7. El Segundo Dunes SEA

Location

General

The El Segundo Dunes Significant Ecological Area (SEA) is located between the west end of the Los Angeles International Airport (LAX) and the Pacific Ocean. The SEA is the largest remaining coastal dune habitat in Southern California. The federally-endangered El Segundo blue (*Euphilotes battoides allyni*) butterfly lives its entire life in these dunes.

The entire SEA is located in the United States Geological Survey (USGS) 7.5' California Quadrangle of Venice.

General Boundary and Resources Description

The SEA boundaries are as follows: Sandpiper Street to the north, Pershing Drive to the east, Imperial Highway to the south, and Vista Del Mar Road to the west. This is the largest of four proposed critical habitat areas for the El Segundo blue butterfly. The Vista Del Mar Park on Vista Del Mar Road is excluded from the SEA.

The ecological significance of the El Segundo Dunes is recognized by both federal and state governments, as well as by the City and County of Los Angeles and the California Coastal Commission (CCC). The vegetation found here does not occur anywhere else in the County, and is uncommon throughout Southern California. The vegetation is southern dune scrub, which is adapted to sandy, well-drained soils. The vegetation shows zonation, changing gradually as one moves from the foredunes facing west and the ocean over the dune crest and into coastal sage scrub. Many plants and invertebrates are specifically adapted and restricted to this environment and are not found elsewhere. One of these endemic organisms is the El Segundo blue butterfly, a federally-endangered butterfly species. The distribution of this butterfly is entirely restricted to the El Segundo Dunes and a few specks of dune habitat south to the edge of Malaga Cove (all once part of the El Segundo Dune sysytem). Because of its rarity and highly limited range, the butterfly is officially recognized as an endangered species by the U.S. Fish and Wildlife Service. This small piece of dune habitat is extremely valuable as the final example of a community that was once more common along the County and Southern California coastline.

Vegetation

Vegetation within the SEA is a remnant of a formerly more widespread distribution in the Los Angeles area of plant communities defined by their proximity to the immediate coast with its unique environmental conditions and sandy soils. The area has a long history of land disturbance and increasing isolation from related habitats. Today, the SEA has three plant communities with relatively few species. Importantly, the dune buckwheat (*Eriogonum parvifolium*), which is the only host plant for the larvae of the rare El Segundo blue butterfly, is found there, and the buckwheat population is isolated from other populations. Sensitive plant species 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.

<u>Coastal Strand Vegetation</u>: A community that occurs in the loose sand just above the high tide line of

the beach. This community is characterized by a low species diversity because few plants can tolerate the harsh conditions on this dry, sandy, saline soil with buffeting by high winds, salt spray and high summer temperatures.

Corresponding MCV communities:

- *Abronia latifolia – Ambrosia chamissonis* (dune mat) Herbaceous Alliance
- *Cakile* (*edentula, maritima*) (sea rocket stands) Semi-Natural Provisional Herbaceous Alliance

Coastal Bluff and Dune Scrub: A remnant of the El Segundo Dune system that occupied coastal areas along much of the Santa Monica Bay. In the SEA, the coastal bluff and dune scrub is found in a strip along the immediate coastal sections of the SEA. The system consists of fine, sandy soil that dries rapidly. 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 squarrosa*), 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: Characterized by the summer drought deciduous vegetation found near the Southern California coast of low, mostly soft-woody shrubs with bare ground underneath and between shrubs. This community is dominated by California sagebrush, California buckwheat (*Eriogonum fasciculatum*), black sage (*Salvia mellifera*), purple sage (*Salvia leucophylla*), and California brittle bush (*Encelia californica*) and intergrades with the coastal bluff and dune scrub near the shore and gradually becomes more evident near the crest of the site

Corresponding MCV communities:

- *Artemisia californica* (California sagebrush scrub) Shrubland Alliance
- *Artemisia californica-Salvia mellifera* (California sagebrush-black sage scrub) Shrubland Alliance
- *Artemisia californica-Eriogonum fasciculatum* (California sagebrush-California buckwheat scrub) Shrubland Alliance
- *Encelia californica* (California brittle bush scrub) Shrubland Alliance
- *Salvia mellifera* (black sage scrub) Shrubland Alliance
- *Eriogonum fasciculatum* (California buckwheat scrub) Shrubland Alliance
- *Hazardia squarrosa* (sawtooth golden bush scrub) Shrubland Alliance
- *Lotus scoparius* [*Acmispon glaber*] (deer weed scrub) Shrubland Alliance
- *Lupinus albifrons* (silver bush lupine scrub) Shrubland Alliance

Wildlife

An assessment of wildlife is made difficult due to the lack of data but the animal populations within the SEA probably reflect a somewhat lower diversity and abundance for the habitat types present for several reasons, including: the small area of the dune habitat, the homogeneity of the topography and habitat, influences of edge effect from developments to the north and south, the ocean to the west and the impact of being under the flight paths of aircraft departing from LAX to the east.

One key occupant of the area is the El Segundo blue butterfly, which is found here and also in a very few other locations to the south in remnants of the former dune complex. The El Segundo blue butterfly co-occurs with the only known plant species that supports its complete lifecycle, the dune buckwheat (*Eriogonum parvifolium*). The adult butterfly uses the flowers as a major source of nectar, and the larvae feed only on the flowers and seeds.

Amphibian populations are generally scarce in beachfront communities and no riparian habitat is available within the SEA. Many essential reptilian habitat characteristics, such as open habitats that allow free movement and high visibility and small mammal burrows for cover and escape from predators and extreme weather, are present within the SEA. The scrubland habitats in the SEA probably provide foraging and cover habitat for year-round resident and seasonal resident song birds. In addition, the SEA provides some raptor foraging habitat, so they can be expected visitors. Mammal populations probably reflect the generally disturbed environs influencing this SEA. Small mammals are expected to be uneven in their diversity, with more adaptive species and introduced European species occurring in higher numbers compared to others. Medium sized mammal populations are expected to exhibit the same characteristics. Resident large mammals are absent. 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 used by many birds seasonally. The dune habitat probably does not play an important role as a stopover because of its limited resources, due its small size; however, it will attract some birds because it is one of the few undeveloped places along the coast. The area does not fall within any identified terrestrial movement routes for wildlife.

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. However, for species listed previous to 1978, critical habitat areas rarely are designated officially. Sometimes such areas are called "essential habitat," which would be the case here for the El Segundo 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 include dune mat, silver dune lupine–mock heather scrub, California brittle bush scrub, and sawtooth golden bush scrub. 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.

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
- Coastal dunes milk-vetch (*Astragalus tener* var. *titi*) FE, SE, RPR 1B.1
- Orcutt's pincushion (*Chaenactis glabriuscula* var. *orcuttiana*) RPR 1B.1
- Beach spectaclepod (*Dithyrea maritima*) ST, RPR 1B.1
- Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*) RPR 1B.1
- 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
- Senile tiger beetle (*Cicindela senilis frosti*) CDFG Special Animals List
- Globose dune beetle (*Coelus globosus*) CDFG Special Animals List
- Henne's eucosman moth (*Eucosma hennei*) CDFG Special Animals List
- El Segundo blue butterfly (*Euphilotes battoides allyni*) FE, Xerces: Critical
- Lange's El Segundo Dune weevil (*Onychobaris langei*) CDFG Special Animals List
- El Segundo flower-loving fly (*Rhaphiomidas terminatus terminatus*) CDFG Special Animals List
- Silvery legless lizard (*Anniella pulchra pulchra*) FSS, SSC
- Coastal whiptail (*Aspidoscelis tigris stejnegeri*) CDFG Special Animals List
- San Bernardino ringneck snake (*Diadophis punctatus modestus*) FSS
- Coast horned lizard (*Phrynosoma blainvillii*) BLMS, FSS, SSC
- Western snowy plover (*Charadrius alexandrinus nivosus*) FT, BCC, SSC, ABC, AWL, USBC
- California black rail (*Laterallus jamaicensis coturniculus*) BCC, ST, CDFG Fully Protected, USBC, AWL, ABC
- California least tern (*Sternula antillarum browni*) FE, SE, CDFG Fully Protected, USBC, ABC
- Pacific pocket mouse (*Perognathus longimembris pacificus*) FE, SSC

Ecological Transition Areas (ETAs)

There are no ETAs in this SEA.

Regional Biological Value

The SEA meets several SEA designation criteria incorporating regional biological values. Each criterion and how it is met is described below.

Criteria Analysis of the El Segundo Dunes SEA

Criterion		Status	Justification
A)	The habitat of core populations of endangered or threatened plant or animal species.	Met	The El Segundo Dunes is one of four known localities in the world where one can find the endangered El Segundo blue butterfly. All four areas are remnants of a once continuous three-mile system of seacoast dunes in the County. The blue's habitat is the coastal dune buckwheat, on which the butterfly lays its eggs and the larvae feed.
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	The southern dune scrub vegetation has become very uncommon in the Southern California region due to the conversion of the habitat to seacoast dwellings, hotels, and other development. The vegetation thrives on sandy, well-drained soils, and grades into coastal sage scrub on the inland side. Many plants and invertebrates are restricted to this environment and are not found elsewhere. This small piece of dune habitat is extremely valuable as the final example of a community that was once more common along the Southern California coast.
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	The southern dune scrub vegetation found here on the three remnant localities of the El Segundo Dunes does not occur anywhere else 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	A number of organisms call the sandy, well-drained soils of the El Segundo Dunes "home," and are restricted to this coastal environment. Like the El Segundo blue butterfly, their entire life cycles are here in the dunes.
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	As a result of the uniqueness of this community and of the specializations of the organisms found here, the dunes have been closely scrutinized by biologists of many disciplines.
F)	Areas that would provide for the preservation of relatively undisturbed	Not Met	Much of the original three miles of dunes have been removed by development or disturbed.

	examples of the original natural biotic communities in the County.		Scattered on the site are radio towers, roads, oil extraction equipment, and a reservoir. The vegetation is much impacted by human use, but can be restored. The designated area is the best remaining part of the original El Segundo Dunes.

In conclusion, the area is an SEA because it contains: A) core habitat for the federally-endangered El Segundo blue butterfly; B-C) beach dunes, a rare community both regionally and within the County; D) a habitat that is rare and necessary for the life cycle of the El Segundo blue butterfly and other dune insects and fauna; and E) the geographic limit of El Segundo Dunes, a rare habitat much studied by biologists.

7. El Segundo Dunes SEA Sources

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