



Natural Environment Study Report

Leo Carrillo North Beach Cabins Project

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Table of Contents

1.0	Introduction	3
1.1.	Project Location.....	3
1.2.	Project Description	3
2.0	Study Methods	4
2.1.	Studies Required and Surveys Performed.....	4
2.2.	Agency Coordination and Professional Contacts.....	5
2.3.	Limitations That May Influence Results	5
3.0	Environmental Setting	5
3.1.	Existing Environment	5
3.2.	Hydrology	6
3.3.	Soils.....	7
3.4.	Vegetation Communities	7
3.5.	Jurisdictional Wetlands/Waters of the U.S.....	9
3.6.	Listed/Sensitive Plants	10
3.7.	Listed/Sensitive Wildlife	13
4.0	Project Impacts	15
4.1.	Impacts.....	15
4.2.	Vegetation Communities	15
4.3.	Jurisdictional Wetlands/Waters of the U.S.....	16
4.4.	Listed/Sensitive Species	16
5.0	Cumulative Impacts.....	16
6.0	Avoidance and Minimization Measures	17
7.0	Conclusions.....	20
8.0	References	21
9.0	Appendices	22
10.0	Figures	25

1.0 Introduction

1.1. Project Location

Leo Carrillo State Park (SP) is situated approximately 24 km (15 mi) northwest of Malibu, along the western end of the Santa Monica Mountains, in Los Angeles County, California (Triunfo Pass USGS 7.5-Minute Quadrangle). Established in 1953, the unit covers approximately 923 ha (2,282 ac), contains three main drainages (Arroyo Sequit, Willow Creek, and San Nicholas Creek), and extends from the coast to roughly 3.2 km (2 mi) inland. The North Beach Day Use Parking Lot, which lies within the southwest portion of the park, and south of Pacific Coast Highway (PCH)/State Highway 1, serves as the site for the current project (Figure 1).

1.2. Project Description

The Department of Park and Recreation (DPR) is proposing to construct a series of cabins within the North Beach Day Use Parking Lot to provide visitors with an alternative camping experience. As planned, 11 modules would be placed along (i.e., north of) the edge of pavement to the west side of the existing comfort station, at the western end of the lot (Figures 2 and 3). The one-bedroom cabins, roughly 4.9 m x 5.5 m (16 ft x 18 ft), would be oriented largely perpendicular to the adjacent slope; with three units resting on the pavement, four units abutting the toe of slope, and four units sited on an existing debris mound (planned for removal). Cabin footings would be precast concrete blocks designed for finished floor elevations of 23 cm (9 in) above final grade. The units would be sized to accommodate up to four people and be equipped with a deck and electricity, but no indoor plumbing. In the area immediately outside each cabin, a picnic table and barbecue grill would be installed; however, private parking would not be built for the campers. As outlined by the Americans with Disabilities Act (ADA), two of the units would be constructed to comply with ADA standards, and furnished with a ramp, accessible travelway, and parking space, along with the standard amenities provided at the other cabins.

Minor grading, excavation, and exportation of approximately 290 m³ (380 yd³) of soil would be required to provide level areas for footings and paths of travel to the buildings. A debris pile and septic tank at the west end of the parking lot would also need to be removed during construction. Electricity would be supplied to the structures by means of two lines; one originating from a power pole off Pacific Coast

Highway, and extending overhead to a new pole at the west end of the project site, and the other connecting to an existing power pole near the comfort station. From these locations, trenching to the cabins would be conducted beyond the edge of pavement and below the toe of slope over a total distance of 160 m (525 ft). Excess soil from the project could potentially be used as fill behind the buildings closest to the restroom, on which the ADA pathway would be built. Work associated with an upcoming geotechnical study would also likely require 2-3 borings on the slope behind the proposed structures.

As estimated, 0.0082 ha (0.0203 ac) and 0.0245 ha (0.0607 ac) of southern coastal bluff scrub would be permanently and temporarily removed, respectively, as a result of the project. Standard equipment, such as bulldozers and bobcats, would be used to complete the proposed work. As anticipated, construction would commence in spring 2008 and extend over a roughly 3-month period, with all activities concluding in summer/fall 2008.

2.0 Study Methods

2.1. Studies Required and Surveys Performed

The potential for listed/sensitive species to occur near the project was determined from a search of the California Natural Diversity Database (CNDDDB) (CDFG 2007), a review of the California Native Plant Society's (CNPS) inventory (CNPS 2007), the results of previous studies for the area (DPR 2001), and general mapping of the on-site habitat (DPR 1996). All the information generated then served as the baseline during a field review for the proposed cabins.

On April 4, 2007 and August 7, 2007, a general survey of plants and wildlife was performed within and around the North Beach Day Use Parking Lot by a DPR Environmental Scientist. The existing vegetation was also categorized and mapped to identify areas that could potentially support listed/sensitive species. Habitat types were classified according to Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California (1986). The site was largely surveyed on foot and those locations that were less accessible (i.e., upper slope) were reviewed using binoculars. All communities were outlined on an aerial photograph and subsequently inputted into a Geographic Information System (GIS) database.

For reporting purposes, the botanical nomenclature follows Hickman (1993), bird classifications comply with the American Ornithologists' Union (2002), and amphibian, reptile, and mammal identification are based upon Laudenslayer et. al (1991). All species recorded during the field assessment can be reviewed/referenced in Section 9.

2.2. Agency Coordination and Professional Contacts

Since January 29, 2007, District staff from Leo Carrillo State Park have been coordinating with the California Coastal Commission (CCC) regarding the proposed beach cabins (Ron Schafer, per. comm.). Basic details of the project, including the location, and type and number of structures have been jointly discussed, along with the idea of potentially using the cabins as mitigation for an up coast development in Ventura County (i.e., County Line Project). DPR is currently completing a CCC application to obtain approval for the work at North Beach. Permits from other resources agencies, however, should not be needed, as no federally/State listed species or jurisdictional wetlands/waters would be affected by construction.

2.3. Limitations That May Influence Results

Due to minimal amounts of rainfall that have been recorded for Los Angeles County in 2006/2007, some sensitive/annual plants that typically would be evident in the spring, may not have been detectable during the field review. As of July 1, 2006, the county has received only 6.27 cm (2.47 in) of precipitation, which accounts for 18 percent of the rainfall in an average year (NWS 2007). Consequently, the list of plants compiled for the North Beach Day Use Parking Lot may not reflect the extent of species that would be found under normal conditions.

3.0 Environmental Setting

3.1. Existing Environment

Leo Carrillo SP consists of 923 ha (2,282 ac) that extend from the coast to approximately 3.2 km (2 mi) inland and includes 3.5 km (2.2. mi) of ocean frontage. The majority of the unit is situated in the western Santa Monica Mountains of Los Angeles County, with a small portion lying in adjoining, eastern Ventura County. Topography can be characterized as mostly steep to very steep, although more level areas exist at the coastal margins, Nicholas Flat, a few ridgetops, and the outlet to the Arroyo Sequit (DPR 1996).

Elevations within the park range from sea level to approximately 560 m (1,838 ft) near Nicholas Flat. The climate can be classified as Mediterranean Dry Summer Subtropical, having warm, dry summers and mild, wet winters. The average annual temperature is 15.1°C (59.2°F), with values reaching maximums in July-October (low 20s [°C]/70s [°F]) and minimums in December-March (~17-18 [°C]/low-mid 60s [°F]). Precipitation largely falls as rain during the months of November through April and can vary considerably within the park; averaging 29.2 cm (11.5 in) per year on the coast (DPR 1996a, 1996b).

The North Beach Day Use Parking Lot is situated in the southwest portion of the SP, immediately up coast from Sequit Point. Located at the base of a slope, below PCH, the site supports a combination of picnic facilities, day use parking, and contained-vehicle camping. A trailer, serving as a temporary Visitor Center, also exists on the northern bluff along a 305 m (1,000 ft) section of the 1929 Roosevelt Coast Highway. Vehicle access to the parking lot can be achieved by either a service entry off the highway or the main park road leading from the campground kiosk and underneath the PCH bridge. Pedestrians can reach the North Beach area via the established roadway or adjoining stairways/trails (DPR 2001). On the highway slope, an expanse of southern coastal bluff scrub can be found, which adjoins the approximately 20 m (65 ft) wide parking lot, and then transitions into a linear strand of beach to the south (Figures 4-9). In the extreme western portion of the project, a collection of large, debris piles (e.g., soil, dirt, concrete), along with an abandoned lifeguard tower, lie adjacent to more native habitat (Figures 10-11). On the far eastern side, both coastal bluff scrub and the entry road comprise the major features on the landscape.

3.2. Hydrology

Leo Carrillo SP lies within the Malibu Hydrologic Unit, which is a subset of the larger Los Angeles Hydrologic Basin that encompasses an area of approximately 10,917 km² (4,215 mi²) within Los Angeles and Ventura counties (Figure 12). The Arroyo Sequit represents the largest drainage in the park with a total of 2,850 ha (7,040 ac). Of this acreage, roughly 518 ha (1,280 ac) are contained within the unit, draining about 50 percent of the SP lands. In general, the Arroyo Sequit, flows in a south to southwest direction and is confined within a deep, sinuous canyon maintaining a severe profile. A steep gradient exists over most of the drainage that eventually becomes relatively gentle near the stream's outlet (DPR 1996a, 1996b). The floodplain along the last half-mile is relatively broad, overlapping portions of the Canyon Campground and the South Beach Day Use Parking Lot. The North Beach Day Use Parking Lot,

which is located approximately 475 m (1,560 ft) west of the Arroyo Sequit, is of sufficient distance from the drainage to fall beyond the 100-year floodplain. No natural stream courses are known to be present within the boundaries of the project. Runoff, however, could enter the parking lot by means of a corrugated metal pipe that collects and discharges flows from the PCH onto the slope at the western end of the site. Additionally, the beach strand, situated to the south of the proposed cabins (roughly 50 m [165 ft] away), has been identified by the Federal Emergency Management Agency as lying within the 100-year floodplain.

3.3. Soils

The majority of Leo Carrillo SP is mantled with soils derived from fine-grained sedimentary and basic igneous rocks that are typically shallow, expansive, and have limited permeability. These conditions, in combination with variations in slope and exposure, have resulted in a complex pattern of soil types. At Leo Carrillo SP, 25 soil mapping units are known to occur, of which 21 are soil phases representing 13 different soil series (Figure 13). The remaining four soil mapping units consist of miscellaneous land types, such as gullied land (DPR 1996a, b).

At the North Beach Day Use Parking Lot, the miscellaneous land type of coastal beaches extends throughout the project area, and along the shoreline and lower portions of the slope. This land type is typically devoid of vegetation and maintains rapid permeability, with drainage ranging from excessive to very poor. In addition, surface runoff is generally slow, but the potential for erosion is very severe due to wind and wave action (DPR 1966a, b). Along the upper slope, the soils are known to consist of Huerhuero very fine sandy loam (5 to 9 percent slopes). Such materials are moderately well-drained and exist on gently rolling older terraces, formed in alluvium derived from sedimentary rocks. Permeability of the series is very slow, runoff is medium, and the erosion hazard is moderate (DPR 1996a, b).

3.4. Vegetation Communities

A search of the CNDDDB database (CDFG 2007) indicated that two sensitive vegetation communities could be present within or near the park (Table 1). Field reviews, however, revealed that neither southern coast live oak riparian forest nor southern sycamore alder riparian woodland exists at the North Beach Day Use Parking Lot. Both vegetation types are found within Leo Carrillo SP, but are located a minimum

Table 1. Sensitive Vegetation Communities Identified within the Triunfo USGS 7.5 Minute Quadrangle that Encompasses Leo Carrillo State Park, Los Angeles County, California (Source: CDFG CNDDDB Database).

Vegetation Community	Description ¹	Habitat Present/Absent ²	Rationale
Southern Coast Live Oak Riparian Forest	Open to locally dense evergreen sclerophyllous riparian woodlands dominated by <i>Quercus agrifolia</i> . This type appears to be richer in herbs and poorer in understory shrubs than other riparian communities.	A	The closest occurrence of the riparian forest to the North Beach Day Use Parking Lot is located roughly 1,250 m (4,100 ft) to the north along the Arroyo Sequit Creek.
Southern Sycamore Alder Riparian Woodland	A tall, open, broadleaved, winter-deciduous streamside woodland dominated by <i>Platanus racemosa</i> (and often also <i>Alnus rhombifolia</i>). These stands seldom form closed canopy forests, and even may appear as trees scattered in a shrubby thicket of sclerophyllous and deciduous species. Understory shrubs include <i>Rubus ursinus</i> and <i>Toxicodendron diversilobum</i> .	A	The closest occurrence of the riparian woodland to the North Beach Day Use Parking Lot can be found at the South Beach Day Use Parking Lot (approximately 750 m [2,500 ft] away).

¹Habitat descriptions are taken from Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California (1986).

²Habitat: Absent (A) - No habitat present and no further work needed; Present (P) - General habitat present and species may be present

of 305 m (1,000 ft) away from the proposed cabins. Habitat on the site was documented as a combination of developed and undeveloped lands, including one sensitive community not identified by CNDDDB (Figure 14). The four vegetation types, consisting of southern coastal bluff scrub, ruderal/nonnative vegetation, disturbed habitat, and developed areas, can be described as follows:

Southern Coastal Bluff Scrub

Southern coastal bluff scrub is typically a low scrub community (up to 2 m [6.6 ft] tall) that is adapted to exposed areas with high winds and salt spray. The majority of plants are woody or succulent and generally display growth/flowering from late winter to spring (Holland 1986). At Leo Carrillo SP, the habitat type is particularly widespread west of Arroyo Sequit, where the vegetation extends inland from the coast for several hundred meters (DPR 1996a). Within the North Beach Day Use Parking Lot, southern coastal bluff scrub was recorded along the length of the slope, slightly beyond (and north of) the edge of pavement. Dominant species included, California encelia (*Encelia californica*), laurel sumac (*Malosma laurina*), bladderpod (*Isomeris arborea*), giant coreopsis (*Coreopsis gigantea*), and coastal prickly-pear (*Opuntia littoralis*). Approximately 1.72 ha (4.24 ac) of coastal bluff scrub, considered sensitive by the California Department of Fish and Game (CDFG), exists within the survey limits.

Ruderal/Nonnative Vegetation

Ruderal and/or nonnative vegetation applies to locations where the native habitat has been intentionally removed and replaced with landscaped/exotic species. As the community is artificial in nature, and has minimal structural/functional value, the vegetation is not deemed sensitive by any resource agency. At the North Beach Day Use Parking Lot, the 0.06 ha (0.16 ac) of ruderal/nonnative vegetation is composed primarily of myoporum shrubs (*Myoporum laetum*), which have established along the northern and western perimeters of the lot, although a few shrubs were observed further within the native habitat.

Disturbed Habitat

Disturbed habitat refers to lands that have undergone clearing/grading and, therefore, usually are barren or dominated by nonnative annuals and exotic broad-leaf species. Such areas typically can be found along roadsides or adjacent to various types of development. In the vicinity of the parking lot, the characteristic species of this community include, black mustard (*Brassica nigra*), foxtail chess (*Bromus madritensis* ssp. *rubens*), fennel (*Foeniculum vulgare*), sweet alyssum (*Lobularia maritima*), tree tobacco (*Nicotiana glauca*), African fountain grass (*Pennisetum setaceum*), castor bean (*Ricinus communis*), and Russian thistle (*Salsola tragus*). Approximately 0.09 ha (0.23 ac) of disturbed habitat occurs just beyond the edge of pavement as linear expanses up to 5.2 m (17 ft) wide. No Federal, State, or local agencies consider the community a sensitive resource.

Developed Areas

Developed areas can be characterized as sites supporting buildings, roads, or other man-made structures. The habitat type generally maintains no native vegetation due to permanent removal or active exclusion, and possesses no sensitive status. Within the project boundaries, the developed areas include the parking lot, existing comfort station, volunteer camp host site, visitor center, picnic area, and a remnant of the historic Roosevelt Coast Highway. The habitat type comprises roughly 0.90 ha (2.23 ac) of the lands inside the survey boundaries.

3.5. Jurisdictional Wetlands/Waters of the U.S.

No jurisdictional wetlands/waters of the U.S. were identified during site reviews of the North Beach Day Use Parking Lot. The nearest, regulated water body would be the Pacific Ocean, which lies roughly 30-46 m (100-150 ft) to the south. The Arroyo Sequit, a blue-line stream exhibiting wetland features, is

situated further to the east (by approximately 475 m [1,560 ft]) and also would be considered jurisdictional by Federal, State, and local agencies. No activities associated with the beach cabins would be occurring within these waterways; therefore, no loss of wetlands/waters would result from construction. Potential impacts would be expected if sedimentation/erosion were not controlled or minimized through Best Management Practices. Consequently, implementation of such measures shall be necessary to ensure that the resources are not disturbed.

3.6. Listed/Sensitive Plants

Eight listed/sensitive plants have been historically recorded (CDFG 2006) in the vicinity of Leo Carrillo SP (Table 2, Figure 15). As indicated in Table 2, habitat for Plummer's Mariposa lily (*Calochortus plummerae*), the Santa Susana tarplant (*Deinandra minthornii*), marcescent dudleya (*Dudleya cymosa* ssp. *marcescens*), Santa Monica Mountains dudleya (*Dudleya cymosa* ssp. *ovatifolia*), Conejo buckwheat (*Eriogonum crocatum*), fragrant pitcher sage (*Lepechinia fragrans*), and Sonoran maiden fern (*Thelypteris puberula* var. *sonorensis*) does not exist at the North Beach Day Use Parking Lot. Additionally, surveys performed for the project, found no evidence of the seven plants on-site (Appendices). Therefore, these species would not be affected by any work related to the proposed cabins and shall not be discussed further. For Orcutt's pincushion (*Chaenactis glabriuscula* var. *orcuttiana*), however, potential habitat for the plant exists at/near the parking lot. As such, an expanded account of the biology and status of the species is provided.

Table 2. Listed and Sensitive Plants Identified within the Triunfo USGS 7.5-Minute Quadrangle that Encompasses Leo Carrillo State Park, Los Angeles County, California (Source: CDFG CNDDDB Database and CNPS Inventory).

Scientific Name	Common Name	Federal Status ¹	State Status ¹	CNPS Listing ¹	General Habitat	Habitat Present/Absent ²	Rationale
<i>Calochortus plummerae</i>	Plummer's Mariposa Lily			1B	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, valley and foothill grassland/granitic, rocky.	A	Suitable habitat for the Plummer's mariposa lily does not exist at the North Beach Day Use Parking Lot. The closest location that could potentially support the species can be found at the South Beach Day Use Parking Lot (i.e., coastal sage scrub), which lies approximately 750 m (2,460 ft) from the proposed beach cabins.
<i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>	Orcutt's Pincushion			1B	Coastal bluff scrub (sandy), coastal dunes.	P	Suitable habitat for Orcutt's pincushion exists at the North Beach Day Use Parking Lot; however, surveys did not find the species on-site. The last occurrence of Orcutt's pincushion was recorded in 1898 in the area of South Beach.
<i>Deinandra minthornii</i>	Santa Susana Tarplant		SR	1B	Chaparral, coastal scrub/rocky.	A	Suitable habitat for the Santa Susana tarplant does not exist at the North Beach Day Use Parking Lot. The closest location that could potentially support the species can be found at the South Beach Day Use Parking Lot (i.e., coastal sage scrub), which lies approximately 750 m (2,460 ft) from the proposed beach cabins.
<i>Dudleya cymosa</i> ssp. <i>marcescens</i>	Marcescent Dudleya	FT	SR	1B	Chaparral (volcanic).	A	Suitable habitat for the marcescent dudleya does not exist at the North Beach Day Use Parking Lot. The closest occurrence of the species was recorded outside park boundaries approximately 3.74 km (2.32 mi) to the northwest of the cabins area.

(Table 2 Continued)

<i>Dudleya cymosa</i> <i>ssp. ovatifolia</i>	Santa Monica Mountains Dudleya	FT		1B	Chaparral, coastal scrub/volcanic.	A	Suitable habitat for the Santa Monica Mountains dudleya does not exist at the North Beach Day Use Parking Lot. The closest location that could potentially support the species can be found at the South Beach Day Use Parking Lot (i.e., coastal sage scrub), which lies approximately 750 m (2,460 ft) from the proposed beach cabins.
<i>Eriogonum crocatum</i>	Conejo Buckwheat		SR	1B	Chaparral, coastal scrub, valley and foothill grassland/Conejo volcanic outcrops, rocky.	A	Suitable habitat for the Conejo buckwheat does not exist at the North Beach Day Use Parking Lot. The closest location that could potentially support the species can be found at the South Beach Day Use Parking Lot (i.e., coastal sage scrub), which lies approximately 750 m (2,460 ft) from the proposed beach cabins.
<i>Lepechinia fragrans</i>	Fragrant Pitcher Sage			4	Chaparral.	A	Suitable habitat for the fragrant pitcher sage does not exist at the North Beach Day Use Parking Lot. The closest occurrence of the species was recorded outside park boundaries approximately 5.94 km (3.69 mi) to the northeast of the cabins area.
<i>Thelypteris puberula</i> var. <i>sonorensis</i>	Sonoran Maiden Fern			2	Meadows and seeps (seeps and streams).	A	Suitable habitat for the Sonoran maiden fern does not exist at the North Beach Day Use Parking Lot. The closest occurrence of the species was recorded outside park boundaries approximately 5.94 km (3.69 mi) to the northeast of the cabins area.

¹Status: Federally Threatened (FT); State Rare (SR); CNPS Plants Rare, Threatened, or Endangered in California and elsewhere (1B); CNPS Plants Rare, Threatened, or Endangered in California, but more common elsewhere (2); CNPS Plants of Limited Distribution – A Watch List (4). ²Habitat: Absent (A) - No habitat present and no further work needed; Present (P) - General habitat present and species may be present.

Orcutt's Pincushion (*Chaenactis glabriuscula* var. *orcuttiana*)

Listing: CNPS List 1B; R-E-D 2-3-2

Orcutt's pincushion is an annual herb of the Asteraceae family typically found in coastal bluff scrub and coastal dune areas at elevations of 3 to 100 m (9.8 to 39.4 ft). The species, growing less than 30 cm (11.8 in) tall, can be distinguished by a basal rosette, 2-pinnately lobed leaves, and a yellow discoid head; with flowering from January through August. Historical observations of the plant have been documented in four southern California counties (Ventura, Los Angeles, Orange, and San Diego) and in Baja, California.

In 1898, one sighting of Orcutt's pincushion was recorded in the South Beach area of Leo Carrillo SP, roughly 1.1 km (0.66 mi) east of the project footprint. Coastal bluff scrub, however, that could potentially support the species extends all along the shoreline. At the North Beach Day Use Parking Lot, an approximately 30 m (100 ft) wide slope, lying below PCH and just north of the paved lot, could serve as habitat for the pincushion. Field reviews performed within and around the project site, though, uncovered no evidence of the sensitive plant. Consequently, impacts to Orcutt's pincushion would not be expected with cabin construction. Disturbance to the existing coastal bluff scrub should also be minimized, as the majority of work would only affect habitat that has been previously developed or disturbed.

3.7. Listed/Sensitive Wildlife

A database search of the Triunfo USGS 7.5-minute quadrangle generated a list of special-status wildlife that could potentially occur within/near the park (Table 3, Figure 15). The species of concern, as shown in Table 3, were found to include, the golden eagle (*Aquila chrysaetos*), monarch butterfly (*Danaus plexippus*), southern steelhead (*Oncorhynchus mykiss irideus*), and Santa Monica grasshopper (*Trimerotropis occidentalooides*). Habitat conditions at the North Beach Day Use Area, however, are not appropriate to support such wildlife and no observations of the species were noted during the field reviews (Appendices). Since no effects to listed/sensitive wildlife is anticipated with implementation of the project, further assessment shall not be provided.

Table 3. Listed and Sensitive Wildlife Identified within the Triunfo USGS 7.5-Minute Quadrangle that Encompasses Leo Carrillo State Park, Los Angeles County, California (Source: CDFG CNDDDB Database).

Scientific Name	Common Name	Federal Status ¹	State Status ¹	CDFG Status ¹	General Habitat	Habitat Present/Absent ²	Rationale
<i>Aquila chrysaetos</i>	Golden Eagle			SC	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range, also large trees in open areas.	A	Suitable habitat for the golden eagle does not exist at the North Beach Day Use Parking Lot. The closest occurrence of the species was recorded outside park boundaries approximately 8.12 km (5.05 mi) to the north of the cabins area.
<i>Danaus plexippus</i>	Monarch Butterfly				Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress) with nectar and water sources nearby.	A	Suitable habitat for the monarch butterfly does not exist at the North Beach Day Use Parking Lot. The closest site that could potentially support the species (i.e., eucalyptus grove) is found roughly 780 m (2,560 ft) to the northeast, along the Arroyo Sequit.
<i>Oncorhynchus mykiss irideus</i>	Southern Steelhead - Southern California ESU	FE		SC	Federal listing refers to populations from Santa Maria River south to southern extent of range (San Mateo Creek in San Diego County). Southern steelhead likely have greater physiological tolerances to warmer water and more variable conditions.	A	Suitable habitat for the southern steelhead does not exist at the North Beach Day Use Parking Lot. Potential habitat for the species exists within the Arroyo Sequit, roughly 710 m (2,330 ft) to the east.
<i>Trimerotropis occidentalooides</i>	Santa Monica Grasshopper				Known only from the Santa Monica Mountains. Found on bare hillsides and along dirt trails in chaparral.	A	Suitable habitat for the Santa Monica grasshopper does not exist at the North Beach Day Use Parking Lot. The closest occurrence of the species was recorded outside park boundaries approximately 7.03 km (4.37 mi) to the northeast of the cabins area.

¹Status: Federally Endangered (FE); CDFG Species of Special Concern (SC). ²Habitat: Absent (A) - no habitat present and no further work needed; Present (P) - general habitat present and species may be present.

4.0 Project Impacts

4.1. Impacts

Impacts can occur at the time of construction (i.e., direct) and cause the temporary/permanent removal of biological resources or can appear later in time (i.e., indirect) as a secondary consequence of a project. For the proposed North Beach Cabins, the following impacts to vegetation communities, jurisdictional wetlands and waters, and listed/sensitive species have been assessed/quantified:

4.2. Vegetation Communities

The construction of 11 cabins at the North Beach Day Use Parking Lot would cause the permanent removal of 0.0641 ha (0.1584 ac) and result in short-term, temporary disturbance to approximately 0.1046 ha (0.2585 ac) (Table 3). Overall, the majority of permanent impacts (84 percent) would be limited to developed areas (0.0254 ha [0.0627 ac]) and disturbed habitat (0.0283 ha [0.0698 ac]), as intrusion into the slope was purposefully minimized. Similarly, temporary impacts would be largely focused (68 percent) within paved areas (0.0366 ha [0.0904 ac]) or sites that have been previously cleared/graded (0.0346 ha [0.0856 ac]). For southern coastal bluff scrub, the habitat loss would amount to 0.0328 ha (0.0810 ac), with 0.0082 ha (0.0203 ac) being permanent and 0.0245 ha (0.0607 ac) only temporary in nature. During construction, removal of this vegetation would maximally concentrate on trimming/pruning, as opposed to clearing and uprooting, to reduce the potential severity of disturbance. A

Table 3: Project Impacts Resulting from the Proposed North Beach Cabins Project, Leo Carrillo State Park, Los Angeles County, California.

Habitat Type	Impacts		
	Permanent ¹ ha (ac)	Temporary ² ha (ac)	Total ha (ac)
Southern Coastal Bluff Scrub	0.0082 (0.0203)	0.0245 (0.0607)	0.0328 (0.0810)
Ruderal/Nonnative Vegetation	0.0022 (0.0056)	0.0089 (0.0219)	0.0111 (0.0275)
Disturbed Habitat	0.0283 (0.0698)	0.0346 (0.0856)	0.0629 (0.1554)
Developed Areas	0.0254 (0.0627)	0.0366 (0.0904)	0.0620 (0.1532)
TOTAL	0.0641 (0.1584)	0.1046 (0.2585)	0.1688 (0.4170)

¹Permanent impacts = Footprint of cabin, picnic table, barbecue grill, and pathways.

²Temporary impacts = Utility trenching, grading/leveling of areas without facilities.

small extent of ruderal/nonnative vegetation (0.0111 ha [0.0275 ac]) would also be impacted by the project. In this case, individual shrubs and groupings of myoporum would be eradicated and not replaced owing to the exotic/invasive status of the species.

Proposed mitigation for the temporary loss of 0.0245 ha (0.0607 ac) of southern coastal bluff scrub would involve seeding and/or planting graded areas with natives known to occur in Leo Carrillo SP. Additionally, an estimated 0.0082 ha (0.0203 ac) of exotics removal (mainly myoporum) would be conducted in and around the North Beach Day Use Parking Lot to offset permanent disturbance to the sensitive habitat. Coordination with the CCC and DPR specialists would be conducted to secure review/approval of the mitigation approach. Should aspects of the proposed strategy be deemed unacceptable or inappropriate, then alternative measures, methods, and/or sites shall be selected by mutual agreement of the agencies.

4.3. Jurisdictional Wetlands/Waters of the U.S.

All work associated with the North Beach Cabins Project would be conducted outside the boundaries of any jurisdictional wetlands/waters of the U.S.; therefore, no disturbance to these resources would occur. Potential impacts (e.g., sedimentation, erosion) shall be addressed through Best Management Practices, which will be detailed in an approved storm water/water pollution plan.

4.4. Listed/Sensitive Species

As outlined in Sections 3.5 and 3.6, the Orcutt's pincushion is the only sensitive species having the potential to occur near the North Beach Day Use Parking Lot. Survey findings and the absence of recent records would suggest the plant does not occupy the southern coastal bluff scrub lying largely to the north of the proposed project limits. Consequently, no direct impacts to Orcutt's pincushion would result from construction-related activities. However, the 0.0082 ha (0.0203 ac) of southern coastal bluff scrub that would be permanently removed to accommodate the cabins, would indirectly effect the species by reducing the extent of available native habitat within the North Beach area.

5.0 Cumulative Impacts

According to the California Environmental Quality Act (CEQA) Guidelines (Section 15355), cumulative impacts refer "to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The cumulative impact from several projects

is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.”

The proposed North Beach Cabins Project lies within the southwest portion of Leo Carrillo SP. Overall, the unit extends over an area of 923 ha (2,282 ac); therefore, activities that could cumulatively impact biological resources would likely result from park-related work. Currently, the only other known project, which could potentially have effects on the environment, would be the Americans with Disabilities Act (ADA) improvements to the South Beach Day Use Parking Lot and the Canyon Campgrounds. As estimated, only temporary impacts to disturbed southern sycamore alder riparian woodland (0.009 ha [0.023 ac]) and some loss of bare ground (0.014 ha [0.035 ac]) would be anticipated. Compensation in the form of native plantings and exotic removal shall be conducted to offset the removal of habitat. As such, the cumulative effects to biological resources would be minimal, when assessed with respect to the current project. Furthermore, most actions reasonable expected to occur within the foreseeable future would need review/approval by the City of Malibu or CCC to ensure compliance with local coastal programs and/or coastal development requirements. Such procedures would serve to minimize habitat loss and species impacts within the park.

6.0 Avoidance and Minimization Measures

As a means of avoiding/minimizing impacts to biological resources, the following measures shall be incorporated into the proposed Leo Carrillo North Beach Cabins Project:

- All vegetation within the project footprint will be cleared between September 15 and February 14 to avoid potential impacts to breeding birds. If habitat removal can not occur during this timeframe, then a pre-construction survey (one week prior) shall be conducted by a qualified biologist/DPR Environmental Scientist to ensure that no breeding/nesting birds are present in the work area. Should a nest site be located, then appropriate measures, as determined by the biologist, will be implemented to minimize harm/harassment to the species.

- During vegetation clearing, all roots 5 cm (2 in) in diameter or greater that need to be removed shall be cleanly cut as supervised/directed by a DPR representative.
- All sensitive habitat near the project boundaries will be designated an Environmentally Sensitive Area (ESA) and strictly avoided. All ESAs shall be depicted on the project plans and no encroachment (i.e., workers, equipment, materials) will be allowed in these locations at any time. Sensitive vegetation or resources will be marked and protected by temporary fencing (e.g., orange plastic fencing, silt fencing) or other acceptable method. Work areas will be clearly marked in the field and confirmed by the project biologist prior to habitat clearing. All staked/fenced boundaries will be maintained throughout the construction period.
- A qualified biologist/DPR Environmental Scientist will be made available for both the pre-construction and construction phases to review grading plans, address resource issues, and monitor ongoing work. The biologist shall maintain communications with the Construction Manager to ensure that concerns related to sensitive species/habitats are appropriately and lawfully managed.
- The Contractor shall prepare and implement an erosion control plan that addresses both the stabilization of soils throughout construction and provides contingencies during rainfall events. Approval of the plan must be obtained from DPR prior to implementation.
- Any areas that must be hydroseeded for temporary erosion control will use local, native plant species that have been approved by the DPR Environmental Scientist. No invasive, exotics shall be included in any proposed seed palette. Species identified on Lists A & B of the California Invasive Plant Council's List of Exotic Pest Plants of Greatest Ecological Concern in California, as of October 1999, will be prohibited.
- BMPs to address erosion and excess sedimentation will be incorporated into the project plans. Measures that could be used during construction include portable concrete washouts, temporary fencing, drainage inlet protection, fiber rolls, gravel bags, and any other procedures deemed appropriate by DPR specialists. Sufficient amounts of materials shall always be available on-site to respond to potential emergencies.
- BMPs employed during construction shall comply with all applicable water quality standards and be detailed in the project's Storm Water Management Plan, Storm Water Pollution Prevention Plan, or Water Pollution Control Program, as appropriate. Specific plans will be reviewed by a qualified biologist/DPR Environmental Scientist and modified, if necessary, prior to implementation. The biologist will have the ability to suggest changes to reduce the probability of erosion/siltation or spills of chemicals/fuels that could potentially affect sensitive habitat.

- Erosion control measures shall be inspected daily during rainfall events and at least weekly throughout construction by the DPR Construction Manager and/or project biologist. Should inspection determine that any BMPs are in disrepair or ineffectual, then action will be immediately taken to fix the deficiency.
- A toxic material control and spill-response plan will be written and submitted to the DPR for approval prior to the onset of construction.
- The changing of oil, refueling, and other actions that could result in the release of a hazardous substance will be restricted to designated areas that are a minimum of 30 m (100 ft) from any sensitive habitat or drainage. Such sites will be surrounded with berms, sandbags, or other barriers to further prevent the accidental spill of fuel, oil, or chemicals. Any discharges will be immediately contained, cleaned up, and properly disposed of, in accordance with the toxic material control and spill-response plan.
- Debris or runoff, generated as a result of the project, shall be directed away from any drainages and/or culverts to prevent deposition into waterways. The disposal of materials must be performed in a manner that will minimize unnecessary effects to the environment.
- Construction dust impacts will be offset through implementation of measures that will appropriately reduce/control emissions generated by the project (see the California Department of Transportation's Standard Specifications Section 7-1.01F Air Pollution Control, Section 10 Dust Control, Section 17 Watering, and Section 18 Dust Palliative for examples). The project biologist will also periodically inspect the work area to ensure that construction-related activities do not generate excessive amounts of dust or cause other disturbances.
- Storage and staging areas will be placed as far from sensitive habitat as possible, and kept free from trash and other waste. Equipment and materials will be stockpiled within the existing parking lot or developed sites that have been approved by the DPR Environmental Scientist. No project-related items will be stored in the adjacent habitat, at any time.
- Following completion of construction, any erosion control measures that are no longer needed, as deemed by DPR representatives, shall be removed and properly disposed off-site. BMPs may remain if the measures are necessary to provide continued stabilization or minimize pollution.
- Compensation for permanent impacts to 0.0082 ha (0.0203 ac) of southern coastal bluff scrub shall be mitigated (1:1 ratio) through the removal of exotics (mainly myoporum) in and around the North Beach Day Use Parking Lot. Temporary habitat losses (0.0245 ha [0.0607 ac]) will also be addressed by seeding and/or replanting graded areas with natives known to occur in Leo Carrillo SP. Coordination with the CCC and DPR specialists will be conducted to secure review/approval of the mitigation approach. Should aspects of the proposed strategy be deemed unacceptable or

inappropriate, then alternative measures, methods, and/or sites shall be selected by mutual agreement of the agencies.

- Any native seed/plant palette will be reviewed and approved by the DPR Environmental Scientist(s) prior to application in the field. The landscaping effort shall be scheduled to immediately precede the winter rains, to the maximum extent possible. Following seeding/planting, periodic monitoring and maintenance will be conducted to ensure adequate survivorship, and to prevent any erosion or siltation from entering nearby sensitive habitat.
- All plants used for the revegetation work will comply with Federal, State, and County laws requiring inspection for infestations. The contractor will provide certification of inspection from the appropriate agency. The plants will also be examined by the project biologist/landscape architect before accepting delivery.
- The project area will be kept clear of debris to avoid attracting predators. All trash and food will be placed in sealed containers and regularly removed from the site.
- Pets belonging to project personnel will not be permitted within the construction boundaries at any time.
- All ADA improvements shall be performed during daylight hours. No nighttime work (including lighting) will be allowed to complete the proposed work.
- Conditions set forth in the Coastal Development Permit, which will be issued by the CCC, shall be observed and implemented as part of the proposed project.

7.0 Conclusions

Implementation of the North Beach Cabins Project would largely result in impacts to developed areas and disturbed habitat; although a small portion of sensitive southern coastal bluff scrub and ruderal/nonnative vegetation would also be temporarily or permanently affected. No listed/sensitive species were found to occupy the study area; therefore, no individuals or populations of concern should be harmed/harassed. Project-specific avoidance and minimization measures shall be incorporated into construction activities to reduce the extent of overall disturbance. In general, the project is expected to have minimal effects upon biological resources, and all impacts to sensitive habitat shall be offset with a combination of on-site revegetation and exotics removal.

8.0 References

- American Ornithologists' Union. 1998. Check-list of North American birds, 7th edition (<http://www.aou.org/checklist/index.php3>). American Ornithologists' Union, McLean, Virginia, USA.
- California Department of Fish and Game (CDFG). 2007. Natural diversity database, rarefind version 3.1.0. California Department of Fish and Game, Sacramento, California, USA.
- California Department of Parks and Recreation (DPR). 2001. Mitigated negative declaration and initial study for Leo Carrillo State Park, north beach parking lot/beach campsite improvements. California Department of Parks and Recreation, Southern Service Center, San Diego, California, USA.
- California Department of Parks and Recreation (DPR). 1996a. Leo Carrillo State Park general plan. California Department of Parks and Recreation, Southern Service Center, San Diego, California, USA.
- California Department of Parks and Recreation (DPR). 1996b. Resource inventory Leo Carrillo State Park. California Department of Parks and Recreation, Southern Service Center, San Diego, California, USA.
- California Native Plant Society (CNPS). 2007. Inventory of rare and endangered plants, version 7-07a (<http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi>). California Native Plant Society, Sacramento, California, USA.
- Hickman, J. C. 1993. The Jepson manual, higher plants of California. University of California Press, Berkeley, California, USA.
- Holland, R.F. 1986. Preliminary descriptions of the terrestrial natural communities of California. State of California, The Resources Agency, Department of Fish and Game, Sacramento, California, USA.
- Laudenslayer, W.F., Jr., W.E. Grenfell, Jr., and D.C. Zeiner. 1991. A check-list of the amphibians, reptiles, birds, and mammals of California. California Fish and Game 77:109-141.
- National Weather Service (NWS). 2007. Monthly and seasonal precipitation summaries for selected recording sties in the Los Angeles/Oxnard hydrologic service area (http://www.wrh.noaa.gov/lox/hydrology/Mar07_E5_Monthly_PCP.pdf).

9.0 Appendices

Table 1. Plant Species Observed in the Vicinity of the Proposed North Beach Cabins at Leo Carrillo State Park, Los Angeles County, California.

Common Name	Scientific Name
Beach-Bur	<i>Ambrosia chamissonis</i>
Scarlet Pimpernel	<i>Anagallis arvensis</i>
Coyote Brush	<i>Baccharis pilularis</i>
Mule Fat	<i>Baccharis salicifolia</i>
Black Mustard	<i>Brassica nigra</i>
Foxtail Chess	<i>Bromus madritensis</i> ssp. <i>rubens</i>
Morning-Glory	<i>Calystegia macrostegia</i> ssp. <i>cyclostegia</i>
Giant Coreopsis	<i>Coreopsis gigantea</i>
Jimson Weed	<i>Datura wrightii</i>
California Encelia	<i>Encelia californica</i>
Coastal Buckwheat	<i>Eriogonum cinereum.</i>
Fennel	<i>Foeniculum vulgare</i>
Cudweed	<i>Gnaphalium californicum</i>
Bladderpod	<i>Isomeris arborea</i>
Giant Wild Rye	<i>Leymus condensatus</i>
Sweet Alyssum	<i>Lobularia maritima</i>
Bush Mallow	<i>Malacothamnus</i> sp.
Laurel Sumac	<i>Malosma laurina</i>
Wishbone Bush	<i>Mirabilis californica</i>
Myoporum	<i>Myoporum laetum</i>
Tree Tobacco	<i>Nicotiana glauca</i>
Coastal Prickly-Pear	<i>Opuntia littoralis</i>
African Fountain Grass	<i>Pennisetum setaceum</i>
Annual Beard Grass	<i>Polypogon monspeliensis</i>
Lemonadeberry	<i>Rhus integrifolia</i>
Hairy Matilija Poppy	<i>Romneya trichocalyx</i>
Castor Bean	<i>Ricinus communis</i>
Russian Thistle	<i>Salsola tragus</i>
Nightshade	<i>Solanum</i> sp.
Our Lord's Candle	<i>Yucca whipplei</i>

Table 2. Wildlife Species Observed in the Vicinity of the Proposed North Beach Cabins at Leo Carrillo State Park, Los Angeles County, California.

Common Name	Scientific Name
Birds	
Song Sparrow	<i>Melospiza melodia</i>
White-Crowned Sparrow	<i>Zonotrichia leucophrys</i>
House Finch	<i>Carpodacus mexicanus</i>
Western Scrub-Jay	<i>Aphelocoma californica</i>
Wrentit	<i>Chamaea fasciata</i>
Northern Mockingbird	<i>Mimus polyglottos</i>
Reptiles	
Western Fence Lizard	<i>Sceloporus occidentalis</i>
Mammals	
California Ground Squirrel	<i>Spermophilus beecheyi</i>

10.0 Figures
