Existing Conditions and Resources Inventory Report

Point Lobos Ranch Property

May 2013 – Rev. December 2013

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ACRONYMS

AADT	annual average daily traffic
Cal Fire	California Department of Forestry and Fire Protection
BLM	U.S. Bureau of Land Management
BSLT	Big Sur Land Trust
cal. BP	before present in calibrated radiocarbon years
Cal Am	California American Water Company
Caltrans	California Department of Transportation
CCC	California Conservation Corps
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CLCC	Carmel Land and Coal Company
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CWA	Clean Water Act
DOM	Department Operations Manual
ESA	Endangered Species Act
FWARG	Far Western Anthropological Research Group, Inc.
GHG	greenhouse gas
HSR	Historic Structures Report
IMAP	Inventory, Monitoring, and Assessment Program
MPRPD	Monterey Peninsula Regional Park District
MPWMD	Monterey Peninsula Water Management District
MST	Monterey-Salinas Transit
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
PLRHD	Point Lobos Ranch Historic District
SB	State Beach
SJCHD	San Jose Creek Historic District
SNR	State Natural Reserve
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service

1 INTRODUCTION

This Existing Conditions and Resources Inventory Report was prepared in support of development of a General Plan for the Point Lobos Ranch property (Point Lobos Ranch) and provides a detailed overview of the existing physical conditions at the property. Information presented in this report will guide the planning process, including the development of alternatives for use of the property, and will also serve as the baseline against which proposed changes at Point Lobos Ranch will be evaluated. This property is one of four California State Parks units being evaluated through this planning process. The other California State Parks properties included in the current General Plan process are Point Lobos State Natural Reserve (SNR), Carmel River State Beach (SB), and the unclassified property commonly known as Hatton Canyon. Separate Existing Conditions and Resource Inventory Reports have been prepared for these park units.

There is currently no General Plan for Point Lobos Ranch and this property is not officially named or classified. Naming and classification of this unit is one of the goals of the current planning effort. This report includes information on land use, significant physical, biological, cultural, and aesthetic resources, and recreation values at Point Lobos Ranch. It was prepared based on an extensive review of existing information, supplemented with photos and notes from a site tour conducted at the onset of the planning process and coordination with park staff, including resource specialists and planners from the Monterey District and Planning Division of California State Parks, and other agencies and organizations.

Point Lobos Ranch is located in coastal Monterey County east of Highway 1 and approximately 3 miles south of the City of Carmel-by-the-Sea. The property is made up of three parcels separated by private property. The western portion of the property is approximately 686 acres and is accessible from San Jose Creek Canyon Road and Riley Ranch Road. This parcel is primarily characterized by Monterey pine forest and central maritime chaparral, with some grassland adjacent to Highway 1. The central and eastern portion of the property is approximately 626 acres and is accessible via Riley Ranch Road and Red Wolf Drive. This parcel is primarily characterized by central maritime chaparral with some Monterey pine forest and coastal scrub. The third parcel is the smallest at approximately 16 acres and is located between the other two parcels. This entire parcel is characterized by central maritime chaparral. The regional location of the property is shown in Exhibit 1-1. Exhibit 1-2 shows the property in a local context and in relation to the other park units also included in development of the current General Plan.

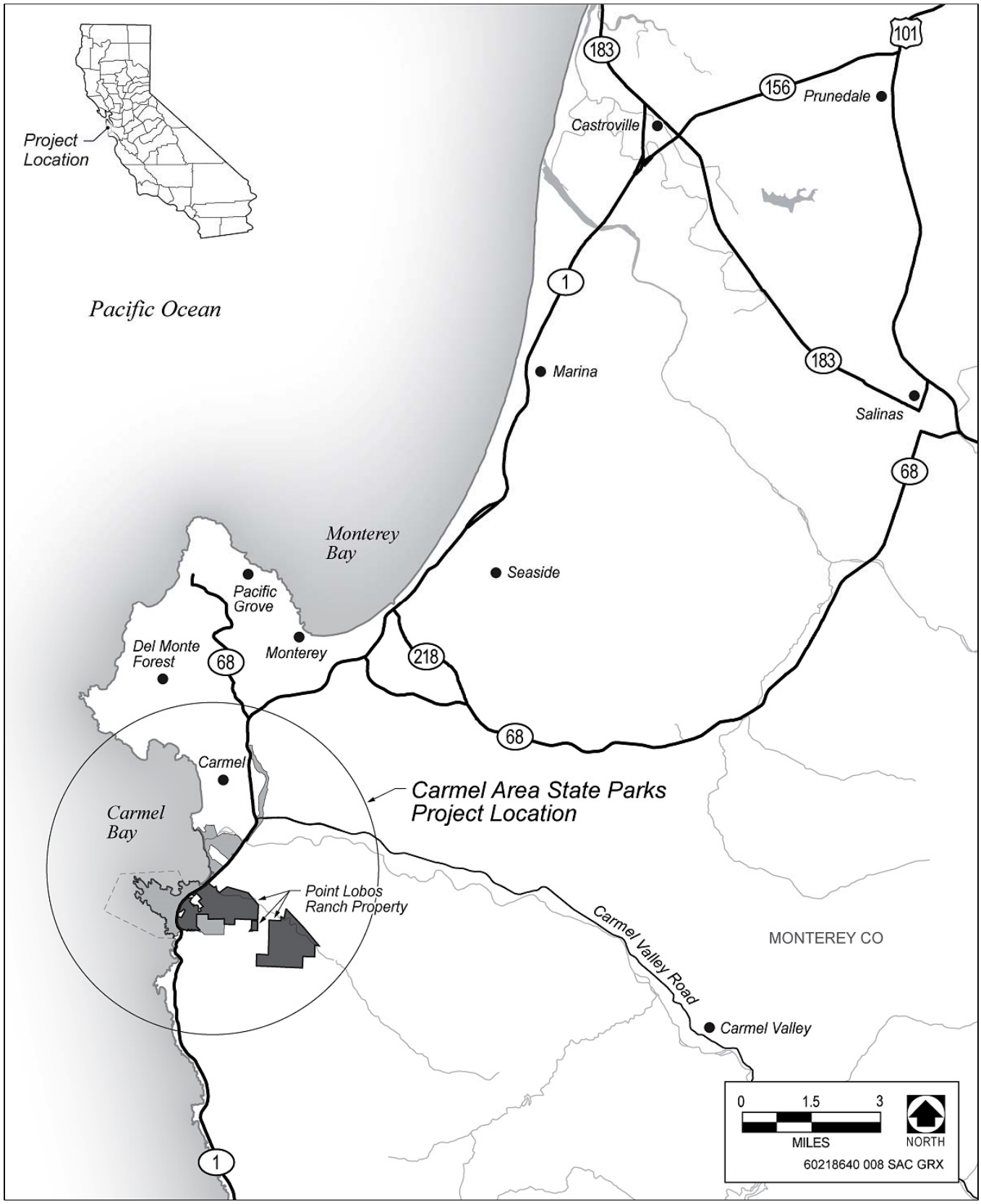


Exhibit 1-1 **Regional Location of Point Lobos Ranch**

Exhibit 1-2 **Local Context of Point Lobos Ranch**

The entire Point Lobos Ranch property was acquired by California State Parks in 1998. The three parcels within Point Lobos Ranch total 1,328 acres. This property was acquired for its Monterey pine and Gowen cypress forests, important archaeological sites, and its proximity to other public lands. The property was acquired with Proposition 117 funds, which are required to be used for acquisition of habitats (i.e., rare and endangered species habitats, wetlands, riparian, aquatic, open space, oak woodlands) that are necessary for the protection of deer and mountain lion. Take of mountain lions except for protection of life, livestock or other property is prohibited on properties purchased with Proposition 117 funds.

2 LAND USE AND POLICY REVIEW

2.1 REGIONAL LAND USES

Founded in 1850, Monterey County was one of the first counties established in California. Much of the current land use in the county is dictated by the natural landforms. Monterey County lies between the Pacific Ocean and the Gabilan Mountain Range, which is part of the California Coastal Ranges running in a northwest-to-southeast direction along the California coastline. Major land uses within the county include recreation, agriculture, urban development (housing and industrial), mining extraction, and transportation. The 2010 General Plan Update for the county establishes land use policies to designate general distribution and intensity of various land uses. The main vision of the 2010 Land Use Element is to create a general framework that encourages growth within or near developed/developing areas in order to reduce impacts to agricultural production, natural resources, and public services. Most of the intense land uses are concentrated in the northern third of the county. The following is the land use breakdown with respect to land coverage percentage in the county (Monterey County 2010):

Agriculture	60%
Public/Quasi Public (e.g., hospitals)	28%
Residential	0.7%
Commercial	0.3%
Industrial	0.3%
Other and Federal lands	remaining

Several other plans that provide regional land use guidance specifically in the Carmel coastal segment of the county have also been adopted. These include the *Greater Monterey Peninsula Area Plan* (Monterey County 1997), a *Conservation Plan for Three Ranches* (Monterey County 1966a)*, Rancho San Carlos Master Plan* (Monterey County 1966b)*, Carmel Valley Master Plan* (Monterey County 1986)*,* and *Carmel Area Land Use Plan* (Monterey County 1983). The development policies and land use recommendations in all of these plans follow the basic objective of maintaining the unique scenic and recreational resources of the Carmel coastal area by holding developments to a standard of "minimal visibility", such that it is subordinate to the existing natural grandeur of the coastline and adjacent coastal terraces.

The *Greater Monterey Peninsula Area Plan* is intended to provide refinement of the County General Plan to reflect local concerns which could not be addressed at the county-wide level. The primary land uses in the Carmel Coastal segment envisioned in the *Greater Monterey Peninsula Area Plan* include residential, commercial, recreational, resource conservation, and agricultural. Public uses in the Carmel area include Point Lobos SNR, Carmel River SB, county and city parks, elementary schools, a day-care school, churches, and a sewage treatment plant.

Regionally major concerns related to new development in the *Greater Monterey Peninsula Area Plan* include:

- Creation of additional recreational demands on the existing state reserve and beaches.
- Degradation of the visual quality of the scenic coastline.
- Continued encroachment affecting the quality of life in existing communities.
- Preservation of open space.
- Continued encroachment on open space.

- Scarcity of water and waste services.

Land use in portions of Monterey County that are within the coastal zone is also influenced by the California Coastal Act. Local jurisdictions implement the California Coastal Act in coordination with the California Coastal Commission through Local Coastal Programs. The Local Coastal Programs contain the ground rules for future development and protection of coastal resources. The *Carmel Area Land Use Plan* is part of the Local Coastal Program. All three parcels of Point Lobos Ranch are within the coastal zone. All development in the coastal zone requires either a Coastal Development Permit or an exemption from coastal permit requirements. The California Coastal Act established a framework for resolving conflicts among competing uses for limited coastal lands. The highest priority is placed upon the preservation of natural resources, including environmentally sensitive habitat areas. In the case of sensitive habitat areas, only uses dependent on these resources are allowed within such areas. Public recreational uses have priority on coastal sites which are not habitat areas and not needed for coastal-dependent uses. For sites that are not reserved for habitat preservation, agriculture, coastal-dependent uses, public recreation, or other types of development are permitted. However, commercial visitor-serving recreation has priority over private residential, general industrial and general commercial development (Monterey County1983).

Many parks that offer recreation opportunities are available in the region (Exhibit 2-1). Approximately 14% of the county is devoted to parks and recreation facilities that are owned by various federal, state, and local agencies (Monterey County 2010). The U.S. Bureau of Land Management (BLM) manages lands in the Monterey area, including Fort Ord National Monument, that provide a variety of recreation opportunities. In the Carmel and Carmel Valley areas, the Monterey Peninsula Regional Park District (MPRPD) operates Garland Ranch Regional Park, Thomas Open Space, Blomquist Open Space Preserve, Cachagua Community Park, Carmel Valley Community Park, and Palo Corona Regional Park (MPRPD 2012a). Palo Corona Regional Park is immediately north of and adjacent to Point Lobos Ranch.

The Monterey County Parks Department owns several parks in the area including Jacks Peak County Park and Martin Canyon. Mission Trails Regional Park, owned by the City of Carmel, is also a well-used corridor connecting the Carmel Mission to surrounding neighborhoods (Monterey County Parks 2012).

Other California State Parks in the immediate area include Point Lobos SNR, Carmel River SB, Hatton Canyon (an unclassified unit) located just north of the Carmel River, and Garrapata State Park. State parks north of Point Lobos Ranch include Asilomar State Beach and Conference Grounds, Monterey State Historic Park, Monterey State Beach, Fort Ord Dunes State Park, Marina State Beach, and Salinas River State Beach. There are also a number of state parks in the Big Sur area. These parks are discussed in more detail in Section 4, Recreation Resources.

Popular recreation opportunities within the region include the Monterey Bay Aquarium, Cannery Row, Fisherman's Wharf, 17-Mile Drive, and various golf courses including Pebble Beach. Numerous hotel/resorts, restaurants, and shopping areas are located near Point Lobos Ranch. Visitors come to the Monterey Peninsula for a variety of recreation experiences, including sightseeing, scenic driving, fishing, diving, surfing, wine tasting, and golfing. Visitors also come to the Monterey area for organized special events such as the Big Sur International Marathon, Sea Otter Classic (bicycle races and outdoor sports festival/expo), or race events at Laguna Seca (Monterey County 1983, Monterey County Convention and Visitors Bureau 2012). Peak visitation to the region occurs between June and September. The Big Sur area to the south is a popular destination for visitors. Activities in this area include camping, tours, whale watching, hiking, and SCUBA diving (Caltrans

2004). The Big Sur area attracts visitors from around the world. It offers spectacular views of California's rugged coast and is recognized as one of the most scenic coastlines in the world.

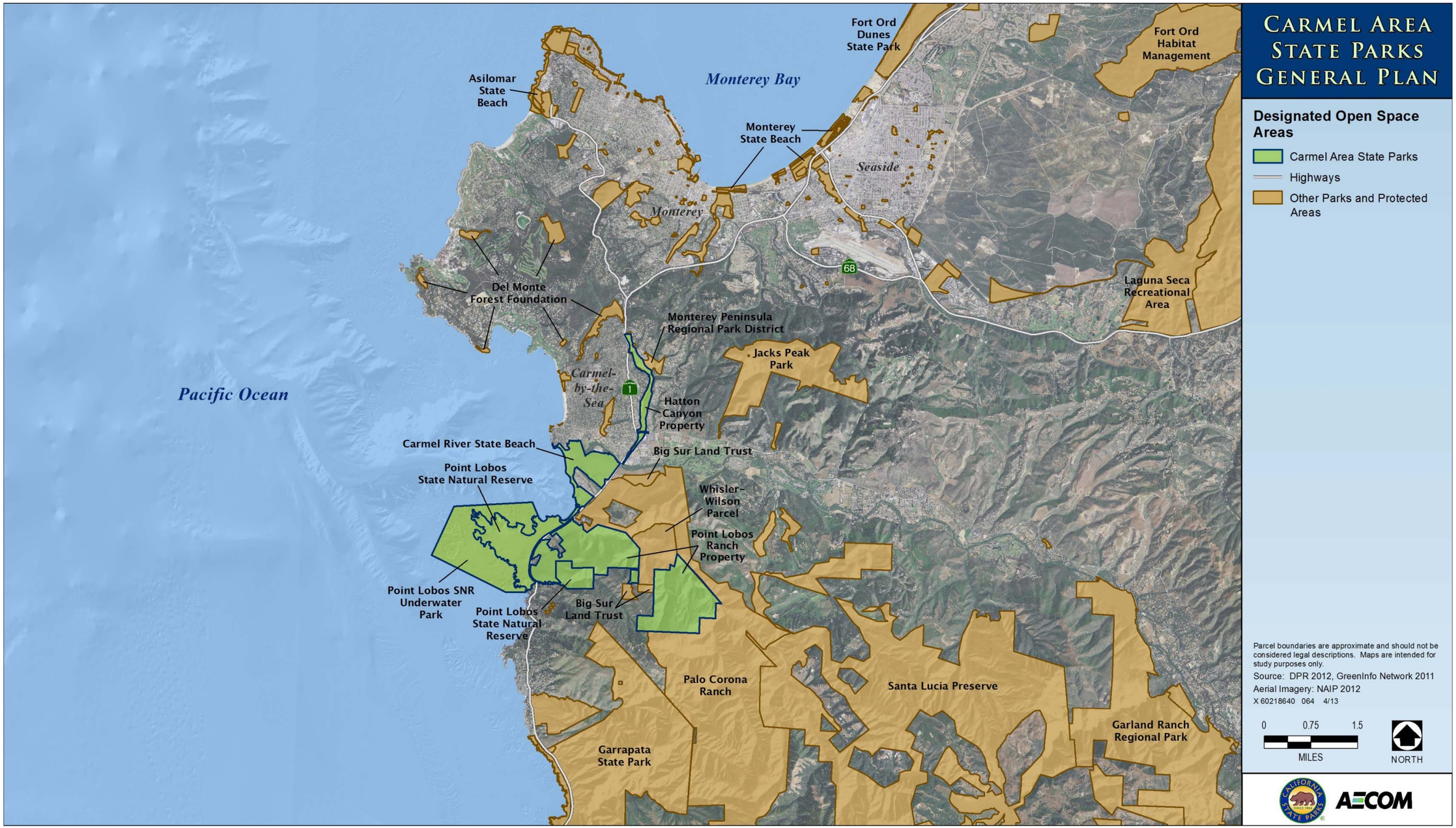


Exhibit 2-1 **Designated Open Space Areas**

2.2 LAND USE AND ZONING

Point Lobos Ranch is currently an unclassified and unnamed property that does not have an existing general plan. The property was purchased to preserve habitat, cultural resources, and an extremely scenic portion of the northern Big Sur Coast (Photo Exhibit 2-1). Habitat types including Monterey pine forest, the rare Gowen cypress forest, and maritime chaparral are present within the property. Point Lobos Ranch is not currently open to the public; however, the property is used by neighbors for hiking and equestrian use. Other land uses within the property include wildlife habitat, including steelhead and mountain lion habitat, significant Native American archaeological sites, residences for California State Parks staff, a staging and camping area for California Conservation Corps (CCC) trail crews (Photo Exhibit 2-2), and an early twentieth century complex of ranch buildings. Historic land uses within the property included dairy farming, grazing, and irrigated pasture land. Several private properties surround Point Lobos Ranch and many of these properties include developed structures and private residences. The Red Wolf Drive Homeowners Association maintains Red Wolf Drive, which is a private road and serves as the primary access to the central and eastern portion of the property (DPR 2011a) (Exhibit 2-2).

Source: California State Parks 2011

Photo Exhibit 2-1 Scenic Viewpoint of Point Lobos SNR from within Point Lobos Ranch

Source: California State Parks 2011

Photo Exhibit 2-2 **CCC Camp within Point Lobos Ranch**

The portion of Point Lobos Ranch adjacent to Highway 1 is designated as Recreation and Visitor Serving Commercial and further inland as Forest and Upland Habitat and Watershed and Scenic Conservation in the local land use plan. Point Lobos Ranch is specifically referenced in the *Carmel Area Land Use Plan* as a "Special Treatment" overlay to facilitate a comprehensive planned development. The "Special Treatment" overlay is intended to be used in conjunction with the underlying land use designation to facilitate development compatible with the unique natural and scenic resources and significant recreational/visitor-serving opportunities of the property.

The property is zoned as Resource Conservation, Visitor Serving Commercial, Watershed and Scenic Conservation by Monterey County. The purpose of the Resource Conservation designation is to protect, preserve, enhance, and restore sensitive resource areas in the County of Monterey. The Open Space Recreation designation is to provide for establishment, enhancement, and maintenance of outdoor recreation uses in Monterey County. The Visitor Serving Commercial zone is to establish areas necessary to service the needs of visitors and the traveling public to Monterey County, and the Watershed and Scenic Conservation designation is to allow development in the more remote or mountainous areas in the coastal zone while protecting the significant and substantial resources of those areas.

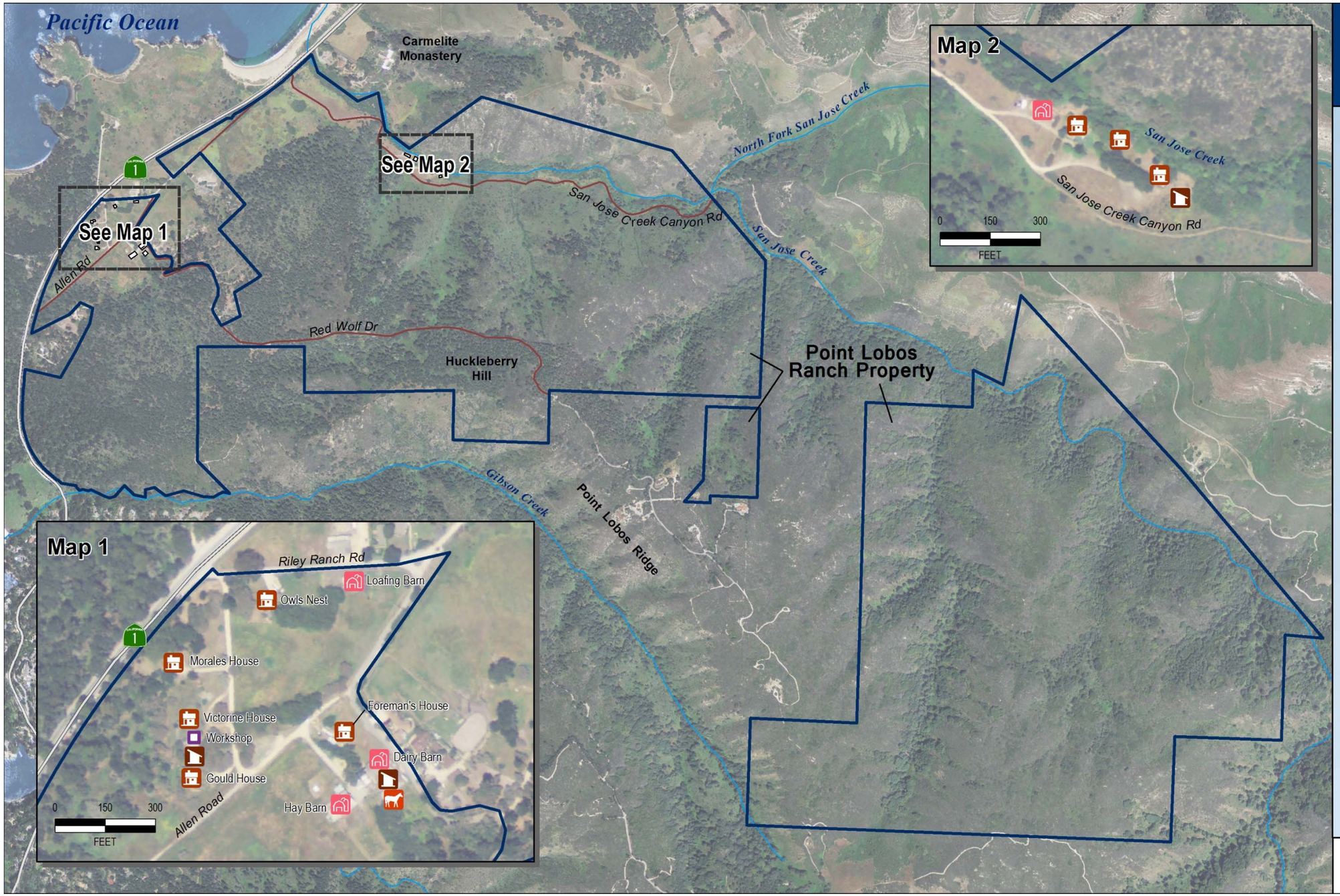


Exhibit 2-2 **Major Features within Point Lobos Ranch**

2.3 RELEVANT PLANNING POLICIES

2.3.1 CARMEL AREA LAND USE PLAN

Many of the policies within the *Carmel Area Land Use Plan* are relevant to the property. These policies are listed below:

- The County should work with the California State Parks and the State Coastal Conservancy to explore the restoration of significant coastal resource areas, as provided for in the State Coastal Conservancy Act.
- To reduce accumulated fuel loads, maintain the health and vigor of the pine and cypress forests, facilitate reproduction of the Gowen and Monterey cypress, and reduce the spread of Monterey pine into certain areas such as Northern Coastal Prairie, the California State Parks should develop a fuel hazard reduction and prescribed burning program.
- A forest conservation and management program should be developed and implemented by the County and the California State Parks to maintain those Monterey pine and Coast redwood forest areas retained as open space.
- California State Parks should monitor disturbed areas such as trail construction sites for the presence of noxious plants and erosion, and such potential problems should be immediately controlled.
- California State Parks interpretive program should include static displays, guided nature walks and published information which emphasize the values of environmentally sensitive habitats and which are directed toward the general public.
- The County, in coordination with the California State Parks and other concerned agencies or organizations should promote increased public understanding of the importance and values of environmentally sensitive habitats.
- Monterey County will take a strong and active role in guiding future use and development of Highway 1 and all categories of land use related to and dependent on the highway. Highway 1 south of the Carmel River will remain a two-lane highway.
- All highway improvements shall be consistent with the retention of Highway 1 as a scenic two-lane road south of the Carmel River. The overall objective for Highway 1 should be to maintain the highest possible standard of scenic quality in management and maintenance activities carried on within the State right-of-way. Bike lanes and left turn lanes are permitted.
- Parking along the highway shoulders in the vicinity of major recreational areas shall be discouraged due to pedestrian and traffic hazards and conflicts.
- Parking may be considered as an allowable use on the Polo Field area inland of Highway 1.

- The provision of recreational opportunities and facilities shall be compatible with the preservation of sensitive coastal resources. Passive to low-intensity outdoor recreational uses shall be emphasized within the State beaches, park and reserve.

2.4 EASEMENTS

Two of the deeds granted for Point Lobos Ranch contain easements. A 1962 deed to Agnes Marks, Herman Marks, and Andrew Marks includes a 30-foot wide roadway easement. Another deed granted in 1994 to the Big Sur Land Trust (BSLT) includes a 60-foot wide roadway easement, a water system easement, and a utilities easement. These deeds also have the following restrictions on allowable uses: 1) to be used to interpret ecological aspects of the property; property's natural state will be retained, 2) may be developed for interpretation, 3) will be administered, protected, and developed in accordance with the principles of Point Lobos SNR; 4) Pedestrian use only (DPR 2012a).

In addition, California State Parks has a scenic easement in perpetuity on the approximately 30 acres located adjacent to Highway 1. This scenic easement prohibits construction of any structures other than farm buildings, and states that trees shall not be removed, to the extent feasible. Monterey County previously had a scenic easement on the portion of the property containing a portion of the "polo field," the mouth of San Jose Creek (located within Carmel River SB), and the area above the creek valley. This easement restricted development and advertising on this portion of the property; however, it was only in effect until 1992 (Monterey County Planning Department 1985).

2.5 EXISTING FACILITIES

Existing facilities within Point Lobos Ranch are listed below. Additional details and a map of these facilities are provided in Section 7.1, Existing Facilities.

- Staff and/or Historic Residences
  - Morales House
  - Victorine House
  - Owls Nest
  - Gould House
  - Foreman's House
  - Three residences along San Jose Creek

- Ranch Buildings
  - Loafing Barn
  - Dairy Barn
  - Hay Barn
  - Two storage sheds
  - Workshop
  - Horse stalls
  - Two barns adjacent to San Jose Creek
  - Shack adjacent to San Jose Creek

3 SIGNIFICANT RESOURCE VALUES

3.1 PHYSICAL RESOURCES

3.1.1 CLIMATE

The climate in the Carmel area is a maritime Mediterranean climate characterized by warm, rainy winters and cool, foggy summers (Thomson 1997). The year-round climate is mild and not subject to severe seasonal change, primarily because of the immediate influence of the Pacific Ocean. A semi-permanent Pacific high pressure system to the west or northwest of the Monterey area creates northwesterly winds over the ocean. The Pacific high pressure system intensifies during the summer months, keeping storms to the north. On average, fog occurs 135 days per year, primarily during July, August, and September, although inland areas experience less fog than the coastal areas. Average annual temperatures in the area generally range from 49°F to 63°F, with summer maximum temperatures around 68°F and winter maximum temperatures in the low 60s. Daily temperature fluctuations are typically small. Rainfall averages 19 inches per year and falls primarily between October and May (CeNCOOS 2012, Caltrans 2004). The El Niño phenomenon of cyclical ocean warming increases the severity and frequency of winter storms and increases the amount of precipitation. During El Niño events, coastal erosion accelerates, resulting in loss of beach sand and coastal bluff failures. La Niña years tend to bring nearly opposite effects of El Niño to the United States (NWS 2012). According to the National Oceanic and Atmospheric Administration's Weather Service website, the nearest weather station to Point Lobos Ranch is the Monterey Peninsula Station.

3.1.2 TOPOGRAPHY

Topography within Point Lobos Ranch includes steep hillsides along the Point Lobos Ridge, a major ridge of the Santa Lucia Range. Except for the coastal meadow on the western portion of the property near Highway 1, the terrain is moderate to steep (Monterey County Planning Department 1985). The property includes the Gibson Creek canyon to the south and the San Jose Creek canyon to the north, which are also prominent topographical features. Elevations range from approximately 6 feet near San Jose Creek and Highway 1 to over 1,800 feet in the southeast corner of the property.

3.1.3 GEOLOGY AND SEISMICITY

Point Lobos Ranch is within the Santa Lucia Mountains, which are a north-west trending range. This range is part of the Salinan Granodiorite Block. The areas geologic history of uplift, erosion, and subsidence has resulted in the property's steep terrain. Bedrock, which is exposed over much of the property, is older granitic rock of the Salinan complex. Fluctuations in sea level and continued uplift along the coastline have moved marine terraces approximately 100 feet above mean sea level. These terraces occur along the front of the property adjacent to Highway 1 (Monterey County Planning Department 1985).

Faults in the Monterey area occur primarily in two northwest-trending zones, the Palo Colorado-San Gregorio fault zone and the Monterey Bay fault zone. There are several active or potentially active faults within these zones including: San Andreas, San Gregorio-Palo Colorado, Chupines, Navy, and Cypress Point, with the San Andreas and San Gregorio being the most dominant faults that are considered active and have evidence of historic or

recent movement. The San Andreas Fault runs through much of California and the southeast portion of Monterey County (Monterey County 2010). Small to moderate earthquakes (i.e., magnitude 5.0 and below) are common in Monterey County. Although there are a number of faults zones in this area, none of them are officially designated as an Alquist-Priolo Earthquake Fault Zone (DPR 1979, 1988; TAMC 2009) (Exhibit 3-1).

Because of the steep nature of the topography of the property, the area is prone to landslides. There have been landslides within the northeast corner the property. In addition, there was a major older landslide above the north fork of San Jose Creek that was 3,500 feet by 1,400 feet. Other potential geologic hazards identified for the property include seismic settlement and ground shaking. The alluvial materials adjacent to San Jose Creek also have a high potential for liquefaction (Monterey County Planning Department 1985).

3.1.4 PALEONTOLOGY

No paleontological resources are known to occur within Point Lobos Ranch.

3.1.5 SOILS

There are twelve soil types within the property that are generally either sandy or loamy (Exhibit 3-2). According to the 2009 Natural Resources Conservation Service (NRCS) Soil Survey and GIS data layers, the sandy and loamy soil types are dominated by Cieneba and Junipero-Sur complex soil series, which extend over most of the central and eastern portions of the property. There's also a large portion of Sheridan coarse sandy loam found on the property. Soils in the western portion of the property include sandy loams, clay loams, and clay.

Generally, the Junipero soil series is found on northerly exposures on mountainous uplands, with bedrock consisting mainly of granodiorite, gneiss, schist, and some sandstone. This soil type has moderately rapid permeability with rapid to very rapid runoff. The Cieneba series consists of very shallow and shallow, somewhat excessively drained soils that are formed in material weathered from granitic rock. The Sheridan coarse sandy loam are formed in residuum weathered from granite, schist, and related rocks. Typically this type of soil is well drained with medium to very rapid runoff and moderately rapid permeability.

Other types of soils found within the property are Elder, Gamboa-Sur complex, Gorgonio, Linne-shedd, Narlon, Pfeiffer, San Andreas, and Santa Ynez.

3.1.6 HYDROLOGY, WATER QUALITY, AND FLOODPLAINS

According to the NRCS watershed database, watersheds in the region include the Canyon Del Rey-Frontal Monterey Bay, Carmel River, and Big Sur River-Frontal Pacific Ocean watersheds (Exhibit 3-3). Watershed data in support of California State Parks general plans is typically obtained from the Calwater 2.2 database; however, in the case of this planning effort, the NRCS dataset appears to contain more detailed and accurate information for this particular region. Point Lobos Ranch is completely within the Big Sur River-Frontal Pacific Ocean Watershed and comprises just over 6% of the total watershed area. The entire Big Sur River-Frontal Pacific Ocean Watershed is more than 20,000 acres. The primary waterways within the Big Sur River-Frontal Pacific Ocean Watershed are San Jose Creek, North Fork San Jose Creek, Gibson Creek, and Wildcat Creek. San Jose Creek is the largest of these waterways and drains approximately 15 square miles (DFG and CCC 2006). There are also a number of unnamed tributaries and creeks within this watershed.

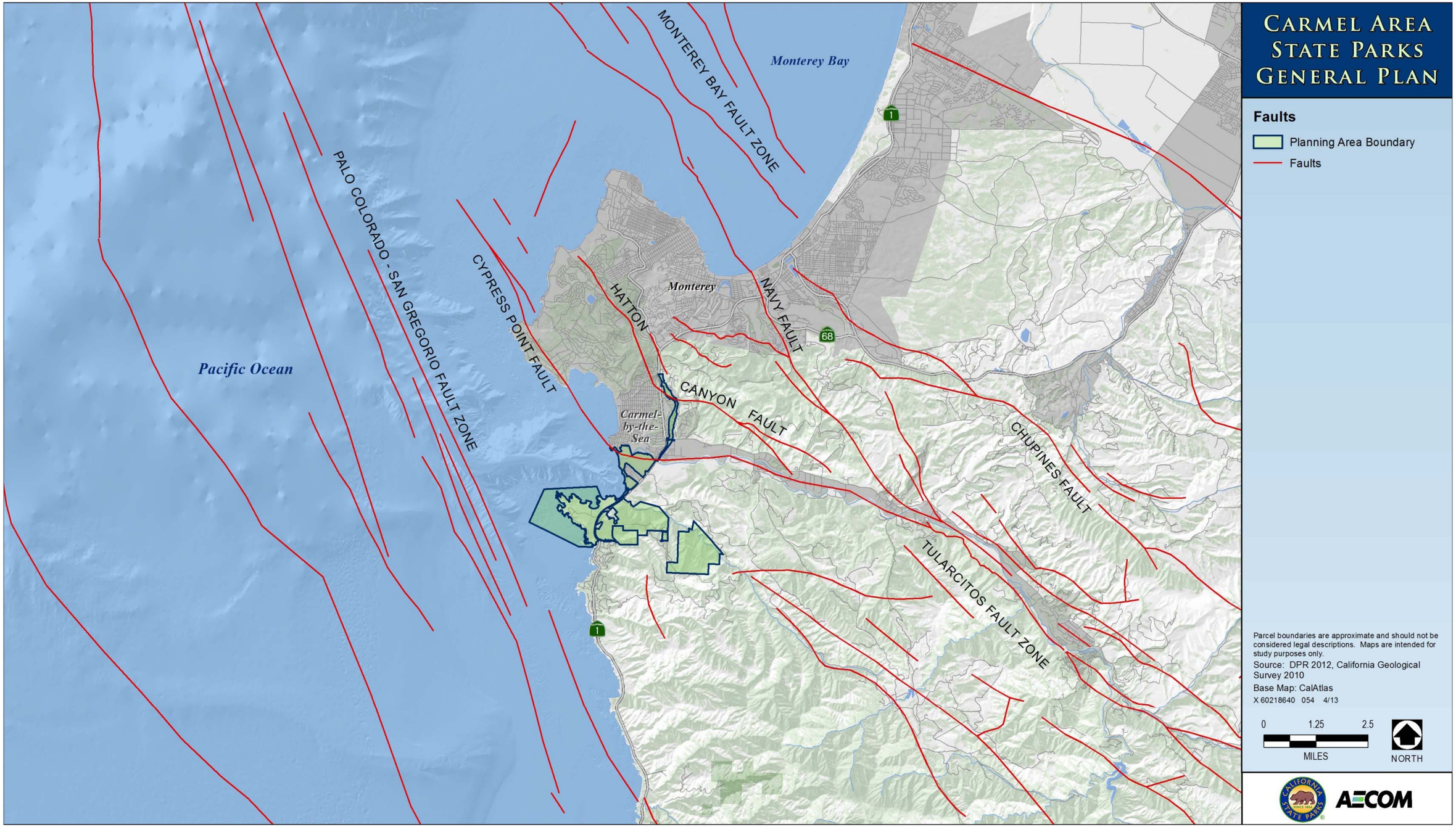
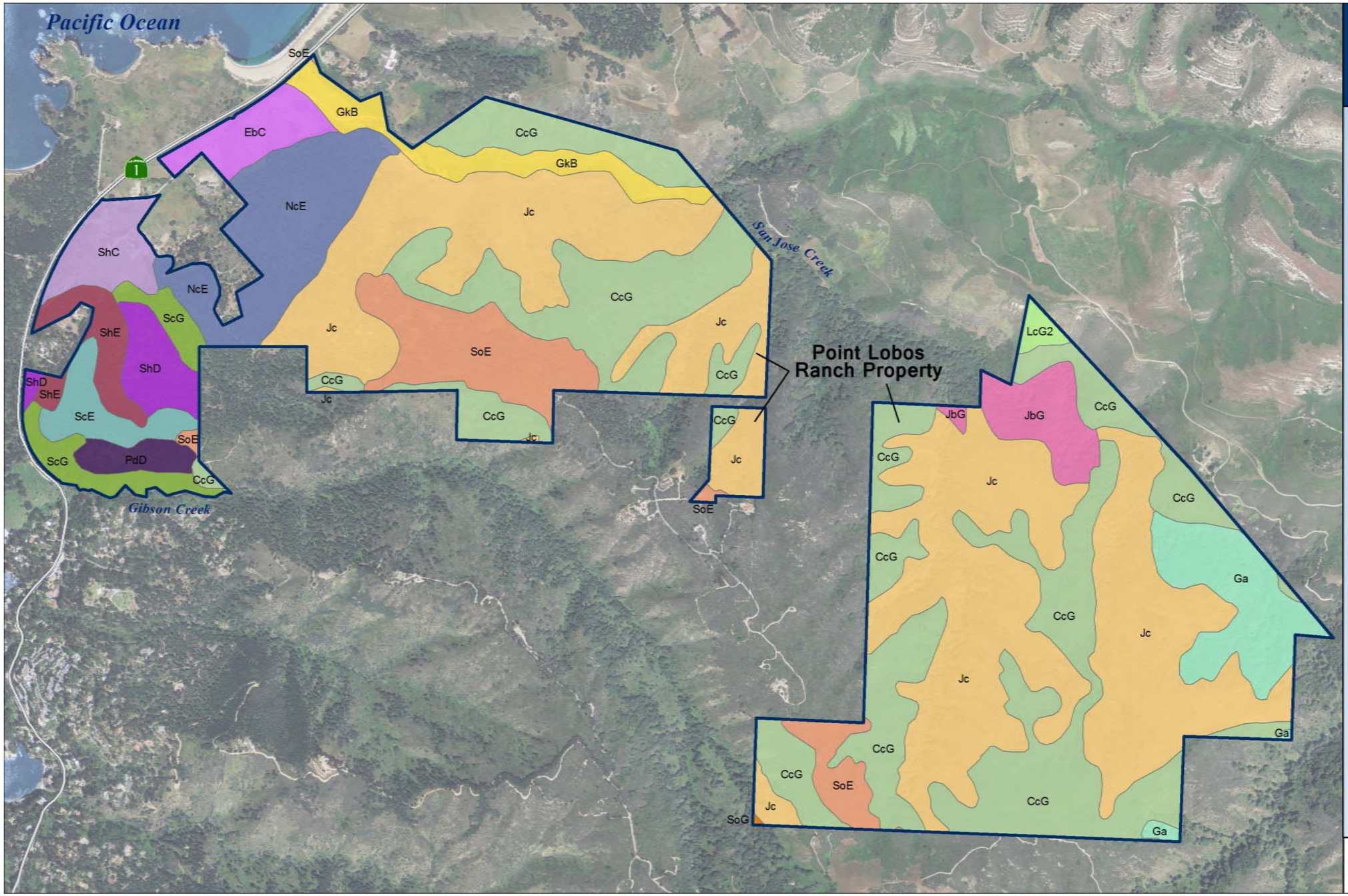


Exhibit 3-1

Faults in the Vicinity of Point Lobos Ranch



Carmel Area State Parks General Plan

Soil Types within Point Lobos Ranch Property

- Planning Area Boundary
- Highway
- CcG — Cieneba fine gravelly sandy loam, 30 to 75 percent slopes
- EbC — Elder very fine sandy loam, 2 to 9 percent slopes
- Ga — Gamboa-sur complex
- GkB — Gorgonio sandy loam, 0 to 5 percent slopes
- JbG — Junipero sandy loam, 30 to 75 percent slopes
- Jc — Junipero-sur complex
- LcG2 — Linne-shedd silty clay loams, 50 to 75 percent slopes, eroded
- NcE — Narlon loamy fine sand, 15 to 30 percent slopes
- PdD — Pfeiffer fine sandy loam, 9 to 15 percent slopes
- ScE — San Andreas fine sandy loam, 15 to 30 percent slopes
- ScG — San Andreas fine sandy loam, 30 to 75 percent slopes
- ShE — Santa Ynez fine sandy loam, 15 to 30 percent slopes
- ShC — Santa Ynez fine sandy loam, 2 to 9 percent slopes
- ShD — Santa Ynez fine sandy loam, 9 to 15 percent slopes
- SoE — Sheridan coarse sandy loam, 15 to 30 percent slopes
- SoG — Sheridan coarse sandy loam, 30 to 75 percent slopes

Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

Source: DPR 2012, NRCS 2009
Aerial Imagery: NAIP 2012
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0 600 1,200
FEET

NORTH

AECOM

Exhibit 3-2

Soil Types within Point Lobos Ranch

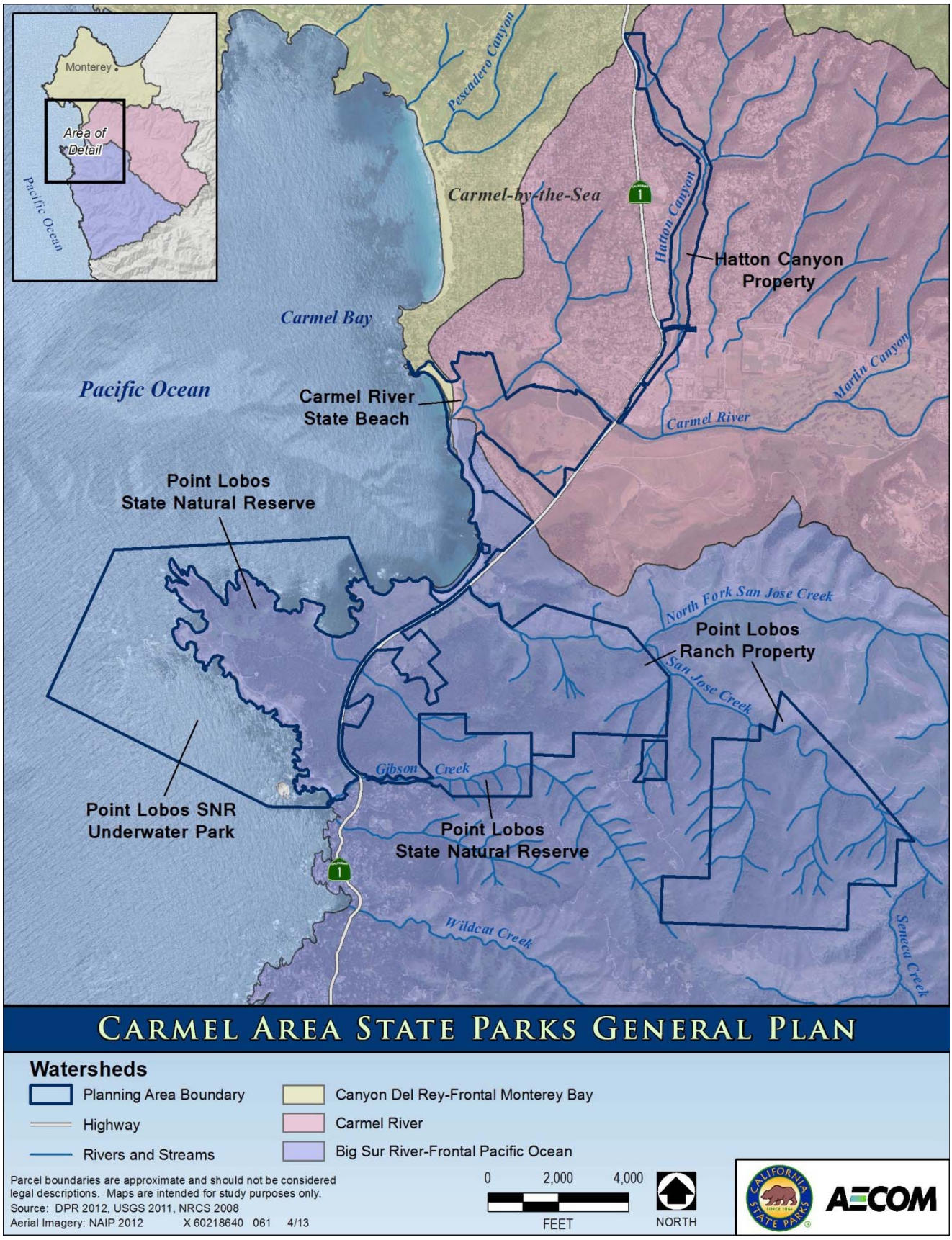


Exhibit 3-3 **Watersheds**

San Jose Creek is a third order stream that is approximately 10.5 miles long and drains an area of approximately 15 square miles. San Jose Creek has several named perennial tributaries including the North Fork San Jose Creek, Seneca Creek, Van Winkley Creek, Williams Canyon Creek, and numerous intermittent and perennial unnamed tributaries. The stream channel is predominately low gradient with the lower and upper sections of San Jose Creek connected to the floodplain and the middle section of the channel confined by steep valley walls. The 100-year floodplain for San Jose Creek includes the mouth of the creek and approximately 2,000 feet upstream from the mouth. This is the only area of the property that is within the 100-year floodplain (Exhibit 3-4). Structures located within the San Jose Creek floodplain include the barn and two residences. The third residence and shed in the San Jose Creek area are also adjacent to the 100-year floodplain. No structures are identified within the Gibson Creek floodplain.

Water temperatures within San Jose Creek remain relatively low and average 57°F. High levels of sedimentation have been observed in the creek. A few bank erosion sites, roads, and road crossings contribute to the fine sediment. In addition, previous storm events that caused failure of earthen dams upstream are likely contributing to the large amount of sand that has been observed within the creek (DFG and CCC 2006). A small portion of Gibson Creek is also within Point Lobos Ranch.

Groundwater within Point Lobos Ranch is primarily within the San Jose Creek aquifer, which is comprised of mixed sand and gravel, clay streaks, and boulders in the stream bed. The aquifer is approximately 6,000 feet by 275 feet, and has an estimated capacity of 660 acre-feet per year. The depth of the aquifer varies over the length, but the average thickness of coarse sand and gravel is approximately 70 feet below the groundwater table. Saltwater intrusion is occasionally a problem for groundwater within the property (Monterey County Planning Department 1985). There are currently two active wells on the property, one that provides water for the two staff houses at San Jose Creek, and one that provides water for a private residence.

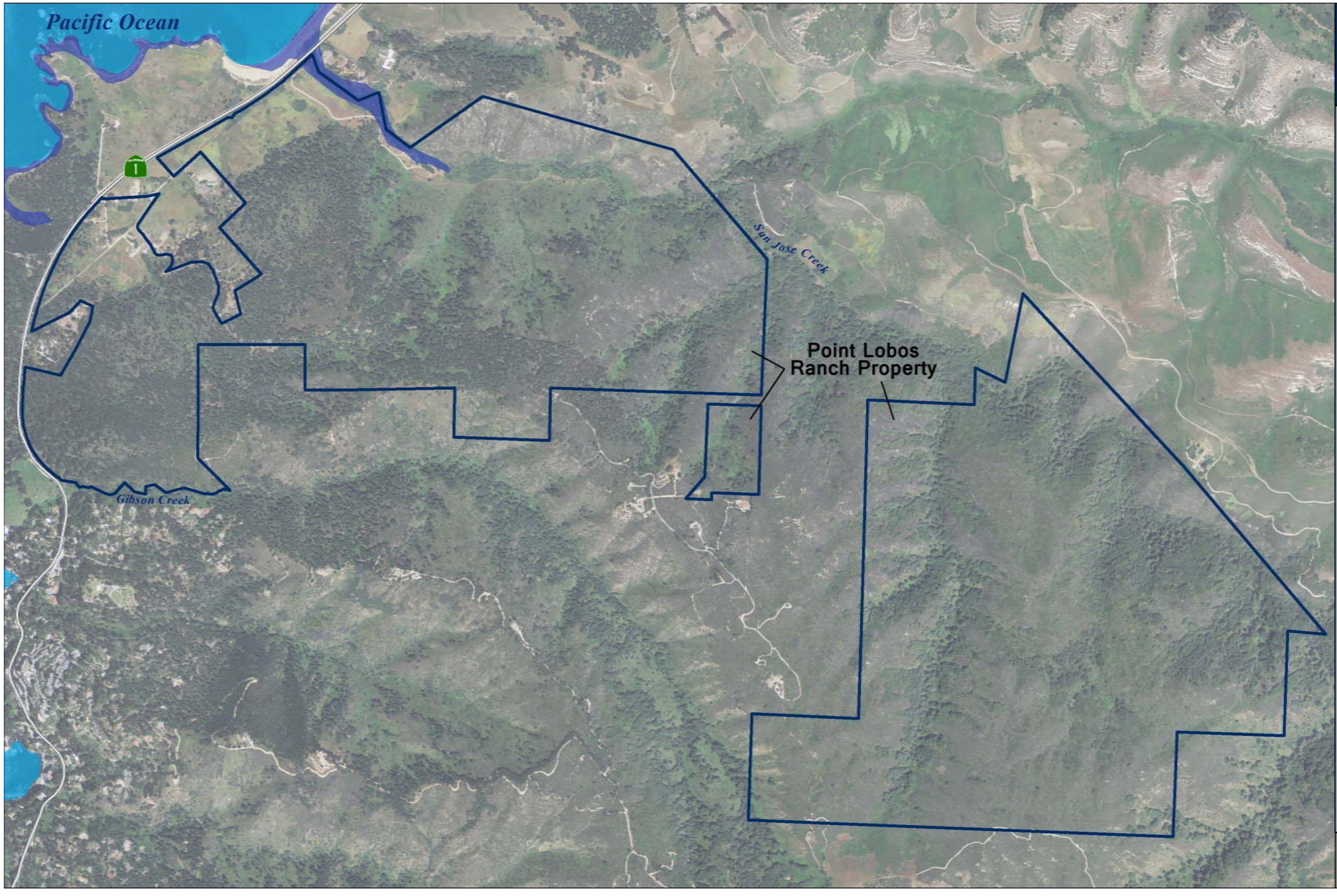
3.1.7 CLIMATE CHANGE AND SEA LEVEL RISE

CLIMATE CHANGE

Climate change refers to change in the Earth's weather patterns including the rise in the Earth's temperature due to an increase in heat-trapping or greenhouse gases in the atmosphere. Greenhouse gases (GHGs) include carbon dioxide, methane, nitrous oxide, and sulfur hexafluoride among others. Human activities are adding large amounts of GHGs to the atmosphere. Combustion of fossil fuels for heat, electricity, and transportation is the main source of these gases.

Emissions of GHGs have the potential to adversely affect the environment because such emissions contribute, on a cumulative basis, to global climate change. Legislation and executive orders on the subject of climate change in California have established a statewide context and process for developing adaptation and mitigation strategies to reduce the negative impacts of impending climate change.

It is anticipated that coastal areas in California will experience several negative affects related to climate change, which will compel the population in these areas to make difficult choices regarding critical assets that need to be protected, relocated, or removed because of economic feasibility. Some of the anticipated extreme events and climate impacts associated with oceans and coastal resources are increased temperature, precipitation changes, sea level rise, reduced agricultural activity, biodiversity threats, public health threats, and increased wildfire risks.



CARMEL AREA STATE PARKS GENERAL PLAN

Floodplain Map of Point Lobos Ranch Property

- Planning Area Boundary
- Highway
- 100-year Floodplain
- 100-year Floodplain (Coastal Areas)

Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

Source: DPR 2012, FEMA 2010
Aerial Imagery: NAIP 2012
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NORTH

AECOM

Exhibit 3-4 **Floodplain Map of Point Lobos Ranch**

Projected effects of climate change on the central California Coastal Region, including Point Lobos Ranch, as described in the *Draft California Climate Change Adaptation Policy Guide* are summarized in Table 3-1.

Table 3-1
Projected Effects of Climate Change on the Central California Coastal Region

Effect	Ranges
Temperature Change (1990-2100)	January: 4.1°F to 5.2°F increase in average temperatures. July: 5.1°F to 6°F increase in average temperatures. (Modeled high temperatures – average of all models; high carbon emissions scenario)
Precipitation	Precipitation varies by location with a general decrease throughout the century. Big Sur's rainfall is projected to decrease by nearly 8 inches in the same timeframe, with 5 to 7 inch decreases in cities like Santa Cruz, San Luis Obispo, and Santa Barbara. Projected decreases in areas of the region that are farther inland are about 4 to 5 inches. (CCSM3 climate model; high carbon emissions scenario)
Sea Level Rise	By 2100, sea levels may rise up to 55 inches, posing threats to many areas in the region, particularly the Monterey Bay Area, Morro Bay, Avila Beach, and Santa Barbara. Overall, the estimated increased acreage in each county vulnerable to flooding will be 36% in Santa Barbara County, 15% in San Luis Obispo County, 12% in Santa Cruz County, and 11% in Monterey County.
Wildfire Risk	There is low to moderate change in projected fire risk in this region except for southwestern Monterey County, near the Big Sur, Carmel Valley, and Greenfield areas, where rates are expected to increase by 70% to 100% by 2085 (GFDL climate model; high carbon emissions scenario)

Source: Cal EMA and CNRA 2012

SEA-LEVEL RISE

Sea-level rise is considered to be one of the primary effects of climate change that is already affecting California. It is anticipated that sea-level rise along the California coast will increase coastal flooding and permanent inundation, deteriorate coastal wetland habitat, increase coastal erosion, cause saltwater intrusion within inland freshwater systems, and change acidity levels of the oceans. Sea-level rise will also have economic impacts, threatening private and public properties and reducing tourism potential of California State Parks and other agencies that provide coastal amenities to the public through reduction in or damages to beaches, access ways, parks, scenic vistas, and trails.

In 2006, a historic sea-level rise of 7 inches was reported by the Climate Change Center. The *Draft California Climate Change Adaptation Policy Guide* estimates that the entire coastal zone of California is susceptible to the effects of sea-level rise including bays and estuaries. The *California Ocean Protection Council* and *Pacific Institute* estimate that even in a medium climate change scenario the sea level along the California coast will rise by 37 to 60 inches by 2100 (Table 3-2).

While future sea-level rise estimates vary based on future GHG emissions scenarios, the *2009 California Climate Change Adaptation Strategy* has adopted six adaptation strategies for ocean and coastal resources that are important to keep in mind while understanding the existing conditions of the Carmel Area State Parks and proposing a plan for the future. The six adaptation strategies laid out by the Coastal Adaptation Working Group, including California State Parks, are:

Table 3-2
Sea-Level Rise Projections using 2000 Sea Levels as a Baseline[1]

Year	IPCC Emission Scenario	Average of Models	Range of Models
2030		7 in (18 cm)	5-8 in (13-21 cm)
2050		14 in (36 cm)	10-17 in (26-43 cm)
2070	Low	23 in (59 cm)	17-27 in (43-70 cm)
	Medium	24 in (62 cm)	18-29 in (46-74 cm)
	High	27 in (69 cm)	20-32 in (51-81 cm)
2100	Low	40 in (101 cm)	31-50 in (78-128 cm)
	Medium	47 in (121 cm)	37-60 in (95-152 cm)
	High	55 in (140 cm)	43-69 in (110-176 cm)

Notes: cm = centimeter; in= inch

[1] Background regarding these sea level rise projections can be found in the Resolution of the California Ocean Protection Council on Sea-Level Rise (OPC 2011).

Source: Cal EMA and CNRA 2012

- Strategy 1: Establish State Policy to Avoid Future Hazards and Protect Critical Habitat;
- Strategy 2: Provide Statewide Guidance for Protecting Existing Critical Ecosystems, Existing Coastal Development, and Future Investments;
- Strategy 3: State Agencies Should Prepare Sea-Level Rise and Climate Adaptation Plans;
- Strategy 4: Support Regional and Local Planning for Addressing Sea-Level Rise Impacts;
- Strategy 5: Complete a Statewide Sea-Level Rise Vulnerability Assessment Every Five Years; and
- Strategy 6: Support Essential Data Collection and Information Sharing.

In addition, in 2011 California State Parks developed the *Sea Level Rise and Extreme Event Guidance* document that includes recommendations for addressing sea level rise at California state parks along California's coast (DPR 2011). This document anticipates effect to coastal park units resulting from the following:

- Potential loss of cultural and natural resources;
- Damage to park facilities and infrastructure (owned by State Parks and others);
- Decreased public access;
- Altered recreational opportunities;
- Change to revenue generation.

To help park planners and managers address these potential effects, the guidance document recommends a 5 step approach to managing risk in coastal park units:

1. Define Scope
2. Assess Vulnerability
3. Determine Risk
4. Manage Risk
5. Formulate Recommendation

Specific considerations include mapping of potential flooding areas, identifying opportunities and constraints, siting of new structures outside of potential flooding areas, and developing shoreline protection goals and guidelines.

Point Lobos Ranch is not anticipated to be affected as much as the coastal and low-lying properties by future sea-level rise because of its inland location and higher elevation. However, according to the Pacific Institute's *Impacts of Sea Level Rise on the California Coast* map, the north-western edge of the property near San Jose Creek along Highway 1 is presently at a high risk of inundation both from 100-year coastal storm event and estimated 1.4-meter sea level rise in future (Exhibit 3-5).

3.2 NATURAL RESOURCES

The Monterey peninsula supports several different climatic, topographic, and soil conditions, resulting in a wide variety of habitats. This diversity of habitats supports many native plants and wildlife species. As an example, 146 plant species reach their most southern distributional limits and 156 plant species reach their most northern distributional limits in Monterey County, and at least 34 plant species are found only in Monterey County (City of Carmel-by-the-Sea 2003).

High levels of biological diversity and ecological complexity have developed within Point Lobos Ranch as a result of complex patterns of topographic, geologic, and microclimatic diversity, as well as successional and other historic influences (Gibson 1989).

3.2.1 PLANTS

The Monterey peninsula supports a variety of unique and important vegetation communities and landscapes, including several types of forest, coastal prairie, coastal scrub, wetlands, streams and associated riparian corridors, beaches, and rocky shoreline. Distinctive forest types include Monterey pine, Monterey cypress, Gowen cypress, and the pygmy pine and pygmy cypress forests. The Monterey pine forest is found naturally in only five locations in the world, and the "core" population exists on the Monterey peninsula (TMPFW 2011). Two stands each of Monterey cypress and Gowen cypress forests occur naturally on the Monterey peninsula (TMPFW 2011, Barbour 2007). The coastal scrub that covers much of the peninsula contains several uncommon vegetation associations, including maritime chaparral, an extremely sensitive and dwindling community (TMPFW 2011). Wetlands and streams provide habitat for many sensitive species. Riparian woodlands are among the most biologically rich habitats in North America (CSU Pomona 2005), providing shade and structure along streams and important habitat for resident and migratory birds, mammals, reptiles, and amphibians (RHJV 2004). In California, less than 15% of these diverse woodlands remain (RHJV 2004).

VEGETATION COMMUNITIES AND OTHER LANDSCAPES

Vegetation communities within Point Lobos Ranch include Monterey pine forest, Gowen cypress forest, coastal scrub, central maritime chaparral, riparian forest, grasslands, and wetlands. The location and extent of these communities and landscapes is shown in Exhibit 3-6. These communities and landscapes are mapped at a broad scale because they are based on California State Parks vegetation management areas (California State Parks 2010), rather than more detailed vegetation community mapping protocols. For general planning purposes, this level of mapping was determined to be sufficient.

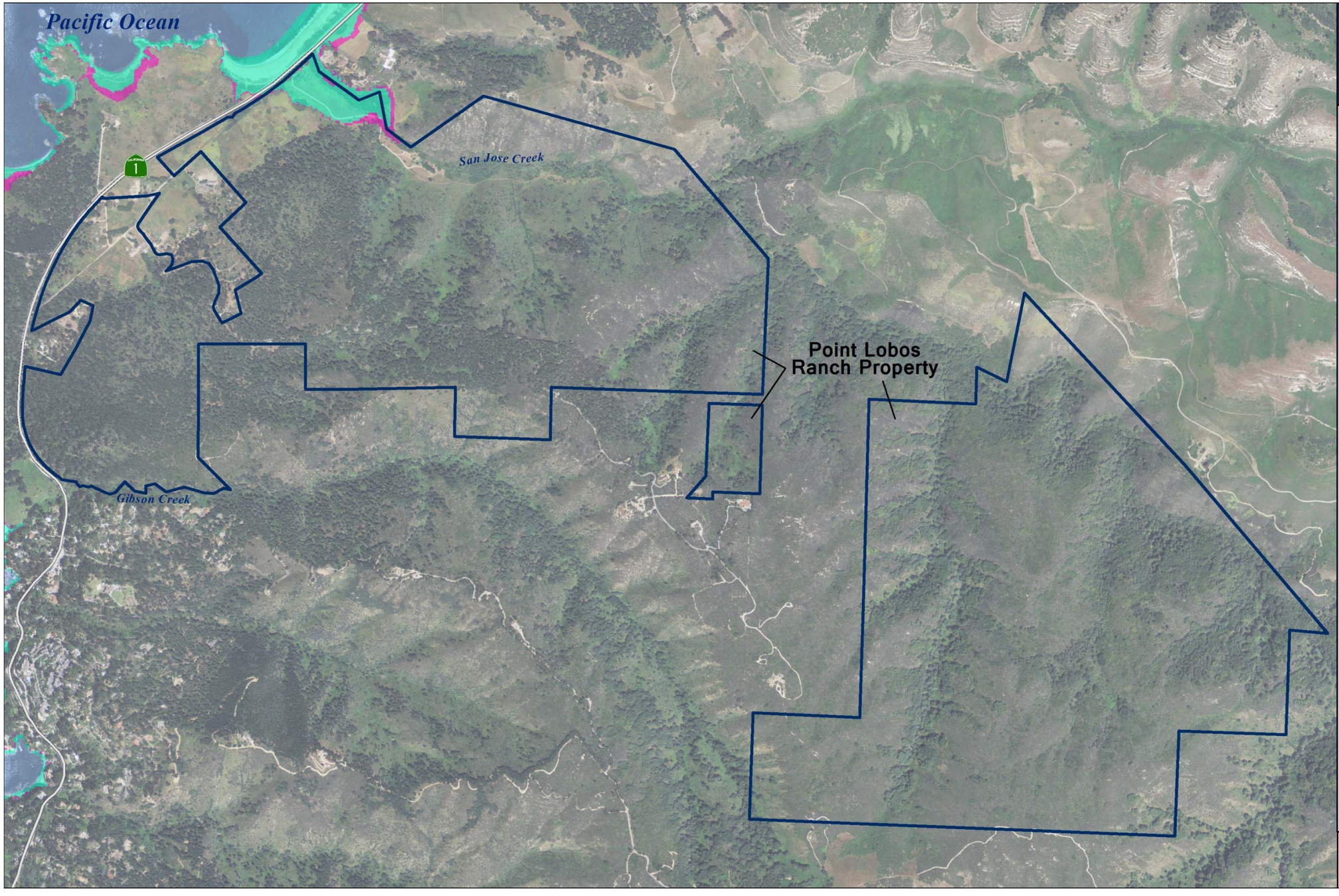
Information on vegetation community descriptions included in this report are mainly based on the *Point Lobos Ranch Biological Resources Assessment and Management Plan* (Gibson 1989) and *The Rare Plant Species of Point Lobos State Reserve* (Patterson 1995), unless otherwise noted.

Monterey Pine Forest

Monterey pine forest occupies the majority of the west facing slopes within the property. The forest is characterized by a continuum of age and size classes and is relatively open. Many of the older trees are infected with western gall rust (*Endocronartium harknessii*) and mistletoe (*Arceuthobium* sp.), and numerous snags (dead standing trees) are present. Coast live oak (*Quercus agrifolia*) is a common associate in the lower canopy, with poison oak (*Toxicodendron diversilobum*), manzanita (*Arctostaphylos* sp.), toyon (*Heteromeles arbutifolia*), salal (*Gaultheria shallon*), California coffeeberry (*Frangula californica*), silk tassel (*Garrya elliptica*), California huckleberry (*Vaccinium ovatum*), bush monkeyflower (*Mimulus aurantiacus*), and Monterey pine seedlings in the understory. California bay laurel (*Umbellularia californica*) is also occasionally found in the overstory. Spreading snowberry (*Symphoricarpos mollis*) is a common ground layer species. Common herbs include seaside woolly sunflower (*Eriophyllum staechadifolium*), seaside daisy (*Erigeron glaucus*), bluff lettuce (*Dudleya farinosa*), Douglas' iris (*Iris douglasiana*), hedge-nettle (*Stachys bullata*), California oat grass (*Danthonia californica*), stinging phacelia (*Phacelia malvifolia*), California bedstraw (*Galium californicum*), bracken fern (*Pteridium aquilinum* var. *pubescens*), seashore bentgrass (*Agrostis pallens*), wild rye (*Elymus* sp.), yerba buena (*Clinopodium douglasii*), and California polypody (*Polypodium californicum*) (Barry et al. 1977). Some areas adjacent to roads support dense stands of French broom (*Genista monspessulana*). Stands of coast redwood (*Sequoia sempervirens*) trees are present within the Monterey pine forest along canyon bottoms south of San Jose Creek and on steep north-facing slopes. Cape ivy (*Delairea odorata*) is also within the pine forest along south side of Red Wolf Drive.

Gowen Cypress Forest

One of the two native populations of Gowen cypress (*Hesperocyparis goveniana*) is present at Point Lobos Ranch (Photo Exhibit 3-1). A dwarf woodland of stunted Gowen cypress trees grows on poor soil with woollyleaf manzanita (*Arctostaphylos tomentosa*) an uncommon species, Monterey manzanita (*A. hookeri* ssp. *hookeri*), and sandmat manzanita (*A. pumila*). A more typical woodland of large, tall Gowen cypress trees is present on more fertile soils, where it intergrades with the Monterey pine forest and shares many of the same shrub and herbaceous species including French broom and bush monkey flower. The canopy is closed and few shrubs or herbs occupy the understory. Some characteristic species include California huckleberry, salal, and chamise (*Adenostoma fasciculatum*).



Carmel Area State Parks General Plan

Sea Level Rise

Planning Area Boundary

Highway

Area at risk from a 100-year coastal flood event

Current

With a 1.4 meter sea level rise

Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

Source: DPR 2012, Pacific Institute 2009

Aerial Imagery: NAIP 2012

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Exhibit 3-5

Projected Effects of Sea Level Rise at Point Lobos Ranch

Source: California State Parks 2011

Photo Exhibit 3-1 **Gowen Cypress Forest within Point Lobos Ranch**

Coastal Scrub

Coastal scrub is widespread on the steep middle to lower slopes of San Jose and Gibson Canyons, especially north- and south-facing slopes with shallow, rocky soils. This plant community is typically dense and plants reach 1 to 3 meters in height. Coastal scrub within Point Lobos Ranch is dominated by a diverse mix of native perennial shrubs and herbs. Common species include wild buckwheat (*Eriogonum fasciculatum*), bush lupine (*Lupinus arboreus*), bush monkeyflower, blue blossom (*Ceanothus thyrsiflorus*), golden yarrow (*Eriophyllum confertiflorum*), coyote brush (*Baccharis pilularis*), California blackberry (*Rubus ursinus*), Douglas' nightshade (*Solanum douglasii*), poison oak, California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), buck brush (*Ceanothus cuneatus*), cape ivy, and California coffeeberry. Herbs include California poppy (*Eschscholzia californica*), California bee plant (*Scrophularia californica*), stinging phacelia, popcorn flower (*Plagiobothrys* sp.), and Chinese houses (*Collinsia heterophylla*). Monterey pine (*Pinus radiata*) is invading coastal scrub in some areas.

Central Maritime Chaparral

Central maritime chaparral is widespread within the property, found on sandy, dry soils on the crest of upper slopes on the ridge between San Jose and Gibson Creeks. Central maritime chaparral is found within the coastal fog belt from Monterey County to Santa Barbara County, and the type or phase at Point Lobos Ranch is unique to the Monterey Peninsula (Griffin 1978 in Gibson 1989). It is characterized by a variety of species with moderate to

high cover and averaging 1 to 2 meters in height. Dominant species include woollyleaf manzanita, Monterey manzanita, golden chinquapin (*Chrysolepis chrysophylla*), scrub oak (*Quercus dumosa*), California huckleberry, and chamise. Other characteristic shrub species include warty-leaved ceanothus (*Ceanothus papillosus*), sandmat manzanita, California sagebrush, coyote brush, blue blossom, black sage, California coffeeberry, toyon, Monterey ceanothus (*Ceanothus rigidus*), salal, beargrass (*Xerophyllum tenax*), and silk tassel. Few herbaceous species are found in this community; these include goldenrod (*Solidago spathulata*), cudweed (*Pseudognaphalium* sp.), small-lobe navarretia (*Navarretia hamata* ssp. *parviloba*), pearly everlasting (*Anaphalis margaritacea*), coast sanicle (*Sanicula laciniata*), herba impia (*Filago californica*), slender woolly-marbles (*Psilocarphus tenellus*), threadstem madia (*Madia exigua*), cottonweed (*Micropus* sp.), and beach aster (*Corethrogyne* sp.). In the transition zone between the Monterey pine forest and the central maritime chaparral there are also sedges (*Carex* sp.) covering large areas. Monterey pines have invaded the chaparral in areas of soil disturbance and some eucalyptus trees (*Eucalyptus* sp.) are present near the old homestead.

Riparian Forest

Riparian vegetation is present along San Jose (Photo Exhibit 3-2) and Gibson Creeks. The San Jose Creek riparian forest is dominated by black cottonwood (*Populus trichocarpa*), white alder (*Alnus rhombifolia*), red willow (*Salix laevigata*), California sycamore (*Platanus racemosa*), coast redwood, buckeye (*Aesculus californica*), California bay laurel, bigleaf maple (*Acer macrophyllum*), and madrone (*Arbutus menziesii*). Common shrubs include arroyo willow (*S. lasiolepis*), Scouler's willow (*S. scouleriana*), western dogwood (*Cornus sericea* ssp. *occidentalis*), snowberry, California blackberry, and thimbleberry (*R. parviflorus*). Common herbs include hoary nettle (*Urtica dioica* ssp. *holosericea*), redwood sorrel (*Oxalis oregana*), swordfern (*Polystichum munitum*), cape ivy, periwinkle (*Vinca major*), and hedge-nettle.

The riparian community along Gibson Creek is dominated by coast redwood, California bay laurel, bigleaf maple, madrone, and white alder in the overstory and swordfern, California huckleberry, thimbleberry, red-flowering currant (*Ribes sanguineum* var. *glutinosum*), panic veldt grass (*Ehrharta erecta*), lady fern (*Athyrium filix-femina* var. *cyclosorum*), California blackberry, giant chain fern (*Woodwardia fimbriata*), and French broom in the understory. Common herbs include redwood sorrel, common horsetail (*Equisetum telmateia*), California bee plant, hairy honeysuckle (*Lonicea hispidula*), dwarf nettle (*Urtica urens*), panicled bulrush (*Scirpus microcarpus*), and Pacific reed grass (*Calamagrostis nutkaensis*).

Riparian corridors are considered environmentally sensitive habitats in the *Carmel Area Land Use Plan* (Monterey County 1983). The riparian vegetation at Point Lobos Ranch is likely considered a freshwater forested/shrub wetland (Gibson 1989) (Exhibit 3-6).

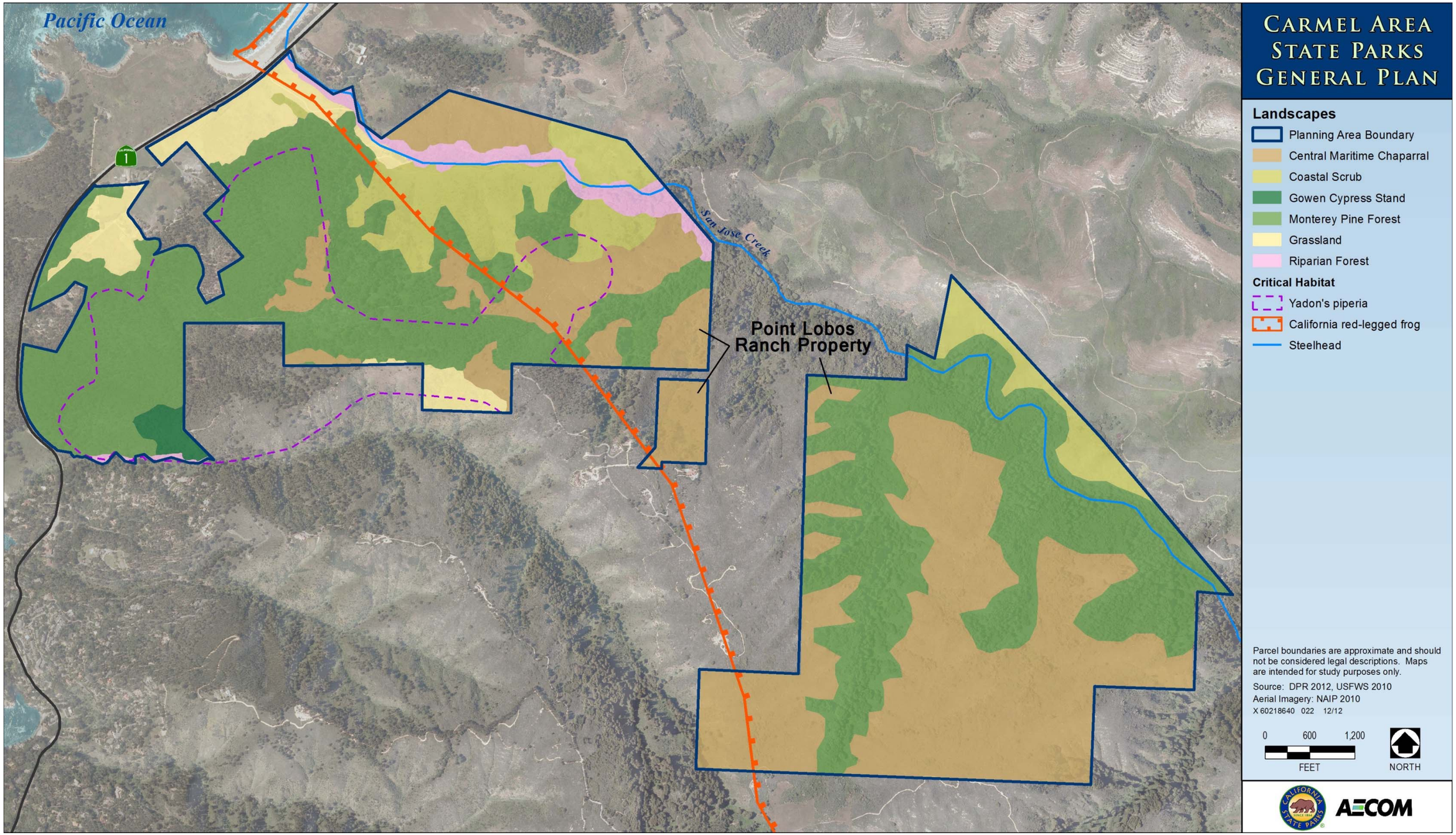


Exhibit 3-6

Vegetation Communities and Other Landscapes at Point Lobos Ranch

Source: AECOM 2012

Photo Exhibit 3-2 **Riparian Forest within Point Lobos Ranch**

Wetlands

Wetlands are present along many of the drainages throughout the property; these include wetlands dominated by herbs and those dominated by trees and shrubs. There is no information available on the vegetation composition of these wetlands. The herbaceous wetlands are likely dominated by common wetland herbs such as sedges (*Carex* sp.), rushes (*Juncus* sp.), tules (*Schoenoplectus* sp.), and nutsedges (*Cyperus* sp.). The tree and shrub wetlands are likely dominated by many of the species found in riparian areas, described above.

A human-made water storage pond exists at the edge of the Monterey pine forest east of Highway 1 and south of San Jose Creek. It is dominated by cattail (*Typha* sp.), tule, willow (*Salix* sp.), nutsedge, and other wetland plants.

Swales and ditches are present in the grassland south of Allen Road. These features are dominated by common rush (*Juncus effusus*), Baltic rush (*J. balticus*), ryegrass (*Festuca perennis*), cut-leaved plantain (*Plantago coronopus*), English plantain (*P. lanceolata*), and other wetland plants.

These wetlands are classified as freshwater emergent wetlands (herbaceous wetlands) and forested/shrub wetlands (tree and shrub wetlands) (USFWS 2012a) (Exhibit 3-7).

Grasslands

Grasslands are dominated by non-native annual and perennial grasses and broadleaf herbaceous species, and are being colonized by native woody shrubs and Monterey pines in some areas (California State Parks 2010). Dominant species include wild oat (*Avena sativa, A. barbata*), soft chess (*Bromus hordeaceus*), ripgut brome (*B. diandrus*), filaree (*Erodium* sp.), lupines (*Lupinus* sp.), clovers (*Trifolium* sp., *Medicago* sp.), owl's clover (*Castilleja* sp.), annual fescue (*Festuca* sp.), sheep sorrel (*Rumex acetosella*), fiddle dock (*R. crispus*), velvet grass (*Holcus lanatus*), barley species (*Hordeum brachyantherum, H. jubatum* ssp. *jubatum, H. marinum* ssp. *gussoneanum, H. murinum* ssp. *leporinum*), with field mustard (*Brassica rapa*) in drier sites; and ryegrass, annual bluegrass (*Poa annua*), rabbits-foot grass (*Polypogon monspeliensis*), and Pacific hairgrass (*Deschampsia cespitosa* ssp. *holciformis*) in moister areas (Barry et al. 1977). Some relic areas of California canary grass (*Phalaris californica*) and western dichondra (*Dichondra occidentalis*) are also present. Grasslands are also infested with poison hemlock (*Conium maculatum*). Species diversity is relatively low in the grasslands just southeast of Highway 1 that have been heavily grazed by horses and other livestock for nearly 200 years. A greater variety of native species occur in the ungrazed grasslands on the steep upper slopes of Huckleberry Hill.

Developed

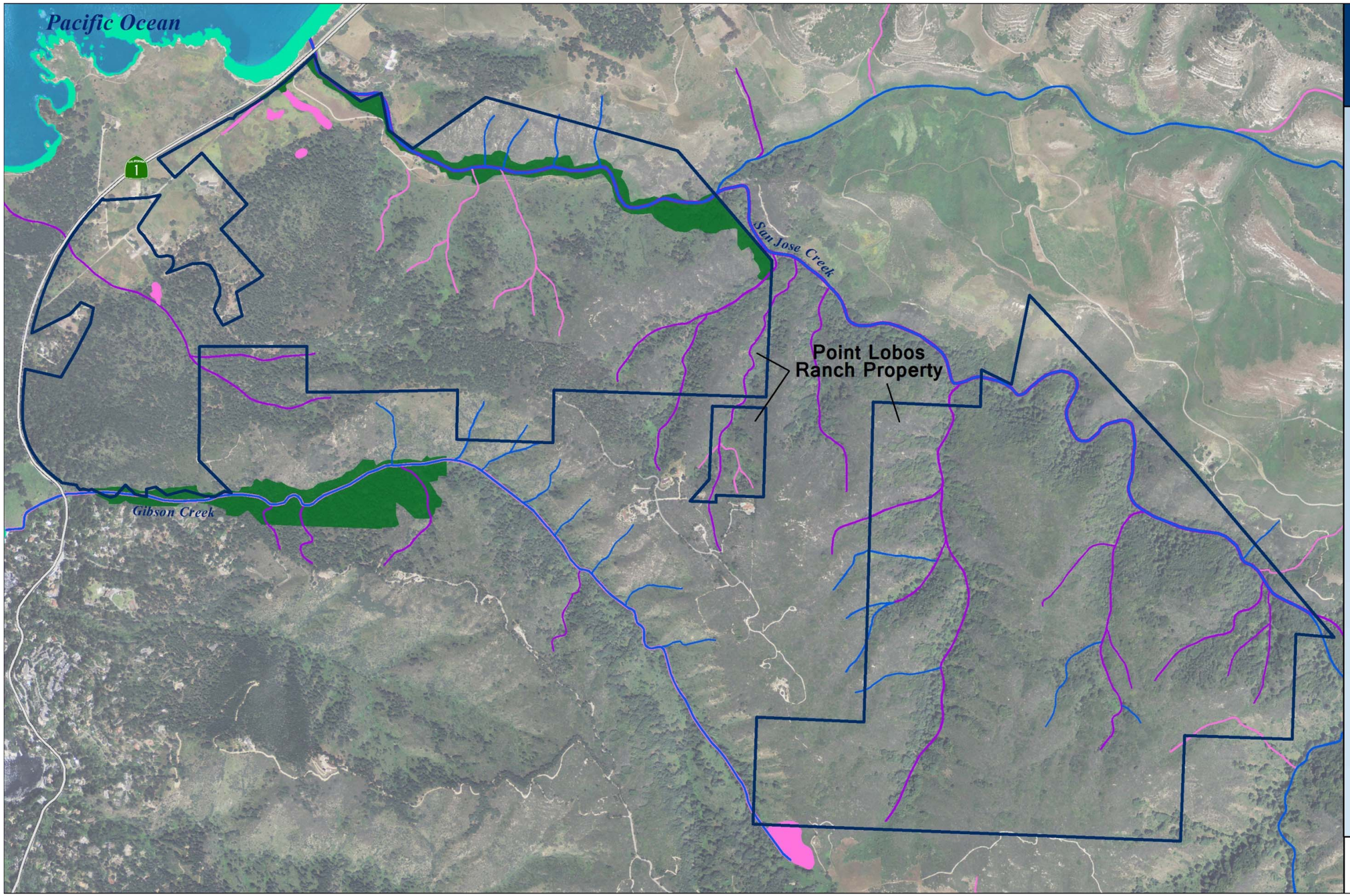
Developed areas within Point Lobos Ranch include paved roads, residences, and farm-related structures.

SENSITIVE NATURAL COMMUNITIES

Sensitive natural communities are those that are of special concern to California Department of Fish and Wildlife (CDFW) or that are afforded specific consideration through the California Environmental Quality Act (CEQA), Section 1602 of the California Fish and Game Code, the Porter-Cologne Act, or Section 404 of the Clean Water Act (CWA). Sensitive communities within the property include central maritime chaparral, Monterey pine forest, Monterey pygmy cypress forest (Gowen cypress dwarf woodland), and riparian habitat along San Jose and Gibson Creeks. California Natural Diversity Database (CNDDB) records exist for the central maritime chaparral, Monterey pine forest, and Monterey pygmy cypress forest within Point Lobos Ranch (Exhibit 3-8).

WETLANDS

Existing information on wetlands within Point Lobos Ranch is provided in the *Aquatic Survey of San Jose Creek* (Hagar Environmental Science 2002), *Point Lobos Ranch Biological Resources Assessment and Management Plan* (Gibson 1989), and *Stream Inventory Report for San Jose Creek* (Nelson, Baglivio, and Kahles 2006), and the National Wetlands Inventory (USFWS 2012a). San Jose Creek is the primary riverine wetland within the property, though there are several smaller streams that flow into San Jose Creek and Gibson Creek. Many of these creek corridors are dominated by wetland shrubs and trees and are classified as freshwater forested/shrub wetlands. Wetlands that are dominated by herbaceous wetland vegetation are classified as freshwater emergent wetlands. Other freshwater emergent wetlands include ponds, swales, and ditches. The riparian forest along San Jose and Gibson Creeks is also likely considered freshwater forested/shrub wetlands. Exhibit 3-7 shows the locations and extent of these wetlands. See Vegetation Communities, above, for descriptions of these wetlands.



Carmel Area State Parks General Plan

Wetlands within Point Lobos Ranch Property

- Planning Area Boundary
- Highway
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Riverine
- Riparian Forest

Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

Source: DPR 2012, USFWS 2009, Gibson 1989

Aerial Imagery: NAIP 2012

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Exhibit 3-7

Wetlands within Point Lobos Ranch

SPECIAL-STATUS PLANT SPECIES

For the purposes of this document, special-status plants include the following:

- Species listed under the federal Endangered Species Act (ESA) and/or California Endangered Species Act (CESA) as rare, threatened, or endangered;
- Species considered as candidates and proposed for state or federal listing as threatened or endangered; and
- Plants ranked by CDFW to be rare, threatened, or endangered in California (these include species in the California Native Plant Society's [CNPS] Inventory of Rare and Endangered Plants of California).

The *Point Lobos Ranch Biological Resources Assessment and Management Plan* (Gibson 1989), *The Rare Plant Species of Point Lobos Reserve* (Patterson 1995), *Point Lobos State Reserve and Carmel River State Beach General Plan* (DPR 1979), and *Point Lobos State Reserve and Carmel River State Beach Resource Inventory* (Barry et al. 1977) contain information on special-status species within Point Lobos Ranch. California State Parks staff have also observed several special-status plant species on the property (Palkovic, pers. comm., 2012a, 2012b). The CNDDB (2012), CNPS Inventory of Rare Plants (CNPS 2012), and USFWS Endangered Species list (USFWS 2012b) were also searched to gather additional information about special-status species previously documented within Point Lobos Ranch (Exhibit 3-8) and the region. Regional occurrences of special-status species are shown in Appendix A. Special-status plant species that are known to occur within the property are Hutchinson's larkspur (*Delphinium hutchinsoniae*), Gowen cypress, Monterey pine, Yadon's rein orchid (*Piperia yadonii*), pine rose (*Rosa pinetorum*), and Pacific Grove clover (*Trifolium polypodon*). Monterey manzanita, Jolon clarkia (*Clarkia jolonensis*), and marsh microseris (*Microseris paludosa*) may also occur within the property. Sandmat manzanita, small-leaved lomatium (*Lomatium parvifolium*), Monterey ceanothus, Douglas' spineflower (*Chorizanthe douglasii*), and Pinnacles buckwheat (*Eriogonum nortonii*) are likely to occur because there are records directly adjacent to the property boundary. Critical habitat for Yadon's piperia has been designated by the USFWS within Point Lobos Ranch. Table 3-3 contains detailed information on all special-status plants known from or with potential to occur within Point Lobos Ranch. Species that are known to occur within Point Lobos Ranch are shown in bold. Exhibit 3-6 shows the location and extent of critical habitat for Yadon's piperia within the property.

Two of the special-status plant species found within Point Lobos Ranch are federally listed as threatened or endangered (Gowen cypress [threatened] and Yadon's rein orchid [endangered]). All six of the other special-status plant species known to occur within the property have a California Rare Plant Rank of 1B, designated as rare, threatened, or endangered in California and elsewhere, and three of these have a threat rank of 0.1, meaning they are seriously threatened in California (Monterey pine, Yadon's rein orchid, and Pacific Grove clover) (CNPS 2012). Threats to special-status plants within the property include loss of habitat and competition from invasive plants, as well as disturbance and damage during invasive plant removal efforts; herbivory; and improper fire regime, especially for the Monterey pine and Gowen cypress. Monterey pine is also specifically threatened by disease (pine pitch canker) and genetic contamination.

No comprehensive survey for special-status plants has been conducted to date within the property, and the extent of the populations of several species is not known. Detailed inventory and monitoring of special-status plants is recommended.

INVASIVE PLANT SPECIES

The *Invasive Plant Control Point Lobos State Reserve, Point Lobos Ranch, & Carmel River State Beach* (California State Parks 2006) and *The Rare Plant Species of Point Lobos Reserve* (Patterson 1995) contain information on invasive species within Point Lobos Ranch. More than 10 acres of French broom have been mapped within Point Lobos Ranch. French broom, cape ivy, and jubata grass (*Cortaderia jubata*) are targeted for removal within the Monterey pine forest. Monterey pines are also susceptible to the recently introduced pine pitch canker disease, which is caused by the fungus *Fusarium circinatum*. Gowen cypress is susceptible to cypress canker caused by the fungus *Seiridium cardinale*. French broom is managed through both mechanical and chemical treatment. A variety of invasive species are treated in the coastal scrub and grasslands, including black mustard (*Brassica nigra*), poison hemlock, fennel (*Foeniculum vulgare*), iceplants (*Carpobrotus chilensis*), French broom, cape ivy, kikuyu grass (*Pennisetum clandestinum*), and jubata grass. Periwinkle is found along San Jose Creek and, in the riparian forest, French broom, cape ivy, and sticky eupatorium (*Ageratina adenophora*) are managed through both mechanical and chemical treatment. English ivy (*Hedera helix*) has also been observed within the property.

Vegetation Management Goals and Recommendations

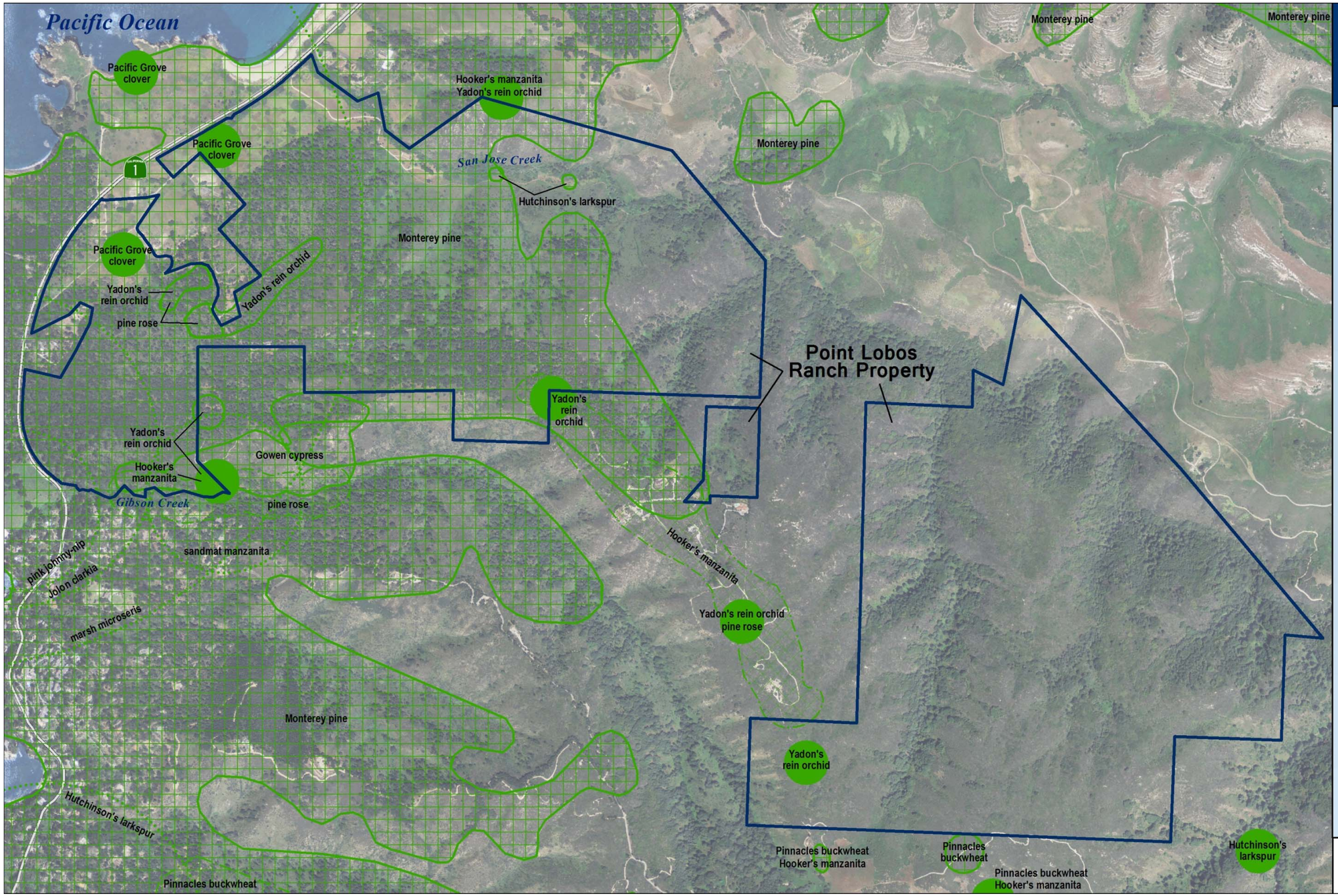
The Vegetation Management Statement for the property (California State Parks 2010) contains park-wide Vegetation Management Goals including protection of special-status species and special plant communities, and management to support a richness of native species and sustainable populations. The Vegetation Management Strategy also has specific management actions related to these goals including maintaining current sensitive habitats and restoring native plant communities in grasslands.

Wildfire Management

Historically, fires burned regularly through the Carmel area, although historic grazing in the surrounding area reduced fuel loads and fire risk. Fire hazard ratings in the immediate vicinity of Point Lobos Ranch are designated as high or very high by the California Department of Forestry and Fire Protection (Cal Fire). A map of the fire hazard ratings and previous fires in the region are shown on Exhibit 3-9. The absence of frequent, low intensity natural fires within the property has created fuel buildups.

Wildfire management in California State Parks is guided by the Department Operations Manual (DOM) Section 0300-Natural Resources (section 0313.2.1 Wildfire Management), the Natural Resources Handbook, the *Wildfire Management Planning Guidelines and Policy* (California State Parks 2008), and the *Guidelines for Protection of Structures from Wildland Fires* (DPR 2009). These guidelines state that parks with wildland vegetation must have a wildfire management plan, and the guidelines provide a template for preparing wildfire management plans. Key components of the wildfire management plans include managing for wildfires before, during, and after a wildfire incident (California State Parks 2008). A wildfire management plan has not yet been prepared for Point Lobos Ranch.

If a park unit contains structures, California State Parks is required to maintain vegetation around those structures in accordance with the *Guidelines for Protection of Structures from Wildland Fires*. The amount of vegetation clearing depends on the type of structure, the slope and distance of vegetation from a structure, and type of vegetation. These guidelines also include resource management goals to reduce fuel loads including removal of invasive species, retaining sensitive native species, and retaining snags that are not touching any structures (DPR 2009). Current vegetation management activities include mowing and limited vegetation clearing to reduce fuel load.



Carmel Area State Parks General Plan

Special-status Plant Occurrences within Point Lobos Ranch Property

- Planning Area Boundary
- Plant - Accuracy Class 1
- Plant - Accuracy Class 2
- Plant - Accuracy Class 3
- Plant - Accuracy Classes 4-9
- Highway

CNDDB Accuracy Class 1: Reported occurrence is a point; location considered accurate to within the minimum mappable unit of 80 meters.
CNDDB Accuracy Class 2: Reported location is an area with defined boundaries.
CNDDB Accuracy Class 3: Reported location is a non-specific area; buffer added to represent degree of uncertainty in reported location.
CNDDB Accuracy Classes 4-9: Reported location considered accurate within the radius shown.

Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

Source: DPR 2012, CNDDB Dec 2012
Aerial Imagery: NAIP 2012
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Exhibit 3-8

Special-Status Plant Occurrences

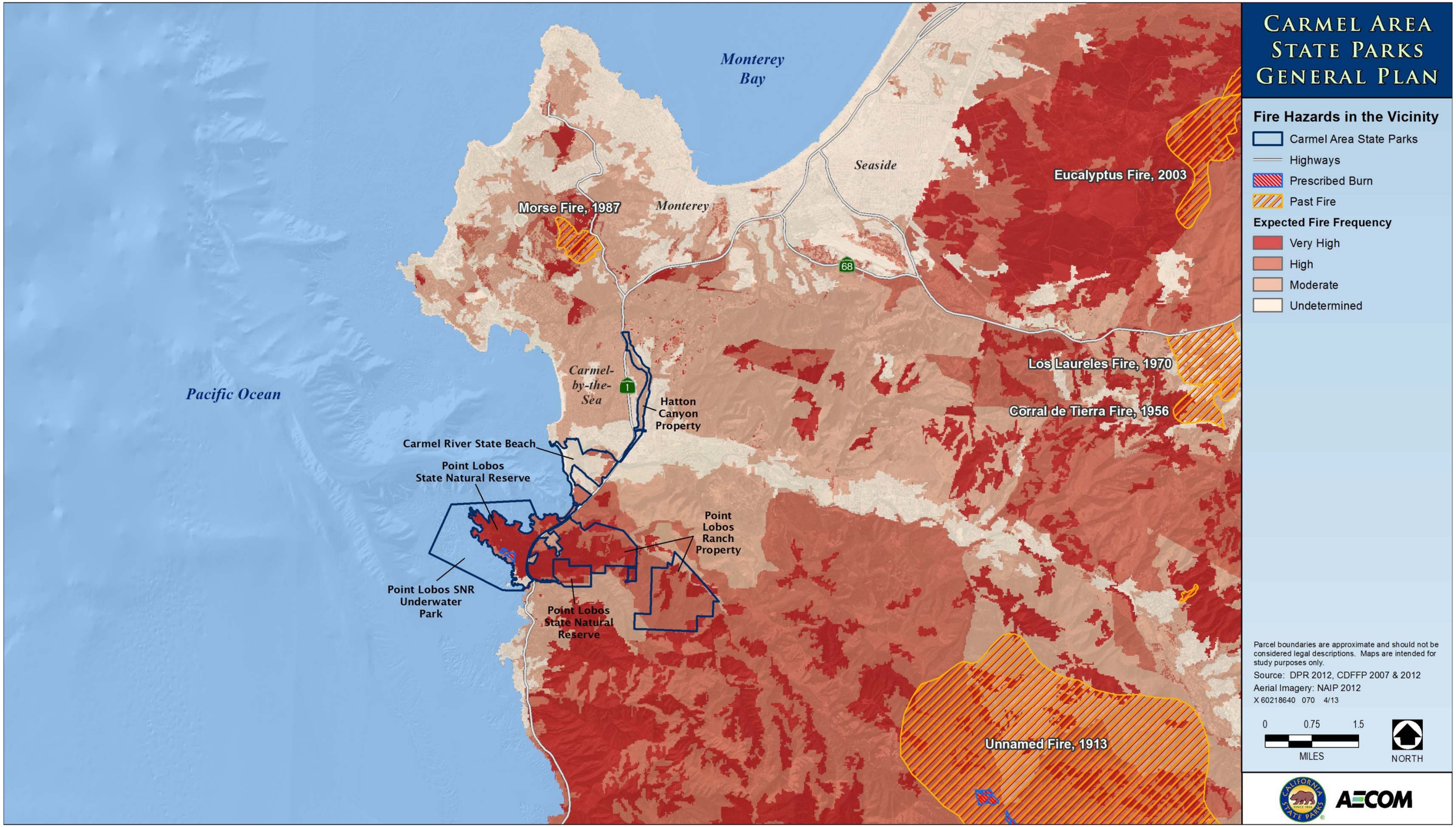


Exhibit 3-9

Fire Hazards in the Vicinity of Point Lobos Ranch

Table 3-3
Special-Status Plants Known from or with the Potential to Occur within Point Lobos Ranch

Species	Status		Habitat and Blooming Period	Potential for Occurrence
	USFWS	CDFW		
Hickman's onion *Allium hickmanii*	-	1B.2	Closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, and valley and foothill grassland; 5 to 200 meters elevation; blooms March through May	Could occur in the Monterey pine forest, Gowen cypress forest, central maritime chaparral, coastal scrub, or grasslands.
Little Sur manzanita *Arctostaphylos edmundsii*	-	1B.2	Coastal bluff scrub and chaparral, in sandy soils; 30 to 105 meters elevation; blooms November through April	Could occur in the coastal scrub or central maritime chaparral.
Hooker's manzanita *A. hookeri* ssp. *hookeri*	-	1B.2	Closed-cone coniferous forest, chaparral, cismontane woodland, and coastal scrub, in sandy soils; 85 to 536 meters; blooms January through June	Could occur in the Monterey pine forest, Gowen cypress forest, central maritime chaparral, or coastal scrub.
Monterey manzanita *A. montereyensis*	-	1B.2	Maritime chaparral, cismontane woodland, and coastal scrub, in sandy soils; 30 to 730 meters elevation; blooms February through March	Possibly known to occur; unclear if observed within Point Lobos Ranch (DPR 1979). Could occur in the central maritime chaparral, live oak dominated portions of Monterey pine forest, or coastal scrub.
Pajaro manzanita *A. pajaroensis*	-	1B.1	Chaparral in sandy soils; 30 to 760 meters elevation; blooms December through March	Could occur in the central maritime chaparral.
Sandmat manzanita *A. pumila*	-	1B.2	Closed-cone coniferous forest, maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub, in sandy soils and openings; 3 to 205 meters elevation; blooms February through May	Likely to occur; recorded within the Gowen cypress stand on the Point Lobos SNR parcel adjacent to Point Lobos Ranch (Palkovic, pers. comm., 2012a, CNDDB 2012, Barry et al. 1977, Patterson 1995, Gibson 1989).
Marsh sandwort *Arenaria paludicola*	FE	CE, 1B.1	In sandy soils, in openings in freshwater and brackish marshes and swamps; 3 to 170 meters elevation; blooms May through August	Could occur in wetlands.
Ocean bluff milk-vetch *Astragalus nuttallii* var. *nuttallii*	-	4.2	Coastal bluff scrub and coastal dunes; 3 to 120 meters elevation; blooms January through November	Could occur in coastal scrub.
Coastal dunes milk-vetch *A. tener* var. *titi*	E	E, 1B.1	Coastal bluff scrub, coastal dunes, and mesic coastal prairie, in sandy soils, often in vernally mesic areas; 1 to 50 meters elevation; blooms March through May	Could occur in coastal scrub.

Table 3-3
Special-Status Plants Known from or with the Potential to Occur within Point Lobos Ranch

Species	Status		Habitat and Blooming Period	Potential for Occurrence
	USFWS	CDFW		
Pink johnny-nip *Castilleja ambigua* ssp. *insalutata*	-	1B.1	Coastal prairie and coastal scrub; 0 to 100 meters elevation; blooms May through August	Could occur in the coastal scrub.
Monterey Indian paintbrush *Castilleja latifolia*	-	4.3	Closed-cone coniferous forest, openings in cismontane woodland, coastal dunes, and coastal scrub, in sandy soils; 0 to 185 meters elevation; blooms February to September	Could occur in the Monterey pine forest, Gowen cypress forest, or coastal scrub.
Monterey ceanothus *Ceanothus rigidus*	-	4.2	Closed-cone coniferous forest, chaparral, and coastal scrub, in sandy soils; 3 to 550 meters elevation; blooms February through April (sometimes June)	Likely to occur; recorded within the Gowen cypress stand on the Point Lobos SNR parcel adjacent to Point Lobos Ranch (Barry et al. 1977; DPR 1979; Patterson 1995; Gibson 1989; Palkovic, pers. comm., 2012b).
Congdon's tarplant *Centromadia parryi* ssp. *congdonii*	-	1B.2	Alkaline soils in valley and foothill grassland; 0 to 230 meters elevation; blooms May through November	Could occur in grasslands.
Douglas' spineflower *Chorizanthe douglasii*	-	4.3	Chaparral, cismontane woodland, coastal scrub, and lower montane coniferous forest, in sandy or gravelly soils; 55 to 1,600 meters elevation; blooms April through July	Likely to occur; recorded within the Gowen cypress stand on the Point Lobos SNR parcel portion of Point Lobos SNR adjacent to Point Lobos Ranch (Patterson 1995).
Monterey spineflower *C. pungens* var. *pungens*	T	1B.2	Maritime chaparral, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland, in sandy soils; 3 to 450 meters elevation, blooms April through June	Could occur in central maritime chaparral, live oak dominated portions of Monterey pine forest, coastal scrub or in grasslands.
Robust spineflower *C. robusa* var. *robusta*	E	1B.1	Maritime chaparral, openings in cismontane woodland, coastal dunes, and coastal scrub, in sandy or gravelly soils; 3 to 300 meters elevation; blooms April through June	Could occur in central maritime chaparral, openings in live oak dominated portions of Monterey pine forest, or coastal scrub.
Jolon clarkia *Clarkia jolonensis*	-	1B.2	Chaparral, cismontane woodland, coastal scrub, and riparian woodland; 20 to 660 meters elevation; blooms April through June	Possibly occurred historically (CNDDB 2012, occ. no. 15), could occur in central maritime chaparral, live oak dominated portions of Monterey pine forest, coastal scrub, or riparian forest.

Table 3-3
Special-Status Plants Known from or with the Potential to Occur within Point Lobos Ranch

Species	Status		Habitat and Blooming Period	Potential for Occurrence
	USFWS	CDFW		
Lewis' clarkia *Clarkia lewisii*	-	4.3	Broadleaf upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, and coastal scrub; 30 to 610 meters elevation; blooms May through June	Could occur in Monterey pine forest, Gowen cypress forest, central maritime chaparral, or coastal scrub.
San Francisco collinsia *Collinsia multicolor*	-	1B.2	Closed-cone coniferous forest and coastal scrub, sometimes in serpentine soils; 30 to 250 meters elevation; blooms March through May	Could occur in Monterey pine forest, Gowen cypress forest, or coastal scrub.
Seaside bird's-beak *Cordylanthus rigidus* ssp. *littoralis*	-	E, 1B.1	Closed-cone coniferous forest, maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub, in sandy soils, often in disturbed sites; 0 to 425 meters elevation; blooms May through October	Could occur in Monterey pine forest, Gowen cypress forest, central maritime chaparral, or coastal scrub.
Branching beach aster *Corethrogyne leucophylla*	-	3.2	Closed-cone coniferous forest and coastal dunes; 3 to 60 meters elevation; blooms May through June	Could occur in Monterey pine forest or Gowen cypress forest.
Hospital Canyon larkspur *Delphinium californicum* ssp. *interius*	-	1B.2	Chaparral, mesic areas in cismontane woodland, and coastal scrub, in openings; 230 to 1,095 meters elevation; blooms April through June	Could occur in central maritime chaparral, live oak dominated portions of Monterey pine forest, or coastal scrub.
Hutchinson's larkspur *D. hutchinsoniae*	-	1B.2	Broadleaf upland forest, chaparral, coastal prairie, and coastal scrub; 0 to 427 meters elevation; blooms March through June	**Known to occur** along San Jose Creek (CNDDB 2012, occ. no. 8 and 25).
Umbrella larkspur *D. umbraculorum*	-	1B.3	Cismontane woodland; 400 to 1,600 meters elevation; blooms April through June	Could occur in live oak dominated portions of Monterey pine forest.
Eastwood's goldenbush *Ericameria fasciculata*	-	1B.1	Closed-cone coniferous forest, maritime chaparral, coastal dunes, and coastal scrub, in sandy soils and openings; 30 to 275 meters elevation; blooms July through October	Could occur in Monterey pine forest, Gowen cypress forest, central maritime chaparral, or coastal scrub.
Elegant wild buckwheat *Eriogonum elegans*	-	4.3	Cismontane woodland and valley and foothill grassland, usually in sandy or gravelly soils, often in washes, sometimes along roadsides; 200 to 1,525 meters elevation; blooms May through November	Could occur in live oak dominated portions of Monterey pine forest or grasslands.
Pinnacles buckwheat *E. nortonii*	-	1B.3	Chaparral and valley and foothill grassland, often on recent burns, in sandy soils; 300 to 975 meters elevation; blooms May through August (sometimes September)	Likely to occur (CNDDB occ. no. 25 is adjacent to the Point Lobos Ranch boundary).

Table 3-3
Special-Status Plants Known from or with the Potential to Occur within Point Lobos Ranch

Species	Status		Habitat and Blooming Period	Potential for Occurrence
	USFWS	CDFW		
Sand-loving wallflower *Erysimum ammophilum*	-	1B.2	Maritime chaparral, coastal dunes, and coastal scrub, in sandy soils and openings; 0 to 60 meters elevation; blooms February through June	Could occur in central maritime chaparral or coastal scrub.
Fragrant fritillary *Fritillaria liliacea*	-	1B.2	Cismontane woodland, coastal prairie, coastal scrub, and valley and foothill grassland, often on serpentine soils; 3 to 410 meters elevation; blooms February through April	Could occur in live oak dominated portions of Monterey pine forest, coastal scrub, or grasslands.
Santa Lucia bedstraw *Galium clementis*	-	1B.3	Lower and upper montane coniferous forest, in rocky granitic or serpentine soils; 1,130 to 1,780 meters elevation; blooms May through July	Could occur in Monterey pine forest.
Monterey gilia *Gilia tenuifolia* ssp. *arenaria*	E	T, 1B.2	Maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub, in sandy soils and openings; 0 to 45 meters elevation; blooms April through June	Could occur in central maritime chaparral, live oak dominated portions of Monterey pine forest, or coastal scrub.
San Francisco gumplant *Grindelia hirsutula* var. *maritima*	-	3.2	Coastal bluff scrub, coastal scrub, and valley and foothill grassland, in sandy or serpentine soils; 15 to 400 meters elevation; blooms June through September	Could occur in coastal scrub or grasslands.
Gowen cypress *Hesperocyparis goveniana*	T	1B.2	Closed-cone coniferous forest and maritime chaparral; 30 to 300 meters elevation	**Known to occur** in one location adjacent to the Gowen cypress stand on the Point Lobos SNR parcel (Palkovic, pers. comm., 2012a; CNDDB 2012 occ. no. 2; Barry et al. 1977; Patterson 1995; Gibson 1989).
Kellogg's horkelia *Horkelia cuneata* var. *sericea*	-	1B.1	Closed-cone coniferous forest, maritime chaparral, coastal dunes, and coastal scrub, in sandy or gravelly soils and openings; 10 to 200 meters elevation; blooms April through September	Could occur in Monterey pine forest, Gowen cypress forest, central maritime chaparral, or coastal scrub.
Coast iris *Iris longipetala*	-	4.2	Coastal prairie, lower montane coniferous forest, and meadows and seeps, in mesic areas; 0 to 600 meters elevation; blooms March through May	Could occur in mesic areas in Monterey pine forest or grasslands.
Contra Costa goldfields *Lasthenia conjugens*	E	1B.1	Cismontane woodland, alkaline playas, valley and foothill grassland, and vernal pools, in mesic areas; 0 to 470 meters elevation; blooms March through June	Could occur in mesic areas in Monterey pine forest or grasslands.

Table 3-3
Special-Status Plants Known from or with the Potential to Occur within Point Lobos Ranch

Species	Status		Habitat and Blooming Period	Potential for Occurrence
	USFWS	CDFW		
Beach layia *Layia carnosa*	E	E, 1B.1	Coastal dunes and coastal scrub, in sandy soils; 0 to 60 meters elevation; blooms March through July	Could occur in coastal scrub.
Coast yellow leptosiphon *Leptosiphon croceus*	-	1B.1	Coastal bluff scrub and coastal prairie; 10 to 150 meters elevation; blooms April through May	Could occur in coastal scrub.
Large-flowered leptosiphon *L. grandiflorus*	-	4.2	Coastal bluff scrub, closed-cone coniferous forest, cismontane woodland, coastal dunes, coastal prairie, coastal scrub, and valley and foothill grassland, usually in sandy soils; 5 to 1,220 meters elevation; blooms April through August	Could occur in coastal scrub, Monterey pine forest, Gowen cypress forest, or grasslands.
Small-leaved lomatium *Lomatium parvifolium*	-	4.2	Closed-cone coniferous forest, chaparral, coastal scrub, and riparian woodland, in serpentine soils; 20 to 700 meters elevation; blooms January through June	Likely to occur; recorded within the Gowen cypress stand on the Point Lobos SNR parcel adjacent to Point Lobos Ranch (Patterson 1995, Gibson 1989).
Carmel Valley bush-mallow *Malacothamnus palmeri* var. *involucratus*	-	1B.2	Chaparral, cismontane woodland, and coastal scrub; 30 to 1,100 meters elevation, blooms May through August (sometimes October)	Could occur in central maritime chaparral or coastal scrub.
Santa Lucia bush-mallow *M. palmeri* var. *palmeri*	-	1B.2	Chaparral; 60 to 365 meters elevation; blooms May through July	Could occur in central maritime chaparral.
Carmel Valley malacothrix *Malacothrix saxatilis* var. *arachnoidea*	-	1B.2	Rocky soils in chaparral and coastal scrub; 25 to 1,036 meters elevation; blooms June through December	Could occur in central maritime chaparral or coastal scrub.
Mt. Diablo cottonweed *Micropus amphibolus*	-	3.2	Broadleaf upland forest, chaparral, cismontane woodland, and valley and foothill grassland, in rocky soils; 45 to 825 meters elevation; blooms March through May	Could occur in live oak dominated portions of Monterey pine forest, central maritime chaparral, or grasslands.
Marsh microseris *Microseris paludosa*	-	1B.2	Closed-cone coniferous forest, cismontane woodland, coastal scrub, and valley and foothill grassland; 5 to 300 meters elevation; blooms April through June (sometimes July)	Possibly occurred historically (CNDDB 2012, occ. no. 4). Could occur in Monterey pine forest, Gowen cypress forest, coastal scrub, or grasslands.
San Antonio Hills monardella *Monardella antonina* ssp. *antonina*	-	3	Chaparral and cismontane woodland; 500 to 1,000 meters elevation; blooms June through August	Could occur in central maritime chaparral or live oak dominated portions of Monterey pine forest.

Table 3-3
Special-Status Plants Known from or with the Potential to Occur within Point Lobos Ranch

Species	Status		Habitat and Blooming Period	Potential for Occurrence
	USFWS	CDFW		
Woodland woolythreads *Monolopia gracilens*	-	1B.2	Broadleaf upland forest, chaparral, cismontane woodland, North Coast coniferous forest, and valley and foothill grassland, in serpentine soils and openings; 100 to 1,200 meters elevation; blooms March through July (sometimes February)	Could occur in central maritime chaparral, openings in live oak dominated portions of Monterey pine forest, or grasslands.
California adder's-tongue *Ophioglossum californicum*	-	4.2	Chaparral, valley and foothill grassland, and along vernal pool margins, in mesic areas; 60 to 525 meters elevation; blooms January through June (sometimes December)	Could occur in mesic areas of central maritime chaparral or grasslands.
South coast branching phacelia *Phacelia ramosissima* var. *austrolitoralis*	-	3.2	Chaparral, coastal dunes, coastal scrub, and coastal salt marshes and swamps, in sandy and sometimes rocky soils; 5 to 300 meters elevation; blooms March through August	Could occur in central maritime chaparral or coastal scrub.
Monterey pine *Pinus radiata*	-	1B.1	Closed-cone coniferous forest and cismontane woodland; 25 to 185 meters elevation	**Known to occur** throughout Point Lobos Ranch (Palkovic, pers. comm., 2012a; CNDDB occ. no. 3; Barry et al. 1977; Patterson 1995; Gibson 1989).
Yadon's rein orchid *Piperia yadonii*	E	1B.1	Coastal bluff scrub, closed-cone coniferous forest, and maritime chaparral, in sandy soils; 10 to 510 meters elevation; blooms May through August	**Known to occur** on Lobos Ridge (CNDDB occ. no. 28); critical habitat listed on property
Hooked popcorn-flower *Plagiobothrys uncinatus*	-	1B.2	Sandy soils in chaparral, cismontane woodland, and valley and foothill grassland; 300 to 760 meters elevation; blooms April through May	Could occur in central maritime chaparral, live oak dominated portions of Monterey pine forest, or grasslands.
Hickman's cinquefoil *Potentilla hickmanii*	E	E, 1B.1	Coastal bluff scrub, closed-cone coniferous forest, vernally mesic meadows and seeps, and freshwater marshes and swamps; 10 to 149 meters elevation; blooms April through August	Could occur in coastal scrub, Monterey pine forest, Gowen cypress forest, or wetlands.
Pine rose *Rosa pinetorum*	-	1B.2	Closed-cone coniferous forest; 2 to 300 meters elevation; blooms May through July	**Known to occur** on Riley Ranch Road (Palkovic, pers. comm., 2012a; CNDDB occ. no. 4).
Maple-leaved checkerbloom *Sidalcea malachroides*	-	4.2	Broadleaf upland forest, coastal prairie, coastal scrub, North Coast coniferous forest, and riparian woodland, often in disturbed areas; 2 to 730 meters elevation; blooms April through August	Could occur in coastal scrub or riparian forest.

Table 3-3
Special-Status Plants Known from or with the Potential to Occur within Point Lobos Ranch

Species	Status		Habitat and Blooming Period	Potential for Occurrence
	USFWS	CDFW		
Santa Cruz microseris *Stebbinsoseris decipiens*	-	1B.2	Broadleaf upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, and valley and foothill grassland, in open areas, sometimes on serpentine soils; 10 to 500 meters elevation; blooms April through May	Could occur in Monterey pine forest, Gowen cypress forest, central maritime chaparral, coastal scrub, or grasslands.
California screw-moss *Tortula californica*	-	1B.2	Chenopod scrub and valley and foothill grassland, in sandy soils; 10 to 1,460 meters elevation	Could occur in grasslands.
Santa Cruz clover *Trifolium buckwestiorum*	-	1B.1	Broadleaf upland forest, cismontane woodland, and coastal prairie, in gravelly soils on margins; 105 to 610 meters elevation; blooms April through October	Could occur in live oak dominated portions of Monterey pine forest.
Saline clover *Trifolium hydrophilum*	-	1B.2	Marshes and swamps, mesic areas in alkaline soils in valley and foothill grassland, and vernal pools; 0 to 300 meters elevation; blooms April through June	Could occur in wetlands or grasslands.
Pacific Grove clover *T. polypodon*	-	R, 1B.1	Closed-cone coniferous forest, coastal prairie, meadows and seeps, and valley and foothill grassland, in mesic areas; 5 to 120 meters elevation; blooms April through June (sometimes July)	**Known to occur** (CNDDB 2012 [occ. no. 11, 12]; Palkovic, pers. comm., 2012a).
Monterey clover *T. trichocalyx*	E	E, 1B.1	In sandy soils, openings, and burned areas in closed-cone coniferous forest; 30 to 240 meters elevation; blooms April through June	Could occur in openings in Monterey pine or Gowen cypress forest.

Notes:

[1] Legal Status Definitions:

U.S. Fish and Wildlife Service:

E = endangered

T = threatened

– = no status

California Department of Fish and Wildlife:

E = endangered

T = threatened

R = rare

– = no status

California Department of Fish and Wildlife California Rare Plant Ranks:

1B = plant species considered rare, threatened, or endangered in California and elsewhere.

2 = plant species considered rare, threatened, or endangered in California but more common elsewhere.

3 = plant species about which we need more information – a review list.

4 = plant species of limited distribution – a watch list.

California Rare Plant Rank Extensions:

1 = seriously endangered in California (>80% of occurrences are threatened and/or have high degree and immediacy of threat).

2 = fairly endangered in California (20–80% of occurrences are threatened and/or have moderate degree and immediacy of threat).

3 = not very threatened in California (<20% of occurrences are threatened and/or have low degree and immediacy of threat or no current threats known).

Sources: CNDDB 2012; CNPS 2012; USFWS 2012b; Palkovic, pers. comm., 2012a; data compiled by AECOM in 2012.

Source: California State Parks 2011

Photo Exhibit 3-3 **Unpaved Road/Fuel Break within Point Lobos Ranch**

Emergency response to wildfires is discussed in Section 7.5.5, Security and Emergency Services, below.

3.2.2 ANIMALS

Information about animal species within Point Lobos Ranch was gathered from the *Point Lobos Ranch Biological Resources Assessment and Management Plan* (Gibson 1989) and the *Point Lobos State Reserve and Carmel River State Beach Resource Inventory* (Barry et al. 1977) unless otherwise noted below.

The property supports a diverse assemblage of wildlife. The relatively large number of species documented likely results from the extent and diversity of vegetation communities within the property and the low density of adjacent development. The San Jose Creek and Gibson Creek channels serve as important wildlife corridors.

FORESTS

The Monterey pine and riparian forest support the greatest number of animal species, the majority of which are birds. Hawks, owls, woodpeckers, and Steller's jay (*Cyanocitta stelleri*) forage in the forests. Western gray squirrel (*Sciurus griseus*), cavity nesting birds, and band-tailed pigeon (*Columba fasciata)* nest in the forests, and salamanders may spend their entire life cycle within the forest. Black-tailed deer (*Odocoileus hemionus*) rest and feed in the forest, and mountain lions (*Puma concolor*) have been observed several times on the property.

The Monterey pine forest is dominated by Monterey pine and live oak of varying ages and densities, which provides a diverse habitat mosaic for wildlife. Bird diversity increases with increasing and variable plant layers. Low, dense thickets of live oak provide shelter for white-crowned sparrow (*Zonotrichia leucophrys*) and song sparrow (*Melospiza melodia*); nest sites for Allen's hummingbird (*Selasphorus sasin*) and bushtit (*Psaltriparus minimus*); and foraging habitat for red-breasted sapsucker (*Sphyrapicus ruber*) and Hutton's vireo (*Vireo huttoni*). The oak dominated portions of the forest are also home to acorn woodpecker (*Melanerpes formicivorus*), Nuttall's woodpecker (*Picoides nuttallii*), oak titmouse (*Baeolophus inornatus*), California ground squirrel (*Spermophilus beecheyi*), and black-tailed deer. Pine dominated portions of the forest provide foraging grounds for hairy woodpecker (*Picoides villosus*), chestnut-backed chickadee (*Poecile rufescens*), pygmy nuthatch (*Sitta pygmaea*), ruby-crowned kinglet (*Regulus calendula*), and Townsend warbler (*Dendroica townsendi*). Wrentit (*Chamaea fasciata*), Bewick's wren (*Thryomanes bewickii*), and orange-crowned warbler (*Oreothlypis celata*) forage in the understory; and hermit thrush (*Catharus guttatus*), spotted towhee (*Pipilo maculatus*), fox sparrow (*Passerella iliaca*), American robin (*Turdus migratorius*), dark-eyed junco (*Junco hyemalis*), and chipping sparrow (*Spizella passerina*) forage on ground. Chestnut-backed chickadee, pygmy nuthatch, and ruby-crowned kinglet can be found in the treetops. Other animals that nest in the Monterey pine forest include lesser goldfinch (*Carduelis psaltria*), brown creeper (*Certhia americana),* and dusky-footed wood rat (*Neotoma fuscipes*).

An important element of the Monterey pine forest is the presence of snags and dead limbs, which provide perching sites, food sources, and nesting sites for many bird species. The fallen tree limbs provide shelter for amphibians and reptiles. Birds that nest in the cavities of snags include northern flicker (*Colaptes auratus*), hairy woodpecker, pygmy nuthatch, American kestrel (*Falco sparverius*), violet-green swallow (*Tachycineta thalassina*), chestnut-backed chickadee, and western bluebird (*Sialia mexicana*). The fallen limbs and trunks of the pines are sought out and tunneled under by many mammals, amphibians, and reptiles.

Other mammals common in the Monterey pine forest include Virginia opossum (*Didelphis virginiana*), broad-footed mole (*Scapanus latimanus*), bobcat (*Lynx rufus*), and raccoon (*Procyon lotor*).

The riparian forest is important to wildlife because it has a high diversity of plant species and access to water. It is also an important corridor for wildlife to move between habitat types. Black-tailed deer, California quail (*Callipepla californica*), Cooper's hawk (*Accipiter cooperii*), and brush rabbit (*Sylvilagus bachmani*) use the dense understory for cover, and the tree canopy provides nesting and foraging habitat for dark-eyed junco, downy woodpecker (*Picoides pubescens*), Pacific-slope flycatcher (*Empidonax difficilis*), warbling vireo (*Vireo gilvus*), yellow warbler (*Dendroica petechia*), and song sparrow. Other mammals observed in the riparian forest include bobcat, Virginia opossum, Audubon's cottontail (*Sylvilagus audubonii*), and raccoon. Redwood trees are used as perching and possibly nesting sites by raptors.

COASTAL SCRUB

Woody perennial shrubs in the coastal scrub provide numerous niches for birds, mammals, reptiles, and invertebrates. Birds commonly found in coastal scrub include black phoebe (*Sayornis nigricans*), killdeer (*Charadrius vociferus*), lazuli bunting (*Passerina amoena)*, California towhee (*Pipilo crissalis*), rufous-crowned sparrow (*Aimophila ruficeps),* golden-crowned sparrow (*Zonotrichia atricapilla*), bushtit, wrentit, Bewick's wren, California thrasher (*Toxostoma redivivum*), hermit thrush, spotted towhee, and fox sparrow. Butterflies often found in coastal scrub include common ringlet (*Coenonympha inornata*), Northern checkerspot (*Chlosyne palla*), Leanira checkerspot (*Thessalia leanira*), bramble hairstreak (*Callophrys dumetorum*), and Mormon metalmark

(*Apodemia mormo*). Reptiles observed in coastal scrub include western fence lizard (*Sceloporus occidentalis*), California striped racer (*Coluber lateralis lateralis*), and western rattlesnake (*Crotalus oreganus*). Mammals commonly inhabiting coastal scrub include California ground squirrel, brush rabbit, bobcat, black-tailed deer, Botta's pocket gopher (*Thomomys bottae*), California meadow vole (*Microtus californicus*), and dusky-footed woodrat. Gray fox (*Urocyon cinereoargenteus*), coyote (*Canis latrans*) and red-tailed hawk (*Buteo jamaicensis*) prey on the birds, rodents, and reptiles that inhabit coastal scrub.

CENTRAL MARITIME CHAPARRAL

The central maritime chaparral has relatively little structural diversity and therefore supports few wildlife species. Wildlife commonly found in chaparral include Merriam's chipmunk (*Tamias merriami*), Audubon's cottontail, brush mouse (*Peromyscus boylii*), California thrasher, common poorwill (*Phalaenoptilus nuttallii*), Anna's hummingbird (*Calypte anna)*, western scrub-jay (*Aphelocoma californica*), and bobcat.

SAN JOSE CREEK

Steelhead have been observed in San Jose Creek (The Watershed Institute 2012; Nelson, Baglivio, and Kahles 2006, Gibson 1989). San Jose Creek is considered critical habitat for steelhead by the USFWS. Other fish observed in San Jose Creek include coast range sculpin (*Cottus aleuticus*), prickly scuplin (*C. asper*), and threespine stickleback (Nelson, Baglivio, and Kahles 2006, Hagar Environmental Science 2002). Isolated, small populations of rainbow trout reside permanently in the upper stream sections of San Jose Creek. Invertebrates observed in San Jose Creek include crayfish (family Astacidae), caddis fly larvae, mayfly larvae, and stonefly larvae (Hagar Environmental Science 2002). Red-legged frog (*Rana draytonii*) has also been observed in the lower end of San Jose Creek (Hagar Environmental Science 2002). Great blue heron (*Ardea herodias*), raccoon, and Sierran tree frog (*Pseudacris sierra*) have been observed in the upper reaches of San Jose Creek within Point Lobos Ranch (Hagar Environmental Science 2002). Cliffs are found along both sides of San Jose Creek and provide roosting areas for white-throated swift (*Aeronautes saxatalis*), cliff swallow (*Petrochelidon pyrrhonota)*, canyon wren (*Catherpes mexicanus*), and bats.

GIBSON CREEK

The *Monitoring Stream Macroinvertebrates at Point Lobos State Reserve* study provides information on the invertebrates found in the portion of Gibson Creek south of Point Lobos Ranch (Swolgaard 2003). A high diversity of invertebrates was found in the lower portion of the creek, including may fly (Ephemeroptera), stone fly (Plecoptera), and caddis fly (Trichoptera) larvae. Wildlife species found along Gibson Creek are expected to be similar to those listed for San Jose Creek.

GRASSLANDS

Grassland animal communities fluctuate because of rapid seasonal and successional changes in the vegetation. Grasslands are used by animals that feed on seeds and herbs, as well as burrowing mammals. Species that commonly feed, nest, or burrow in grasslands include killdeer, black-tailed deer, Botta's pocket gopher, California ground squirrel, and meadow vole. Gray fox, coyote, bobcat, and red-tailed hawk prey on the birds, rodents, and reptiles that inhabit these communities. Grasslands attract large numbers of seed-eating birds including purple finch (*Carpodacus purpureus*), lesser goldfinch (*Carduelis psaltria*), and white-crowned sparrow. Other birds observed in the grasslands include American kestrel, great blue heron, loggerhead shrike

(*Lanius ludovicianus*), house finch (*Carpodacus mexicanus*), white-tailed kite (*Elanus leucurus*), California towhee (*Pipilo crissalis*), golden-crowned sparrow (*Zonotrichia atricapilla*), great horned owl (*Bubo virginianus*), western meadowlark (*Sturnella neglecta*), and Say's phoebe (*Sayornis saya*). Other mammals that inhabit the grasslands include broad-footed mole (*Scapanus latimanus*), badger (*Taxidea taxus*), and western harvest mouse (*Reithrodontomys megalotus*).

SPECIAL-STATUS ANIMAL SPECIES

The *Point Lobos Ranch Biological Resources Assessment and Management Plan* (Gibson 1989) and *Reconnaissance Aquatic Survey of San Jose Creek, Point Lobos State Reserve* (Hagar Environmental Science 2002) contain information on special-status species within Point Lobos Ranch, and California State Parks staff have also observed several special-status wildlife species within this property (Palkovic, pers. comm., 2012a). The CNDDB (2012) and USFWS Endangered Species list (USFWS 2012b) were also searched to gather additional information about special-status species previously documented within Point Lobos Ranch (Exhibit 3-10) and the region. Regional occurrences of special-status species are shown in Appendix A. Special-status wildlife species known to occur include steelhead, Smith's blue butterfly, and California red-legged frog; hoary bat and black swift likely occurred historically; and Monarch butterfly occurred previously but has not been observed lately. A large portion of the property is considered critical habitat for red-legged frog, and San Jose Creek is critical habitat for steelhead. Detailed information on special-status wildlife known from or with potential to occur within Point Lobos Ranch is provided in Table 3-4. Species that are known to occur within Point Lobos Ranch are shown in bold.

Smith's blue butterfly is federally listed as endangered, and South/central California coast steelhead and California red-legged frog are federally listed as threatened. Smith's blue butterfly is threatened by loss of its coastal dune and scrub habitat from invasive plant species and trampling by park visitors. Threats to steelhead include sedimentation, water diversions and dams, gravel extraction, and high water temperatures (CNDDB 2012). California red-legged frog populations are threatened by predation by and competition from bullfrogs, road maintenance and traffic on Highway 1 at San Jose Creek, and invasive plants altering upland habitat (CNDDB 2012).

No comprehensive survey for special-status animals has been conducted to date, and the extent of the populations of most of the species is not known. Detailed inventory and monitoring of special-status animals is recommended.

INVASIVE ANIMAL SPECIES

No invasive animal species have been documented as causing problems within Point Lobos Ranch. Bullfrogs have the potential to occur in San Jose Creek (Palkovic, pers. comm., 2012b). Bullfrogs are known to cause declines in native frogs through competition and predation, including the federally threatened California red-legged frog.

3.2.3 ECOLOGY

WILDLIFE CORRIDORS

A functional network of connected wildlands is essential to the maintenance of diverse natural communities in a region. Wildlife populations depend on habitat connectivity to survive in the face of human development and

climate change, and wide-ranging wildlife need unfragmented habitat and linkages between natural areas to support activities such as reproduction, foraging and migration. The presence of highways and other infrastructure can create barriers that limit access to seasonal ranges and other vital habitats, reduce genetic interchange, constrain dispersal of young, and reduce the long-term viability of wildlife populations. Maintaining connectivity between natural areas and minimizing further fragmentation is crucial to the long-term viability of California's natural heritage. Point Lobos Ranch and the three other park units included in this planning effort provide important habitat linkages for wildlife. Together with other protected public lands in the area, such as Palo Corona Regional Park, Palo Corona Ranch, the Santa Lucia Preserve, Garrapata State Park, and other lands owned by the BSLT, Point Lobos SNR, Carmel River SB, and Point Lobos Ranch form an important regional network of wildland habitats (Exhibit 2-1). Palo Corona Regional Park provided a critical link for a wildlife corridor that now extends from the Carmel River to San Luis Obispo County. Within Point Lobos Ranch, San Jose Creek and Gibson Creek are important wildlife corridors.

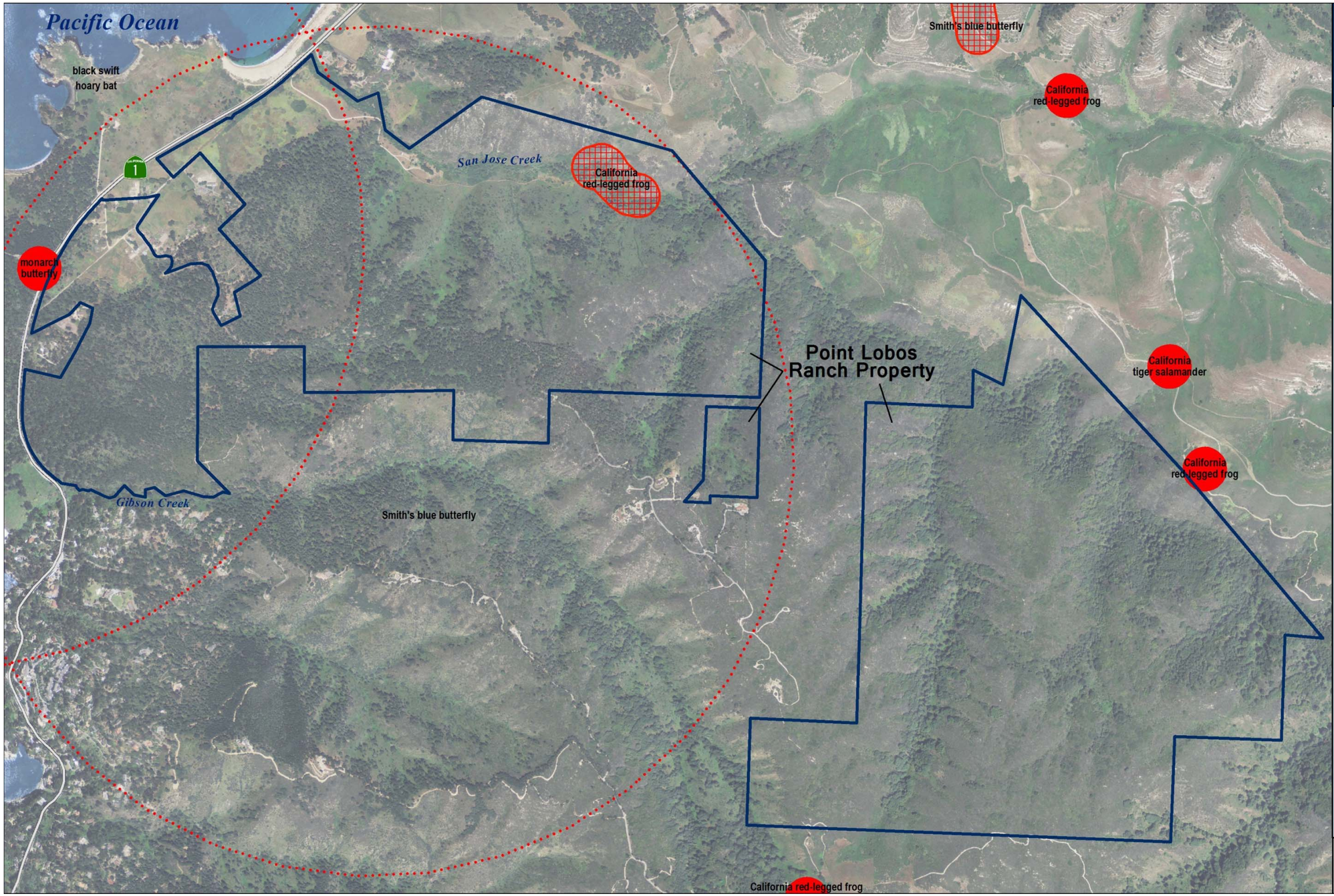
NATURAL PROCESSES

Fire

The upland vegetation communities on the Monterey Peninsula are largely shaped by fire. The structure of the pine and cypress forests is dependent on a regular fire regime. Cones of Monterey pine, Monterey cypress, and Gowen cypress will slowly release seeds once mature, but open more rapidly with fire (TMPFW 2011, Barbour 2007, Patterson 1995). Optimum seedling recruitment for the pine and cypress species takes place following a fire (DPR 1979, Barbour 2007). Cypress seeds require bare mineral soil in full sunlight to germinate (Barbour 2007, Patterson 1995), and dense stands are produced following fires (DPR 1979). Scrub communities are known to be well adapted to recurring fires; many species resprout from stumps and have long-lived seed banks which germinate following fires (DPR 1979). Since fire suppression began on the Monterey Peninsula, habitat quality of the coastal scrub has declined for special-status plants and animals dependent on a frequently disturbed scrub community (Ford and Hayes 2007). The Native Americans in the Monterey area were known to set frequent, small fires to maintain the coastal prairie (TMPFW 2011, Ford and Hayes 2007). Burning the coastal prairies eliminated woody invaders and increased herbaceous diversity, allowing for the germination of edible plants and browse for game animals (DPR 1979, TMPFW 2011). The absence of frequent, low intensity natural fires within Point Lobos Ranch has created high fuel buildups, especially in the Monterey pine ecosystem. Fire hazard ratings in the vicinity of the property and previous fires in the area are shown on Exhibit 3-9.

3.2.4 MONITORING

The former Inventory, Monitoring, and Assessment Program (IMAP) provided goals, guidance, and standards for California State Parks efforts to systematically evaluate the vegetation, wildlife, and physical natural resources of the state park system (California State Parks 2012b). Evaluations consisted of collecting data through various scientific means in each state park system unit. Data is generally quantitative and consists of counts and measures of natural resources. Data can be used to make status assessments and detect changes in resources over time so that trends in the unit's health can be ascertained and corrective management action can be taken. Because of a lack of funding, IMAP monitoring has not been conducted in any of the Carmel area units in recent



Carmel Area State Parks General Plan

Special-status Animal Occurrences within Point Lobos Ranch Property

- Planning Area Boundary
- Animal - Accuracy Class 1
- Animal - Accuracy Class 2
- Animal - Accuracy Class 3
- Animal - Accuracy Classes 4-9
- Highway

CNDDB Accuracy Class 1: Reported occurrence is a point; location considered accurate to within the minimum mappable unit of 80 meters.
CNDDB Accuracy Class 2: Reported location is an area with defined boundaries.
CNDDB Accuracy Class 3: Reported location is a non-specific area; buffer added to represent degree of uncertainty in reported location.
CNDDB Accuracy Classes 4-9: Reported location considered accurate within the radius shown.

Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

Source: DPR 2012, CNDDB Dec 2012
Aerial Imagery: NAIP 2012
X 60218640 083 4/13

0 600 1,200
FEET

NORTH

AECOM

Exhibit 3-10

Special-Status Animal Occurrences

Table 3-4
Special-Status Wildlife Known from or with the Potential to Occur at Point Lobos Ranch

Class	Species	Status[1]	Habitat	Potential for Occurrence
Fish	**Steelhead—South/ Central California coast DPS** *Oncorhynchus mykiss irideus*	AFST, CSC, FT	Streams in coastal basins from the Pajaro River south to, but not including, the Santa Maria River	**Known to occur** in San Jose Creek (Gibson 1989; Palkovic, pers. comm., 2012a).
Amphibians	California tiger salamander *Ambystoma californiense*	CSC, CT, FT	Aestivates in underground burrows, especially ground squirrel burrows; breeds in vernal pools and other seasonal wetlands	Could aestivate in ground squirrel burrows in coastal scrub; could breed in seasonally inundated wetlands.
	California red-legged frog *Rana draytonii*	CSC, FT	Ponds and slow moving streams with overhanging vegetation	**Known to occur** in San Jose Creek (CNDDB occ. no. 647; Hagar Environmental Science 2002, Palkovic, pers. comm., 2012a).
Reptiles	Northwestern pond turtle *Emys (=Clemmys) marmorata marmorata*	CSC, CFP	Forage in ponds, marshes, slow-moving streams, sloughs, and irrigation/drainage ditches; nests in nearby uplands with low, sparse vegetation	Could forage in ponds or creeks, nest in grasslands or coastal scrub.
Birds	Western burrowing owl *Athene cunicularia hypugaea*	CSC	Burrows in open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-lying vegetation; breed in open, well-drained grasslands, steppes, deserts, prairies, and agricultural land	Could burrow in grasslands or coastal scrub.
	Marbled murrelet *Brachyramphus marmoratus*	CE, FT	Forage in coastal/ocean habitats and nest in low-elevation forest stands, near the coast dominated by large, old-growth and mature redwood trees.	Could nest in redwood dominated portions of riparian and Monterey pine forest.
	Black swift *Cypseloides nigra*	BCC, CSC	Nest on cliffs although forage in a variety of habitats	Possibly occurred historically (CNDDB occ. no. 16); could nest in cliffs along San Jose Creek and forage throughout Point Lobos Ranch.
	Southwestern willow flycatcher *Empidonax traillii extimus*	CE, FE	Riparian woodlands	Could occur in riparian forest.

Table 3-4
Special-Status Wildlife Known from or with the Potential to Occur at Point Lobos Ranch

Class	Species	Status[1]	Habitat	Potential for Occurrence
	California condor *Gymnocyps californianus*	CE, FE	Currently restricted to chaparral, coniferous forests, and oak savannah habitats in southern and central California. Formerly occurred more widely throughout the Southwest and also fed on beaches and large rivers along the Pacific coast. Nests in cavities in cliffs, in large rock outcrops, or in large trees. Roosts on cliffs or large trees, often near feeding sites. Forages mostly in grasslands, openings in chaparral, or in oak savannahs.	Could nest in cliffs along San Jose Creek and forage throughout Point Lobos Ranch.
	Least Bell's vireo *Vireo bellii pusillus*	CE, FE	Riparian	Could occur in riparian forest.
Mammals	Hoary bat *Lasiurus cinereus*	WBWG: M	Forages in open or patchy habitats with trees for cover; roosts in dense foliage of medium to large trees; near water	Possible occurred historically (CNDDB occ. no. 76); could occur in riparian forest.
	Monterey dusky-footed woodrat *Neotoma fuscipes luciana*	CSC	Forest and chaparral	Could occur in Monterey pine forest, Gowen cypress forest, riparian forest, or central maritime chaparral.
Insects	Monarch butterfly *Danaus plexippus*	G5 S3	Roosts along the Pacific coast in winter in wind-protected tree groves with nectar and water sources nearby	Historically occurred, but extirpated (CNDDB occ. no. 141); could roost in Monterey pine forest, Gowen cypress forest, or riparian forest.
	Smith's blue butterfly *Euphilotes enoptes smithi*	FE	Coastal dunes and coastal sage scrub in Monterey and Santa Cruz counties	**Known to occur** on Huckleberry Ridge (CNDDB occ. no. 19; Palkovic, pers. comm., 2012a).

Notes:

[1] Status Codes: BCC = US Fish and Wildlife Service Birds of Conservation Concern; CE = California Endangered; CFP = California Fully Protected; CSC = California Species of Special Concern; CT = California Threatened; FE = Federal Endangered; FT = Federal Threatened; G5 S3 = Global rank: demonstrably secure, common; State rank: restricted range; WBWG: M = Western Bat Working Group - Medium Priority.

Source: CNDDB 2012; DPR 1979; Palkovic, pers. comm., 2012a; USFWS 2012; data compiled by AECOM in 2012.

years. Developing and implementing a monitoring system for the long term monitoring of the natural resources within the property could help to document baseline conditions to measure change over time and guide management.

3.3 CULTURAL RESOURCES

3.3.1 PREHISTORIC BACKGROUND

Information on the prehistoric background presented here is summarized primarily from the following report that documented the results of test and data recovery excavations conducted at Point Lobos SNR: *Test and Data Recovery Excavations at Sites CA-MNT-261, -217/H, and -263, for the Point Lobos State Reserve Bird Island Trail Accessibility Improvements Project, Monterey County, California*, prepared for California State Parks, Monterey District by Far Western Anthropological Research Group, Inc. (FWARG) in July 2010 (Mikkelsen and Jones 2010). That work is in turn based on the most recent chronological sequence developed for the Monterey Bay area which includes five general time periods (Jones et al. 2007). Additional background and citations are provided as appropriate.

PALEOINDIAN PERIOD

The Paleoindian Period starts at the end of the Pleistocene and dates prior to 10,000 years before present in calibrated radiocarbon years (cal. BP). There are very few known archaeological sites in the Point Lobos Ranch area dating to this earliest period and many important questions about settlement patterns, subsistence activities, tool making, and social organization remain unanswered (Jones et al. 2007, Mikkelsen and Jones 2010). The Scotts Valley site (CA-SCR-177), located 30 miles north of Point Lobos Ranch yielded radiocarbon dates as early as 13,500 cal. BP, however the deposit was too mixed to allow an assignment of a specific assemblage to the time period (Cartier 1989, 1993; Mikkelsen and Jones 2010). Likely reasons so few sites dating to this period have been found include sea level rise at the end of the Pleistocene Period that submerged much of the California coast that had previously been exposed, destruction of sites by coastal erosion, and deep burial of sites by alluvial deposition (Jones and Waugh 1997).

MILLINGSTONE PERIOD

The Paleoindian Period is followed by the Millingstone Period, which lasted from 10,000 to 5500 cal. BP (Jones et al. 2007, Mikkelsen and Jones 2010). Few sites dating to this period have been identified for the same reasons that few Paleoindian sites have been found (Jones and Waugh 1997). Flooding of sloped coastline areas during this period produced estuaries that were highly utilized by prehistoric groups of this period, however interior areas were also used. Sites dating to this period tend to have shell middens containing more ground and battered stone tools relative to flaked stone tools; indicating that shellfish and seeds were more important food resources than large terrestrial and marine animals during this period. Diagnostic artifacts that are indicative of the period include eccentric crescents, long-stemmed projectile points, and thick rectangular (L-series) *Olivella* beads (Jones et al. 2007, Mikkelsen and Jones 2010). Prehistoric inhabitants of the area were likely highly mobile, moving in accordance with the seasons to obtain both inland and coastal resources (Jones and Waugh 1997, Mikkelsen and Jones 2010).

Sites dating to this period are most often found in southern California, but Millingstone Period components have been found at Elkhorn Slough at CA-MNT-229 and CA-MNT-234, near Castroville at CA-MNT-228 and CA-MNT-1570, and at CA-SCL-178 in the southern Santa Clara Valley (Mikkelsen and Jones 2010). A Millingstone Period component was also found at the Scotts Valley Site (CA-SCR-177) and, unlike the Paleoindian component, produced three reliable radiocarbon dates from this period and a discrete component with abundant amounts of ground stone artifacts (Jones and Waugh 1997, Mikkelsen and Jones 2010).

EARLY PERIOD

The Millingstone Period is followed by the Early Period, which lasted from 5500 to 2600 cal. BP (Jones et al. 2007, Mikkelsen and Jones 2010). This period is characterized by adoption of new land use patterns, new tools, and new forms of social organization (Mikkelsen and Jones 2010). While use of estuaries remained important, settlements expanded to include open coast locales, which was likely the result of environmental fluctuations and population increases (Jones and Waugh 1997, Mikkelsen and Jones 2010). This trend did not follow at Elkhorn Slough where the closing of the slough and the decline in its estuary resources probably led to the abandonment of some sites such as CA-MNT-229 (Mikkelsen and Jones 2010). Some researchers also believe that increasing aridity in the Great Basin not only put pressure on populations in that area, but caused a ripple effect putting pressure on coastal groups, triggering a greater reliance on trade networks, increased use of local resources, and more rigid territorial boundaries (Jones and Waugh 1997, Mikkelsen and Jones 2010).

Mortars and pestles first appear during this period, likely signaling the incorporation of acorns into the diet (Mikkelsen and Jones 2010). Some researchers question the link between mortars, pestles, and acorn use this early in the archaeological record; however, burnt acorn remains in an Early Period component at Morro Bay support the idea of a relationship between mortars and pestles and the intensified use of acorns in this period (Mikkelsen and Jones 2010). Researchers further speculate that acorn intensification may have occurred to balance a protein-rich marine diet (Mikkelsen and Jones 2010). Artifact assemblages also contain greater proportions of hunting and fishing tools during this period, indicating these activities were increasing in importance (Jones and Waugh 1997, Mikkelsen and Jones 2010).

Artifacts common or indicative of this period include thick rectangular (Class L), end-ground (Class B), and split (Class C) *Olivella* beads and square *Haliotis* forms; projectile points of the period include Contracting-stemmed, Rossi Square-stemmed, and Side-notched types (Jones et al. 2007, Mikkelsen and Jones 2010). There is conflicting evidence regarding whether populations were highly mobile or if they were becoming increasingly constrained (Mikkelsen and Jones 2010).

Sites in Monterey County with components dating to the Early Period include CA-MNT-108, where the abundance of fish remains has led some researchers to speculate if fish were being harvested for trade (Breschini and Haversat 1993). The site also appears to represent a large summer occupation village (Breschini and Haversat 1989). CA-MNT-14/633 dates to the Early Period and is located within Carmel River SB (Garlinghouse 2009). Smaller village sites in the Monterey region include CA-MNT-17C and CA-MNT-95. Other sites in the Monterey area dating to this time period include CA-MNT-116, -148, -170A, -170C, -387, and -391 (Mikkelsen and Jones 2010).

MIDDLE PERIOD

The Early Period is followed by the Middle Period which lasted from 2600 to 1000 cal. BP (Jones et al. 2007, Mikkelsen and Jones 2010). The large number of sites dating to this period most likely reflect an increase in population (Mikkelsen and Jones 2010). Not all of the changes that occurred from the former period are obvious; some changes represented continuations of previous trends; for example, mortars and pestles continued to increase in importance indicating that the use of acorns was also increasing in importance (Garlinghouse et al. 2009). At sites in Santa Clara County, however, shellfish decreased in importance possibly because of a decrease in coastal access (Mikkelsen and Jones 2010). Typical artifacts of the Middle Period include Contracting-stem, Side-notched, and Concave-base projectile points, mortars and pestles, hand stones, millingslabs, F and G series *Olivella* beads (Garlinghouse et al. 2009, Mikkelsen and Jones 2010). Probably the most important technological event during this period was the first appearance of circular shell fishhooks (Garlinghouse et al. 2009). Although, fishhooks are mostly found on rocky coasts, in slough habitats, fish were probably gathered by baskets, nets, or other methods. Fishhooks likely represent an increase in exploitation in fish (or specific kinds of fish) but also may have resulted in a decrease in the efficiency of collecting high calorie resources (Garlinghouse et al, 2009). Trade across the Sierra Nevada Mountain Range also appears to increase, with obsidian from the Casa Diablo source being very important in the Monterey Bay area while obsidian from the Coso source is important to the south (Garlinghouse et al. 2009, Mikkelsen and Jones 2010).

Archaeological sites or components of sites that date to the Middle Period have been found at many locations in the broader region including San Luis Obispo County and Santa Cruz County and possibly further inland in Merced County and Kern County (Jones et al. 2007, Mikkelsen and Jones 2010). One of the largest sites in the Monterey region is CA-MNT-12. Located within Point Lobos Ranch, the site contains a large and diverse artifact assemblage and human remains (Howard and Cook 1971; Schwaderer 2004). CA-MNT-207 and CA-MNT-212 both date to the Middle Period and are located in Point Lobos SNR (Schwaderer 2005, 2007a; Mikkelsen and Jones 2010). Near Little Pico Creek in San Luis Obispo County, CA-SLO-175 also had a large Middle Period component with a diverse assemblage of tools and some burials (Jones and Waugh 1995). Other Middle Period components have been found at CA-MNT-229 and CA-MNT-282 in southern Monterey County near Cape San Martin, CA-SCR-9 in the Santa Cruz Mountains, and CA-SCR-7 in Santa Cruz County also contains a Middle Period component (Jones et al. 2007). Artifacts found at these sites include Side-notched and Square-stemmed projectile points as well as Contracting-Stem and concave base types, saucer-shaped *Olivella* shell beads, mortars, pestles, hand stones, and milling stones (Mikkelsen and Jones 2010).

MIDDLE/LATE TRANSITION

The Middle Period is followed by the Middle/Late Transition, which lasted from 1000 to 700 cal. BP (Jones et al. 2007, Mikkelsen and Jones 2010). Peak use of coastal areas occurred during the beginning of this period, but was followed by abandonment of coastal sites in the region (Mikkelsen and Jones 2010). Originally, most researchers thought these changes were caused by over-exploitation of marine resources and increased population pressure leading to intensification of the use of inland terrestrial resources. There is evidence, however, that the changes may have been caused by environmental stress. At about this same time, western North America had a strong warming event, the “Medieval Climatic Anomaly” (Stine 1990, 1994).

Among the environmental changes associated with the warming event was decreased precipitation that may have had a very large impact among coastal populations. Researchers have argued that populations “de-intensified”

how they gathered food resources during the climatic event. During this period population growth declined, trade systems collapsed, fewer kinds of food resources were exploited, and in Monterey County several coastal sites were abandoned in favor of areas located in the interior. Obsidian from eastern sources almost disappears from the archaeological record (Garlinghouse et al. 2009). Recent studies, however, indicate stable, seasonal use of coastal areas from the Middle to Late periods (Mikkelsen and Jones 2010).

CA-MNT-12, -17A, -17C, -107, -111, -112, -116, -117, -170A, -170C, -187, -438, -1084, and -1348 all contain components that date to the Middle/Late Transition Period. Sites within the Point Lobos SNR dating to this period include CA-MNT-203, -207, and -218 (Schwaderer 2005). Ten miles east of Carmel Valley, sites CA-MNT-1485/H and -1486/H yielded reliable data indicating they date to this period (Breschini and Haversat 1992). CA-MNT-12 is one of a small number of sites that contain components spanning from the Middle to Late periods, including the Middle/Late Transition Period (Schwaderer 2007a; Mikkelsen and Jones 2010).

LATE PERIOD

The Middle/Late Transition Period is followed by the Late Period, which lasted from 700 cal. BP to European contact. Many researchers believe that during this period groups in the Monterey region maintained an inland focus and concentrated on using acorns and other terrestrial resources, though there is contradictory data as well (Garlinghouse et al. 2009). Villages were generally located in valley bottoms and near lakes or rivers, while coastal sites were used as short-term processing camps by inland inhabitants (Mikkelsen and Jones 2010). Large amounts of ground stone tools and high diversity of botanical remains signal a continuing reliance on plant processing though in inland areas there appears to be a heavy reliance on the hunting of deer (Garlinghouse et al. 2009, Mikkelsen and Jones 2010). Oxygen isotope studies and ethnographic information have been used to investigate settlement distribution in the central California coast. These studies have recognized two groups exploiting the region, one inland –focused group and the other a year-round, semi-sedentary coastal population focusing on a marine resource base with acorn having a less important role in their diet (Mikkelsen and Jones 2010).

Most of the coastal sites dating to this period represent specialized shellfish processing stations, although there are some sites that evidence a broader range of activities including marine and terrestrial mammal hunting (Mikkelsen and Jones 2010). Some researchers believe these sites may have functioned as temporary residential sites used seasonally in coordination with the shellfish processing sites and inland villages (Garlinghouse et al. 2009). Other locations show evidence of red abalone procurement by specialized task groups (Mikkelsen and Jones 2010). Very late in the period, there is evidence of changing subsistence strategies and settlement patterns either related to the resumption of past activities or as a reaction to European contact. Evidence for this includes a greater diversity of botanical remains from coastal sites than would be expected from a specialized processing camp and an emphasis on shellfish at other locations (Mikkelsen and Jones 2010). Likewise, the identified changes may be the result of a population rebound following the presumed population drop during the Middle/Late Transition Period, as evidenced by an increase in the number of burials and features (Mikkelsen and Jones 2010).

Artifacts marking the Late Period include Desert Side-notched projectile points and Class E (lipped), K (callus), and M (thin rectangular) *Olivella* shell beads (Garlinghouse et al. 2009, Mikkelsen and Jones 2010). Bead drills and waste from bead manufacture at several sites indicate that bead manufacture was widespread but not intensive (Garlinghouse et al. 2009).

A large number of sites date to the Late Period in the Monterey region (Garlinghouse et al. 2009, Mikkelsen and Jones 2010). CA-MNT-1485/H and -1486/H may represent at least a portion of the Rumsien ethnographic village *Echilat* (Breschini and Haversat 1992). CA-MNT-12 may represent at least a portion of the Rumsien ethnographic village of *Ichxenta* (Howard and Cook 1971). CA-MNT-170 is located at the south end of Monterey Bay and consists of a large, multi-component midden site. CA-MNT-156 and -436 are coastal sites showing a broader range of activities than shellfish procurement. CA-MNT-1942 is on the Big Sur coast and contains an artifact assemblage suggesting to researchers that coastal sites during the Late Period were not as well-developed as they were prior to the Medieval Climatic Anomaly, although there appears to have been a rebound in coastal populations.

3.3.2 ETHNOGRAPHIC BACKGROUND

OVERVIEW

The Carmel area is located in the traditional territory of the Costanoan or Ohlone people. "Costanoan" is derived from the Spanish word for "coast dweller". Ohlone (or Alchone, Olchone, Oljon, or Olhon) was the name of a tribe between San Francisco and Santa Cruz. Ohlone has come to be used to describe a related set of languages as well as the people who speak these languages (Bean 1994, Heizer 1967, Levy 1978).

Ohlone groups inhabited the San Francisco Peninsula, the eastern Bay Area south to the San Joaquin Delta, and the Santa Clara Valley to Monterey and inland south to San Juan Bautista when Europeans first arrived in the region in the 1760s. Ohlone territory encompassed a variety of ecological zones including grasslands, woodlands, chaparral, redwood forests, sea coasts, bay estuaries, and tidal marshes. Miwok people lived to the north and northeast and Yokuts groups lived to the east. South of the Ohlone territory lived Esselen and Salinan, whose languages were of the Hokan language stock. Costanoan is part of the Utian family of languages and likewise part of the larger Penutian language stock. Pentutian speakers include Maidu, Wintu, Miwok, and Yokuts people. Costanoan is divided into eight languages (Levy 1978). Esselen and Salinan speaking people would gather food in the area, and the Esselen likely occupied the Carmel area prior to the arrival of the Ohlone (Broadbent 1972, Milliken 1987).

Ohlone may have come into the San Francisco and Monterey Bay Area relatively late in time, perhaps as late as 1450 B.P., originating in the San Joaquin-Sacramento River system and displacing earlier Hokan speaking people (Levy 1978). The migration to the Bay Area may have come much earlier according to some researchers, who propose Penutian speakers may have entered the Bay Area at approximately 4950 B.P. (Whistler 1977).

Researchers disagree on the exact number of the Ohlone population at European contact. Estimates vary from 7,000 to 11,000 (Cook 1943, Heizer 1974, Kroeber 1925, Levy 1978). Modern estimates based on Mission records suggest a population density of 2.5 individuals per square mile in the San Francisco Peninsula (Milliken 1995). Milliken notes that large villages were located near the Carquinez Straight, San Francisquito Creek, and Point Año Nuevo.

European contact, through Spanish colonization, missionization, and introduction of foreign diseases, brought drastic, cataclysmic changes to California Indians. Spanish missionaries actively discouraged or banned traditional practices, and populations drastically declined because of increases in deaths and a declining birth rate. By the time anthropologists such as Harrington (1985), Kroeber (1925), and Merriam (1967) began studying

California Indians many customs, rituals, and rites had been forgotten or lost. Many aspects of Ohlone culture were nevertheless passed down to later generations. Ethnographers have been able to use this information, as well as Spanish diaries, letters, and other documents and archaeological investigations, to develop a broad outline of past Ohlone culture (Bean 1994, Broadbent 1972, Kroeber 1925, Levy 1978, Milliken 1995).

The Ohlone lived in approximately 50 politically autonomous villages called tribelets (Kroeber 1925). Tribelet chiefs could be male or female, but the office was generally inherited through the male line usually passing from father to son (Levy 1978). Tribelets usually included one large, centralized, permanent village and one or more, smaller satellite villages that were occupied for several months of the year depending on what resources were available during the season. Families came together during winter months both to share food and to participate in annual ceremonies. Warfare was common, with many Spanish accounts noting tribelets battling over land rights or points of honor (Broadbent 1972, Margolin 1978, Milliken 1995).

Men and boys usually did not wear any clothing, though they covered themselves in mud on cold mornings. Ornaments included *Olivella* bead necklaces, abalone pendants, and pierced ears and nasal septums with ornaments. Men allowed their facial hair to grow out and, if it was long, would braid their hair or tie it on the top of their heads. Women braided plant fibers for a front apron and used sea otter or deer skin for a rear apron. Many women had chin tattoos, usually consisting of lines and rows of dots. Men and women wore robes woven from animal skins when it was cold. Men often applied dyes and other decorations to their bodies during rituals or warfare (Levy 1978, Milliken 1995).

Ohlone followed a seasonal round of resource availability, hunting and gathering whatever food resources were available depending on the season. Family groups were generally spread out across their territory, but came together whenever a large number of people were required to harvest large amounts of food resources, which were usually stored for winter and early spring when the tribelet would gather (Levy 1978).

The most important food source for the Ohlone consisted of acorns (Beechy 1968, Bickel 1981, Broadbent 1972, King 1974, Milliken 1995). The favorite acorns of the Ohlone came from tanbark oak, valley oak, coast live oak, and California black oak. Preparing acorns so they could be eaten was a long process. The acorns were collected during the fall season and then ground into flour using pestles and either bedrock mortars or portable mortars. The flour was then leached in streams to remove tannic acids. The acorn meal was made into cakes or mush and eaten during the winter. Other important foods included buckeye nuts and dock, gray pine, and tarweed seeds. Gooseberries, blackberries, madrone, and wild grapes were among the berries harvested. Roots that were eaten included wild onion, cattail, and wild carrot. Kelp, which was sundried and roasted, was eaten by groups living on the coast (Broadbent 1972).

Shellfish were also immensely important in the Ohlone diet, as evidenced by large shell mounds and Spanish accounts of Ohlone collecting and processing shellfish. Various shellfish species that were collected and eaten by the Ohlone included mussels, abalone, clam, oyster and scallop species. Many of these species were gathered year-round with prying sticks or by hand, but were likely mostly collected during winter. Clams would have been dug from tidal flats while a variety of fish such as salmon, sturgeon, steelhead, and others would have been taken with nets or spears (Broadbent 1972, Levy 1978). Marine mammals such as sea lions, seals, and sea otters were clubbed on beaches and meat from beached whales was also taken and roasted (Baumhoff 1963).

Land animals that were hunted included deer, pronghorn, and tule elk (Baumhoff 1963). Controlled burns were used in grassland and woodland settings to help in hunting activities. Controlled burns also helped clear dense vegetation and increased the productivity of grasses which attracted game animals. Other animals that were hunted included rabbits, which were taken using nets in large communal drives, squirrels, woodrat, mice, and moles (Levy 1978).

CONTACT PERIOD

When contact was first made with Spanish explorers, the Rumsien, the local Ohlone group, occupied Point Lobos and the lower Carmel River Valley. A study of Spanish mission registers shows that there were between 400 and 500 Rumsien with a population density of between two and two and a half people per square mile. Accounts by Spanish explorers indicate that the Rumsien lived inland and only came to the coast for fish and shellfish, with a heavy reliance on deer and acorns (Mikkelsen and Jones 2010).

Milliken, using census information from the Mission San Carlos baptismal register for 1770, estimates that the Rumsien were distributed between five villages much of the year. Baptized village populations ranged from 40 to 150 individuals. The villages included *Tucutnut,* likely located 4 miles inland along the Carmel River; *Socorronda*, located approximately 7 miles up the Carmel River; *Echilat*, located 5 miles southwest of the Carmel River Valley; *Achasta*, located either at the San Carlos Mission or at Monterey; and *Ichxenta*, generally associated with the San Jose Creek/Point Lobos area (Schwaderer 2007a, 2007b). There were at least four other campsites and likely numerous more that were never recorded (Mikkelsen and Jones 2010).

The local Rumsien were bordered by three other Rumsien-speaking peoples and an Esselen-speaking group. Their populations were likely divided among multiple villages. Despite borders usually being defended, there were at least certain occasions or times of the year when neighboring tribes were allowed to enter their neighbor's territory and collect resources. Traditional food sources declined greatly, however, because of the introduction of Spanish cattle herds, and alteration of the landscape to make it more accommodating for grazing and agriculture. Although introduced diseases were the major cause for Rumsien population decline, the impact upon local food resources was also factor (Mikkelsen and Jones 2010).

3.3.3 ARCHAEOLOGICAL INVESTIGATIONS

The following is based on information contained in the *Point Lobos Ranch Cultural Resources Inventory Final Summary* prepared by California State Parks in September 2012, existing site records for individual resources, and personal communication with California State Parks Archaeologist Rae Schwaderer and California State Parks Historian Matt Bischoff.

The Point Lobos Ranch Property contains what is probably the most significant archaeological site in the Carmel Area State Parks. The site consists of the remains of a long-term seasonal settlement that was occupied as early as the Middle Period and as late as the Historic Period. California State Parks has found the site to be eligible for listing on the National Register of Historic Places and California Register of Historic Properties under Criterion D/4 for its ability to address important questions in prehistory. Furthermore, the area is considered sacred by the local Rumsien and Esselen people.

Other Native American sites surrounding this one have not been investigated but are likely related and could contribute to its significance. In addition, the remains of two late 19th – 20th century homesteads have been recorded within the unit as well as historic refuse deposits and infrastructure, such as water lines, power lines, fence lines, and road grades, associated with other standing historic structures on the property.

The Native American sites have suffered from looting over the years, a problem which could become a critical issue when the property is opened to the public.

3.3.4 HISTORIC BACKGROUND

SPANISH SETTLEMENT

Sebastián Vizcaíno, a successful merchant trader, was appointed by the Viceroy of New Spain, Monterey, to head the exploratory party to map the coast of California. Vizcaíno sailed into Monterey Bay in 1602 and thought it was an ideal harbor where Spanish ships could rest, make repairs, and take on supplies. Vizcaíno gave an exaggerated description of the bay and its harbor when he recommended that Monterey Bay be the site of a Spanish colony (Beck and Haase 1974:14). The Viceroy Monterey was succeeded by Marqués de Montesclaros who distrusted Vizcaíno and did not believe Vizcaíno's report of a splendid harbor and thus never allowed for a colony's establishment (Bean 1973:23). One hundred and sixty-seven years later, the Don Gaspar de Portolá-Father Crespi expedition arrived in the Monterey Bay area with plans to establish a permanent settlement in Upper California. The expedition left San Diego on July 14, 1769, to find Monterey Bay. After a difficult passage over the Santa Lucia Mountains they followed the Salinas River and reached the ocean on September 30, 1769. The expedition mistook the Salinas River as the Carmelo River described by Vizcaíno. Therefore, the landmarks, the peninsula and Point Pinos, described by Vizcaíno were not in the correct location and the bay did not resemble Vizcaíno's description. The expedition also anticipated that their ship, *San José*, would be waiting for them. Each of these factors convinced the expedition that they were not at Monterey Bay (Beck and Haase 1974:17; Bean 1973:38).

The expedition was short on supplies and the decision was made to return to San Diego. Before leaving, they erected a cross on a knoll near the lagoon near the Carmel River SB. Buried beneath the cross was a letter inside a bottle with instructions for the *San José* to look for them along the coast and the explanation that they had decided to return to San Diego because a lack of supplies made it too difficult to continue. A second cross was erected at the northeast side of the Point Pinos where the harbor was supposed to have been located. The expedition reached San Diego on January 24, 1770 (Brown 2001:633; Bean 1973:39).

Portolá, still seeking the location of Monterey Bay, set out on a land expedition to the bay on April 17, 1770. The ship *San Antonio* carried Father Junipero Serra, Lieutenant Pedro Fages and Miguel Costansó, a cartographer and engineer, towards Monterey Bay. Portolá followed practically the same route as the previous year. On May 24th, the party reached Monterey Bay and discovered the cross that was placed in 1769 at Point Pinos. The cross was surrounded by feather-topped arrows, sticks and other artifacts, which were placed there by the Native Americans. The expedition camped in the same location as they had previously. As the fog burned off they had a clear view of the region and realized that the bay, which they had previously mistaken for a lake was actually Monterey Bay (Engelhardt 1912:72–73; Brown 2001:733). After Portola left the area, Serra established a permanent presence in the area with the construction of Presidio of Monterey and Mission San Carlos de Borromeo in Monterey. Later in 1771, Father Serra moved the Mission San Carlos de Borromeo in Monterey to Carmel Bay, north of the mouth of

the Carmel River (Hoover and Kyle 1990:214–215; Stammerjohan 1980:1). Herds of cattle and flocks of sheep were raised at the Mission and with the establishment of nearby ranchos an early industry developed. Meanwhile, a marine resource-centered industry was also established centering on hunting otter and seal. Eventually, the point south of the Carmel River was named *Punta de los Lobos Marinos,* or Point of the Sea Wolves, after the numerous sea lions living in that area (Stammerjohan 1980:1).

RANCHO PERIOD

After the secularization of California's missions in 1834, Teodoro Gonzales applied for a land grant for 8,876 acres for land that stretched from the Carmel River to Big Sur. Gonzales was likely interested in the land because he owned a commercial otter hunting license (Lydon 2006). Although the grant was issued, Gonzales did not keep it and settled elsewhere under a different land grant. In 1839, Marcelino Escobar was re-granted the land and named it Rancho San Jose y Sur Chiquito. Escobar bequeathed the rancho to his two oldest sons in 1840. They in turn sold it to Josefa de Abrego in 1841. By 1844, the rancho was owned by Captain Jose Castro (Stammerjohan 1980).

After California became a state in 1850, the California Lands Commission was established to determine the validity of land claims granted during Mexican rule. Castro petitioned for a land patent, but before one was issued he sold the rancho to Joseph S. Emery and Abner Bassett (Stammerjohan 1980). The process for determining the legal status of ranchos was long. Castro pursued his claim to Rancho San Jose y Sur Chiquito with the California Lands Commission to have the title verified and transferred to Emery and Bassett. The claim was denied and Emery and Bassett were left to pursue the claim (Stammerjohan 1980, Lydon 2006).

EARLY AMERICAN PERIOD

As Emery and Bassett continued the legal process to have their rancho title confirmed others started to settle on their land. None of these groups paid rent to Emery and Bassett because doing so would be an admission that the two were the legal owners. These squatters were hoping that Emery and Bassett's claim would be rejected and the land opened for homesteading. Antonio Brazil, one such individual, was an immigrant from the Azores who arrived in the United States in the 1860s. Brazil worked at dairies in Marin and San Benito counties before arriving in the Carmel Valley. In the early 1880s, he established his own dairy on a portion of Rancho San Jose y Sur Chiquito along San Jose Creek where the Carmelite Monastery exists today. For the next several decades other claimants came forward as the rightful owners of Rancho San Jose y Sur Chiquito. Finally in 1888, the land patent was settled and the title listed a series of owners (Stammerjohan 1980:4; Bischoff and Jimenez 2008:7; Hudson and Wood 2004:28; Lydon 2006:4).

Portuguese whalers from the Azores islands established a shore whaling station in 1862 on the edge of present-day Whalers Cove. Whaling was a seasonal occupation and most of the families began dairy ranching and farming operations around Point Lobos, particularly near San Jose Creek. Jacinto De Amaral and his wife, Ana Freitas, homesteaded on approximately 82 acres in 1894. They raised their 11 children here and remained on the property until the 1950s. Antonio Victorine and Antonio Brazil were two successful dairy ranchers during the 1880s and 1890s. They occupied these ranches until the land was sold and the dairies acquired by the new landowner, Alexander MacMillan Allan (Green et al. 2012:12; Lydon 2006:9; Hudson and Wood 2004:25–28).

19TH CENTURY DEVELOPMENT

The idea to subdivide Point Lobos and the surrounding land was first developed by William Strader in 1878 and was put into fruition in 1890 by the Carmel Land and Coal Company (CLCC). The CLCC planned a subdivision with more than 1,000 lots surrounding Whaler's Cove. The subdivision, known as Carmelito, was envisioned as a resort community. Land was subdivided and sold. Sales of lots slowed, however, in 1891 by a financial recession and competition of a neighboring subdivision, Carmel-by-the-Sea. Facing mounting debt, the CLCC decided to sell the remaining 700 acres it still owned. Six hundred of those acres were purchased by businessman and engineer, Allan (Lydon 2006:7–8; Stammerjohan 1980:6).

Allan received a degree in engineering from the University of Illinois and had opened a business as a contractor. He became well known for, among other things, building racetracks. Allan and his wife, Satie, moved to San Francisco in 1894 at the request of Adolph Spreckels who asked him to build California's first racetrack. Allan arrived in Point Lobos in 1898. As part of the real estate transaction arrangement with the CLCC, Allan continued to sell lots in the Carmelito subdivision but gave the CLCC 20% of the profits. Allan also agreed to improve the roads in the subdivision and install a water system. The lots in the Carmelito subdivision did not sell well and in 1903, Allan purchased lots that were previously sold to private individuals. The majority of the parcels were acquired by the mid-1920s and Allan's descendants acquired the last lot in 1950. Some of the acreage Allan purchased included existing houses that Allan remodeled and rented to staff. Allan constructed small cottages on his other parcels that subsequently became rental properties. Ranch hands who worked at Point Lobos Ranch and Dairy occupied some of the rental properties. Some of the existing residences included the Morales House, Victorine House, and the Gould House (Lydon 2006:13–14; Bloner 2007:3; Bischoff 2007:1).

POINT LOBOS RANCH

Shortly after acquiring his property in the area, Allan established the Point Lobos Ranch and Dairy and removed occupants and dairy ranchers who did not have title to the land, including Brazil. Allan also evicted the MacDonald family who dismantled their house and reconstructed it on a ridge above San Jose Creek where they remained until the 1970s. Allan, however, forged a relationship with the Azorean dairymen and employed them on his ranch and learned the dairy business with their assistance. His first herd numbered approximately 20 cows and, like many small family dairies in the region, Allan's dairy produced Monterey Jack Cheese, a cheese developed locally in Monterey County which was a highly sought-after product. By 1915, Allan added two Holstein bulls to his herd. He expanded his operation again in the early 1920s. Allan's dairy was one of several established in California's Central Coast region, the second region in California to be developed for dairying (Green et al. 2012:13; Lydon 2006:9, 16–18; Bischoff 2011:2, 7).

In later years, Allan's daughter, Eunice, largely managed the dairy operations (Lydon 2006:16–17). Eunice attended the University of California, Davis and studied dairy ranching, animal husbandry, and agriculture (CAGenWeb 2012). In 1922, she married Thomas Riley, who was hired to help operate the dairy (Hudson and Wood 2004:30). The Rileys used much of Allan's property as grazing land for their cows while other sections were used to grow hay for livestock (Bischoff 2007:1). Like most dairies in the area, the Point Lobos Dairy originally concentrated on making cheese. In 1924, the focus changed to milk production, which was more profitable. The family continued to modernize the dairy to adhere to changes in dairy ranching laws. The new California laws concerning dairies were introduced in the early 1920s by the California Dairymen's Association and the dairy division of the California Department of Agriculture. These new laws were aimed at protecting

public health and regulate competition by introducing standards (Pincetl 1999:79). When the Rileys changed their ranching operations to milk production they constructed a new dairy barn that included a concrete floor and modern milking machines. Between 1943 and 1950, the dairy sold its milk to the Carmel Dairy, which operated in the Carmel Valley southeast of Point Lobos. After the Carmel Dairy was sold in 1950, the Rileys sold their milk to Borden's. By 1952, small, family dairies were unprofitable and the Point Lobos Dairy closed. The Riley family then focused on raising horses (Lydon 2006:18; Hudson and Wood 2004:30).

Alexander Allan died in February 1930 at Point Lobos and his property passed to his second wife, Florence, and his children (Hudson and Wood 2004:68). Allan's family continued to live at Point Lobos and his children leased the land near San Jose Creek, north of the ranch, to the Silvear family. Edwin and Rachel Silvear started a flower farm where they primarily grew calla lilies which they sold to stores on the East Coast. The Silvears two children left the farm in 1950 and their parents and grandparents remained there until the mid-1960s. After the Silvears left the property it was used by Sue Sally Hale. Hale married Alex Hale in 1957 and moved to the area. Because women were not allowed in polo tournaments, Hale would disguise herself as a man in order to play. In 1963 she established the Carmel Valley Polo Club, which was the first polo club in the region since World War II (Lowenthall 1990). In 1972, after intensive lobbying she became the first female polo player to be admitted into the U.S. Polo Association. She used the acreage to operate a horse camp. In 1969, Tom and Jane Hudson, Margaret Allan Hudson's son and daughter-in-law, moved to this section of the Allan family property and lived there until 1979 (Bischoff 2007:2; Woo 2012). In the late 1990s, California State Parks acquired this portion of the Allan landholdings. To date there is no public access to the property.

POINT LOBOS SNR ACQUISITION AND DEVELOPMENT

Allan recognized the scenic value of Point Lobos and that it attracted many visitors to his property. To maintain control on his property and to capitalize on the beauty of Point Lobos, Allan erected a gate in 1899 and charged a 50 cent fee to enter Point Lobos. Throughout Allan's ownership of Point Lobos, he allowed and welcomed visitors and groups to picnic and enjoy his property (Hudson and Wood 2004:85–94). In 1928, the California Division of Beaches and Parks and Allan's Point Lobos property was identified as significant scenic and scientific areas that should be acquired by California to create a state park (Roland 2003:7; Engbeck 1980:62). Allan died in 1930 and in 1932, the necessary funds were obtained for California to acquire Point Lobos. The following year Florence Allan deeded portions of Point Lobos to the state (DPR 1969:1).

The Allan heirs retained Point Lobos Ranch and the property inland from the acreage deeded to the state. During this same year the Allans and the State of California reached an agreement on the location of the new Carmel-San Simeon Highway, today's Highway 1, which was under construction and would pass through the area. It was decided that the new route would be located 400 feet west of the old Coast Road. This prompted the Allans to relocate several buildings to their property. The Allans also moved buildings from the portion deeded to California State Parks, knowing that most would be demolished. One such building was the Owl's Nest. The Owl's Nest was originally occupied by Antonio Brazil before being moved by Allan to his property near Whalers Cove where it was occupied by the Kodani family. It was last moved to Point Lobos Ranch where it remains today.

3.3.5 ARCHITECTURAL RESOURCES AND LANDSCAPES

Two potential historic districts, the Point Lobos Ranch Historic District (PLRHD) and the San Jose Creek Historic District (SJCHD), within Point Lobos Ranch, were identified by California State Parks in 2012 as part of the *Point Lobos Ranch Cultural Resource Inventory*. Both districts were inventoried and evaluated for compliance with California Code of Regulations (CCR) Section 5002.1 and 5002.2(a) and (b). California State Parks cultural staff determined that the two districts were eligible for the National Register of Historic Places (NRHP). Documentation for the PLRHD was sent to the State Historic Preservation Officer in 2012 for concurrence, but as of the date of this report concurrence has not been received (Green 2012:1, 7; pers. comm. 2012). The districts and their contributing resources and are considered historical resources for the purposes of CEQA.

1. **Point Lobos Ranch Historic District (PLRHD).** The potential PLRHD contains nine contributing resources and two non-contributing resources (horse stalls and shed). The PLRHD consists of the headquarters of the Point Lobos Dairy started by Allan and his family in the late-19th century and operated by his daughter and son-in-law (Rileys) until the 1950s. Many of the domestic and processing structures of the dairy as well as pastures, roads, fences, and other associated features are located within the district's boundaries and would be considered contributing elements and character-defining features of the historic district. The spatial organization of all these contributing features to the potential historic district creates a vernacular landscape. The contributing buildings and structures in the PLRHD include:

   - Loafing Barn, constructed in ca. 1950s. It is a wood-frame building with two shed-roof additions. The central portion has a gable roof and it is sheathed in a variety of siding including horizontal boards and board-and-batten (Bishoff 2011:45).

   - Owl's Nest/First Residence #1 was constructed in the late 1880s for the Brazil family. It was moved by Allan to Whalers Cove in 1903, and moved again in the early 1930s to Allan's ranch property to prevent its demolition during the establishment of Point Lobos SNR (Bischoff and Jimenez 2008:8). The residence underwent several alterations by the Allan family shortly after it was moved to its present location. The building is a 1-1/2 story residence with a gable and shed roof with dormers, wood-frame windows, and beveled wood siding.

   - Morales House/Residence #2 was constructed in ca. 1900. It has a gable roof with a shed roof above the porch, drop siding, and wood-frame windows. The house is named for the Morales family, who worked for Allan from approximately 1915 until the 1930s. During the 1940s the building was used by the Riley family as a rental property. The house was altered in 1959 with the addition of a bedroom, and again in 1962 with the construction of a carport (Bischoff and Jimenez 2007a:6–7).

   - Victorine House/Middle Residence #3 (Photo Exhibit 3-4) was constructed ca. 1900. It is T-shaped with a cross-gable roof with a shed roof above the porch. The house is sheathed in board-and-batten siding and has wood-frame windows. Alterations were made to the house prior to 1959 and after 1978, including additions, additional fenestration, and a wood deck (Bischoff and Jimenez 2007b:6). There is a difference of opinion if the residence is associated with Antonio Victorine's family, who were early whalers at Point Lobos, or if the house was occupied by a different Victorine family (Lydon 2006:15).

Source: AECOM 2012

Photo Exhibit 3-4 **Victorine House**

- Gould House, named for the Gould family who sold the property to the Rileys in 1945. It was one of the original houses constructed as part of the Carmelito subdivision in ca. 1900 (Lydon 2006:16). The house was altered after its original construction and now has a gable roof with a shed roof extension on its east elevation.

- Hay Barn (Photo Exhibit 3-5) was constructed in ca. 1930s (Bischoff 2011:44). It is rectangular in plan with three bays, a gable roof and shed roof with a hay hood and corrugated metal cladding. One bay is enclosed and it has wood siding. It has a concrete slab foundation with concrete piers supporting each post.

Source: AECOM 2012

Photo Exhibit 3-5 **Hay Barn**

- Dairy Barn was constructed in 1924 by Allan in 1924 and contained the most modern milking equipment available at the time (Bishoff and Schwaderer 2006:1; Lydon 2006:18). The barn is rectangular in plan with a gable roof, wood siding, and sliding barn doors. In 1937, a shed was added to the barn's east elevation by the Rileys (Bischoff 2011:24). The shed's east elevation is a series of open bays formed by six wood posts. It is enclosed with vertical wood siding on its south elevation and is open on its north elevation.

- Foreman's House (Photo Exhibit 3-6) was designed and built by Allan in 1908 for the dairy ranch foreman. It has a hipped roof, drop siding and wood-frame windows. The porch was enclosed at an unknown date. The porch has a gable roof with brackets beneath the eaves, fish scale wood siding beneath the gable, and solid brackets at each porch support.

Source: AECOM 2012

Photo Exhibit 3-6 **Foreman's House**

2. **San Jose Creek Historic District (SJCHD).** The potential SJCHD consists of six buildings, an historic period archaeological deposit, and numerous associated historic period landscape features. The potential historic district also contains archaeological features such as a corral, a water conveyance system, power poles and lines, and landscape elements including roads, pastures, rock walls, fruit trees, and ornamental plants (Green 2012:10–11). The district's contributing architectural resources include:

   - Barn
   - Main Ranch House (Milker's House), was constructed pre-1930 and originally occupied by Swiss milkers employed by Allan on his dairy (Bischoff 2007:1; Green 2012:10).
   - Dynamite Shack
   - Back House was constructed by Edwin Silvear in the early 1930s.
   - Back Barn. The barn is wood-frame and collapsed in on itself.
   - Middle House was constructed in the 1930s and altered several times over the decades. It is a bi-level building with a gable roof, board-and-batten siding, aluminum sliding windows, metal-frame casement windows.

3.4 AESTHETIC RESOURCES

Scenic resources provide a unique sense of place to an individual park as a whole, and to specific areas within a park unit. Scenery can be defined as the general appearance of a place and the features that contribute to its views or landscapes. Scenery consists of biophysical elements (landforms, water, and vegetation) and cultural or human-made elements (structures, water features, and managed landscapes). Many of the resources referred to as "scenery" or "scenic resources" also may be considered cultural landscape features in many instances (e.g., viewsheds, landforms, water vegetation, human-made elements). Scenic quality is an important and valuable resource, especially on public lands. Many people value the quality of the scenery and have high expectations of scenic quality when visiting California State Parks.

3.4.1 VISUAL RESOURCES AND VIEWSHEDS

The property is not currently open to the public, so foreground views of the property are currently limited to travelers on Highway 1, adjacent residents, and California State Parks staff. Because of the steep topography of the property, there are also many distant views to and from the property. Viewer groups with more distant views of the property include visitors within Point Lobos SNR, Carmel River SB, Palo Corona Regional Park, the Carmelite Monastery, and residences in nearby subdivisions; however, many distant views are partially or completely obscured by vegetation. Landforms are important to the visual character of Point Lobos Ranch and include high ridges, steeply sloping foothills, and gentle marine terraces spanning from the Santa Lucia Range to Point Lobos SNR. The high ridges provide breathtaking views of the Pacific Ocean, Carmel-by-the-Sea, and Monterey Bay (Dornbusch Associates 2010). The property is covered almost entirely in dense Monterey pine forest and oak (Monterey County Planning Department 1985). Foreground views also include residences and historic structures associated with farming. The primary scenic vista within the property is at the top of Red Wolf Drive. Exhibit 3-11 shows some of the scenic viewsheds within and of Point Lobos Ranch.

The unique landscape of the property also changes seasonally. Summer fog is frequent, and views of the fog layer blanketing the coastal areas are prominent from the high elevations of the property. The changing seasons and a variety of weather conditions (e.g., fog, wind, rain) contribute to a transformation of vegetation in form, texture, and color. The majority of Point Lobos Ranch is remote and dense vegetation creates a quiet, peaceful experience. There is some noise produced by traffic from Highway 1 and the nearby residences. However, much of this noise is reduced by intervening vegetation.

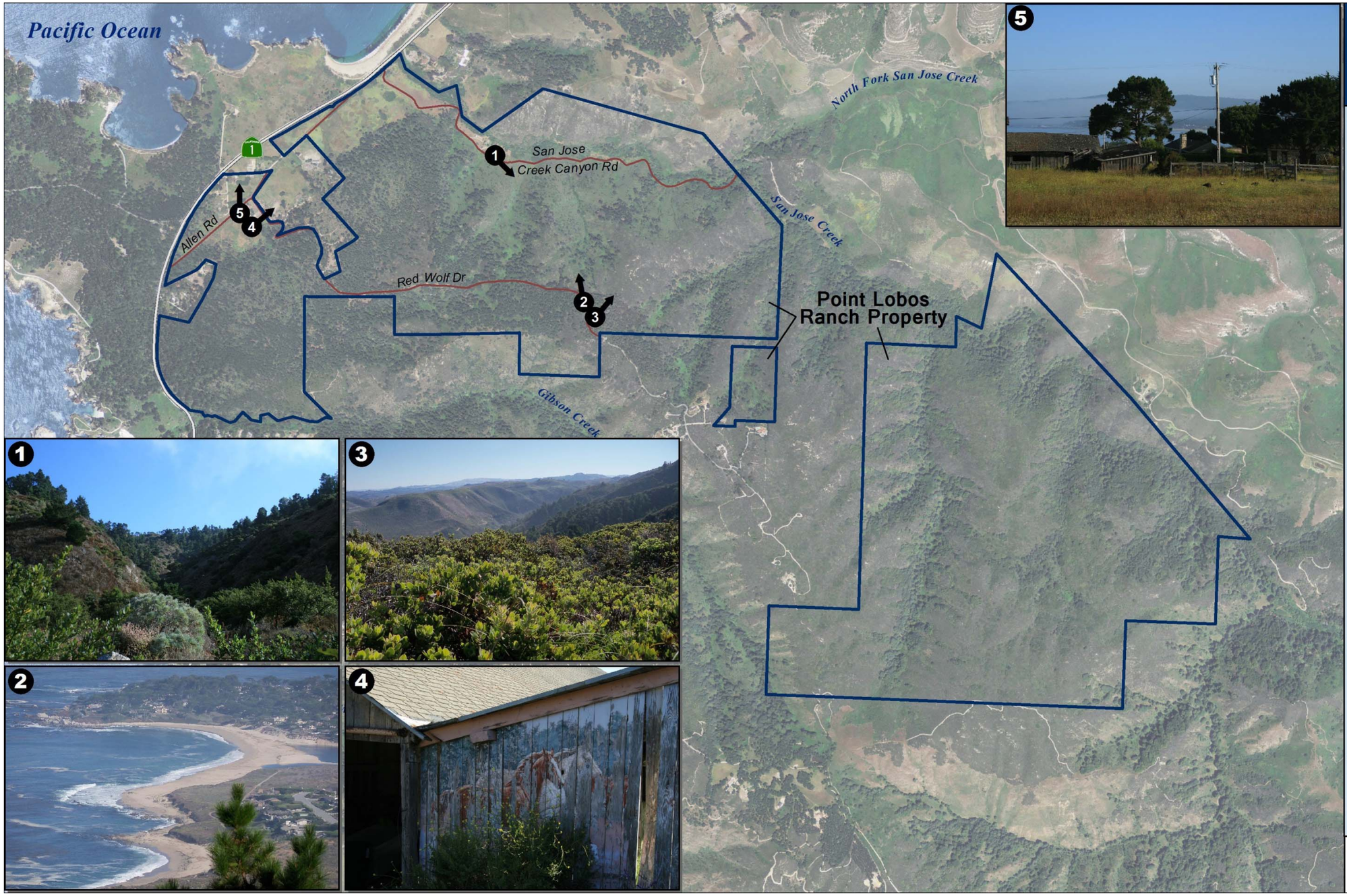
3.4.2 DESIGNATED SCENIC AREAS AND ROUTES

A portion of the property is visible from Highway 1 and California State Parks has a scenic easement in perpetuity on the approximately 30 acres located adjacent to the highway. This scenic easement prohibits construction of any structures other than farm buildings, and states that trees shall not be removed, to the extent feasible (Monterey County Planning Department 1985). Monterey County also had a scenic easement on the portion of the property containing a portion of the "polo field," (Photo Exhibit 3-7) the mouth of San Jose Creek, and the area above the creek valley; however, this easement was only in effect until 1992.

In addition, portions of Highway 1, which is a State Scenic Highway, are immediately adjacent to the property. Highway 1 is designated as an All-American Road by the National Scenic Byways program and was designated as the first State Scenic Highway in California. The 1996 All-American Road designation was limited to the 72-miles

of coast within Monterey County; in 2002, the designation was extended south to the City of San Luis Obispo. To be designated as an All-American Road, a roadway must meet the criteria for at least two of the following intrinsic qualities: scenic, historic, recreational, cultural, archaeological, and/or natural (FHWA 1995). The portion of Highway 1 with the All-American Road designation is recognized as having the following four intrinsic qualities: scenic, natural, recreational, and historic. All-American Roads are so distinctive they are themselves considered a destination (Caltrans 2004). Advertisements along designated scenic byways are restricted (FHWA 2005). The goal of the State Scenic Highway program is to preserve and protect scenic highway corridors from changes that would affect the aesthetic value of the land adjacent to highways. Official designation requires a local jurisdiction to enact a scenic corridor protection program that protects and enhances scenic resources. In addition, the Carmel Area Land Use Plan contains policies that the existing forested corridor along Highway 1 shall be maintained as a scenic resource and any new development along the highway shall be sufficiently set back to minimize visual impact (Caltrans 2004).

The most vivid images along Highway 1 are of steep rocky cliffs with the ocean crashing at the shore. Natural features of the corridor such as the geology, climate, streams, vegetation, and wildlife all contribute to the viewshed.



Carmel Area State Parks General Plan

Scenic Features at the Point Lobos Ranch Property

- Planning Area Boundary
- View
- Highway
- Other Paved Roads

Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

Source: DPR 2012, AECOM 2012

Aerial Imagery: NAIP 2012

X 60218640 073 4/13

0 750 1,500

FEET

NORTH

Exhibit 3-11

Scenic Features within Point Lobos Ranch

Source: AECOM 2012

Photo Exhibit 3-7 **"Polo Field" Area of Point Lobos Ranch**

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4 RECREATION RESOURCES

4.1 REGIONAL RECREATION

4.1.1 FEDERAL PARKS

BLM lands in the Monterey vicinity provide a variety of recreation opportunities including mountain bike events, hiking, birding, wildlife viewing, and equestrian events. The recently designated Fort Ord National Monument is approximately 14,650 acres, with 7,200 acres currently administered by BLM for recreation, and the another 7,450 that will be administered by BLM once environmental remediation is completed by the U.S. Army. This property has 86 miles of trails for hiking, mountain biking, equestrian use, and wildlife/wildflower photography (BLM 2012). The Juan Bautista de Anza National Historic Trail, which is managed by the National Park Service, is also in Monterey County and transverses the Fort Ord National Monument. This trail follows the historic route of the 1775-1776 Anza expedition throughout Arizona and California. Portions of the 1,200-mile trail are accessible by automobile, and 300 miles of the trail are accessible for hiking, biking, and equestrian use (NPS 2013).

The Los Padres National Forest, which is owned and managed by the U.S. Forest Service (USFS), has 1,257 miles of maintained trails that provide both day-use and extended backpacking opportunities. Los Padres National Forest has 10 congressionally-designated wildernesses comprising approximately 875,000 acres or about 48% of the forest. The Ventana Wilderness portion of the Los Padres National Forest is the closest of those wildernesses and is more than 240,000 acres. The Ventana Wilderness is located approximately 30 miles southeast of Point Lobos Ranch. Because it is a wilderness area, recreation opportunities are limited to activities that will not alter the natural qualities of the area including camping, backpacking, and hiking (USFS 2012).

4.1.2 CALIFORNIA STATE PARKS

California State Parks properties in the immediate vicinity of Point Lobos Ranch include Point Lobos SNR to the west, Carmel River SB to the northwest, the unclassified Hatton Canyon property to the north, and Garrapata State Park located along Highway 1 south of Point Lobos Ranch. State parks to the north include Asilomar State Beach and Conference Grounds, Monterey State Historic Park, Monterey State Beach, Fort Ord Dunes State Park, Marina State Beach, and Salinas River State Beach. These areas provide important open space and recreational opportunities and areas for resource protection (Caltrans 2004). There are also a number of state parks in the Big Sur area, approximately 30 miles south of the Carmel area, including Point Sur State Historic Park, Andrew Molera State Park, Pfeiffer Big Sur State Park, Limekiln State Park, and Julia Pfeiffer Burns State Park.

4.1.3 REGIONAL PARKS

The MPRPD operates a number of regional parks in the vicinity of Point Lobos Ranch including Garland Ranch Regional Park, Thomas Open Space, Blomquist Open Space Preserve, Cachagua Community Park, and Carmel Valley Community Park. The MPRPD also owns Palo Corona Regional Park, part of Palo Corona Ranch, which is 10,000 acres of open space (MPRPD 2012a). Palo Corona Regional Park is immediately adjacent to Point Lobos Ranch, and is open to the public via access permits that are processed on a “first come, first served” basis. Recreation within Palo Corona is limited to hiking, wildlife viewing, and picnicking (MPRPD 2012a). Because of

the proximity of Palo Corona Regional Park, there is much opportunity for providing important connections between this property and the California State Parks properties, including trail connections and improving wildlife corridors.

The Monterey County Parks Department owns several parks in the area including the 525 acre Jacks Peak County Park, Toro Regional Park, and Martin Canyon, which provides a vital corridor to Jacks Peak County Park. The Monterey County Parks Department also owns the Laguna Seca Raceway, which provides camping. Mission Trails Regional Park, owned by the City of Carmel, is also a well-used corridor connecting the Carmel Mission to surrounding neighborhoods (Monterey County Parks 2012).

Regional recreation in the area also includes trail connections, such as BSLT's South Bank Trail. The South Bank Trail is a 1.5-mile ADA-accessible trail south of Carmel River connecting the area near Quail Lodge in Carmel Valley to Palo Corona Regional Park. This trail is an important milestone in the BSLT's "Experience Carmel River" program, a community-based program to extend access to and enjoyment of the Carmel River. Additional trail connections are proposed as part of this program including trail connections throughout the Whisler-Wilson Ranch (BSLT 2011).

4.2 UNIT RECREATION

4.2.1 RECREATIONAL ACTIVITIES

The property is not currently open to the public; therefore, recreation is limited to hiking and equestrian use by neighbors on unofficial trails in the Gowen cypress forest, and guided hikes led by BSLT through their Volunteer Hike Leader Program.

4.2.2 RECREATION FACILITIES AND TRAILS

No recreational facilities currently exist within Point Lobos Ranch.

4.3 PATTERNS AND LEVELS OF RECREATIONAL USE

4.3.1 REGIONAL PATTERNS AND USE

STATEWIDE TRENDS

As recorded within the *Complete Findings of the Survey on Public Opinions and Attitudes on Outdoor Recreation in California* (DPR 2009), respondents to a 2008 recreation survey were asked about the activities in which they participated. The top 10 activities mentioned by the highest percentage of participants were the following:

- Walking for fitness or pleasure (74.2%)
- Picnicking in picnic areas (67.0%)
- Driving for pleasure, sightseeing, driving through natural scenery (59.8%)
- Beach activities (59.2%)
- Visiting outdoor nature museums, zoos, gardens or arboretums (58.4%)
- Attending outdoor cultural events (56.3%)
- Visiting historic or cultural sites (54.8%)

- Wildlife viewing, bird watching, viewing natural scenery (45.9%)
- Jogging and running for exercise (39.8%)
- Camping in developed sites (39.0%)

Although currently none of these activities are officially offered within Point Lobos Ranch, the site is used unofficially for walking and wildlife viewing. The top four recreation activities that survey respondents would like to participate in more often include walking for fitness or pleasure, camping in developed sites, bicycling on paved surfaces, and day hiking on trails. The most common facilities and amenities used by respondents included the following:

- Community/facility buildings (64%)
- Open spaces to play (59%)
- Picnic tables/pavilions (58%)
- Unpaved multipurpose trails (53%)
- Paved trails (50%)

REGIONAL PATTERNS AND USE

Monterey County is a tourist destination that attracts visitors year round; however, peak visitation in the Monterey region is between Memorial Day weekend and Labor Day weekend. Almost 14% of the County's land area is devoted to parks and recreation facilities operated by various governmental agencies. The County parks system makes up about 10% of the County's total park acreage (Monterey County 2010). Because the property is not currently open to the public, visitation is unofficial and is not tracked. Visitation to other state parks in the region is shown in Table 4-1.

Table 4-1
Annual Visitation to Regional State Parks

	2008 / 2009	2009/2010	2010/2011
Monterey SB	558,490	443,641	458,313
Monterey SHP	318,547	171,161	136,795
Asilomar SB	787,040	622,790	657,555
Garrapata SP	147,662	132,109	119,156
Andrew Molera SP	45,647	58,955	62,741
Julia Pfeiffer Burns SP	53,376	75,705	78,192
Point Lobos SNR	324,449	331,431	370,409
Total	**2,235,211**	**1,835,792**	**1,883,161**

Source: DPR 2010a, 2010b, 2011b

Overall visitation to state parks in the region declined between the 2008/2009 and 2009/2010 fiscal years, but increased slightly in fiscal year 2010/2011 (DPR 2010a, 2010b, 2011b). The *Complete Findings of the Survey on*

Public Opinions and Attitudes on Outdoor Recreation in California reports recreation trends for regions within California including the Central Coast region that encompasses Monterey. The type of park that Central Coast region respondents visited most frequently was highly developed parks and recreation areas. The majority of Central Coast region respondents reported driving for 5 minutes or less or walking to reach their most visited recreation destination (DPR 2009).

The top five activities that Central Coast participants would like to participate in more often include the following (DPR 2009):

- Camping in developed sites;
- Day hiking on trails;
- Walking for fitness or pleasure;
- Beach activities (i.e., swimming, sunbathing, surf play, wading, playing on beach); and
- Visiting historic or cultural sites.

4.3.2 PATTERNS AND USE AT POINT LOBOS RANCH

Point Lobos Ranch is not currently open to the public; therefore, recreational use data is not collected for the property. In addition, the property is not currently used for special events.

5 INTERPRETATION AND EDUCATION

Interpretation and education heightens and increases public understanding, appreciation, and enjoyment of natural, cultural, and recreational values. Providing meaningful, powerful, and inspiring experiences and opportunities is one of the core initiatives of California State Parks. The interpretive opportunities for Point Lobos Ranch are described in more detail below.

5.1 TOPICS

Currently, there are no interpretive facilities at the property because the property is not open to the public. However, the property has a number of natural and cultural resources that could be topics for public education and interpretation, such as the Monterey pine forests, Gowen cypress forest, mountain lion habitat, San Jose Creek which provides steelhead spawning habitat, significant Native American archaeological sites, and early twentieth century ranch buildings.

5.2 THEMES

No interpretive themes have been developed for the Point Lobos Ranch property.

5.3 PROGRAMS

There are no existing interpretation or education programs for Point Lobos Ranch.

5.4 REGIONAL INTERPRETATION

Major interpretation topics in the regional area are: recreation; marine life and its protection, including marine mammals and tidepools; wetlands; Native California Indians; special status species; and geology.

Following is a list of interpretive and educational programs in the region, with their primary topics listed:

- California State Parks, Monterey District – natural history field trips; cultural history field trips; environmental studies programs; Junior Rangers Programs; Litter-Getter Programs (engages children in trash collecting activities while explaining the environmental value of acting responsibly in parks); Monterey District Habitats Van; and the Junior Lifeguard Programs (California State Parks 2008);

- MPRPD Interpretive walks/hikes – includes hikes through various MPRPD parks focusing on natural and recreation resources;

- MPRPD Let's Go Outdoors Program – environmental education and outdoor related programs, classes, and activities on topics such as photography, star gazing, hiking, kayaking, wildlife watching, art and writing, gardening, composting, and horseback riding;

- MPRPD Nature Camp – camps include hands-on activities and outdoor adventures such as camping and hiking (MPRPD 2012b);

- BSLT education programs – include science and environmental camps, art-in-nature classes, Plant-a-Thons, wilderness challenge experiences, and interactive history, agriculture and nature exhibits (BSLT 2012a);
- Pacific Grove Museum of Natural History – includes field trips and classroom visits, summer camps, Science Saturdays, Long-term Monitoring Program and Experiential Training for Students, and Monarch butterfly monitoring (Pacific Grove Museum of Natural History 2013);
- Carmel Mission – includes museums, exhibitions, and tours (Carmel Mission Basilica 2013);
- Monterey Bay Aquarium – includes field trips, classroom curriculum, Teen Conservation Leaders volunteer program (Monterey Bay Aquarium Foundation 2013);
- Monterey County Toro Park field trips for grades 1-4 (Monterey County Parks 2007); and
- CSU, Monterey Bay Camp Sea Lab – programs include day and residential summer camps for ages 8-17, outdoor school for ages 3-8, workshops/curriculum for teachers to incorporate marine science in the classroom, and family workshops for children of all ages (CSU, Monterey Bay 2010).

Other interpretive and educational facilities in the region include the following:

- Monterey State Historic Park – classrooms, a collection of significant historic houses and buildings including the Pacific House Museum;
- Julia Pfeiffer Burns SP Information Center;
- MPRPD Garland Ranch Visitor Center;
- Monterey County Visitor Center;
- Monterey County Agriculture and Rural Life Museum; and
- Monterey County Toro Park Environmental Center.

Interpretive and educational opportunities offered in the region are primarily related to natural and cultural resources in the area and provide opportunities for educational hikes and programs for school groups and families.

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6 ACCESS, CIRCULATION AND TRANSPORTATION

6.1 ACCESS

Point Lobos Ranch is accessible directly from Highway 1. San Jose Creek Canyon Road provides access from Highway 1 to the northern portion of the property, Riley Ranch Road and Allen Road provide access to the western portion, and Red Wolf Drive and Riley Ranch Road provide access to the central/south eastern portion of the property.

6.2 ROADS/CIRCULATION

Highway 1 is the primary roadway in the vicinity of Point Lobos Ranch. Highway 1 varies in width from as narrow as 20 feet (10-foot travel lanes with no paved shoulders) to 40-feet (12-foot lanes and 8-foot shoulders). The transportation concept for Highway 1 would consist of two 12-foot lanes with 4-foot paved shoulders. The transportation concept for a roadway is defined as long-range improvements needed to bring an existing facility up to the standards needed to adequately serve 20-year traffic forecasts (Exhibit 6-1).

Roadways within the property include Red Wolf Drive, Riley Ranch Road, Allen Road, and San Jose Creek Canyon Road. Red Wolf Drive and Riley Ranch Road are paved private roads traversing west to east and providing access to private residences. Private roadways are maintained by homeowners and California State Parks has easements to allow for use of the roadways by California State Parks staff. Allen Road is a paved private road that transverses north to south and crosses Riley Ranch Road and Red Wolf Drive. Allen Road also follows the historic alignment of a portion of Highway 1. San Jose Creek Canyon Road is an unpaved road.

6.2.1 PLANNED ROADWAY IMPROVEMENTS

The *Monterey Bay Area Mobility 2035* is a long range transportation plan for Monterey, San Benito, and Santa Cruz counties. The plan contains projects which can be implemented anytime over the span between Year 2010 and 2035. There are no roadway improvements planned in the immediate vicinity of the property (AMBAG 2010a).

6.3 PARKING

Point Lobos Ranch is not currently open to the public; therefore, there are no parking facilities within the property.

6.4 TRAFFIC VOLUMES

Based on 2011 Caltrans traffic counts, the annual average daily traffic (AADT) volumes on Highway 1 in the vicinity of Point Lobos Ranch was 14,200 in 2011. The AADT is the total volume for the year divided by 365 days. The peak hour volume along Highway 1 in 2011 was 1,550 (Caltrans 2011). As compared to the past 3 years, the AADT at this location has slightly decreased.

Highway 1 from Carmel to Carmel Highlands is the only roadway segment in the Carmel area identified as being congested or that are projected to be congested based on the 2010 Metropolitan Transportation Plan. The portion

of Highway 1 adjacent to Point Lobos Ranch is not identified as a congestion area (AMBAG 2010b). In addition, Caltrans' *Transportation Concept Report for State Route 1 in District 5* characterizes Highway 1 in the Monterey area as having intense local and regional traffic in addition to through traffic bound for the Big Sur coast and recreational attractions, and long wait times for turns at intersections with Rio Road and Carmel Valley Road (Caltrans 2006).

6.5 ALTERNATIVE MODES OF TRANSPORTATION

The property can be accessed via non-motorized and public transportation. Highway 1 is classified as a Caltrans Class III Bikeway (Bike Route), which provides for shared use with pedestrian or motor vehicle traffic. This designation would allow visitors to ride their bicycles to the property, although bicycles are not currently allowed within the property. In addition, the 2011 *TAMC Bicycle and Pedestrian Master Plan* proposed "Front Ranch Trails" immediately north of Point Lobos Ranch (TAMC 2011).

In addition, the Monterey-Salinas Transit (MST) operates Line 22 seasonally and runs between Big Sur and Monterey. Line 22 operates between 10:15 AM and 7:05 PM from Memorial Day weekend to Labor Day and a bus stop is located across Highway 1 from the property, just outside the entrance to Point Lobos SNR (MST 2012).

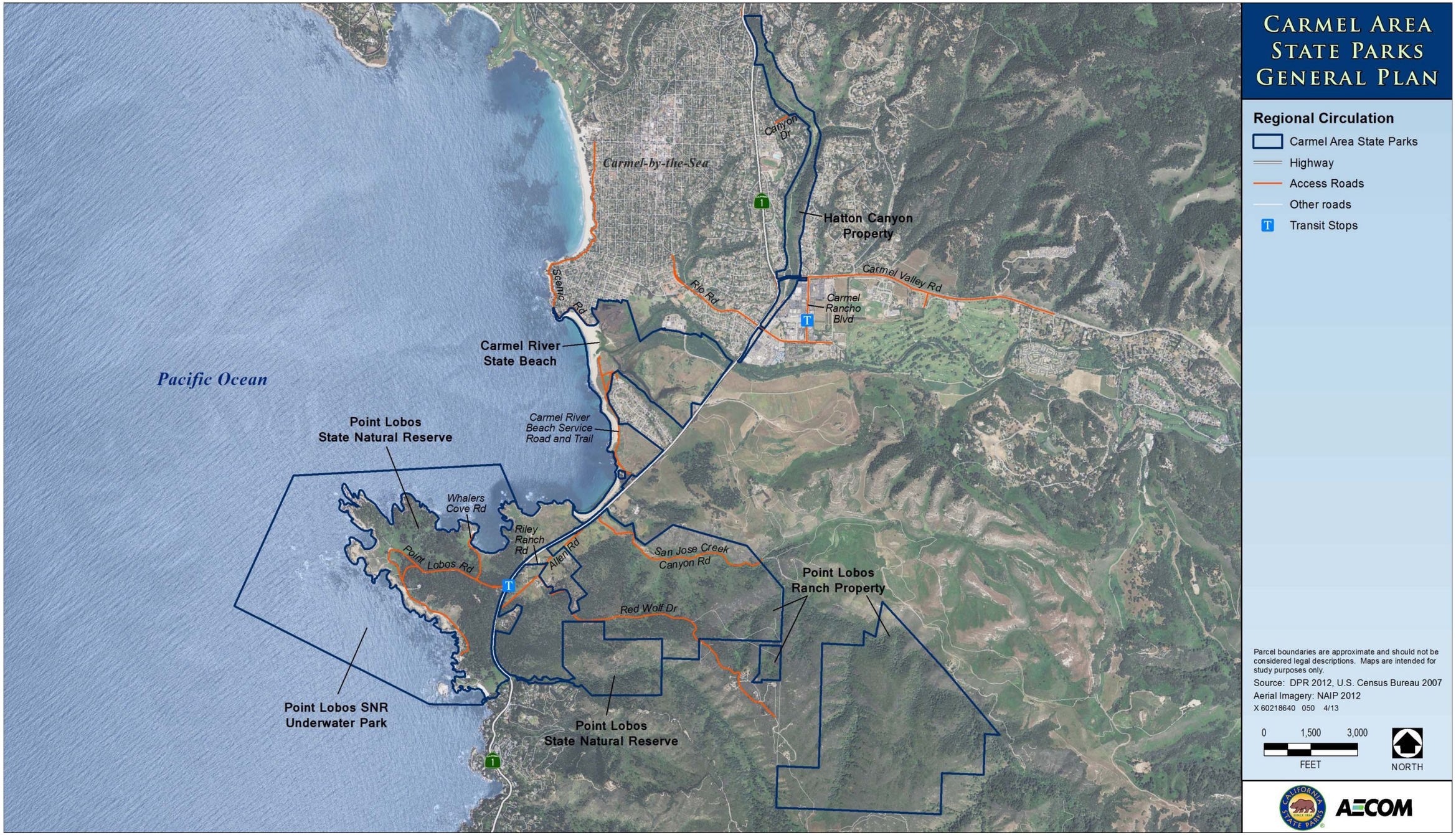

Exhibit 6-1 **Regional Circulation**

7 OPERATIONS AND MAINTENANCE

7.1 EXISTING FACILITIES

There are several residences and structures within Point Lobos Ranch that are primarily located in two areas; near Riley Ranch Road and Allen Road, and the San Jose Creek Canyon area. In the area near Riley Ranch Road and Allen Road there are five residences; a loafing barn, hay barn, and dairy barn; two storage areas; horse stalls; and a workshop. The area east of the residences has also been used as a staging/camping area for CCC trail crews. In the San Jose Creek Canyon area there are three additional residences; a storage area; and a barn. The houses include the Morales House, Owls Nest, Victorine House, Gould House, Foreman's House, Middle House, Milker's House, and the Main Ranch house. Several of these houses are being used as housing for California State Parks staff, and have recently, or are currently, undergoing renovations. The hay barn is being used by California State Parks for storage. There is also private property adjacent to Point Lobos Ranch that has structures and private residences (Exhibit 2-2).

7.2 STAFF AND SERVICES

California State Park's facilities maintenance staff maintains the existing structures and infrastructure (water, sewer, electric, gas, and telecommunication services) for Point Lobos Ranch. The property is served by the Monterey District maintenance shop located on Garden Road in Monterey. There is also a facility within the property that the Monterey District trail crew operates from. California State Parks maintains all utilities in coordination with the respective utility providers. Facilities maintenance staff also maintains facilities needed to maintain a safe and comfortable park experience. California State Parks Peace Officers are primarily responsible for public safety and law enforcement at the property.

7.3 CONCESSIONS

There are currently no concessions at Point Lobos Ranch.

7.4 CONTRACTS AND AGREEMENTS

California State Parks, MPRPD, and BSLT have prepared a MOU to guide how these entities will work together to plan and implement the San Jose Creek Trail Project. The project is an approximately 1-mile long pedestrian recreation trail that will link the Point Lobos Ranch property with the MPRPD Whisler-Wilson properties which border Palo Corona Regional Park. The project also includes a trailhead parking lot, picnic area, and two foot bridges spanning San Jose Creek. The MOU states that BSLT will take the lead on building the trail but that State Parks and MPRPD will take responsibility for maintaining the trail for a minimum of 20 years.

There are currently no contracts within the Point Lobos Ranch property.

7.5 UTILITIES AND SERVICES

7.5.1 WATER AND WASTEWATER SERVICES

Point Lobos Ranch is within the Monterey Peninsula Water Management District (MPWMD). MPWMD is responsible for issuing water connection permits for development within their boundaries, and managing and regulating the use, reuse, reclamation, and conservation of water within its boundaries on the Monterey Peninsula. California American Water Company (Cal Am) is a privately-owned and operated company that is responsible for collecting, storing, and distributing approximately 80% of the water within the MPWMD's boundaries. Cal Am currently provides water to properties adjacent to Point Lobos Ranch. There are three Cal Am water meters adjacent along Highway 1 that serve the existing houses (Monterey County Planning Department 1985). Existing residences within the property have water and wastewater facilities. These buildings are either currently, or in the process of, being renovated to be used as residences for California State Parks staff and are served by groundwater wells that are served by the alluvial aquifer of San Jose Creek. Groundwater is typically used in late summer and fall to supplement surface water supply. The San Jose aquifer is susceptible to seawater intrusion because of the exposure of the aquifer to seawater in Monastery Bay and the coarse-grained sediments in the aquifer (MPWMD 1987). There is a sewer line easement along Highway 1 on California State Parks property and upgrades to the sewer line were completed in 2013.

7.5.2 ELECTRICITY

There are currently no public facilities within the property; however, there are several existing staff residences that have electrical service. These residences are served by 12 kV overhead PG&E electrical lines adjacent to Highway 1.

7.5.3 PHONE AND TELECOMMUNICATIONS

Phone lines adjacent to Highway 1 provide connections for phone service to the property. The staff residences have phone service.

7.5.4 SOLID WASTE

Solid waste in the Monterey area is transported to the Monterey Peninsula Landfill and Recycling Facility in the City of Marina, which is operated by the Monterey Regional Waste Management District (MRWMD). This facility serves the solid waste and recycling needs of an estimated 170,000 residents. The facility accepts basic solid waste, liquid waste and sewage sludge (biosolids), wood waste, yard waste, concrete, tires, appliances, and furniture. The facility also has off-site local recycling centers that collect household recyclables (glass, aluminum, paper, and plastics).

The MRWMD Landfill and Recycling Facility receives approximately 300,000 tons of solid waste per year. The Monterey Peninsula Landfill and Recycling Facility has a remaining capacity of approximately 40 million tons or 74 million cubic yards. Assuming MRWMD continues to achieve the State-mandated 50% recycling goal, the landfill will continue to serve the present service area through the year 2107 (MRWMD 2007).

Solid waste is collected throughout all of the park units by California State Parks staff. Solid waste collection at the property is primarily limited to staff residences, which each have their own solid waste containers. These smaller solid waste containers are then emptied into two dumpsters that are serviced by a contracted waste hauler.

7.5.5 SECURITY AND EMERGENCY SERVICES

California State Parks rangers and lifeguards are trained peace officers that help to operate and manage the California State Park units. They provide public safety law enforcement, aquatic rescue services, and public education through interpretation (DPR 2010c).

California State Parks Peace Officers have the primary public safety and law enforcement responsibility for all of the California State Parks properties. The Monterey County Sheriff's Office has concurrent law enforcement jurisdiction for park property that is located in the unincorporated area of Monterey County. The California Highway Patrol has concurrent law enforcement jurisdiction for all state facilities. California State Parks Peace Officers occasionally are called to assist or back up a local police officer, California Highway Patrol Officer, or other law enforcement officers. California State Parks Peace Officers also provide emergency medical response for all of the California State Parks properties.

Cal Fire provides the primary fire protection services for the property; however, California State Parks staff conducts vegetation clearing for fire management to maintain defensible space. The nearest fire station to the property is the Carmel Highlands Fire Protection District located approximately one mile southeast of the property. This fire protection district is operated under a cooperative agreement with Cal Fire. Cal Fire recently identified areas along Red Wolf Drive for vegetation clearing to ensure access to the residences on this road during an emergency. Implementation of the proposed vegetation clearance would have an adverse effect on the vegetation resources within the property. California State Parks staff is coordinating with Cal Fire on this matter.

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8 PARK SUPPORT

8.1 VOLUNTEERS

There is currently no public access to the property; therefore, volunteer activities have been minimal. A volunteer group, Return of the Natives Restoration Education Project, which is the education and outreach branch of the Watershed Institute of CSU Monterey Bay, has helped with weed control at the property.

8.2 PARTNERSHIPS

8.2.1 BIG SUR LAND TRUST

The BSLT's mission has been to conserve the significant lands and waters of California's Central Coast for all generations. The BSLT recently adopted a new mission, which is to inspire love of the land and conservation of our treasured landscapes. The BSLT partners with government agencies in a variety of ways including sharing technical expertise, providing funding, and partnering on innovative projects (BSLT 2012b). In 2010, BSLT acquired the 317-acre Whisler-Wilson Ranch located adjacent to Point Lobos Ranch. The Whisler-Wilson Ranch was recently transferred to the MPRPD. California State Parks has a Memorandum of Understanding with BSLT and MPRPD for planning and development of the San Jose Creek Trail Project, which would include a 1-mile trail linking Point Lobos Ranch and Palo Corona Regional Park, a trailhead and parking area, picnic area, and two foot bridges spanning San Jose Creek. California State Parks also meets with BSLT monthly to discuss management issues and collaborate on land use and natural resource management issues.

In 2013 the BSLT, California State Parks, MPRPD, and Point Lobos Foundation initiated a partnership effort known as the "Big Sur Gateway" to support the creation and implementation of a collaborative, long-term regional vision for the collective landscape of state and local parklands and open space located adjacent to or nearby one another, from Carmel south to Garrapata State Park. The Gateway partners are working together to develop a model partnership that will result in improved coordination and enhanced land management practices, trail planning and networks, public access and safety, and visitor educational and recreational experiences across the landscape that will better serve the community and the land. This planning effort will create a significant recreation and open space experience and enhance management opportunities by linking the Palo Corona lands with BSLT and State Parks adjoining park and open space lands.

8.2.2 MONTEREY PENINSULA REGIONAL PARK DISTRICT

The MPRPD's mission is to acquire and maintain open space in the District for preservation and use, working with partners and the community, for public benefit, enjoyment, and environmental protection. One of the MPRPD's values is to foster new and creative collaborative partnerships and projects to better meet their mission and serve the community (MPRPD 2012a). California State Parks will continue to work with MPRPD to coordinate recreational uses on the nearby park properties so there are similar uses on similar pieces of property (using a landscape relevant approach) and maintain continuity between properties.

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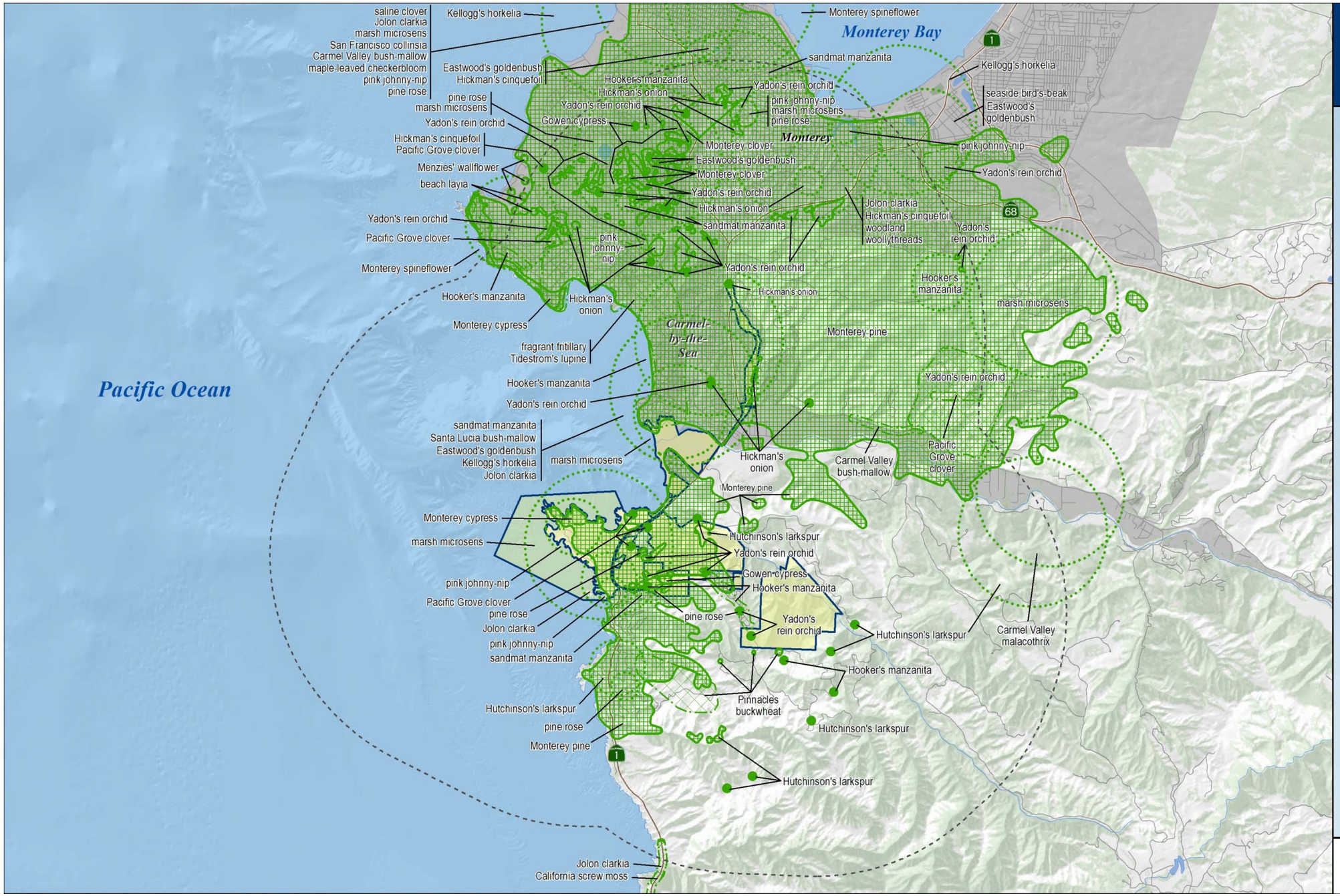
APPENDIX A

Regional CNDDB Occurrences



Carmel Area State Parks General Plan

Special-status Plant Occurrences

- Planning Area Boundary
- 3-mile Buffer Area
- Plant - Accuracy Class 1
- Plant - Accuracy Class 2
- Plant - Accuracy Class 3
- Plant - Accuracy Classes 4-9

CNDDB Accuracy Class 1: Reported occurrence is a point; location considered accurate to within the minimum mappable unit of 80 meters.
CNDDB Accuracy Class 2: Reported location is an area with defined boundaries.
CNDDB Accuracy Class 3: Reported location is a non-specific area; buffer added to represent degree of uncertainty in reported location.
CNDDB Accuracy Classes 4-9: Reported location considered accurate within the radius shown.

Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

Source: DPR 2012, CNDDB 2012

Aerial Imagery: NAIP 2010

X 60218640 006 11/12

0 0.75 1.5

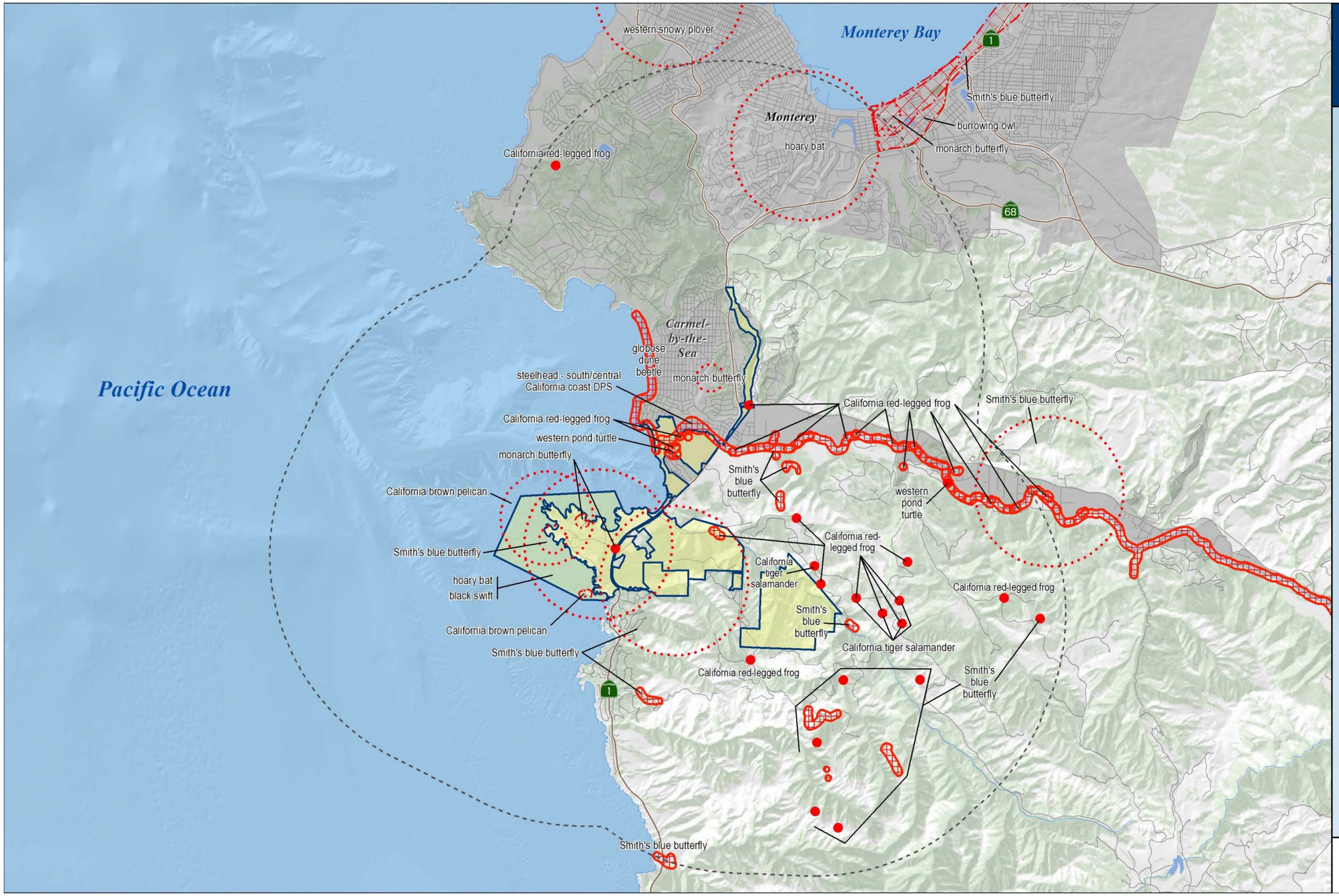
MILES

NORTH

AECOM

Exhibit A-1

Special-Status Plant Occurrences



Carmel Area State Parks General Plan

Special-status Animal Occurrences

- Planning Area Boundary
- 3-mile Buffer Area
- Animal - Accuracy Class 1
- Animal - Accuracy Class 2
- Animal - Accuracy Class 3
- Animal - Accuracy Classes 4-9

CNDDB Accuracy Class 1: Reported occurrence is a point; location considered accurate to within the minimum mappable unit of 80 meters.
CNDDB Accuracy Class 2: Reported location is an area with defined boundaries.
CNDDB Accuracy Class 3: Reported location is a non-specific area; buffer added to represent degree of uncertainty in reported location.
CNDDB Accuracy Classes 4-9: Reported location considered accurate within the radius shown.

Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

Source: DPR 2012, CNDDB 2012

Aerial Imagery: NAIP 2010

X 60218640 005 11/12

0 0.75 1.5

MILES

NORTH

AECOM

Exhibit A-2

Special-Status Animal Occurrences

APPENDIX B

Cultural Resources – Confidential