22. Santa Monica Mountains SEA

Location

General

The Santa Monica Mountains Significant Ecological Area (SEA) is located within the Santa Monica Mountains in a mostly unincorporated area of the County. Much of the area is in the Santa Monica Mountains National Recreation Area, but is privately owned. Many of the federal lands under the jurisdiction of the National Park Service (NPS) are included in the SEA designation. Many of the state parklands, notably Malibu Creek State Park and Topanga State Park, are also included in the SEA. The SEA includes nearly all of the canyons and ridges from the Ventura-Los Angeles County line, and east to Sullivan Canyon, which is near the communities of Pacific Palisades Brentwood to the south, and Encino to the north. From south to north, the SEA extends from the Pacific Ocean shoreline or urban-wildland interface of Malibu, through the unincorporated area of the Santa Monica Mountains proper, to the northern edge of the SEA extending along the undeveloped southern edge of the San Fernando Valley or irregularly along the Ventura-Los Angeles County line. It should be stated that this SEA recognizes the rare habitat of a small regional mountain range with a high diversity of topography and moisture regimes, and with vegetation adapted to a Mediterranean climate, which is globally rare, existing elsewhere only along western portions of continents at 30-40° latitude[1]. Although the habitats may seem common within the Santa Monica Mountains, in terms of limited indigenous global ranges of the constituent species, their special adaptations to climate, the relatively intact character of the habitats, and the plant assemblage of the Santa Monica Mountains are unique. Development within the SEA that extends the nearby expansive urban development of the Los Angeles Basin and San Fernando Valley needs to be carefully considered to preserve these special resources.

The SEA is located at least partially in each of the following United States Geological Survey (USGS) 7.5' California Quadrangles: Thousand Oaks, Calabasas, Canoga Park, Triunfo Pass, Point Dume, Malibu, and Topanga.

General Boundary and Resources Description

Within the SEA boundary, there are a number of areas that are not a part of the SEA due to dense development. For example, La Sierra, Malibu Lake, and most of the City of Malibu have been excluded.

The majority of the SEA lies within the unincorporated area of the County. Other jurisdictions include the City of Malibu, the City of Los Angeles, City of Calabasas, the City of Agoura Hills, the City of Hidden Hills, and the City of Westlake Village.

From the Ventura-Los Angeles County line to the vicinity of Topanga Beach, the southern boundary of the SEA irregularly contacts the boundary of the Malibu Coastline SEA, which extends offshore about a 0.8 mile to capture the kelp beds and rich natural marine communities of and off the coastline of the Santa Monica Mountains. The sandy beaches along this SEA are the least disturbed beaches of the County, some of them completely natural. This is a remnant of the typical rock and sand shoreline that once occurred along the coast of Southern California. From Mugu Lagoon to

[1] Six regions on Earth have a coastal climate where ocean currents mediate an equable climate yet cause most precipitation to occur outside the summer period of most intense sunlight and most vegetative growth for many plants. These are California, the Mediterranean Basin, portions of South Australia, South Africa, and Chile

Latigo Point (the County portion starting at the Ventura-Los Angeles County line and Leo Carillo State Beach), this is an ASBS (Area of Special Biological Significance), which is a marine area designated by the State Water Resources Control Board as having exceptionally good water quality and natural community features. Populated and disturbed areas along the shore are not included in the SEA.

Beginning at the intersection of the Ventura-Los Angeles County line and State Route-1, the southern area of the SEA includes all the terrestrial area of Leo Carrillo State Beach (a state park that has much beautiful upland acreage of grasslands, coastal chaparral, and an excellent riparian area of sycamore-oak forest along the Arroyo Sequit). The Arroyo Sequit from the coast to the junction of West and East forks and about a 0.5 mile of the West Fork are federally-designated critical habitat for the southern steelhead (*Oncorhynchus mykiss irideus*), which is a salmon that runs upstream for breeding, but spends most of its life in the ocean. The young fish, however, spend the first year of life in fresh water.

At the eastern boundary of Leo Carillo State Beach, an unnamed canyon is excluded from the SEA, but San Nicolas Canyon with its riparian woodland is included all the way to the shore. Urban areas to the east of San Nicolas Canyon are also excluded. The Los Alisos and Lechuza Canyon immediate drainages are included up to the highway. From Lechuza Canyon, the excluded area extends north to the southern border of Charmlee Natural Area (a County park supporting grasslands and chaparral). Much of the Encinal Canyon drainage is included in the SEA north of State Route-1, and the Steep Hill Canyon drainage is included north of State Route-1. Trancas Canyon is densely settled in the area near the coastline; only the steeper, natural section is included in the SEA. To the east, a large excluded area encompasses the dense habitation of the Malibu Riviera.

The SEA includes the riparian forest of Zuma Canyon as it exits onto the coastal plain, with a small sub-watershed designated critical habitat for the federally-endangered Braunton's milkvetch (*Astragalus brauntonii*). This rare plant is narrowly endemic to four mountain ranges of Southern California that have a particular marine-originated rock stratum of interbedded carbonates and sandstones. The SEA also includes portions of the riparian forest of Ramirez Canyon, where it has not been impacted by development in the Malibu Riviera. The natural area of Escondido Canyon and its 150 feet waterfall is included. Latigo Canyon is included north of State Route-1, where chaparral intergrades with walnut and oak woodlands along the drainages and north-facing slopes. East of Latigo Canyon, the boundary of the excluded area follows the ridges immediately north of State Route-1 to join the highway west of Solstice Canyon. Solstice Canyon and its County Park are included in the SEA. These support grasslands, chaparral, and a fine riparian area of sycamore-oak forest along Solstice Canyon. Puerco and Marie Canyon drainages are included north of State Route-1.

In the vicinity of Winter Canyon, the boundary follows Malibu Canyon Road to exclude the central community area of Malibu in another large island. A finger of the SEA extends through central Malibu along Malibu Creek in the area of Malibu Creek State Park and Malibu Lagoon State Beach to include the Creek and Malibu Lagoon south of Pacific Coast Highway. This is one of the points of contact between the Santa Monica Mountains SEA and the Malibu Coastline SEA. Malibu Creek from the shore to its major bend to the west in Malibu Canyon is federally-designated critical habitat for the southern steelhead. Coincident with the steelhead critical habitat along Malibu Creek and all brackish portions of the Malibu Lagoon are designated critical habitat for the endangered tidewater goby (*Eucyclogobius newberryi*). This little two-inch fish was once common in brackish water of coastal lagoons of streams the length of the State of California. This pristine habitat is disappearing (the fish is apparently gone from San Francisco Bay), and any location where the tidewater goby is still found is a unique place.

The Malibu Lagoon is the only remaining intact coastal lagoon in the County[2], and still has its

[2] Ballona Creek lagoon is also in Los Angeles County, but exists in a disturbed condition.

perennial stream to maintain the brackish conditions that are essential to the diverse and unique group of species of coastal lagoons. The federally-endangered southern steelhead passes through this lagoon on its upstream and downstream spawning runs, and its young fish (smolts) may spend some time in the lagoon before entering their oceanic habitat. The passage is critical habitat for the steelhead, as well as for the endangered tidewater goby (*Eucyclogobius newberryi*). This lagoon has one of the County's three[3] remaining saltmarshes, with dominant species of pickleweeds (*Arthrocnemum subterminale* and *Salicornia pacifica*). The Malibu Lagoon supports a good representation of coastal strand community (now groomed off many of the recreational beaches), is a resting stop on the Pacific Flyway (over 200 species of birds reported), and has many resident avian species. From fall to spring, it supports a flock of the federally-threatened western snowy plover (*Charadrius alexandrinus nivosus*), and there are recent indications that some may over-summer to breed (after a hiatus in breeding of many decades, Ryan Ecological Consulting, 2010). The pickleweed is valuable non-breeding habitat for the state-endangered Belding's savannah sparrow (*Passerculus sandwichensis beldingi*).

East of central Malibu, the excluded area borders primarily follow the less-inhabited ridges that border Carbon and Las Flores canyons and about a 0.5 mile north of State Route-1. East of Las Flores Canyon, the border of the excluded area follows a transmission line to skirt an old oil field. At the western ridge of Piedra Gorda, the SEA boundary follows the ridgeline southeast to State Route-1. From Piedra Gorda, the SEA boundary closely tracks State Route-1 along the substantial sea cliffs, avoiding two small developed areas north of the highway near the mouths of Pena and Tuna canyons. The SEA includes all of the meandering Topanga Canyon Creek at Topanga Beach. Upstream nearly to the community of Fernwood, Topanga Canyon is federally-designated critical habitat for the southern steelhead. Near the shore in Topanga Canyon Creek is critical habitat for the tidewater goby. This is the eastern point of contact between the Malibu Coastline SEA and SEA. It is also at this point where the shoreline where there are no more excluded areas.

The SEA includes Parker Mesa, north of State Route-1, and is coterminous with the boundary for the City of Los Angeles towards the north. About one mile north of the coast, the boundary extends to the east, contouring around the ridgelines that border the populated areas of Santa Ynez, Pulga, and Temescal canyons, with some residential areas on the ridges excluded from the SEA. These three canyons contain riparian oak and sycamore forests, which are a good variety of canyon habitats that include rocky outcrops and small waterfalls, are preserved in their upper reaches by inclusion in the Topanga State Park. The upstream areas of Santa Ynez, Pulga, and Temescal canyons that are uphill from the community of Palisades Highlands include much of federally-designated critical habitat for the Braunton's milkvetch. The boundary skirts Will Rogers State Park, but includes much of the unpopulated part of Rustic Canyon.

At Rustic Canyon, the boundary follows the eastern ridge to the north. Tracing the edge of development along the eastern slope of the canyon, the boundary continues north and eventually crosses over the ridgeline and into the undeveloped part of Sullivan Canyon. The boundary then follows the eastern slope of Sullivan Canyon and continues north along the ridgeline between Sullivan Canyon and Mandeville Canyon. After crossing the main ridge of the coastal zone and Mulholland Drive near San Vicente Mountain, the SEA boundary reaches and includes the sub-watershed of Encino Reservoir.

On the west side of Encino Reservoir, the SEA boundary turns west and follows the edge of development on the northern slopes of the Santa Monica Mountains that form the southern border of the San Fernando Valley. Some development is excluded on the east side of Topanga Canyon and the Calabasas Highlands area. The upper reaches of Topanga Canyon are included, and the SEA crosses the ridge to include the upper slopes of a natural drainage that is opposite to Topanga Canyon on the San Fernando Valley side.

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[3] The three areas with salt marsh in Los Angeles County are Alamitos Bay, Ballona Lagoon, and Malibu Lagoon.

West of Calabasas Park, the SEA boundary extends northeast and contours along the upper slopes of McCoy Canyon to include a finger of SEA on the north ridge of McCoy Canyon, which is part of state park land. On the west side of Calabasas Park and Hidden Hills, the boundary crosses State Route-101 along the western edge of development in Hidden Hills north to the County line. The undeveloped portion of Gates Canyon within the Simi Hills and its watershed is included north to the Ventura-Los Angeles County line, excluding a ridgetop island and developed portions of the City of Calabasas. A narrow finger of connection joins the portion of the SEA east of the City of Calabasas to the area west of the City, north of State Route-101 along a tributary of Las Virgenes Creek. Las Virgenes is an important tributary of Malibu Creek, and although this area is not in the coastal zone, it represents a portion of the upper coastal watershed. Further to the west, the boundary extends north again to encompass the open space from Las Virgenes Road along the Ventura-Los Angeles County line to the edge of development within the City of Agoura Hills. Within this portion of the SEA, Cheseboro Canyon contains fine natural, undeveloped sections of canyon just east of the City of Agoura Hills that are administered by both the NPS and the State Park system. The SEA includes all of undeveloped Cheseboro Canyon and the undeveloped western ridge of Cheseboro's important tributary, Palo Comado Canyon. This is the western terminus of the SEA that lies north of State Route-101.

An important feature of this area is a small tributary of Las Virgenes Creek (and ultimately Malibu Creek) named Liberty Canyon. The underpass of State Route-101 at Liberty Canyon Road along the drainage conveys relatively less vehicular traffic than other freeway crossings within several miles, and is one of the few active wildlife passage areas along the entire extent of State Route-101 through the Santa Monica Mountains. All other watercourse and street crossings of State Route-101 are very constrained or else entirely impassible for wildlife. There are widely documented concerns for the consequences of genetic isolation for the small band of mountain lions (*Puma concolor*) of the Santa Monica Mountains. Mountain lions that are known to use this area of the SEA to transit back and forth between the Santa Monica Mountains and the greater lion populations of the Simi Hills and north. The area north of the Liberty Canyon underpass is natural chaparral, watercourses, and grassland administered by the Santa Monica Mountains Conservancy. South of State Route-101, development is present with a very narrow corridor of natural habitat that includes valley oak (*Quercus lobata*) along the creek of Liberty Canyon.

A small island of developed area south of State Route-101 and along Liberty Canyon is excluded from the SEA. From the Liberty Canyon underpass south of State Route-101 the SEA boundary follows the north-facing side of an unnamed ridge at the southern end of the City of Agoura Hills towards the northern slopes of Ladyface Mountain. This is a chaparral-dominated area with numerous canyons and ridges supporting federally-threatened Agoura Hills dudleya (*Dudleya cymosa* ssp. *agourensis*), and one of the nine critical habitat areas in the County of Los Angeles and in the SEA for the state- and federally-endangered Lyon's pentachaeta (*Pentachaeta lyonii*), as well as other uncommon and rare plants, such as Fish's milkwort (*Polygala cornuta* var. *fishiae*), Sonoran maiden fern (*Thelypteris puberula* var. *sonorensis*), and the southern-most known occurrence of the California juniper (*Juniperus californica*) within the County. The SEA northern boundary crosses Kanan Dume Road in the area where Lindero Canyon formerly joined Medea Creek and continues its contour along the north-facing ridge of Ladyface Mountain, which also supports Agoura Hills dudleya, Lyon's pentachaeta, Ojai navarretia (*Navarretia ojaiensis*), and other rare and sensitive plants on its chaparral-covered slopes. A small area with development and fill along the south side of Kanan Dume Road has been excluded from the SEA.

The SEA boundary veers to the southwest to avoid the developed areas of Westlake Village, but includes Las Virgenes Reservoir in the SEA and three more of the critical habitat areas for the Lyon's pentachaeta. A finger includes an undeveloped section of Triunfo Canyon. A short distance southwest of Las Virgenes Reservoir, the boundary crosses Decker Canyon road and extends west to the Ventura-Los Angeles County line, which is another area of critical habitat for the Lyon's pentachaeta. Most of the critical habitat areas for Lyon's pentachaeta in the County are covered by the North Area Plan regulations for the Santa Monica Mountains, but some critical habitat areas also occur in the coastal zone. The boundary then follows the Ventura-Los Angeles County line to the southwest all the way to the coast and State Route-1 where the northern and the southern boundary

join at Leo Carillo State Beach.

Vegetation

The SEA includes most of the Santa Monica Mountains range. This east-west trending range is geologically complex, and because of its unique geological history and rugged topography with many microhabitats, it has a flora that is unlike any other place in the County. There are about 900 species of vascular plants—an exceptionally diverse flora for an area of its size. (Raven et al., 1986) The County portion of the Santa Monica Mountains are characterized by steep, rugged terrain of mountain slopes and canyons, with elevations ranging from sea level to over 2,800 feet above mean sea level (MSL) at Castro Peak. The Santa Monica Mountains are bounded by the Pacific Ocean to the south, the Oxnard Plain to the west, the Los Angeles Basin to the east, and the San Fernando Valley and Simi Hills on the north. The SEA includes numerous minor and major canyons. Named canyons include Trancas Canyon, Zuma Canyon, Ramirez Canyon, Escondido Canyon, Solstice Canyon, Corral Canyon, Malibu Canyon, Carbon Canyon, Los Flores Canyon, Tuna Canyon, Topanga Canyon, Santa Ynez Canyon, Temescal Canyon, Sullivan Canyon, Lobo Canyon, Triunfo Canyon, Las Virgenes Canyon, Liberty Canyon, Palo Comado Canyon, and Stokes Canyon. Major drainages within the SEA include the Arroyo Sequit, Zuma Canyon Creek, Malibu Creek, Los Flores Canyon Creek, Topanga Canyon Creek, Triunfo Creek, Las Virgenes Creek, and Medea Creek.

These drainages all support well-developed riparian communities, which are a type of sensitive and rare community that is essential to the biodiversity of the County. Natural watercourses provide water, food and cover for a variety of animal species and provide an ecological link between the upland and marine environments. Additionally, they contribute to regional and continental connectivity by providing shelter and forage for many migratory bird species, which maintains biodiversity over several spatial scales. Many riparian corridors within the SEA contain perennial sections that are among the last remaining major drainages in the Santa Monica Mountains in an undeveloped condition. In the canyon bottoms are riparian forests, which are sensitive habitats because of their rarity and loss to channelization and development. Most riparian forests in the Santa Monica Mountains are of western sycamore (*Platanus racemosa*) and coast live oak (*Quercus agrifolia* var. *agrifolia*), Fremont and black cottonwood (*Populus fremontii* ssp. *fremontii* and *P. trichocarpa*) and leatherleaf ash (*Fraxinus velutina*). The upstream and upper canyon ridges are dry and support coastal sage scrub, which blends with the more mesic chaparral of the lower slopes. The rich riparian community of plants supports abundant wildlife populations that include amphibians and birds dependent on surface moisture, and mule deer and mountain lion, the latter of which is an indicator of large-scale ecosystem health.

The endangered Lyon's pentachaeta (*Pentachaeta lyonii*) prefers compact, undisturbed soil on the upper coastal slope areas of many of these streams. Because such areas are often flat and may be cleared of other plants, this puts the plant in the path of development. This "daisy" is a narrow endemic of Los Angeles and Ventura counties, and has recently lost about half of its known population. Most of the critical habitat for Lyon's pentachaeta occurs in the northern area of the SEA. At the south end of the artificial Malibu Lake on Triunfo Creek, in the rolling slope area of Medea Creek that is south of the City of Agoura Hills, near the confluences of Lobo and Triunfo creeks and La Sierra Canyon and Triunfo Creek, on the east and west ridgelines of Las Virgenes Reservoir extending to the drainage junction with Triunfo Creek along Decker Road to the ridgeline area of Mulholland Highway, and in the area of Saddle Rock on the Mulholland Highway. These are about half of the areas of critical habitat named for the plant. The remainder are in nearby Ventura County extending between the Santa Susana Mountains in the north, and the Santa Monica Mountains in this area.

Because of the undisturbed conditions, with riparian forests filtering and cooling the waters, Arroyo Sequit, Malibu Creek, and Topanga Canyon still support extremely rare spawning runs of the federally-endangered southern steelhead. Historically, steelhead was known from Solstice and Zuma canyons as well, and it is likely that all the major drainages, which once had perennial water

and extended to the shore in the rainy season supported this species.

The majority of the SEA consists of undisturbed open space with scattered rural residential communities and a few high-density residential developments. Open space within the SEA is mostly vegetated with dense stands of chaparral. Other types of vegetation, such as woodlands and grasslands, occur in smaller portions scattered throughout the SEA on moist or north facing slopes and canyon bottoms. Lesser amounts of coastal sage scrub are also present, primarily on low-elevation, dry south-facing slopes, ridgelines, or as early successional communities in previously disturbed areas.

Topanga Canyon State Park and Malibu Creek State Park have pristine areas of all the characteristic habitats of the Santa Monica Mountains: chaparral, oak woodland, grasslands, and coastal sage scrub. Some of the principally-named canyons of Malibu Creek State Park with diverse riparian habitat on north-facing slopes include Fern, Mendenhall, and Lost Cabin canyons. The headwaters of the major drainages of the Santa Monica Mountains often lie outside park jurisdictions, but most retain intact natural communities that contribute to a clean water source. Many of these with scattered development are included in the SEA.

The perennial stream of Cold Creek lies in the center of a relatively undisturbed natural sandstone basin that has a diversity of flora reflecting the extreme range in physical conditions of the watershed, from cool wet streambed to hot dry rocky ridges, making the area a remarkable concentration of native vegetative diversity. Pristine stands of chaparral, southern oak woodland, coastal sage scrub, and riparian woodland all support the unusual species found in the streamside areas such as stream orchid (*Epipactis gigantea*), scarlet monkeyflower (*Mimulus cardinalis*), ocellated Humboldt lily (*Lilium humboldtii* var. *ocellatum*), big-leaf maple (*Acer macrophyllum*), and redshank (*Adenostoma sparsifolium*). Redshank has a widely disjunct distribution, with scattered populations from San Diego to Santa Barbara County. Redshank is common in the southern portion of the Cold Creek watershed, but this population and another within Decker and Encinal canyons represent two of the few localities of this species within the County. Flowering ash (*Fraxinus dipetala*), usually a diminutive tree of 15-20 feet, can grow to 40 feet here. This diversity supports good populations of stream animals: turtles, lizards, snakes, and amphibians. There are a number of private reserves and study facilities in the watershed, including a university field station. Pierce College has a collection of the plants in its herbarium and also an insect collection for the Cold Creek area.

Where drainage conditions result in moist sandstone and micro-slumping of developing soil, this creates a variety of habitats in close proximity to one another. There can be very unusual associations of species—xerophytic chaparral yucca (*Yucca whipplei*) and lance-leaf live-forever next to a diverse array of moisture-dependent ferns, mosses, liverworts, and hornworts. A north-east draining tributary of Las Flores called “Hepatic Gulch,” with a cirrhotic sandstone rock formation, has an unusual assemblage of uncommon plants and a good diversity of wildflowers. Adjacent to seasonally mesic moss-dominated areas supporting California saxifrage (*Micranthes californica*) are silver birds-foot trefoil (*Acmispon argophyllus* var. *argophyllus*), Wright’s buckwheat (*Eriogonum wrightii* var. *membranaceum*), wooly paintbrush (*Castilleja foliolosa*), redskin onion (*Allium haematochiton*), and mariposa lilies (*Calochortus* spp).

Tuna and Pena canyons are the last coast drainages of the central Santa Monica Mountains that have not had development in the watershed or between the canyon mouth and the coast. Tuna Canyon has a perennial stream. Due to the coastal exposure, the riparian woodlands in the canyon bottoms are in excellent health and support healthy wildlife populations. The extensive coast live oak woodland in the riparian area is known to support over 300 species of various plants and animals. Animals utilize the stream as a water source and forage in the chaparral and coastal sage scrub on adjacent hillsides. These areas are important to migratory song bird and waterfowl species.

Temescal, Rustic, and Sullivan canyons are excellent representatives of the dry chaparral and coastal sage scrub plant communities found in the interior canyons of the Santa Monica Mountains. The canyons are less steep than others and their open form favors vegetation with less understory

growth, which provides great examples of lush intermittent stream courses. They each have hiking trails and a drier canyon flora, even within stream beds. To the east is the dense urban habitat of the City of Los Angeles. Wildlife use these canyons as linkage and movement corridors, which connect the coastal populations and those of the interior valleys.

Encino Reservoir has the best undisturbed stand of inland chaparral, coastal sage scrub and streamside vegetation remaining on the inland slope of the Santa Monica Mountains. Inland chaparral develops where the moist coastal air rarely intrudes, and its characteristic species composition is different from similar communities on the coastal side of the mountains. In addition, the freshwater habitat is present along the shores of the Reservoir, so that the overlap of habitats provides a greater number of resources than each habitat would have alone.

The sections of Las Virgenes Canyon and Medea Creek within the SEA support exceptionally diverse wildflower populations, and if rainfall patterns are propitious, wildflower fields may cover large sections of the Canyon slopes. The surrounding canyon slopes support lush growth of coastal sage scrub and other chaparral. The Canyon itself has some floral elements that are characteristic of interior or even desert conditions: the California juniper (*Juniperus californica*) is found only in the Santa Monica Mountains, and narrowleaf goldenbush (*Ericameria linearifolia*) is another interior plant that is common in this canyon and rare elsewhere in the SEA. A variety of live-forever (*Dudleya* spp.), species are present on the canyon walls and rock outcrops, including chalk lettuce (*D. farinosa*), lance-leaf live-forever (*D. lanceolata*), and federally-threatened Agoura Hills dudleya (*D. cymosa* ssp. *agourensis*). One of the critical habitat areas for Lyon's pentachaeta is in this section of the SEA.

South of Liberty Canyon is La Sierra Canyon, which is an important tributary of Triunfo Creek, with exceptional floral biodiversity. La Sierra Canyon has a flora that includes elements found in only a few known places in the Santa Monica Mountains. Some of these are the rare state and federally-endangered Santa Monica Mountains live-forever (*Dudleya cymosa* ssp. *marcescens*); the creek dogwood (*Cornus glabrata,* known only from one other site in the Santa Monicas); the giant chain fern (*Woodwardia fimbriata*, which is exceptionally large in this locality); ocellated Humboldt lily (*Lilium humboldtii* ssp. *ocellatum*, which is also very tall in this locality), and dense stands of big-leaf maple (*Acer macrophyllum*, which is one of the uncommon, large-leaved, deciduous trees of Southern California that is an obligate of moist stream habitat); dense stands of coast live oak (*Quercus agrifolia* var. *agrifolia*, protected by County ordinance and an oak woodland management plan); and very rare anywhere in the County, dense streamside stands of California bay (*Umbellularia californica*).

Palo Comado Canyon is one of the remaining areas with the emblematic California habitat of mixed southern oak woodland and savannah on rolling grassy hills. This type of habitat was one of the first to disappear with of the arrival of European settlers and the use of water diversions for the irrigation of crops. Agriculture made way for dense urban development, and very little of the oak savannah that was typical of Southern California ranchos remain. What was left was heavily impacted by cattle grazing. Along with facilitating non-native grasses that have displaced the native fields of wildflowers, cattle often consume the oak seedlings that would otherwise have replaced oaks that succumb to old age, which converts the woodlands into grasslands. Trees in Palo Comado Canyon support abundant populations of raptors, woodpeckers, western gray squirrels, quail and other savannah species. The ridgelines around the canyons support coastal sage scrub and other kinds of chaparral. The savannah, canyons, and ridgetop chaparral combine to support the connectivity that wildlife and plant populations need to sustain themselves, and this area has been named in a number of studies as very important to the continued genetic exchange and population replenishment of the County and other parts of Southern California.

Vegetation within the SEA is comprised of a large variety of community types. The diversity of the communities reflects the topography of the Santa Monica Mountains. The southern slopes are strongly affected by moist marine weather, while the northern slopes are influenced by drier inland weather conditions. In addition, the steepness of many slopes causes sharp differences in vegetation on either side of the ridges. All 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, including chaparral, redshank chaparral, coastal sage scrub, non-native grassland, native grassland, walnut woodland, valley oak woodland, coast live oak woodland, southern willow scrub, cottonwood-willow riparian forest, oak riparian forest, salt marsh, sycamore-alder woodland, freshwater marsh, and disturbed communities are presented below.

Chaparral: Consists of broad-leafed or needle-leafed, sclerophyllous (hard-leafed), medium height to tall shrubs that form a dense cover on steep slopes below 5,000 feet in Southern California. Dominant species found within this community include ceanothus, toyon, scrub oak, sugar bush, holly-leaved cherry, holly leaf redberry, chamise, laurel sumac, and manzanita. This plant community occurs throughout the SEA and occupies most of the higher elevations and steep slopes.

Corresponding MCV communities:

- *Adenostoma fasciculatum* (chamise chaparral) Shrubland Alliance
- *Adenostoma fasciculatum-Salvia apiana* (chamise-white sage chaparral) Shrubland Alliance
- *Arctostaphylos glandulosa* (Eastwood's manzanita chaparral) Shrubland Alliance
- *Arctostaphylos glauca* (bigberry manzanita chaparral) Shrubland Alliance
- *Ceanothus megacarpus* (big pod ceanothus chaparral) Shrubland Alliance
- *Ceanothus spinosus* (greenbark ceanothus chaparral) Shrubland Alliance
- *Ceanothus oliganthus* (hairy leaf ceanothus chaparral) Shrubland Alliance
- *Prunus ilicifolia* (holly leaf cherry chaparral) Shrubland Alliance
- *Rhus ovata* (sugarbush chaparral) Shrubland Alliance

Redshank Chaparral: A very similar community to the chaparral described above, with the exception that red shank is the dominant species with lesser amounts of other chaparral species. This community is less common. It occurs in small patches, on steep slopes throughout the SEA.

Corresponding MCV communities:

- *Adenostoma sparsifolium* (redshank chaparral) Shrubland Alliance

Coastal Sage Scrub: Consists of drought-deciduous, low, soft-leafed shrubs and herbs on gentle to steep slopes under 1,500 feet in elevation. This community is dominated by California sagebrush, California buckwheat, black sage, purple sage, and California encelia. Coastal sage scrub is distributed throughout the SEA along dry ridgelines, slopes, and other areas previously disturbed by fire.

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
- *Dendromecon rigida* (bush poppy scrub) Shrubland Alliance
- *Diplacus aurantiacus* (bush monkeyflower scrub) Shrubland Alliance
- *Salvia apiana* (white sage 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 LotusAcmispon scoparius* ([*Acmispon glaber*] deer weed scrub) Shrubland Alliance
- *Lupinus albifrons* (silver bush lupine scrub) Shrubland Alliance
- *Malacothamnus fasciculatus* (bush mallow scrub) Shrubland Alliance

Native Grassland: Consists of at least 10 percent cover of native herbaceous plants (grasses and forbs) with the remaining coverage similar to non-native grasslands. Small patches of native grassland can be found scattered throughout the SEA, mostly in openings in coastal sage scrub and mixed with non-native grasslands.

Grassland communities consist of low, herbaceous vegetation that is dominated by grasses. Grasslands also harbor native forbs and bulbs, as well as naturalized annual forbs. Grasslands within the SEA include both non-native grasslands and native grasslands. Non-native grassland consists of dominant invasive annual grasses that are primarily of Mediterranean origin. Dominant species found within this community include wild oat, slender oat, red brome, ripgut brome, and herbs, such as black mustard and wild radish. Non-native grasslands are located in small to large patches throughout the SEA in previously disturbed areas, cattle pastures, valley bottoms, and along road sides.

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*]) Semi-Natural Herbaceous Stands
- *Lolium perenne* ([*Festuca perennis*] perennial rye grass fields) Semi-Natural Herbaceous Stands

Coast Live Oak Woodland: Is dominated by coast live oak and has a poorly developed shrub layer, which may include toyon, currant, gooseberry, laurel sumac, elderberry, and mulefat. Some coast live oak woodlands in the area include scattered California walnut or valley oaks. This community occurs throughout the SEA, often along canyon bottoms and more mesic, north-facing slopes.

Corresponding MCV communities:

- *Quercus agrifolia* (coast live oak woodland) Woodland Alliance

Valley Oak Woodland: An open woodland community dominated by valley oak. The understory is a grassy savannah composed mostly of non-native grasses. Valley oak woodland occurs mostly on the north slope of the Santa Monica Mountains in shaded ravines and on north-facing slopes.

Corresponding MCV communities:

- *Quercus lobata* (valley oak woodland) Woodland Alliance

Walnut Woodland: An open woodland dominated by Southern California black walnut. Occurring on moist, fine-textured soils, the open tree canopy usually has a grassy understory. Other characteristic species include coast live oak, sugar bush, and skunk bush. This community occurs mostly on the north slope of the Santa Monica Mountains in shaded ravines and on north-facing slopes.

Corresponding MCV communities:

- *Juglans californica* (California walnut groves) Woodland 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 arroyo willow with lesser amounts of mulefat. This community occurs in segments along portions of several of the drainages as well as along the periphery of many of the ponds and lakes throughout the SEA.

Corresponding MCV communities:

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

Cottonwood-Willow Riparian Forest: An open broad-leafed winter-deciduous riparian forest dominated by Fremont cottonwood, black cottonwood, black willow, and red willow. This community occurs in segments along of many of the drainages, ponds, and lakes throughout the SEA.

Corresponding MCV communities:

- *Populus fremontii* (California sycamore woodlands) Forest Alliance
- *Salix gooddingii* (black willow thickets) Woodland Alliance
- *Salix laevigata* (red willow thickets) Woodland Alliance
- *Populus trichocarpa* (black cottonwood forest) Forest Alliance

Sycamore-Alder Riparian Woodland: A tall, open, broad-leafed, winter-deciduous streamside woodland dominated by western sycamore and alder. These stands often form a closed canopy forest and even may appear as trees scattered in a shrubby thicket of sclerophyllous and deciduous species. This community is found infrequently within the SEA along the lower reaches of several major creeks.

Corresponding MCV communities:

- *Platanus racemosa* (California sycamore woodlands) Woodland Alliance
- *Alnus rhombifolia* (white alder groves) Forest Alliance

Oak Riparian Forest: An open woodland of dense evergreen sclerophyllous riparian woodland dominated by coast live oak. This type appears to be richer in herbs and poorer in understory shrubs than other riparian communities. This community occurs along many streams and canyon bottoms scattered throughout the SEA.

Corresponding MCV communities:

- *Quercus agrifolia* (coast live oak woodland) Woodland Alliance

Freshwater Marsh: Develops in areas of still or slow-moving permanent freshwater. This community is dominated by the perennial, emergent monocot cattails, which reach a height of four to five meters and often form a closed canopy. Bulrushes are dominant below the cattail canopy. Freshwater marsh is relatively uncommon. It occurs in small patches in natural or created sinks with water sources.

Corresponding MCV communities:

- *Phragmites australis* (common reed marshes) Herbaceous Alliance and Semi-Natural Stands
- *Lepidium latifolium* (perennial pepper weed patches) Semi-Natural Herbaceous Stands
- *Eleocharis macrostachya* (pale spike rush marshes) Herbaceous Alliance
- *Schoenoplectus californicus* (California bulrush marsh) Herbaceous Alliance
- *Typha* (*angustifolia, domingensis, latifolia*) (cattail marshes) Herbaceous Alliance
- *Sarcocornia pacifica* (*Salicornia depressa*) (pickleweed mats) Herbaceous Alliance

- *Juncus arcticus* (var. *balticus, mexicanus*) (Baltic and Mexican rush marshes) Herbaceous Alliance
- *Juncus effusus* (soft rush marshes) Herbaceous Alliance
- *Lemna* (*minor*) *and Relatives* (duckweed blooms) Provisional Herbaceous Alliance

Salt Marsh: Similar to the freshwater marsh described above, but with more salt-tolerant hydrophytes present. Species associated with this community include cattails, pickleweed, and saltgrass. Salt marsh is rare. Within the SEA it is known only from Malibu Lagoon and in the County, and only two other places.

Corresponding MCV communities:

- *Distichlis spicata* (salt grass flats) Herbaceous Alliance
- *Spartina foliosa* (California cordgrass marsh) Herbaceous Alliance
- *Arthrocnemum subterminale* (Parish's glasswort patches) Herbaceous Alliance
- *Atriplex lentiformis* (quailbush scrub) Shrubland Alliance

Rock Outcrop: A sparsely vegetated community occurring on cliffs and rock outcroppings of sedimentary, metamorphic, and volcanic rocks along the ridges and peaks of the hills and mountains. Between the rocks and in the crevices, the few plants found are usually representative of a chaparral species composition. Other plants often found on the rock faces in protected areas include *Dudleya*, *Selaginella*, and various lichens.

Corresponding MCV communities:

No corresponding communities at this time

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 and take the form of residential developments, paved roads, fire breaks, dirt access roads, trails, and other similarly disturbed areas.

Corresponding MCV communities:

No corresponding communities at this time

Wildlife

Wildlife within the SEA is generally diverse and abundant due to large acreages of natural open space and diversity of habitat types. While a few wildlife species are entirely dependent on a single vegetative community, the entire mosaic of all the vegetation communities within the SEA and adjoining areas constitute a functional ecosystem for a variety of wildlife species, both within the SEA and as part of the regional ecosystem.

The analysis of invertebrates is severely limited due to the lack of data; the SEA, however, undoubtedly supports healthy populations of a diverse assortment of invertebrate species. Amphibian populations are plentiful in the SEA due to the high moisture content provided by coastal conditions as well as the large number of drainages and year-round water supplies. The SEA is also likely to support a variety of amphibians within the moister woodland areas and canyon bottoms. Many habitat characteristics essential to reptiles are present within the SEA. These include rock outcroppings that allow for high visibility and small mammal burrows for cover and escape from predators and extreme weather. These characteristics, as well as the variety of habitat types present, are likely to support a wide variety of reptilian species.

The scrubland, woodland, riparian, and grassland habitats in the SEA provide foraging and cover habitat for year-round residents, seasonal residents, and migrating song birds. In addition, the SEA encompasses many year-round water sources located throughout the SEA and abundant raptor

foraging, perching, and nesting habitat along the northern slopes of the Santa Monica Mountains. The southern edge of the SEA, along the coast, is part of the Pacific Flyway. The combination of these resources, as well as the confluence of many community types provides an unusually high diversity of bird species. Mammal populations within the SEA are diverse and reflect the large size of the SEA and great variation in topography and community types.

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 contains major features that are important to wildlife movement. For the mammals and other large terrestrial wildlife, it is important to recognize the crossing area of State Route-101 freeway at Liberty Canyon, and this has been detailed in the General Boundary and Resources Description section. Future highway modifications in this far western area of the County may take the need for wildlife connectivity into account. On the eastern end of the mountains (separated from the SEA by the communities of Brentwood and Encino in the City of Los Angeles) the California Department of Transportation, or Caltrans, has undertaken widening conversion of one of the bridges to incorporate a vegetated area on the bridge that will encourage wildlife transit between the mountain sections west and east of Interstate-405. This is the first such endeavor in County.

The many natural drainages and ridgelines of the Santa Monica Mountains connect populations in a netlike web, and development should always take account of the importance of these natural areas to wildlife connectivity.

The major coastal drainages with natural habitat shading and cooling the waters support a very unique and rare wildlife movement, which is the spawning runs of the federally-endangered southern steelhead. Spawning run areas and young fish habitat are in critical habitat areas of Arroyo Sequit, Malibu, and Topanga Canyons. Historically, steelhead were known from Solstice and Zuma canyons as well, and it is likely that all the major drainages that once had perennial water and extended to the shore in the rainy season supported this species.

Although wildlife movement is hampered by rural development in the SEA, animals are still able to move through the Santa Monica Mountains in many areas. Due to its large size and topographic complexity, linkages in many directions occur within the SEA. However, there are also various bottlenecks. Edelman (1990) identifies Malibu Creek State Park as the central core habitat area in the Santa Monica Mountains, serving as a connective hub between the Simi Hills to the north and the open space preserves of Topanga State Park to the east, and Mugu State Park to the west (which is near the Ventura-Los Angeles County line, but within Ventura County). These linkages allow movement among large open space areas within the SEA as well as between areas outside the SEA, such as the Simi Hills and the western extent of the Santa Monica Mountains in Ventura County. The genetic flow through these areas is crucial in maintaining the diversity and viability of the species within the Santa Monica Mountains. Open space linkages between Kanan Road and Calabasas Parkway along State Route-101, as indicated by the National Park Service, are of particular importance for continued connectivity of wildlife populations, due to a lack of alternative routes and encroachment of development (Nelson, 2000). Although there are significantly large open spaces within the SEA, maintaining habitat linkages between them is critical in providing for long-term sustainability. A wide variety of wildlife use linkages throughout the SEA, including mountain lion, coyote, mule deer, bobcat, and a number of medium-sized mammals.

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 SEA has a number of these for a number of species, as discussed in the General Boundary and Resources Description section. The Santa Monica Mountains SEA has critical habitat for the southern steelhead (fish), the tidewater goby, Braunton's milkvetch, and Lyon's pentachaeta. There is proposed critical habitat for the western snowy plover in the SEA.

Sensitive Plan 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 coastal sage chaparral scrub, native grassland, valley oak woodland, walnut woodland, southern willow scrub, southern cottonwood-willow riparian forest, sycamore-alder woodland, southern coastal live oak riparian forest, fresh-water swamp, and alkali swamp, all of which occur throughout 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.

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 species occur, or are known to have occurred, or have the potential to occur in the SEA area:

- Santa Susana tarplant (*Deinandra minthornii*) CDFG Rare, RPR 1B.2
- Lyon's pentachaeta (*Pentachaeta lyonii*) FE, SE, RPR 1B.1
- Beach spectaclepod, (*Dithyrea maritima*) ST, RPR 1B.1
- Blochman's dudleya (*Dudleya blochmaniae* ssp*. blochmaniae*) FT, RPR 1B.2
- Marcescent dudleya (*Dudleya cymosa* ssp. *marcescens*) FT, RPR, 1B.2]
- Santa Monica dudleya (*Dudleya cymosa* ssp. *ovatifolia*) FT, RPR 1B.2
- Braunton's milk-vetch (*Astragalus brauntonii*) FE, RPR 1B.1
- Salt marsh bird's beak (*Chloropyron maritimum* ssp. *maritimum*) FE, SE, RPR 1B.2

In addition, the following species considered by CNPS to be rare, threatened or endangered have the potential to occur:

- Sonoran maiden fern (*Thelypteris puberula* var. *sonorensis*) RPR 2.2
- Southern tarweed (*Centromadia parryi* ssp*. australis*) RPR 1B.1
- Coulter's goldfields (*Lasthenia glabrata* var*. coulteri*) RPR 1B.1
- Coulter's saltbrush (*Atriplex coulteri*) RPR 1B.2
- Parish's brittlescale (*Atriplex parishii*) RPR 1B.1

- Mud nama (*Nama stenocarpum*) RPR 2.2
- Salt spring checkerbloom (*Sidalcea neomexicana*) RPR 2.2
- Ojai navarretia (*Navarretia ojaiensis*) RPR 1B.1
- Parry's spineflower (*Chorizanthe parryi* var. *parryi*) RPR 1B.1
- Plummer's mariposa lily (*Calochortus plummerae*) RPR 1B.2

Sensitive Animal Species

The following vertebrate species are state and/or federally-listed endangered or threatened, and are known to occur or have the potential to occur in the SEA:

- Tidewater goby (*Eucyclogobius newberryi*) FE, SSC
- Steelhead – Southern California ESU (*Onchorynchus mykiss irideus*) FE, SSC
- Western snowy plover (*Charadrius alexandrinus nivosus*) FT, ABC, SSC, BCC
- Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) FC, FSS, BCC
- Southwestern willow flycatcher (*Empidonax traillii extimus*) FE, SE, ABC
- American peregrine falcon (*Falco peregrinus anatum*) FD, SD CDF, CDFG Fully Protected, BCC
- Bald eagle (*Haliaeetus leucocephalus*) FD, SE, CDF, CDFG Fully Protected, FSS, BCC
- Bank swallow (*Riparia riparia*) ST
- California least tern (*Sternula antillarum browni*) FE, SE, ABC, CDFG Fully Protected
- Least Bell's vireo (*Vireo bellii pusillus*) FE, SE, ABC

The western snowy plover, which feeds and resides in the wrack line areas, has designated critical habitat on Zuma Beach from Trancas Canyon to the northeastern side of Point Dume (within the Point Dume SEA). This is proposed to expand on Point Dume, but also to expand to include Malibu Beach, from the pier to Malibu Point, and the area around the seaward side of the Malibu Lagoon, which is included in this SEA (where it contacts the Malibu Coastline SEA).

The southern steelhead lives in the coastal and oceanic marine waters for most of its life. It uses the coastal streams for spawning runs to breed. Some fish may die on these runs, but many of this particular species return to the ocean and may spawn again. The creeks become the habitat for the first year of the young fish's lives. Here they mature to smolts and make their run to the ocean. In the ocean, they mature and spend most of their lives. The Arroyo Sequit has the lower section and much of its west fork designated as critical habitat, with known, naturally occurring spawning beds and habitat for young fish. The lower areas of Malibu Creek and Topanga Creek are also designated critical habitat.

In addition, following CDFG-listed Special Animals have the potential to utilize habitats within the SEA:

- Callippe silverspot butterfly (*Speyeria callippe callippe*) FE
- Arroyo chub (*Gila orcutti*) FSS, SSC
- California red-legged frog (*Rana draytonii*) FT, SSC
- Western spadefoot (*Spea hammondii*) BLMS, SSC
- Coast range newt (*Taricha torosa*) SSC
- Silvery legless lizard (*Anniella pulchra pulchra*) SSC, FSS
- Southwestern pond turtle (*Emys marmorata*) BLMS, SSC, FSS
- San Diego mountain kingsnake (*Lampropeltis zonata pulchra*) FSS, SSC
- Coast horned lizard (*Phrynosoma blainvillii*) BLMS, SSC, FSS
- Coast patch-nosed snake (*Salvadora hexalepis virgultea*) SSC
- Two-striped garter snake (*Thamnophis hammondii*) BLMS, SSC, FSS
- Cooper's hawk (*Accipiter cooperii*) CDFG Watch List
- Sharp-shinned hawk (*Accipiter striatus*) CDFG Watch List
- Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) CDFG Watch List

- Bell's sage sparrow (*Amphispiza belli belli*) ABC, CDFG Watch List, BCC
- Golden eagle (*Aquila chrysaetos*) CDF, CDFG Fully Protected, CDFG Watch List, BCC
- Short-eared owl (*Asio flammeus*) ABC, SSC
- Long-eared owl (*Asio otus*) SSC
- Coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*) SSC, FSS, BCC
- California horned lark (*Eremophila alpestris actia*) CDFG Watch List
- Northern harrier (*Circus cyaneus*) SSC
- Black swift (*Cypseloides niger*) ABC, SSC, BCC
- Yellow warbler (*Dendroica petechia brewsteri*) SSC, BCC
- White-tailed kite (*Elanus leucurus*) CDFG Fully Protected
- Merlin (*Falco columbarius*) CDFG Watch List
- Prairie falcon (*Falco mexicanus*) CDFG Watch List, BCC
- Yellow-breasted chat (*Icteria virens*) SSC
- Least bittern (*Ixobrychus exilis*) SSC, BCC
- Loggerhead shrike (*Lanius ludovicianus*) SSC, BCC
- California brown pelican (*Pelecanus occidentalis californicus*) FD, SD, CDFG Fully Protected
- Pallid bat (*Antrozous pallidus*) BLMS, SSC, FSS, WBWG: High Priority
- Townsend's big-eared bat (*Corynorhinus townsendii townsendii*) BLMS, SSC, FSS, WBWG High Priority
- Spotted bat (*Euderma maculatum*) BLMS, SSC, WBWG High Priority
- Western mastiff bat (*Eumops perotis californicus*) BLMS, SSC, WBWG High Priority
- San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) SSC
- South coast marsh vole (*Microtus californicus stephensi*) SSC
- Occult little brown bat (*Myotis lucifugus occultus*) CDFG Special Animals List, WBWG Medium Priority
- San Diego desert woodrat (*Neotoma lepida intermedia*) SSC
- Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) SSC, FSS
- American badger (*Taxidea taxus*) SSC

Ecological Transition Areas (ETAs)

There are six designated ETAs within the north area of the SEA, but none in the coastal zone of the SEA. These ETAs are semi-natural areas next to developed areas that did not meet all mapping criteria for SEA designation. The ETAs are either farmed or residential areas considered important to SEA continuity and maintenance of upland parts of the coastal watershed. Extended urban areas are excluded, but small urban areas are included in the SEA because of coastal restrictions that apply to environmental review of proposed development.

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 SANTA MONICA MOUNTAINS SEA

Criterion		Status	Justification
A)	The habitat of core populations of endangered or threatened plant or	Met	The SEA provides habitat for the following listed species: Lyon's pentachaeta (FE, SE); beach spectaclepod (ST); Blochman's dudleya (FT); marcescent dudleya (FT); Santa

Criterion		Status	Justification
	animal species.		Monica dudleya (FT); Braunton's milk-vetch (FE); salt marsh bird's beak (FE, SE); tidewater goby (FE); steelhead – Southern California ESU (FE); western snowy plover (FT); western yellow-billed cuckoo (SE); southwestern willow flycatcher (FE, SE); American peregrine falcon (SE); bald eagle (FT); bank swallow (ST); California least tern (FE, SE); least Bell's vireo (FE, SE). The SEA contains designated critical habitat for Lyon's pentachaeta, Braunton's milk-vetch, tidewater goby, steelhead, and western snowy plover.
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	Upper La Sierra Canyon contains an unusually rich and diverse stand of canyon flora, including marcescent dudleya, creek dogwood, and many unusually large specimens of other rare plant species; Malibu Lagoon is the only intact natural lagoon between Point Mugu in Ventura County and Anaheim Bay in Orange County; Malibu Canyon contains a unique mix of floral species that are uncommon in the region, such as black cottonwood and leather leaf ash, as well as a regionally unique mixture of inland and coastal species; regionally rare volcanic rock formations create unique communities where they occur.
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	Malibu Lagoon is the only natural lagoon in the County; upper La Sierra Canyon contains an unusually rich and diverse stand of canyon flora, including marcescent dudleya, creek dogwood, and many unusually large specimens of other rare plant species; and Malibu Canyon contains a regionally unique mix of floral species htat are uncommon in the County, such as black cottonwood and leather leaf ash, as well as a unique mix of inland and coastal species.
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 Malibu Lagoon and the upstream riparian woodland in Malibu Creek is an important migrating bird refuge, with over 200 species recorded. Tuna and Pena canyons are an important area to migratory birds due to their combined qualities of healthy vegetation, riparian woodland, surface moisture, undeveloped land, and an unobstructed opening to the coast. The SEA also contains habitat linkages between large open space areas within the SEA and areas outside the SEA, such as the Simi Hills and the western extent of the Santa Monica Mountains in Ventura County. Such linkages are crucial in maintaining regional plant and animal population health and viability.

Criterion		Status	Justification
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	The SEA includes a myriad of unique and pristine natural areas that are important for nature study and scientific research; the range of extremes of many species, such as the California juniper, linear-leaved goldenbush, splendid mariposa lily (*Calochortus venustus*), and valley oak; and disjunct and unique populations of redshank, island mountain-mahogany, lyre snake, mountain quail, hirsute rain-beetle, and the Jerusalem cricket.
F)	Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.	Met	Zuma Canyon is one of the last major drainages in the Santa Monica Mountains with a year-round stream that supports a rich riparian community and remains in an undeveloped state; Cold Creek includes an excellent example of an undisturbed natural sandstone basin with springs and a perennial stream; Tuna and Pena canyons are the last drainages in the central and eastern Santa Monica Mountains that have no development between the canyon mouth at the coast and upper areas of the watershed; Palo Comado and Cheseboro canyons support one of the last examples of an oak woodland savannah of any significant size in the County; Temescal, Rustic, and Sullivan canyons represent contiguous, self-contained watersheds that are large enough to support representative samples of native flora and fauna; the area surrounding Encino Reservoir supports the best undisturbed stand of an inland chaparral, coastal sage scrub, and streamside vegetation remaining on the inland slope of the Santa Monica Mountains.

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, or 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

22. Santa Monica Mountains SEA Sources

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