arborea*), deer weed (*Acmispon glaber*), sawtooth goldenbush (*Hazardia aquarrosa*), and California sunflower (*Helianthus californicus*).

Corresponding MCV communities:

- *Baccharis pilularis* (coyote brush scrub) Shrubland Alliance
- *Lupinus arboreus* (yellow bush lupine scrub) Shrubland Alliance and Semi-Natural Shrubland Stands
- *Lupinus chamissonis-Ericameria ericoides* (silver dune lupine–mock heather scrub) Shrubland Alliance

Coastal Sage Chaparral Scrub: Consists of drought-deciduous, low, soft-leafed shrubs and herbs on gentle to steep slopes below 1,500 feet in elevation. This community is dominated by California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), black sage (*Salvia mellifera*), purple sage (*Salvia leucophylla*), and California brittle bush (*Encelia californica*). Coastal sage scrub is distributed throughout the SEA on the slopes of the isolated areas inland from the coast and on the coastal cliffs.

Corresponding MCV communities:

- *Artemisia californica* (California sagebrush scrub) Shrubland Alliance
- *Artemisia californica-Eriogonum fasciculatum* (California sagebrush-California buckwheat scrub) Shrubland Alliance
- *Encelia californica* (California brittle bush scrub) Shrubland Alliance
- *Diplacus* [*Mimulus*] *aurantiacus* (bush monkeyflower scrub) Shrubland Alliance
- *Salvia leucophylla* (purple sage scrub) Shrubland Alliance
- *Salvia mellifera* (black sage scrub) Shrubland Alliance
- *Eriogonum cinereum* (ashy buckwheat scrub) Shrubland Alliance
- *Eriogonum fasciculatum* (California buckwheat scrub) Shrubland Alliance
- *Hazardia squarrosa* (sawtooth golden bush scrub) Shrubland Alliance
- *Isocoma menziesii* (Menzie's golden bush scrub) Shrubland Alliance
- *Lotus scoparius* [*Acmispon glaber*] (deer weed scrub) Shrubland Alliance
- *Lupinus albifrons* (silver bush lupine scrub) Shrubland Alliance

Southern Willow Scrub: A riparian community consisting of dense, broad-leafed, winter-deciduous riparian thickets occurring within and adjacent to watercourses. The dominant species of this community within the SEA are willows (*Salix* spp.), with lesser amounts of mulefat (*Baccharis salicifolia*). This community occurs in segments along portions of the drainages and streambeds of isolated sites inland from the shoreline.

Corresponding MCV communities:

- *Salix exigua* (sandbar willow thickets) Shrubland Alliance
- *Salix gooddingii* (black willow thickets) Shrubland Alliance
- *Salix lasiolepis* (arroyo willow thickets) Shrubland Alliance

Non-Native Grassland: Consists of dominant invasive annual grasses that are primarily of Mediterranean origin. Dominant species found within this community include wild oat (*Avena fatua*), slender oat (*Avena barbata*), red brome (*Bromus madritensis* ssp. *rubens*), ripgut brome (*Bromus*

diandrus), and herbs, such as black mustard (*Brassica nigra*) and wild radish (*Raphanus raphanistrum*). Non-native grasslands are located in small to large patches throughout the SEA in previously disturbed areas, former agricultural and cattle pastures.

Corresponding MCV communities:

- *Avena* (*barbata, fatua*) Semi-Natural Herbaceous Stands
- *Brassica* (*nigra*) and other mustards Semi-Natural Herbaceous Stands
- *Bromus* (*diandrus, hordeaceus*)-*Brachypodium distachyon* Semi-Natural Herbaceous Stands
- *Bromus rubens-Schismus* (*arabicus, barbatus*) ([*Bromus madritensis* ssp. *rubens*] red brome or Mediterranean grass grasslands) Semi-Natural Herbaceous Stands
- *Lolium perenne* [*Festuca perennis*] (perennial rye grass fields) Semi-Natural Herbaceous Stands

Disturbed or Barren Areas: Areas that either completely lack vegetation or are dominated by ruderal species. Ruderal vegetation typically found within the SEA includes non-native grasses and a high proportion of weedy species, including black mustard and thistle species. Several disturbed areas are scattered throughout the SEA.

Corresponding MCV communities:

No corresponding MCV communities at this time

Intertidal and Subtidal Algal Habitats: Common in tidepools and on rocky subtidal substrate down to the macro-alga photosynthetic depth, which varies with water turbidity that is characteristic of the region. This habitat has representatives from all the phyla of algae, and it has not been characterized in the MCV manner. A common large brown alga observed at the tidepools of Point Fermin is feather-boa kelp (*Egregia menziesii*).

Community dominant plant:

- Feather-boa kelp (*Egregia menziesii*)

Surfgrass and Eelgrass Habitats: Characterized by two flowering plants that resemble grass and form dense beds on different substrates and in different conditions. Both types form highly productive habitats for unique assemblages of marine species. NOAA Fisheries and the CDFG consider surfgrass and eelgrass as valuable habitats that should be protected. Surfgrass occurs from Mean Lower Low Water (MLLW) to about 25 foot depth on rocky substrate. Locations known to support substantial surfgrass beds include rocky points and rocky subtidal areas of canyons all along the northern border of the SEA. Eelgrass grows on soft substrate and typically occurs in bays. A form of eelgrass (thought to be *Zostera pacifica)* is found on open coast sand bottom. Eelgrass is an important habitat that supports a community of diverse species from sessile to mobile invertebrates and certain fishes, such as pipefish.

Community dominant plant:

- *Phyllospadix scouleri,* or Scouler's surf grass and *P. torrey* or Torrey's surfgrass
- *Zostera pacifica* (eelgrass)

Kelp Forest Habitat Giant Kelp Beds: Can form to a depth of approximately 99 feet in the ocean. The kelp beds are part of a productive habitat that provide food, attachment sites and shelter for invertebrates and fishes. Giant kelp, the dominant alga of this community, is the fastest lengthening organism known, and it really thrives in nutrient-enriched waters of upwelling. It has been “clocked” at two feet per day extension of its stipe and blades. The kelp beds are an important nursery habitat and recruitment area for juvenile fishes and invertebrates. The Fisheries National Oceanographic

and Atmospheric Administration (NOAA) Fisheries, as well as the CDFG consider kelp beds as sensitive.

Community dominant plant:

- *Macrocystis pyrifera* (giant kelp)

Marine Resources

The Palos Verdes coastline is a region where the upwelling of nutrient-rich waters offers a variety of habitats that supports highly productive and extremely diverse marine and coastal communities. Man-made disturbances have seriously diminished the quality and extent of unaffected marine habitats. Today, the SEA possesses limited areas of kelp bed habitats. A kelp bed restoration program begun in the 1960s has apparently succeeded in these areas, and kelp has been reestablished off Point Fermin, in Abalone Cove and offshore of Halfway Point.

Intertidal Zone Habitats: Consist of a variety of coastal habitats periodically covered and uncovered by waves and tides. The rocky shores support a rich assortment of plants and animals including green, brown and red algae. A wide variety of invertebrates compete for space with the plants in this habitat. Mobile invertebrates, such as crabs and snails can be found in great abundance. Fishes are limited to tidepools during high tide, while shorebirds actively forage during low tide. The black abalone (*Haliotis cracherodii*) is a federally-endangered species and critically endangered species of the International Union for Conservation of Nature–Red List (IUCN). At one time, the black abalone was plentiful in the rocky intertidal and nearshore rocky subtidal areas in the SEA down to about 20 feet depth. Whether it still exists in the SEA is unknown, because its current occurrences are widely scattered and much reduced by overfishing and wasting disease.

Nearshore Subtidal Habitat: Includes those marine habitats ranging from the lower level of the intertidal zone to 99 feet. This region supports a variety of assemblages of invertebrates and fishes, and along the coastline of the SEA this habitat is dominated by giant kelp.

Kelp Forest Habitat: Kelp beds dominated by giant kelp are found in some locations in the area. These have tremendous value to the biota of nearshore areas. Where they occur, they may locally account for 90% of the biomass, providing structure and structural complexity for their community from the rocky base through the water column to the surface. Giant kelp is the fastest lengthening organism known, and it thrives in nutrient-enriched waters of upwelling. The giant kelp provides food and habitat for hundreds of species and all the phyla. The kelp beds are an important nursery habitat and recruitment area for juvenile fishes and invertebrates. Many of the species that this habitat supports are the basic components of the food chains of nearshore fishes. Kelp beds are also important because they reduce wave shock to shorelines. This protection helps maintain the abundance and complexity of the marine life found there.

Marine Habitat: Has the greatest diversity of wildlife, with representatives from nearly all the phyla (major groupings of animals, such as jellyfish, mollusks, echinoderms, etc.) and all parts of the food web (trophic levels) for several communities. Many of the marine phyla do not have terrestrial representatives. Some of the vertebrates, such as gray whales, and the plankton use the area as a migratory corridor. The major vegetation communities, each with its own great diversity and all trophic levels, are the benthic algae of rocky substrates, the kelp beds based on giant kelp holding onto rocky subtidal substrate and extending into the water column, and the planktonic, which are based on photosynthesizers that are microscopic and are throughout the water column in photosynthetic depths.

Wildlife

The wildlife found in the SEA is dependent upon the two basic regimes: marine and terrestrial. The shoreline and bluffs that overlook the coastal sections are homes and migratory rest areas for a wide variety of birds and marine life. The interior grasslands and ravines have a very different assemblage than the coast. Some of the SEA areas are separate and isolated from one another and probably suffer from the effects of the fragmentation of a larger, more contiguous ecosystem, and exhibiting a reduced number of species from what might be expected.

The mountainous Palos Verdes Peninsula juts out into the Pacific Ocean, relative to developed coastline to the north and south and offers many undisturbed habitats for marine and shorebirds. These and offshore rocks offer ideal roosting and feeding sites for numerous birds that affiliated with the coastline. The area is an important stop for migrating birds as they fly along the coast or across the Santa Monica Bay. In addition, the bluff tops and marine terraces, which are now either residences or abandoned agricultural fields, are utilized by many species in winter as feeding grounds. One fully protected species, the American peregrine falcon, and one uncommon species of conservation concern, the prairie falcon, have been known to winter here in recent years.

All wildlife species previously recorded, as well as those expected to occur, within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium* of the *Los Angeles County SEAs*. Sensitive wildlife species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Wildlife Movement

The SEA is on the Pacific Flyway migration route, which is used by many birds seasonally and plays an important role as a stopover because of its extensive undisturbed marine resources. It does not fall within any identified terrestrial movement routes for wildlife because it is isolated by the ocean on one side, and enclosed by miles of developed land on the remaining terrestrial sides.

The offshore major part of the SEA is on the annual migration route of the California gray whale (*Eschrichtius robustus*), which is a Convention on International Trade in Endangered Species (CITES) Appendix I animal. This means that they have endangered status, and no trade or harvest is permitted, except by strictly controlled export and import permits that are issued in countries that are party to the convention and have legislation of adoption, which includes the U.S. The gray whale migrates close to shore on its transit during the winter months, from the Bering Sea to lagoons of Baja California for calving and breeding. A whale count station is manned by volunteers at the Point Vicente Park and Interpretive Center that has yearly records, starting in 1979. The whales generally return north offshore. The area may be a migration corridor for other marine animals, as this is part of the great Southern California Bight, which has an eddy circling counterclockwise to the north off the southward flow of the California Current. This flow brings marine organisms (fishes, invertebrates, and plants) that may have major population concentrations in the south to this part of the ocean habitat. Most of these organisms have a planktonic stage that is dependent on the current system to maintain their populations and distribution. Pollution of the ocean waters by development on land will have significant effects that may not be appreciated immediately because of the cryptic nature of subtidal animals and plants.

Other Cites Appendix I mammals have been recorded as using the SEA in the Point Vicente records including: sperm whales (*Physeter macrocephalus*), minke whales (*Balaenoptera acutorostrata*), humpback whales (*Megaptera novaeangliae*), blue whales (*Balaenoptera musculus*), fin whales (*Balaenoptera physalus*), and southern sea otters (*Enhydra lutris nereis*).

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, and/or rare. This is due to the species' declining or limited population sizes, which usually results from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups, such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, which have been accorded special recognition. When species are federally-listed as endangered or threatened, they often have federally-designated, geographically-specific "critical habitat areas." Critical habitat areas, after extensive study by experts, are judged to be essential to conservation and maintenance of the species. The terrestrial parts of this SEA are virtually all critical habitat for the coastal California gnatcatcher. Many of the broader canyons and marine terrace bluff areas are also critical habitat for the Palos Verdes blue butterfly.

Sensitive Plant Communities and Habitats

The SEA supports several habitat types considered sensitive by resource agencies. These are inventoried by California Department of Fish and Game (CDFG) in the California Natural Diversity Database (CNDDB) [2011]. The CNDDB includes state and federally-listed endangered, threatened, and rare vascular plants, as well as several sensitive vertebrate species. These communities include silver dune lupine–mock heather scrub, California brittle bush scrub, bush monkeyflower scrub, ashy buckwheat scrub, Menzie's golden bush scrub, and black willow thickets, which occur in the SEA. These communities, or closely related designations, are considered high priority communities by the CDFG, which indicates that they are experiencing a decline throughout their range. The array and composition of these communities has been discussed in the Vegetation section. Changes to the classification system mentioned earlier, in some cases divide plant communities into many possible vegetation alliances, not all of which may be considered sensitive. For the purposes here previously listed communities with at least one sensitive alliance in the new format have been listed.

Sensitive Plant Species

The statuses of rare plants are hierarchically categorized by the CNPS using a rank and decimal system. The initial category level of Rare Plant Rank is indicated by the ranks 1A (presumed extinct in California), 1B (rare or endangered in California and elsewhere), 2 (rare or endangered in California but more common elsewhere), 3 (more information needed, a review list), and 4 (limited distribution). In cases where the CNPS has further identified the specific threat to the species, a decimal or Threat Code is added: .1 (seriously endangered in California), .2 (fairly endangered in California), or .3 (not very endangered in California).

The following special-status plant taxa have been reported or have the potential to occur within the SEA, based on known habitat requirements and geographic range information:

- Aphanisma (*Aphanisma blitoides*) RPR 1B.1
- Ventura marsh milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*) FE, SE, RPR 1B.1
- Coastal dunes milk-vetch (*Astragalus tener* var. *titi*) FE, SE, RPR 1B.1
- Coulter's saltbush (*Atriplex coulteri*) RPR 1B.2
- South Coast saltscale (*Atriplex pacifica*) RPR 1B.2
- Parish's brittlescale (*Atriplex parishii*) RPR 1B.1
- Davidson's saltscale (*Atriplex serenana* var. *davidsonii*) RPR 1B.2
- Southern tarplant (*Centromadia parryi* ssp. *australis*) RPR 1B.1
- Orcutt's pincushion (*Chaenactis glabriuscula* var. *orcuttiana*) RPR 1B.1

- Coastal goosefoot (*Chenopodium littoreum*) RPR 1B.2
- Catalina crossosoma (*Crossosoma californicum*) RPR 1B.2
- Beach spectaclepod (*Dithyrea maritima*) ST, RPR 1B.1
- Many-stemmed dudleya (*Dudleya multicaulis*) RPR 1B.2
- Island green dudleya (*Dudleya virens* ssp. *insularis*) RPR 1B.2
- Southern island mallow (*Lavatera assurgentiflora* ssp. *glabra*) RPR 1B.1
- Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*) RPR 1B.1
- Santa Catalina Island desert-thorn (*Lycium brevipes* var. *hassei*) RPR 1B.1
- Coast woolly-heads (*Nemacaulis denudata* var. *denudata*) RPR 1B.2
- South coast branching phacelia (*Phacelia ramosissima* var. *austrolitoralis*) RPR 4.2
- Brand's star phacelia (*Phacelia stellaris*) FC, RPR 1B.1

Sensitive Animal Species

The following special-status animal species are reported or are likely to be present within the SEA based on habitat requirements and known range attributes:

- Belkin's dune tabanid fly (*Brennania belkini*) CDFG Special Animals List
- Busck's gallmoth (*Carolella busckana*) CDFG Special Animals List
- Sandy beach tiger beetle (*Cicindela hirticollis gravida*) CDFG Special Animals List
- Western beach tiger beetle (*Cicindela latesignata latesignata*) CDFG Special Animals List
- Senile tiger beetle (*Cicindela senilis frosti*) CDFG Special Animals List
- Globose dune beetle (*Coelus globosus*) CDFG Special Animals List
- Monarch butterfly (*Danaus plexippus*) CDFG Special Animals List
- Henne's eucosman moth (*Eucosma hennei*) CDFG Special Animals List
- El Segundo blue butterfly (*Euphilotes battoides allyni*) FE, Xerces: Critical
- Palos Verdes blue butterfly (*Glaucopsyche lygdamus palosverdesensis*) FE, Xerces: Critical
- Lange's El Segundo Dune weevil (*Onychobaris langei*) CDFG Special Animals List
- Wandering skipper (*Panoquina errans*) CDFG Special Animals List
- Dorothy's El Segundo Dune weevil (*Trigonoscuta dorothea dorothea*) CDFG Special Animals List
- Black abalone (*Haliotis cracherodii*) FE
- Silvery legless lizard (*Anniella pulchra pulchra*) FSS, SSC
- Coast horned lizard (*Phrynosoma blainvillii*) BLMS, FSS, SSC
- Western snowy plover (*Charadrius alexandrinus nivosus*) FT, BCC, SSC, ABC, AWL, USBC
- Southwestern willow flycatcher (*Empidonax traillii extimus*) FE, FSS, SE, USBC, AWL, ABC
- California black rail (*Laterallus jamaicensis coturniculus*) BCC, ST, CDFG Fully Protected, USBC, AWL, ABC
- California brown pelican (*Pelecanus occidentalis californicus*) FE, SE
- Coastal California gnatcatcher (*Polioptila californica californica*) FT, SSC, USBC, AWL, ABC
- California least tern (*Sternula antillarum browni*) FE, SE, CDFG Fully Protected, USBC, ABC
- Western mastiff bat (*Eumops perotis californicus*) BLMS, SSC, WBWG High
- Silver-haired bat (*Lasionycteris noctivagans*) WBWG Medium
- San Diego desert woodrat (*Neotoma lepida intermedia*) SSC
- Pocketed free-tailed bat (*Nyctinomops femorosaccus*) SSC, WBWG Medium
- Big free-tailed bat (*Nyctinomops macrotis*) SSC, WBWG Medium-High
- Pacific pocket mouse (*Perognathus longimembris pacificus*) FE, SSC
- American badger (*Taxidea taxus*) SSC
- Minke whale (*Balaenoptera acutorostrata*) CITES Appendix I, IUCN least concern

- Blue whale (*Balaenoptera musculus*) CITES Appendix I, IUCN endangered
- Fin whale (*Balaenoptera physalus*) CITES Appendix I, IUCN endangered
- Southern sea otter (*Enhydra lutris nereis*) CITES Appendix I, IUCN endangered
- California gray whale (*Eschrichtius robustus*) CITES Appendix I, FE, IUCN critically endangered
- Humpback whale (*Megaptera novaeangliae*) CITES Appendix I, IUCN least concern
- Northern elephant seal (*Mirounga angustirostris*) CDFG Fully protected
- Sperm whale (*Physeter macrocephalus*) CITES Appendix I, IUCN vulnerable

The Palos Verdes blue butterfly is found in only within the County. The El Segundo blue butterfly is listed as federally-endangered and is currently known from a few areas on the Peninsula. Additional suitable habitat is found in the SEA, and the hope is that the one population can expand. The federally-threatened coastal California gnatcatcher occurs in the coastal sage scrub of the Peninsula, both in and outside of the SEA. The California least tern feeds in the near offshore areas, may visit the beaches, and may rest on the cliff and headland areas in the SEA. In addition, the silvery legless lizard and coast horned lizard, both state species of special concern, have the potential to occur in the SEA.

Ecological Transition Areas (ETAs)

There are no ETAs designated within this SEA.

Regional Biological Value

The SEA meets all SEA designation criteria and supports many regional biological values. Each criterion and how it is met is described below.

CRITERIA ANALYSIS OF THE PALOS VERDES PENINSULA AND COASTLINE SEA

Criterion		Status	Justification
A)	The habitat of core populations of endangered or threatened plant or animal species.	Met	The Palos Verdes Peninsula is the western-most area of breeding for the threatened coastal California gnatcatcher. The headlands and rocky shoreline provide wintering habitat for two important birds: the fully protected California brown pelican and the state-fully protected American peregrine falcon. The canyons of the SEA support three races of birds that are residents only on the Peninsula and the Channel Islands: insular forms of the orange-crowned warbler, western flycatcher, and Allen's hummingbird. Rare plants, such as southern island mallow t, make this area a very special mainland population for species that otherwise occur only on the offshore islands. Island green dudleya, a rare bluff plant known only from Palos Verdes Peninsula, Santa Catalina Island, and San Nicolas Island, occurs in the Portuguese Bend Landslide.

B)	On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	Unparalleled headlands, rocky shoreline, and the land-sea interface provide for a tremendous variety of biotic resources in the coastline area. Rocky shores support a great number of species, and the upwelling of deep waters provides nutrient-rich waters for the area's kelp beds, which are dominated by giant kelp. Kelp beds were formerly common off the Southern California coast wherever rocks were present at shallow depths. However, due to man-made and natural phenomena, this habitat has been severely diminished in the region. The mainland SEA areas contain mainland populations of species that occur chiefly on the offshore Channel Islands. Any population characteristic of an island is of extremely restricted regional distribution.
C)	Within the County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution	Met	Kelp beds are now rare in the County. These algal communities can account for 90% of the biomass where they occur, and provide food and habitat for hundreds of species. Like terrestrial forests, they moderate the microclimate, reduce wave shock to shorelines and provide shade and shelter to their myriad denizens. The coastal cliffs support coastal sage and coastal strand vegetation, which are rare in Los Angeles because of the scarcity of rocky headlands. The Peninsula's former island status and current maintenance of mainland populations of species that occur chiefly on the offshore Channel Islands are very special. Any population characteristic of an island is of extremely restricted distribution in the County.
D)	Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in the County.	Met	The coastal cliffs provide ideal roosting and feeding sites for numerous shorebirds, gulls, and other seabirds, including the fully-protected California brown pelican. This headland is a principal rest-stop for migrating terrestrial and marine birds on the Pacific Flyway and a wintering area for some migrants. Bluff tops and marine terraces of abandoned agricultural fields are utilized by many species as winter feeding grounds. The Palos Verde Peninsula is the western-most area of breeding for the federally-threatened coastal California

			gnatcatcher. It has numerous plant and animal species that only occur here and otherwise on the offshore islands, so this is a special area for all phases of their life cycles. The marine area is an important migration area for all of the sealife and marine mammals.
E)	Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Met	Much scientific and educational work has been done on this part of the coastline. State and county agencies have generated a great deal of information about the area. The Peninsula was once an island and has biotic characteristics more like the offshore Channel Islands than the rest of the County. It is an anomaly of an island now attached to the mainland, and thus interesting for biogeographic studies. The Peninsula canyons are the western-most area of breeding coastal California gnatcatchers. Because of the resident birds and plants that occur only on the Palos Verdes Peninsula and the Channel Islands, this area is of scientific interest for study of island biogeography and evolutionary ecology.
F)	Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.	Met	As the only extensive (10 miles long) rocky intertidal shoreline in the County, the coastline is an important area for preserving its intense biodiversity. It has headlands, rocky shoreline cliffs, rocky intertidal areas, boulder field intertidal areas, kelp beds, coastal strand, ephemeral coastal strand, and coastal sage scrub. The bluffs have a special array of plants found nowhere else on the County mainland. The Peninsula has diverse communities typical of the offshore Channel Islands including coastal sage scrub (which is used by the mainland threatened bird, coastal California gnatcatcher), chaparral, and riparian habitats. The SEA canyons are the least disturbed coastal drainages of the County.

In conclusion, the area is an SEA because it contains: A) the habitat of core populations of endangered and threatened plant and animal species; B-C) biotic communities, vegetative associations, and habitat of plant and animal species that are either unique or are restricted in distribution in the County and regionally; D) concentrated breeding, feeding, resting, and migrating grounds, which are limited in availability in the County; E) biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community; and F) areas that provide for the preservation of

relatively undisturbed examples of original natural biotic communities in the County.

13. Palos Verdes Peninsula and Coastline SEA Sources

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