Chapter 2

EXISTING CONDITIONS

2 EXISTING CONDITIONS

The Existing Conditions chapter describes existing regional land uses and facilities, natural, cultural, scenic, and recreational resources, and existing planning influences and trends of the Carmel Area State Parks (CASP) units. This information provides a foundation for developing goals and guidelines presented in Chapter 4, Park Plan, and conducting the environmental analysis.

2.1 Regional Land Use and Facilities

This section describes relevant regional land uses in Monterey County and local uses surrounding each of the CASP units. Regional access and local circulation pertinent to all of the CASP units are also presented. Regional recreation resources, including federal, state, and local public lands, are discussed to provide the context of recreational opportunities in the region.

2.1.1 Regional Land Use

Monterey County was one of the first counties established in California.

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. The following are land use designations with respect to land coverage percentage in the county (Monterey County 2010):

Agriculture	60%
Public/quasi public (e.g., hospitals, recreation)	28%
Residential	0.7%
Commercial	0.3%
Industrial	0.3%
Other and federal lands	remaining

The Reserve, State Beach, and Point Lobos Ranch are within the jurisdiction of the California Coastal Commission (CCC) and included in the Carmel Area Land Use Plan, which is part of the California Coastal Act's Local Coastal Program (LCP). The Reserve is designated as a coastal forest and upland habitat. To the south is Carmel Highlands, a low-density residential development. To the north is the boundary shared with the State Beach (Monterey County 1983).

The State Beach is designated in the LCP as Wetlands and Coastal Strand and Scenic and Natural Resource Recreation. The State Beach is adjacent to Carmel Meadows, a medium-density residential area. Other adjacent land uses include the Bay School, which is owned by Carmel Unified School District, vacation rentals, residential developments, Carmel River Elementary School, Mission Ranch Hotel, Carmel Mission, and the Carmel Area Wastewater District (CAWD) wastewater treatment plant.

Point Lobos Ranch is referenced in the Carmel Area Land Use Plan as a "Special Treatment" overlay to facilitate a previously planned, comprehensive development by a former landowner. 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.

Regional Access and Circulation

State Route (SR) 1 is a state highway along the Pacific Coast in California that provides primary access to the CASP units. In the CASP area, SR 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). SR 1 is a California Department of Transportation (Caltrans)-designated scenic highway with a 55-mph speed limit near the CASP units. The Caltrans transportation concept for SR 1 in the CASP area is envisioned as two 12-foot lanes with 4-foot paved shoulders. Currently, SR 1 becomes heavily congested during peak use periods, including seasonal tourism to the Monterey-Carmel-Big Sur area, and vehicle parking on the shoulders within the Caltrans right-of-way of SR 1 outside the Reserve and State Beach contributes to existing traffic congestion and pedestrian safety issues (see Appendix J).

2.1.2 Regional Recreational Facilities

Many parks that offer outdoor recreation opportunities are available in the region (Figure 2-1, Public Parks and Open Space Areas). Approximately 14 percent 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 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, Monterey Peninsula Regional Parks District (MPRPD) operates Garland Ranch Regional Park, Thomas Open Space, Joyce Stevens Monterey Pine Forest Preserve, Laguna Grande Regional Park, and Palo Corona Regional Park (California Protected Areas Database 2016) (Figure 2-1).

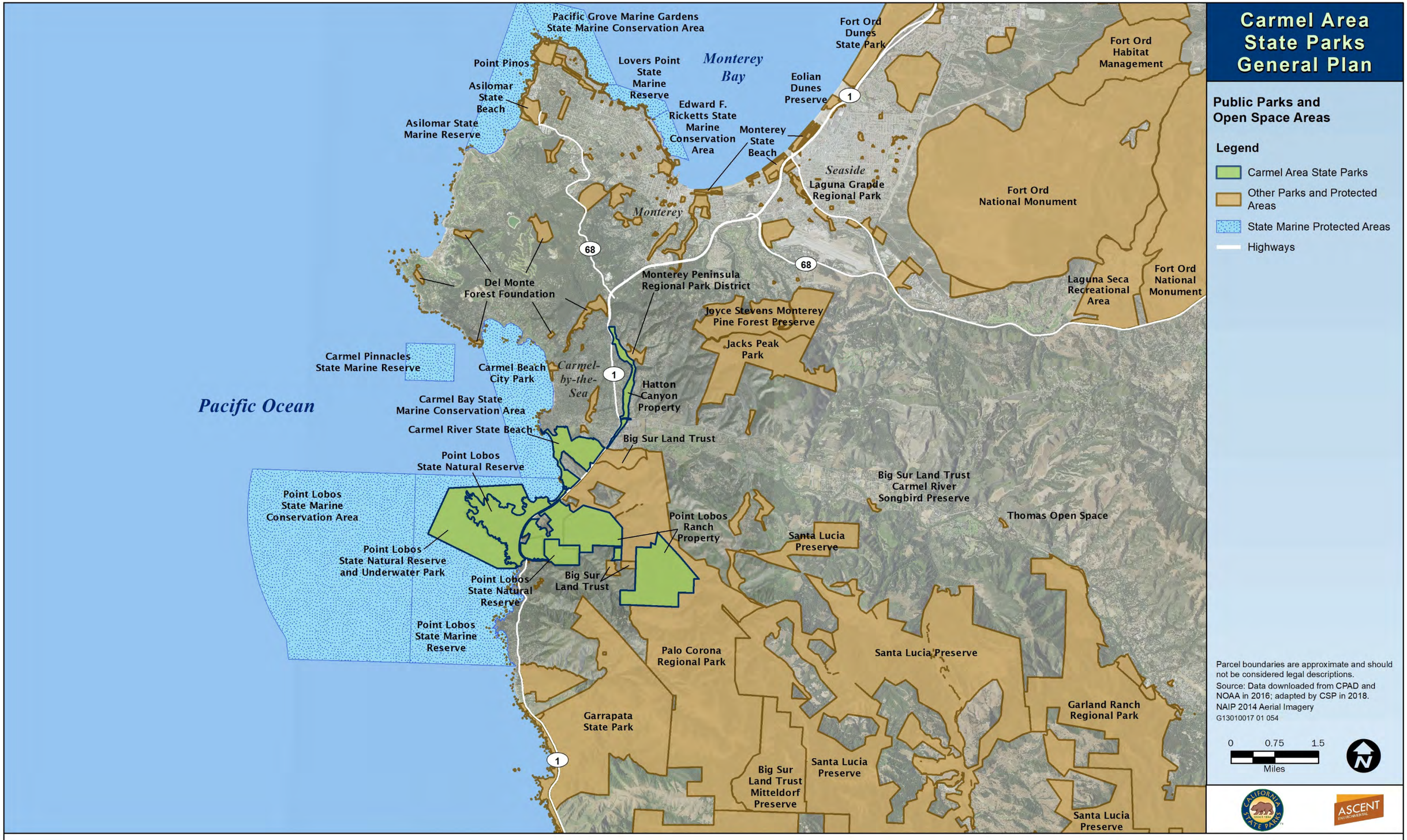


Figure 2-1 Public Parks and Open Space Areas

The Monterey County Parks Department owns several parks in the area including Jacks Peak County Park, Martin Canyon, and Laguna Seca Raceway and Campground. 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 2018).

2.2 Park Land Use and Facilities

This section describes existing land uses and zoning, visitation and recreation demographics, and facilities within each of the CASP units.

2.2.1 Existing Land Uses

Point Lobos State Natural Reserve

Land uses within the Reserve include recreational uses, interpretive and educational uses, residences for California State Parks (CSP) staff, park operations and maintenance facilities, and cultural and biological resource protection. Day use recreational activities at the Reserve include painting, photography, wildlife and nature viewing, walking or hiking along the shoreline, and enjoying world-class views. The Reserve is a unique and important recreational resource for scuba diving. The underwater portion of the Reserve is an Underwater Park. The Underwater Park is also within a designated State Marine Reserve (SMR) and an Area of Special Biological Significance (ASBS), and therefore no fishing and collecting of plants or marine animals is allowed within the underwater boundaries. The marine reserve is a place of continuing scientific research.

View to State Marine Reserve

The Reserve is zoned as Resource Conservation District by Monterey County. The purpose of this zoning designation is to protect, preserve, enhance, and restore sensitive resource areas, and the zoning code states that development in areas with this zoning designation shall be achieved without adverse effect and will be subordinate to the resources.

Easements within the Reserve include a scenic easement along SR 1, a right-of-way easement over the trail along Gibson Creek, and a right-of-way easement for pedestrian access to Gibson Beach.

Carmel River State Beach

Wildlife viewing at Carmel River State Beach lagoon

Beach-oriented recreation is the primary land use at the State Beach. Carmel River Beach is the northernmost section of beach within the unit, with Middle Beach immediately south of Carmel River Beach, and Monastery Beach to the south of Middle Beach. Most of the recreational activities at this park unit are low-intensity such as sightseeing, photography, painting, walking/dog walking, nature study, picnicking, bird/wildlife watching, and whale watching. Monastery Beach is also heavily used for scuba diving. There are two preserves within the State Beach, the Ohlone Coastal Cultural Preserve and the Carmel River Lagoon and Wetland Natural Preserve. A portion (approximately 43 acres) of the State Beach has been restored by Caltrans to wetland and riparian habitat. Under agreement with Caltrans, this area provides mitigation for impacts to riparian and wetland habitats from regional transportation projects. Odello West field and the Odello Farm complex are also within the State Beach. In the 1996 General Plan Amendment, the designation of the Odello West field was changed from agriculture to riparian and wetland habitat. CSP has subsequently embarked on an extensive lagoon restoration project and has created additional lagoon/wetland habitat for species of special concern. The Odello Farm complex consists of several historic farm buildings and a native plant shade house.

Visitor safety and access from SR 1 are key issues for the CASP units.

Adjacent offshore areas include two Marine Protected Areas (MPAs) managed by the California Department of Fish and Wildlife (CDFW). MPAs are managed for protection and research of California's marine and coastal environment, including the condition of marine animals and plants where there is little or no human disturbance. A portion of the Point Lobos SMR, which is 8.8 square miles, is adjacent to Monastery Beach, and the 2.12-square mile Carmel Bay State Marine Conservation Area (SMCA) is adjacent to Carmel River Beach and Middle Beach (Figure 2-1). Carmel Pinnacles SMR is a 0.53-square mile area of submerged granitic pinnacles and spires located further offshore. This area is commonly used by scuba divers. There is no fishing allowed within the state marine reserves. Recreational take of finfish and limited commercial fishing is allowed within the marine conservation area (Clifton and Johnson 2010).

The State Beach is zoned as Coastal Agriculture Preserve, Resource Conservation, and Open Space Recreation by Monterey County. The purpose of the Coastal Agricultural Preserve designation is to preserve and enhance the use of the prime, productive, and unique farmlands in Monterey County while also providing an opportunity to establish necessary support facilities for

those agricultural uses. The Resource Conservation designation is to protect, preserve, enhance, and restore sensitive resource areas in Monterey County. The Open Space Recreation designation is to provide the establishment, enhancement, and maintenance of outdoor recreation uses in Monterey County.

Utility easements run from east to west across the Odello West field. Electrical line easements are also located along the eastern edge of the property. A 10-foot sewer line easement runs from east to west from the CAWD wastewater treatment plant to the 100-foot sewer outfall easement located at Middle Beach. There is also a 40-foot roadway easement that runs east to west from the Bay School to SR 1 and a 20-foot roadway easement on the eastern edge of the property to accommodate the access road to the CAWD wastewater treatment plant. Caltrans has a right-of-way easement adjacent to SR 1.

Point Lobos Ranch Property

Point Lobos Ranch has not yet been opened to the general public; however, the property is informally used by adjacent property owners for hiking. Other land uses within the property include wildlife habitat, including south-central California coast steelhead and mountain lion habitat, significant Native American archaeological sites, CSP staff residences, a staging area for trail crews, and an early twentieth century complex of ranch buildings. The property was acquired with funds from Proposition 117, the California Wildlife Protection Act of 1990, which authorized funds for the acquisition of deer and mountain lion habitat; rare and endangered species habitat; wetlands; riparian and aquatic habitat; and open space. The property contains a number of sensitive species and habitats, including California red-legged frog, south-central California coast steelhead, Smith's blue butterfly, old growth Monterey pine forest, Gowen cypress, and one of the southernmost populations of native rhododendron. Freshwater seeps and springs in the slot canyons to San Jose Creek support redwood groves. Historic land uses within the property included dairy farming, cut flower production, grazing, and irrigated pasture land. Several private properties surround Point Lobos Ranch and many of these properties include developed structures and private residences. The Lobos Ridge Association helps maintain Red Wolf Drive, which serves as the primary access to the central and eastern portion of the property (CSP 2011).

The portion of Point Lobos Ranch adjacent to SR 1 is designated as Recreation and Visitor Serving Commercial and further inland is designated as Forest and Upland Habitat and Watershed and Scenic Conservation in the County General Plan.

Point Lobos Ranch is zoned by Monterey County as Resource Conservation, Open Space Recreation, Visitor Serving Commercial, Watershed and Scenic Conservation. 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.

Easements within Point Lobos Ranch include CSP easements to allow public use of the roads, a sewer line easement along SR 1 on CSP property, and a scenic easement on the approximately 30 acres located adjacent to SR 1.

Hatton Canyon Property

Hatton Canyon multi-purpose trail and undercrossing

Hatton Canyon is an unclassified property. The property was transferred to CSP after plans for a SR 1 highway bypass through the property were terminated. Monterey pine forest, wetlands, and riparian forest occur within the property. Recreational use in the northern portion of Hatton Canyon is informal, primarily walking and jogging. There is an existing paved multi-purpose trail within the southern portion of Hatton Canyon. The southern portion of the property is also used for special events such as seasonal uses and as the staging area and terminus for the annual Big Sur International Marathon. The CAWD service road in the northern portion of the canyon is unpaved.

Land uses adjacent to the property include residential, commercial, and visitor-serving facilities such as Carmel Rancho Shopping Center, Carmel Mission Inn, and the Crossroads and Barnyard shopping centers. Commercial, planned commercial, visitor accommodations, and professional offices are located to the east. Existing land use in the vicinity is designated as medium-density residential north of Carmel Valley Road and east of the SR 1.

Hatton Canyon is zoned as Public/Quasi-Public by Monterey County. The purpose of the Public/Quasi-Public designation is to allow in designated areas public/quasi-public uses such as schools, parks, regional parks, recreation areas, and uses which serve the public at large. Hatton Canyon is outside of the City of Carmel-by-the-Sea city limits, but is within the City's sphere of influence, and is described as a right-of-way within the City's 2003 General Plan (City of Carmel-by-the-Sea 2003). Some encroachment on the CSP-owned property from surrounding land uses/residences occurs. Caltrans maintains a highway right-of-way south of Carmel Valley Road.

2.2.2 Visitation and Recreation Uses

Point Lobos State Natural Reserve

Visitation

The pattern of visitation at the Reserve is seasonal with the peak visits (high season) occurring between Memorial Day and Labor Day, although the Reserve can experience spikes in visitation on holidays, weekends, and fair-weather days during the non-peak (shoulder) season. Visitor attendance is collected at the entrance station for the Reserve. Visitor attendance for the Reserve between 2013 and 2016 is listed in Table 2-1. Visitation by vehicle is limited by the 150-car capacity of the parking areas within the Reserve. When the 150-car limit is reached, cars are turned away, but walk-in and bike-in visitation continues. During an average year an estimated 400,000 visitors walk into the Reserve and avoid paying the vehicle entrance fee.

Visitor demand at the Reserve remains high all year, particularly on any good-weather day.

Table 2 1 Reserve Visitor Attendance Between 2013 and 2016

Year	# Paid Day Use Visitors	# Free Day Use Visitors
2013	326,549	217,064
2014	344,052	205,560
2015	363,465	191,215
2016	297,508	176,277

Note: The number of free day use visitors is an estimate.
Source: CSP 2013, 2014a, 2015b, 2016

Special events can be held by permit within the Reserve, including weddings, dinner parties, and corporate events. In addition, adherence to strict permit conditions is required to ensure that special events do not have a negative effect on sensitive resources. Approximately 220 events are held at the Reserve each year, including 75 tour-led events, 105 dive events, 30 artist/photography events, and 10 other events.

Access and Circulation

The vast majority of visitors to the Reserve use personal autos. All vehicle access to the Reserve is via SR 1. Within the Reserve, Point Lobos Road provides visitor access from the park entrance to all of the parking areas within the park. There are two spur roads off of Point Lobos Road that provide access to the Whalers Cove parking area and the Piney Woods picnic area. The road leading to Rat Hill is authorized for staff only, with the exception of visitor boat trailer parking at Rat Hill.

Recreation Activities

Within the Reserve, some of the most popular areas include tidepools at Weston Beach during low tides, the trail to Bird Island, Whalers Cabin Museum, South Shore and North Shore trails, and Sea Lion Point/Allan Memorial Cypress Grove. Bird Island attracts birders during the Brandt's cormorant nesting season. Upper Sea Lion Point and the Allan Memorial Cypress Grove are popular destination points and the parking area that accommodates access to these areas is often the first to fill to capacity. This area provides access to the Sand Hill/Sea Lion Point Trail, Allan Memorial Cypress Grove Trail, and the Information Station. These areas are particularly popular between December and May for whale watching. The Reserve is also a popular destination for scuba diving.

Carmel River State Beach

Visitation

The State Beach is accessible from multiple access points; therefore, accurate visitation data is unknown for this unit.

Special events held within the State Beach include weddings, photo shoots, and dive/kayak special events at Monastery Beach. In 2016, 80 weddings were held at Monastery Beach, 30 at Carmel River Beach, and 25 each at Wedding Rock and Stewart's Cove.

Access and Circulation

The State Beach is used primarily by local visitors who walk to the beach from adjacent neighborhoods. The exception is the area known as Monastery Beach. This area is heavily used for beach-oriented day use activities because of the visibility and accessibility from SR 1. There are several access points to the State Beach including Scenic Road and parking lot, Bay School, Carmel Meadows subdivision, and SR 1. Roads within the State Beach include an unpaved service road that also functions as a coastal bluff trail and an unpaved road that leads to the Odello Farm complex. Vehicle access on these roadways is limited to authorized vehicles. There is a paved road that runs from SR 1 to the CAWD treatment plant and provides access to the Odello West field.

Recreation Activities

Activities at the State Beach are focused on opportunities for beach-oriented recreation in a high-quality environment. The most popular recreation activities include sightseeing, walking/running on the beach and trails, sunbathing, photography, painting, sunset viewing, bird watching, picnicking, kayaking, and swimming. Monastery Beach is the most heavily used scuba diving beach in Northern California and is used by various diving schools because of the proximity of the Carmel submarine canyon. Many visitors also use Monastery, Middle, and Carmel River Beaches for walking their dogs on leash and local cross-country teams use the beaches for training. During the summer months children often play in the Carmel River backwater lagoon. The main beach parking lot on Scenic Road is often filled to capacity and provides visitors access to the beach.

Point Lobos Ranch Property

Visitation

Point Lobos Ranch has not been open to the public; therefore, recreational use data is not collected for the property. The property is used by the Point Lobos Foundation (PLF) for special events.

Access and Circulation

Access to Point Lobos Ranch is provided from SR 1. Roads within Point Lobos Ranch include Red Wolf Drive, Riley Ranch Road, Allen Road, and San Jose Creek Canyon Road. San Jose Creek Canyon Road is a gated unpaved road that provides access to the open space northeast of Point Lobos Ranch and CSP staff housing. Allen Road, Red Wolf Drive and Riley Ranch Road are paved roads that provide access to private residences adjacent to the CSP property. These roads are maintained by homeowners and CSP has easements to allow use of the roads.

Recreation Activities

Point Lobos Ranch has not been open to the public and recreation has been limited to guided hikes led by MPRPD and the Big Sur Land Trust (BSLT).

Hatton Canyon Property

Visitation

Recreational use data is not collected for Hatton Canyon; however, in 2016 there were six to eight special events held in the Marathon Flats portion of the property, and at least five of those events lasted more than 14 days each. The number of people using the Hatton Canyon multi-purpose trail is not known, but it is used every day due to its urban location.

Access and Circulation

Access to southern Hatton Canyon is provided via Rio Road, and access to northern Hatton Canyon is provided via Carmel Valley Road and Canyon Drive, all of which are accessible from SR 1. Hatton Canyon does not contain any public roadways. CAWD vehicles use the unpaved service road to access the sewer line and for maintenance purposes.

Recreation Activities

The northern portion of Hatton Canyon is used for informal recreation by nearby residents including walking, running, hiking, and wildlife viewing. The canyon does not connect to other recreational facilities (e.g., local or regional parks). The southern portion of the property with its paved, multi-purpose trail is used for walking, running, and bicycling. This portion of the property is also used for special events, including annual pumpkin and Christmas tree sales, and as a staging area for community events, including the Big Sur International Marathon.

2.2.3 Existing Facilities

Point Lobos State Natural Reserve

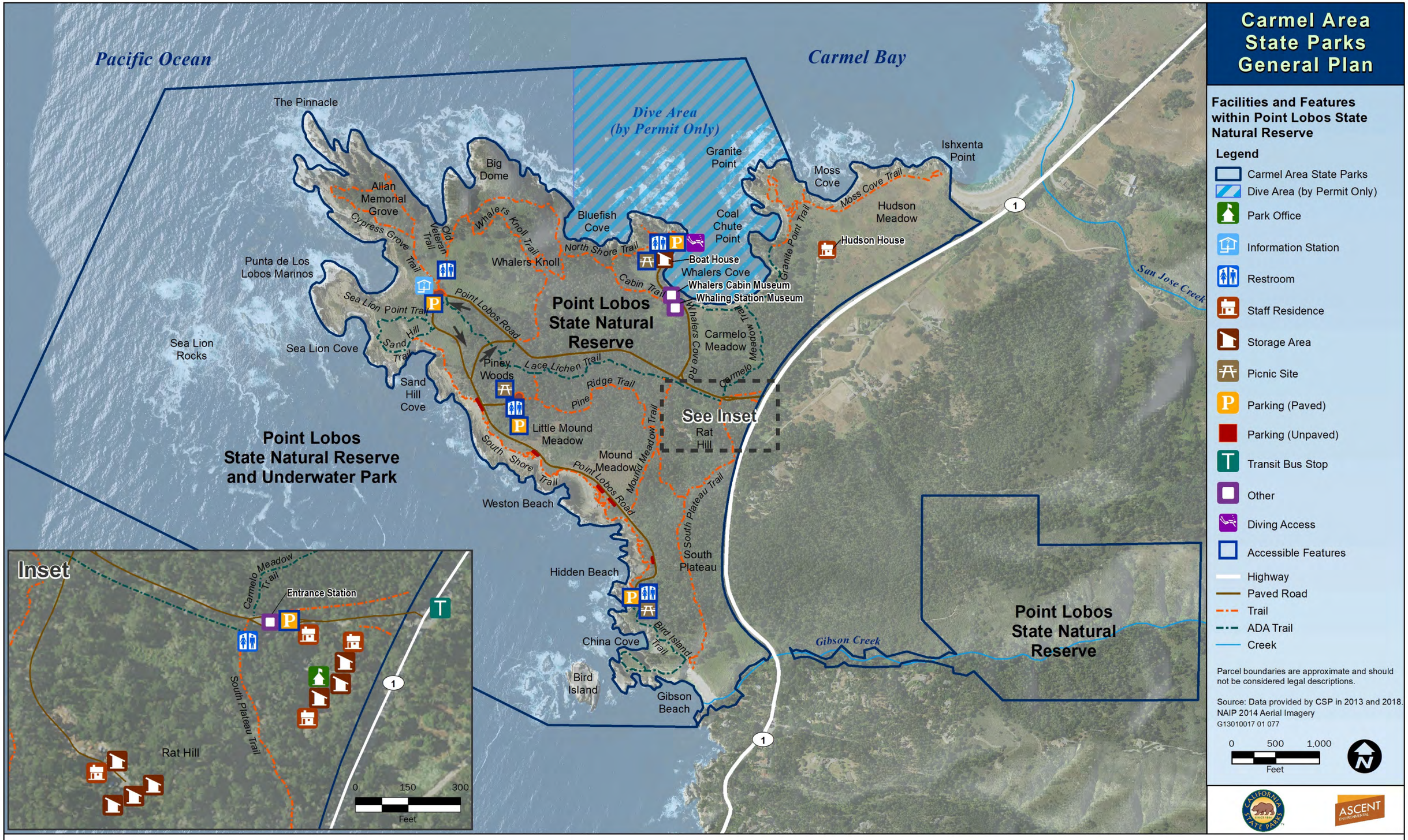
Piney Woods picnic area within the Reserve

Visitor and Operational Facilities

Visitors stop at the Reserve entrance station to get information, pay the day use fee, and then proceed to their destination within the Reserve. They park in one of the nine parking areas. When all of the parking areas are full, signs are posted in both directions on SR 1 indicating that the Reserve parking is closed. Additional vehicles are allowed into the Reserve as parking spaces become available.

The Whalers Cabin Museum and Whaling Station Museum include cultural history exhibits on the whaling era and the early history of the Reserve. Recreational facilities available in the Reserve are summarized below. Additional detail and a map of the recreational facilities are provided on Figure 2-2.

- Approximately 12 miles of trails
- Three picnic areas - Whalers Cove, Piney Woods, and Bird Island
- Stairs or trails that enable beach access - at Moss Cove, south of Granite Point, Hidden Beach, and Gibson Beach, and tidepool access along the south shore of the Reserve including Weston Beach
- Diving, kayaking, and stand-up paddle boarding access is available at Whalers Cove for an additional day use fee



Carmel Area State Parks General Plan

Facilities and Features within Point Lobos State Natural Reserve

Legend

- Carmel Area State Parks
- Dive Area (by Permit Only)
- Park Office
- Information Station
- Restroom
- Staff Residence
- Storage Area
- Picnic Site
- Parking (Paved)
- Parking (Unpaved)
- Transit Bus Stop
- Other
- Diving Access
- Accessible Features
- Highway
- Paved Road
- Trail
- ADA Trail
- Creek

Parcel boundaries are approximate and should not be considered legal descriptions.

Source: Data provided by CSP in 2013 and 2018.
NAIP 2014 Aerial Imagery
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0 500 1,000
Feet

Figure 2-2 Facilities and Features within Point Lobos State Natural Reserve

Within the Reserve, there are six accessible trails, including Bird Island, Sand Hill, Lace Lichen, Sea Lion Point, Granite Point, and Carmelo Meadow trails. As described above, there are also the American with Disabilities Act (ADA) accessible picnic areas and restrooms at Whalers Cove, Piney Woods, and Bird Island. The Whalers Cove picnic area has four accessible picnic tables and a restroom with two ADA accessible stalls. The path to the picnic area at Whalers Cove is accessible. The Piney Woods picnic area has a restroom with two ADA accessible stalls. The restroom at Bird Island has two ADA accessible stalls. All three of these picnic areas, in addition to the Reserve entrance and Sea Lion Point parking area, have at least one ADA accessible parking space each. There are ADA accessible benches along the accessible trails for relaxation and wildlife viewing (CSP 1979, 1988; PLF 2012).

Administration and maintenance facilities within the Reserve are primarily located adjacent to the Reserve entrance and at an area known as Rat Hill located in the interior of the Reserve (Figure 2-2). The area adjacent to the Reserve entrance serves as the park headquarters, and facilities at this location include offices, a docent center/library, and three staff residences. Rat Hill is the primary maintenance and storage location for equipment used for operation of the Reserve and contains a maintenance shop, storage yard, and one staff residence. The Rat Hill area is not open to the public except for boat trailer parking for visitors. There are two boat sheds at the Whalers Cove parking area where boats for emergency rescues are stored. Staff parking is located at the Reserve entrance area and at Rat Hill.

There are five staff residences within the Reserve: three near the entrance, one at Rat Hill, and the Hudson House.

Staff residence at Rat Hill maintenance and operations area in the Reserve

Utilities

For water supply, the Reserve is within the Monterey Peninsula Water Management District (MPWMD). California American Water (CalAm) is a privately-owned and operated company that is responsible for collecting, storing, and distributing approximately 80 percent of the water within the MPWMD's boundaries. Monterey County residents rely on the Carmel River watershed for their primary water supply. Water is a limiting factor for new development. Surface and groundwater within the Carmel area are generally of good mineral and bacteriological quality. However, based on data from the California Department of Water Resources, levels of iron and manganese exceed maximum contaminant levels for California secondary drinking water standards (Resource Conservation District of Monterey County, Carmel River Watershed Conservancy, and MPWMD 2016).

CAWD provides wastewater collection, treatment, and disposal services to Carmel-by-the-Sea, Carmel Valley, and Carmel Highlands.

There are five restroom facilities within the Reserve located at Whalers Cove, Sea Lion Point, Piney Woods, Bird Island, and the park entrance. All restrooms and residences are connected to a wastewater collection system except the Rat Hill residence and Bird Island restroom, which are on septic tanks. The Hudson House residence connects to the highway sewer force main. All of this collected sewage continues from Ribera Road in CAWD-owned facilities to the CAWD treatment plant near the Carmel River State Beach lagoon where it is treated. There are approximately 15 storm drains that flow under the roadways within the Reserve and discharge to the ocean at Whalers Cove, the Slot, Weston Beach, and Bird Island parking lot.

Pacific Gas & Electric provides electrical service to the Carmel area. Electrical service to this area is via a 12-kV overhead electrical line adjacent to SR 1. There are also seven propane tanks within the Reserve, including two that are underground.

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). The Monterey Peninsula Landfill and Recycling Facility has a remaining capacity of approximately 48 million tons or 71 million cubic yards. Assuming MRWMD continues to achieve the state-mandated 50 percent recycling goal, the landfill will continue to serve the present service area through the year 2161 (MRWMD 2014). Solid waste is collected throughout the CASP units by CSP staff.

Phone lines adjacent to SR 1 provide connections for phone service within the CASP units. Facilities within the Reserve with phone service include the entrance station, office areas, Whalers Cabin Museum, employee residences, and most of the restrooms. There are also wireless internet capabilities at the entrance station, office areas, and employee residences; however, wireless internet is not available to visitors.

Carmel River State Beach

Visitor and Operational Facilities

Visitor facilities within the State Beach are limited to low-intensity day use facilities. The Odello West portion of the unit is used informally for bird watching; however, there is currently no formal public access or trail system within this portion of the unit.

Existing facilities within the State Beach are listed below. Additional detail and a map of the recreational facilities are provided on Figure 2-3.

- Trails, including the 2-mile round-trip Carmel River Beach Service Road and Trail, access roads to the Odello Farm complex and the CAWD treatment plant
- Restrooms at the southern end of Monastery Beach and at Carmel River Beach off Scenic Road
- Beach access to Carmel River Beach, Middle Beach, and Monastery Beach

There are no administration, maintenance, or staff residence facilities located at the State Beach.

Monastery Beach is the most heavily used scuba diving beach in Northern California.

Utilities

There are two restroom facilities at the State Beach, one two-stall restroom at Carmel River Beach near the lagoon and the other two-stall restroom at the southern end of Monastery Beach (CSP 1979). There is a main sewer line adjacent to the State Beach that serves the Carmel Meadows neighborhood. The sewage from Monastery Beach and the Reserve go to the CAWD treatment plant.

Restrooms and information kiosk at Carmel River Beach

Water facilities at the State Beach include a pump and two wells. One well was installed by Caltrans for the mitigation bank. A second well was the water source for the Odello West field. This well is used to augment lagoon water levels and lower temperatures during periods when the lagoon water levels are low.

SR 1 will be relocated as part of the Carmel River Floodplain Restoration and Environmental Enhancement (Carmel River FREE) project which is being sponsored by the BSLT. The project will reconnect the Odello East and West fields, thereby reconnecting the former Carmel River floodplain. The existing Odello well will be relocated adjacent to the CAWD access road as part of the Carmel River FREE project.

The existing 12 kV electrical line serves several facilities within the unit including the Odello Farm complex in the southeast corner of the property. An additional overhead power line runs along the southern portion of the property along the access road to the CAWD treatment plant (MPRPD, California State Coastal Conservancy, and CSP 1999).

Solid waste disposal is the same for the State Beach as described above for the Reserve.

There are no phone lines within the State Beach.

Former hay barn within Point Lobos Ranch

Point Lobos Ranch Property

Visitor and Operational Facilities

The property has not been opened to the public so there are no visitor facilities. Additional details and a map of facilities are provided in Figure 2-4.

Several historic ranch structures within Point Lobos Ranch near Riley Ranch Road/Allen Road and in the San Jose Creek Canyon area serve as maintenance or storage facilities and staff housing. This area is also used as a staging area for regional trail crews. In the San Jose Creek Canyon area, there are two maintenance facilities.

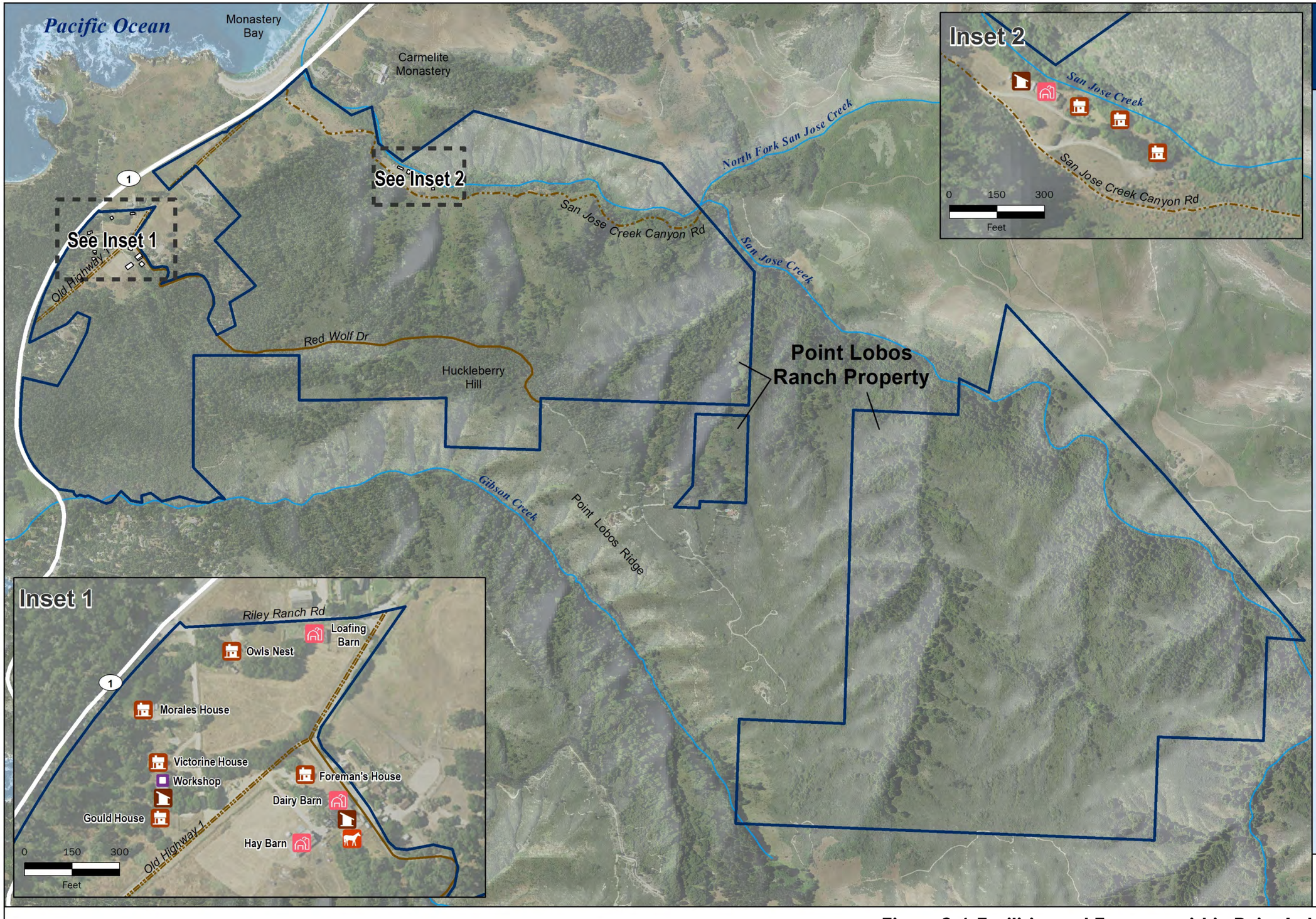
Five staff residences are located near Riley Ranch Road and Allen Road, and three are in the San Jose Creek Canyon area.

Utilities

Three CalAm water meters along SR 1 serve the existing staff houses (Monterey County Planning Department 1985). Existing staff residences within the property have water and wastewater facilities, and are served by groundwater wells that are supplied by the alluvial aquifer of San Jose Creek. There are currently two active wells on Point Lobos Ranch, one that provides water for two staff houses at San Jose Creek, and one that provides water for a private residence. Groundwater is typically used in late summer and fall to supplement surface water supply. The San Jose Creek aquifer is susceptible to seawater intrusion because of the proximity of the aquifer to the Pacific Ocean and its coarse-grained sediments that allow infiltration of salt water into the aquifer (MPWMD 1987).

Staff residences are served by the existing electrical and phone lines adjacent to SR 1. Solid waste disposal is the same for Point Lobos Ranch as described above for the Reserve.

Figure 2-3 Facilities and Features within Carmel River State Beach



Carmel Area State Parks General Plan

Facilities and Features within Point Lobos Ranch Property

Legend

- Carmel Area State Parks
- Residence
- Barn
- Horse Stall
- Storage Area
- Other
- Highway
- Paved Road
- Unpaved Road
- Unimproved Road
- Creek

Parcel boundaries are approximate and should not be considered legal descriptions.

Source: Data provided by CSP in 2013 and 2018. NAIP 2014 Aerial Imagery

G13010017 01 079

0 600 1,200
Feet

Figure 2-4 Facilities and Features within Point Lobos Ranch Property

Hatton Canyon Property

Visitor and Operational Facilities

There are no CSP-developed recreational facilities within the northern portion of the property; however, an unpaved service road for a CAWD sewer line is used informally as a trail (Figure 2-5). Recreational facilities within the southern portion of the property include a paved ADA accessible multi-purpose trail.

There are no administration facilities within Hatton Canyon, and the only maintenance facility is an unpaved service road used by CAWD for maintenance of the sewer line. No staff housing is located at Hatton Canyon.

Utilities

Hatton Canyon does not have any water use or connections. CalAm waterlines are located along SR 1 and Rio Road adjacent to the southern portion of Hatton Canyon (TAMC 2009).

Existing sewer lines are located within northern Hatton Canyon, and CAWD conducts weekly routine inspections of these sewer lines.

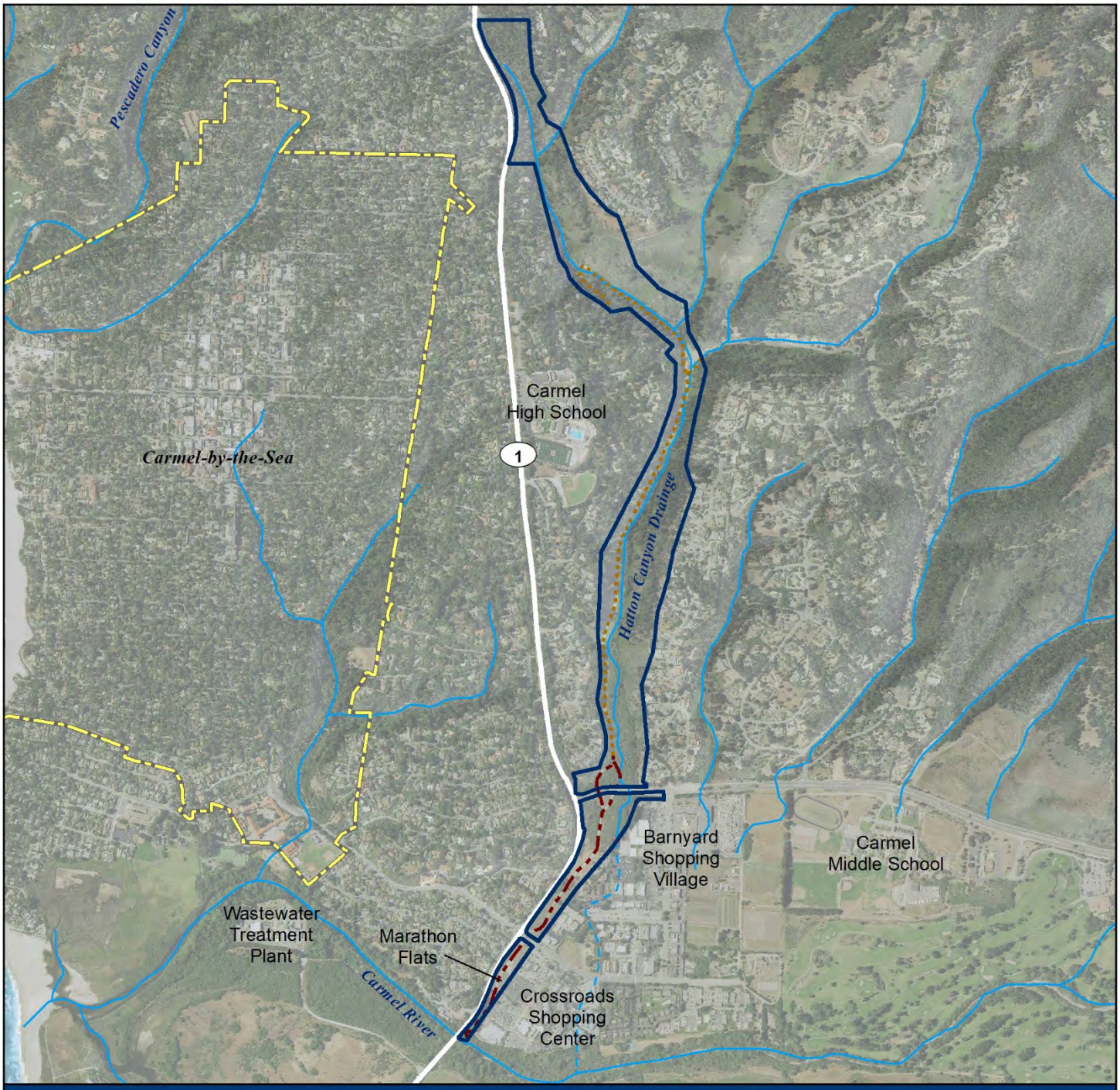
In southern Hatton Canyon, there are electrical lines along the east side of SR 1 and crossing SR 1 at Rio Road that serve the area. Electrical service is located at the intersection of Rio Road and SR 1.

Solid waste disposal is the same for Hatton Canyon as described above for the Reserve.

There are currently no phone connections within Hatton Canyon.

2.3 Important Resource Values

This section describes the important physical, natural, cultural, and aesthetic resources within the CASP units. The information in this section was compiled from existing documents and field research. For more detailed information on the CASP's natural and cultural resources, please refer to the references section of the General Plan and associated appendices.



Carmel Area State Parks General Plan

Facilities and Features within Hatton Canyon Property

Legend

- Carmel Area State Parks
- Highway
- Service Road/Unpaved Trail
- Multi-Purpose Trail
- Creek/River
- Creek (underground)
- City Limits

0 800 1,600

Feet

Parcel boundaries are approximate and should not be considered legal descriptions.
Source: Data provided by CSP in 2013 and 2018.
NAIP 2014 Aerial Imagery G13010017 01 081

Figure 2-5 Facilities and Features within Hatton Canyon Property

2.3.1 Physical Resources

Topics include topography; geology and seismicity; paleontology; soils; hydrology, water quality, and floodplains; and shoreline conditions. Because climate, climate change, and air quality conditions are similar across all CASP units, they are described in a parkwide context.

Regional 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. On average, fog occurs 135 days per year, primarily during July, August, and September, although inland areas experience less fog than the coastal areas. Rainfall averages 19 inches per year and falls primarily between October and May (Central and Northern California Ocean Observing System 2012, Caltrans 2004). During El Niño events, coastal erosion accelerates, resulting in loss of beach sand and coastal bluff failures.

Climate Change Predictions

It is anticipated that coastal areas in California will experience several effects related to climate change, which will require choices regarding critical infrastructure and assets that need to be protected, relocated, replaced, or abandoned. Climate change impacts will also necessitate adaptation of resources management, visitor management, and park operations. Some of the anticipated climate impacts are increased temperature, precipitation changes, sea level rise, reduced agricultural activity, biodiversity threats, public health threats, and increased wildfire risks.

Projected effects of climate change on the central California coastal region, including the CASP units, as described in the Draft California Climate Change Adaptation Policy Guide are summarized in Table 2-2 (California Emergency Management Agency and CNRA 2012). These predictions have been carried forward into the 2014 Safeguarding California report and its update in 2018 (CNRA 2018).

Sea level rise predictions are based on the National Research Council (2012) study of the west coast and have broad confidence limits, so variability is recognized; however, they provide a valid general parameter for long-range planning. Cal-Adapt, the state's internet resource for climate change predictions, reports the sea level rise prediction listed in Table 2-2 as of mid-2017 (1.4 meters; see below).

Table 2 2 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. (Community Climate System Model Version 3.0 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 percent in Santa Barbara County, 15 percent in San Luis Obispo County, 12 percent in Santa Cruz County, and 11 percent 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 percent to 100 percent by 2085 (Geophysical Fluid Dynamics Laboratory climate model; high carbon emissions scenario)

Source: Cal EMA and CNRA 2012

CSP has also prepared guidance for sea level rise and extreme coastal events in its 2017 report, Sea Level Rise and Extreme Event Guidance (CSP 2017). This guidance report presents sea level rise predictions in ranges that include the planning level noted in Table 2-2, and also recognizes that sea level could be higher by the end of the century than this elevation. CSP will continue to track the evolution of climate change predictions as they occur over the life of the General Plan.

See Section 3.2.2, Resource Protection, for more information on what is being done at the state and local level regarding climate change effects and sea level rise.

Sea level rise is 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 CSP and other agencies that provide coastal amenities to the public through reduction in or damages to beaches, access ways, parks, scenic vistas, and trails.

The California Energy Commission, in partnership with the University of California at Berkeley Geospatial Innovation Facility, has developed the Cal-Adapt tool, which can be used to predict various climate change-related effects, including sea level rise, based on a variety of climate models under two emissions scenarios used by the Intergovernmental Panel on Climate Change: the representative concentration pathway (RCP) 8.5, which assumes emissions will continue to rise strongly through 2050 and 2100 (High-Emission Scenario) and RCP 4.5, which assumes emissions will peak around 2040 and then decline throughout the remainder of the century (Low-Emission Scenario) (California Energy Commission 2017).

Using data provided by the U.S. Geological Survey and the Pacific Institute, Cal-Adapt maps the vulnerability of the California coastline under a 1.4-meter (m) rise in sea level coupled with a 100-year flood event for 2100 (see Figures 2-8, 2-10, 2-12, and 2-14). Consistent with the findings of the Ocean Protection Council's (OPC) most recent report, Rising Seas in California: An Update on Sea-Level Rise Science, a 1.4-m rise represents a comprehensive average of anticipated sea level rise by 2100 based off projections which utilize varying models (e.g., Kopp et al. [2014] which projects a 1.2-m rise by 2100 as compared to Jevrejeva et al. [2014, 2016] which projects a 1.8-m rise by 2100 off the California coast) (OPC 2017:20).

Air Quality

Concentrations of ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, respirable particulate matter with an aerodynamic diameter of 10 micrometers or less (PM_{10}), fine particulate matter with an aerodynamic diameter of 2.5 micrometers or less ($PM_{2.5}$), and lead are criteria air pollutants (CAPs) and are used as indicators of ambient air quality conditions. CAPs are air pollutants for which acceptable levels of exposure can be determined and for which an ambient air quality standard has been set by the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB). Counties in California must comply with National Ambient Air Quality Standards (NAAQS) established by EPA as well as California Ambient Air Quality Standards (CAAQS) set by CARB. Monterey County is unclassified or attainment with all NAAQS. For CAAQS, Monterey County is in nonattainment-transitional for ozone and nonattainment for PM_{10}.

Concentrations of CAPs are measured at several monitoring stations near the CASP units. Data collected by the Carmel Valley-Ford Road monitoring station at 35 Ford Road in Carmel Valley are generally representative of ambient air quality in the vicinity of the CASP units with respect to ozone and $PM_{2.5}$. The closest station that measures PM_{10} is located at 415 Pearl Street in King City, which is also within Monterey County. Notably, the King City station is located approximately 50 miles inland of Point Lobos Ranch and, as such, may demonstrate higher concentrations of PM_{10}. Concentrations of CAPs measured at these stations are summarized in Table 2-3.

Table 2 3 Summary of Annual Air Quality Data (2014–2016)

Ozone [1]	2014	2015	2016
Highest Concentration (1-hour/8-hour, ppm)	0.078/0.070	0.071/0.066	0.078/0.061
Second Highest Concentration (1-hour/8-hour, ppm)	0.075/0.070	0.0690.062	0.072/0.060
Number of days state standard exceeded (1-hour/8-hour)	0/0	0/0	0/0
Number of days national standard exceeded (1-hour/8-hour)	0/0	0/0	0/0
Respirable Particulate Matter (PM_{10}) [2]	2014	2015	2016
Highest Concentration (µg/m^c) (California)	99.2	72.6	71.4
Second Highest Concentration (µg/m^c) (California)	66.0	68.5	70.9
Annual Average (µg/m^c) (California)	*	*	*
Number of days national standard exceeded (measured [3])	0	0	0
Fine Particulate Matter ($PM_{2.5}$) [1]	2014	2015	2016
Highest Concentration (µg/m^c) (California)	16.3	43.2	104.7
Second Highest Concentration (µg/m^c) (California)	14.7	23.0	77.0
Annual Average (µg/m^c) (California)	6.5	6.3	6.9
Number of days national standard exceeded (measured [3])	0	1	11

Notes: µg/m^3 = micrograms per cubic meter; ppm = parts per million; * = Insufficient data to determine the value

[1] Ozone and $PM_{2.5}$ measurements are taken from the monitoring station on 35 Ford Road in Carmel Valley.

[2] PM_{10} measurements are taken from the station on 415 Pearl Street in King City.

[3] Measured days are those days that an actual measurement was greater than the level of the daily standard. The number of days above the standard is not necessarily the number of violations of the standard for the year.

Source: CARB 2017b, 2017c, 2017d, 2017e

Motor vehicles are the predominant source of CAPs and precursor emissions in and near the CASP units, including trips made using on-road vehicles to and from the CASP units. Vehicles traveling along SR 1, which runs north to south adjacent to the parks, represent the predominant non-stationary source of toxic air contaminants (TACs) in the CASP units. Other sources of TACs in the CASP area include any diesel-powered equipment, which emit diesel PM, such as off-road maintenance and construction equipment.

Point Lobos State Natural Reserve

Topography

Slopes within the Reserve are generally gentle except for sea bluffs and the steep-sided canyon of Gibson Creek. Sea bluffs rise up to 200 feet above sea level in some areas. Elevations within the Reserve range from 940 feet in the northeast corner of the area east of SR 1 to sea level at the beaches.

Submarine topography is highly variable, with sheer granite walls, flat plateaus, stone pinnacles, and caves found off Sand Hill Cove and Bird Island (CSP 1979, Thomson 1997). The south shore submarine topography is shallow and the north shore topography is extremely rugged (Barry et al. 1977).

Geology, Seismicity, and Soils

The Reserve includes Porophyritic Granodiorite, Carmelo Formation, Pleistocene marine terrace deposits, and Temblor Formation. Porophyritic Granodiorite is deep-seated igneous rock that is resistant to erosion and weathering. This formation is exposed at several locations throughout the Reserve including Bird Island, Big Dome, Whalers Knoll, and Granite Point. The Carmelo Formation includes four distinct rock types: sandstone, siltstone, conglomerate, and shale. The Carmelo Formation is softer than the granodiorite and more susceptible to erosion (Thomson 1997).

In the northern submarine portion of the Reserve lies the Carmel Submarine Canyon. This canyon is a branch of the larger Monterey Submarine Canyon, a major geomorphic feature off the California coast.

Monterey County is located within the Coast Ranges Geomorphic Province. 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. In addition, the potentially active Hatton Canyon Fault consists of a group of northwest-striking faults that extend from Carmel Valley Road northwest for approximately 7 miles (TAMC 2009). Small to moderate earthquakes (i.e., magnitude 5.0 and below) are common in Monterey County.

Several active or potentially active faults are within the Monterey area, including San Andreas, San Gregorio-Palo Colorado, Chupines, Navy, and Cypress Point.

Although there are several fault zones in this area, none of them are officially designated as an Alquist-Priolo Earthquake Fault zone (CSP 1979, 1988; TAMC 2009). The Monterey County General Plan EIR identifies the entire Reserve as having a low potential for landslides and liquefaction (Monterey County 2008).

Fifteen soil series have been mapped within the Reserve, with three of those soil types covering most of the Reserve west of SR 1. These soil types include Xerorthents, Santa Ynez fine sandy loam, and Sheridan coarse sandy loam. The portion of the Reserve east of the highway is dominated by Junipero-sur complex and Cieneba fine gravelly sandy loam (NRCS 2017).

Xerorthents typically occur on steep to extremely steep terrain and consist primarily of unconsolidated or weakly consolidated stony alluvium. Runoff is rapid and erosion hazards vary considerably over short distances. The Sheridan coarse sandy loam is well drained with medium to very rapid runoff and moderately rapid permeability.

Source: (c) 2012 Charles M. Bancroft

Trace fossil near Weston Beach in the Reserve

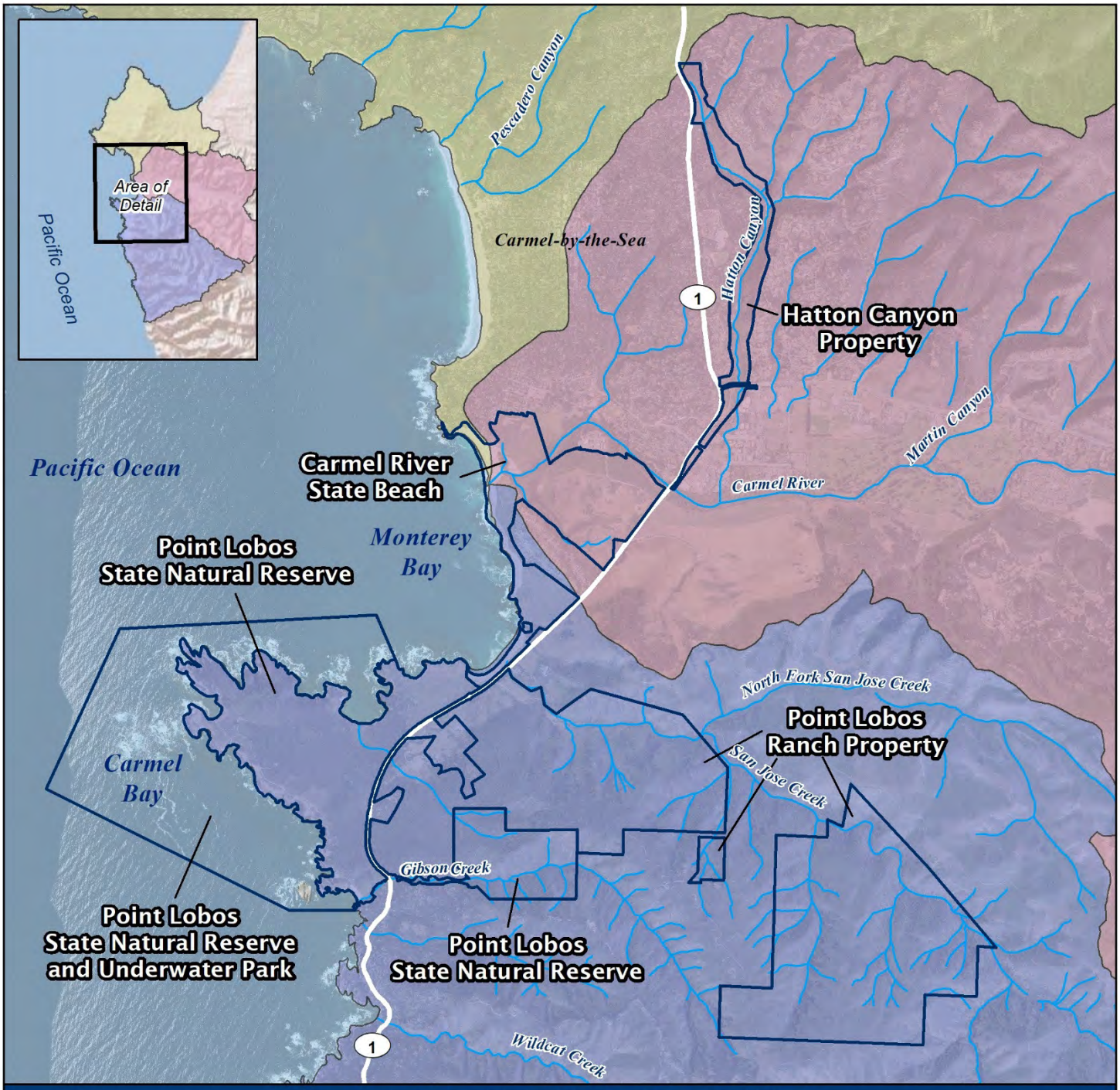
Paleontology

The Carmelo Formation within the Reserve contains plant and animal fossils, largely consisting of leaf fragments, pieces of carbonized wood, and seaweed. Fossils associated with this formation have been found in various locations, including numerous fossils near Gibson Beach. Trace fossils of many kinds are also a prominent feature along the southwestern shore of the Reserve between Weston Beach and Sea Lion Point (Bromley et al. 2002).

Hydrology, Water Quality, and Floodplains

Watersheds in the region include the Canyon Del Rey-Frontal Monterey Bay, Carmel River, and Big Sur River-Frontal Pacific Ocean watersheds (NRCS 2014) (Figure 2-6).

The Reserve is completely within the Big Sur River-Frontal Pacific Ocean watershed. The entire Big Sur River-Frontal Pacific Ocean watershed is more than 20,000 acres, and the Reserve comprises approximately 3 percent of that area. Only the immediate coastline of the Reserve and areas offshore are within the 100-year floodplain or 100-year floodplain for coastal areas (Figure 2-7). The surface waterways within the Reserve are Gibson Creek and its floodplain and two freshwater seeps in the northern portion of the Reserve. Surface water quality for the portions of Gibson Creek within the Reserve was fair-to-good during the 2003 monitoring of this creek (Swolgaard 2003).



Carmel Area State Parks General Plan

Watersheds

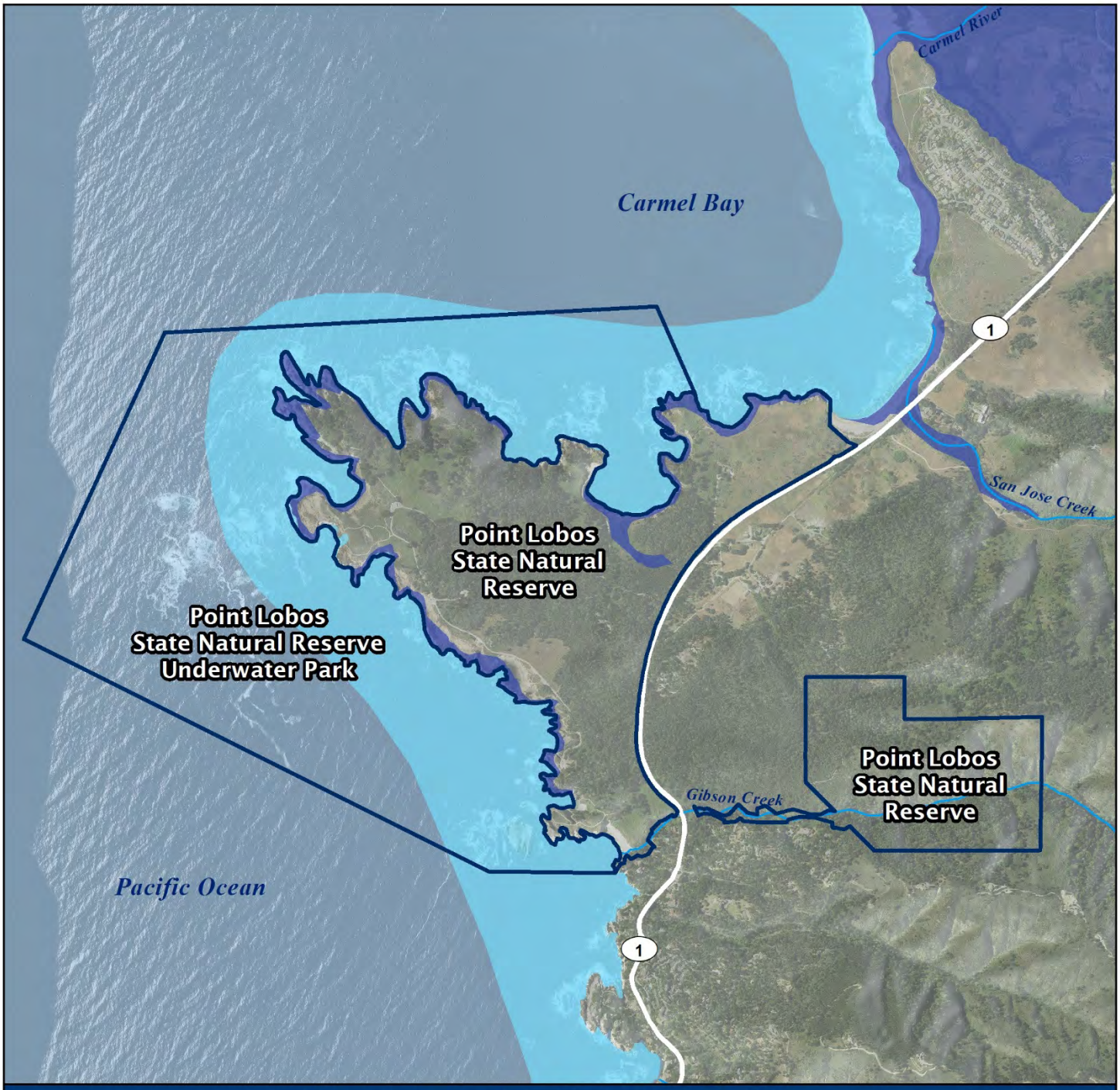
Legend

- Carmel Area State Parks
- Highway
- Creek/River
- Canyon Del Rey-Frontal Monterey Bay
- Carmel River
- Big Sur River-Frontal Pacific Ocean

Parcel boundaries are approximate and should not be considered legal descriptions.
Source: Data provided by CSP in 2013.
NAIP 2014 Aerial Imagery G13010017 01 064

0 2,000 4,000
Feet

Figure 2-6 Watersheds



Carmel Area State Parks General Plan

Floodplain Map of Point Lobos State Natural Reserve

Legend

- Carmel Area State Parks
- Highway
- Creek/River
- 100-year Floodplain
- 100-year Floodplain (Coastal Areas)

Parcel boundaries are approximate and should not be considered legal descriptions.
Source: Data provided by CSP in 2013.
NAIP 2014 Aerial Imagery G13010017 01 055

0 1,000 2,000
Feet

Figure 2-7 Floodplain Map of Point Lobos State Natural Reserve

Groundwater in the area primarily occurs in unconfined deposits in alluvial material. The groundwater basin slopes toward the Pacific Ocean.

Runoff from SR 1 is collected via double culverts that discharge runoff through the forested and coastal meadow upland zones into Whalers Cove. This runoff has caused erosion and silt flows into Whalers Cove impacting ocean water clarity.

Shoreline Conditions

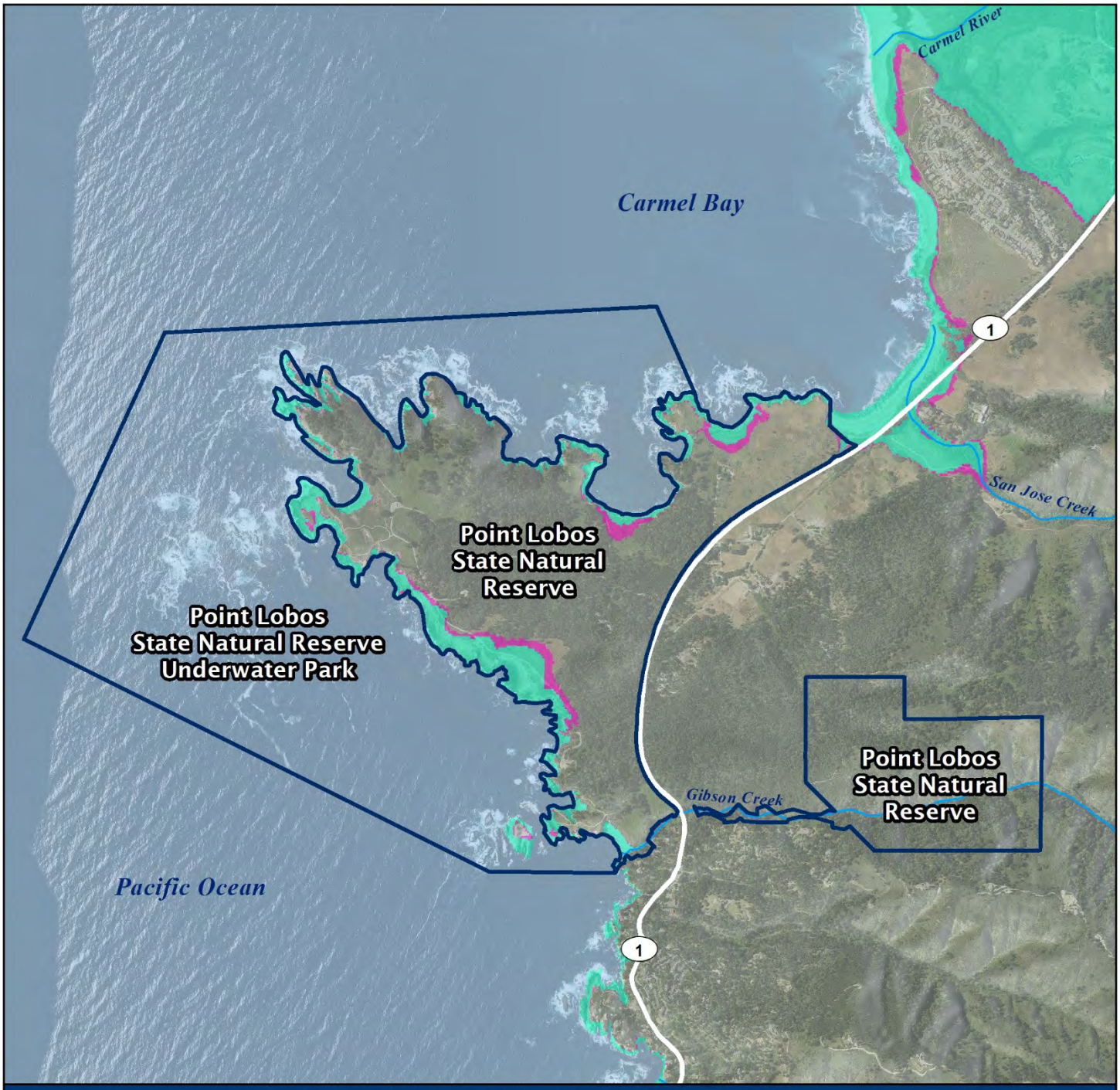
The Reserve's coastline includes exposed or protected rocky areas, pocket beaches, tidepools, and sheer cliffs. Many geologic features such as caves, islands, pinnacles, and low-lying rocks make up the Reserve's highly variable shoreline conditions (Caltrans 2004). Surface currents off the Reserve vary with the season. The predominant current is a southerly movement of cold water from the Gulf of Alaska. From August through November the current is close to the coasts of northern and central California. There is a significant area of upwelling off the coast at Sea Lion Point. This area is an extremely rich and highly productive marine ecosystem of statewide importance.

The Reserve underwater park is within a larger MPA managed by CDFW called Point Lobos SMR, which is 5.36 square miles. In addition, the Point Lobos SMCA extends seaward from the Point Lobos SMR and is 8.8 square miles (Clifton and Johnson 2010).

Sea Level Rise

It is anticipated that sea level rise caused by climate change will affect the Reserve in the future. The coastal edges along the Reserve are at risk of inundation, coastal erosion, and saltwater intrusion related to sea level rise and intensification of coastal storms (Figure 2-8).

Erosion of coastal bluffs may also result in deterioration or loss of upland bluff habitat, beach access, and the trails near the shoreline at the Reserve. Portions of the following trails could be affected by sea level rise: Moss Cove Trail, South Shore Trail, Sea Lion Point Trail, Granite Point Trail, and Bird Island Trail. In addition, sea level rise has the potential to affect Whalers Cove Road, Point Lobos Road, the Bird Island parking area, Whalers Cabin Museum and the storage area, restroom, and parking area at Whalers Cove, as well as parking areas along Point Lobos Road.



Carmel Area State Parks General Plan

Sea Level Rise at Point Lobos State Natural Reserve

Legend

- Carmel Area State Parks
- Highway
- Creek/River

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.
Source: Data provided by CSP in 2013 and Heberger and Herrera in 2009.
NAIP 2014 Aerial Imagery G13010017 01 065

0 1,000 2,000
Feet

Figure 2-8 Sea Level Rise at Point Lobos State Natural Reserve

Carmel River State Beach

Topography

The State Beach consists of north- to northwest-facing beach and lagoon backed by low coastal terraces. The elevation ranges from mean sea level to 100 feet (CSP 1988). The topography is relatively flat with slight undulations in the local dunes/beach.

Geology, Seismicity, and Soils

The State Beach is in the Salinian block of the Coast Ranges Geomorphic Province (CSP 1988). One major geologic feature, the Santa Lucia Granodiorite of Paleocene Age, dominates the State Beach. The Santa Lucia Granodiorite is approximately 93 million years old, comprises the bedrock basement at the Carmel River lagoon, and is a primary formation along the State Beach shoreline. Geologic hazards at the State Beach include landslides, rockfalls, seacliff retreat, liquefaction, tsunamis, and seismic shaking (CSP 1988).

The Cypress Point Fault extends from Carmel-by-the-Sea directly across the State Beach to Palo Corona Regional Park. Small to moderate earthquakes (i.e., magnitude 5.0 and below) are common in Monterey County. Although there are several fault zones in this area, none of them are designated as an Alquist-Priolo Earthquake Fault Zone (CSP 1979, 1988; TAMC 2009).

The State Beach is located within the Northern Coast Soil Region, which is characterized by coastal terraces and uplands. The three soil types with maximum coverage within the State Beach are Pico fine sandy loam, Narlon loamy fine sand, and coastal beaches (NRCS 2017). The Pico fine sandy loam soil type is typically well drained and has moderate rapid permeability with slow to medium runoff. "Coastal beaches" are mapped on narrow, sandy beaches. This soil type is partially or completely covered by water during high tides and storm surges. Permeability is high, and erosion hazard related to wind and wave action is high. Narlon soils consist of poorly drained soils that formed uplands in soft marine sediments.

The State Beach also has a dissected form of Xerorthents. This type of soil consists primarily of unconsolidated or weakly consolidated stony alluvium. Runoff is rapid and with erosion potential (CSP 1988).

Paleontology

The Carmelo and Temblor Formations adjacent to the State Beach contain plant and animal fossils, largely consisting of leaf fragments, pieces of carbonized wood, and seaweed. However, no fossils have been found in the three outcrops around Carmel Bay (Simpson 1972).

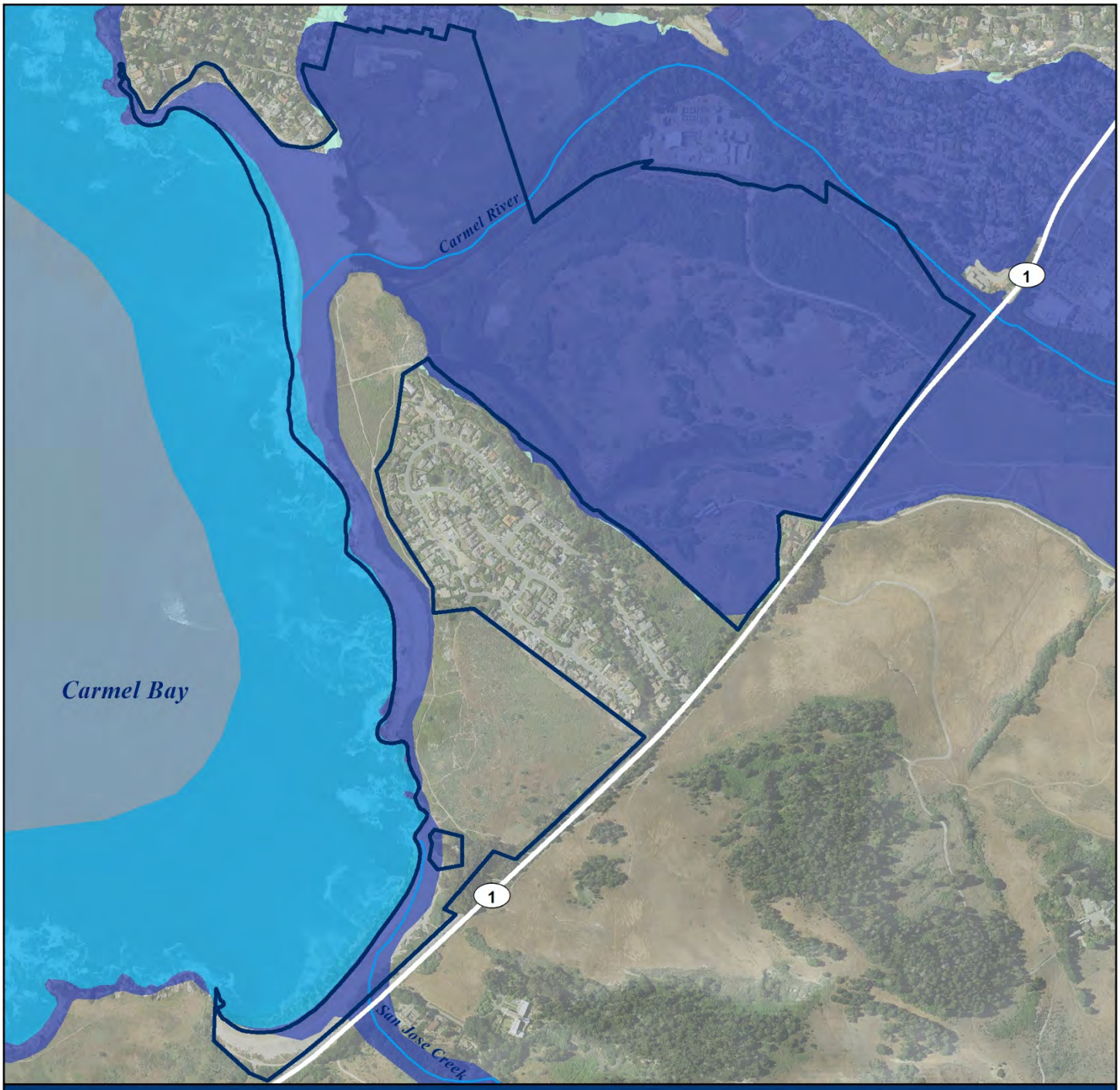
Hydrology, Water Quality, and Floodplains

The State Beach is within three watersheds: Canyon Del Rey-Frontal Monterey Bay, Carmel River, and Big Sur River-Frontal Pacific Ocean, and comprises a small percentage (i.e., 1 percent or less) of each of these watersheds (Figure 2-6). The headwaters of the Carmel River watershed are located within the northern portion of the Ventana Wilderness of Los Padres National Forest. Carmel River is the primary hydrologic feature within the State Beach. Flow in the Carmel River is partially regulated by the upstream Los Padres Dam. Ninety percent of the Carmel River annual discharge occurs from January to April; peak flow can reach 8,600 cubic feet per second during that period. The lower reach of San Jose Creek and its associated floodplain are also main hydrologic features within the State Beach (CSP 1988).

Carmel River's surface water comes from four sources: direct run-off from rainfall, releases from the dam, seeps and springs of upland groundwater, and return-flow from urban areas (The Watershed Institute 2004). During summer low flow periods, the lagoon is supplied almost entirely by groundwater, and groundwater from an onsite well is periodically used to increase water levels and regulate water temperature in the lagoon during summer months.

Most of the State Beach is within the 100-year floodplain or 100-year floodplain for coastal areas (Figure 2-9). This area has experienced extensive flooding, most notably in 1995, 1998, and 2008. Surface water flows from the Carmel River can flood most of the Odello West field (CSP 1979). The Carmel River Lagoon Restoration Project has added significant flood protection to residential neighborhoods north of the lagoon. Levees have been notched east and west of SR 1 to relieve floodplain constriction; however, SR 1 remains a constriction point within the floodplain (The Watershed Institute 2004).

The Monterey County Resource Management Agency has historically conducted sandbar management activities including mechanical breaching of the Carmel River mouth at the State Beach to mitigate flooding impacts to low lying residential structures along the northern edges of the lagoon and this activity continues to date. After the rainy season (April or May), sandbar management may include closure of the sandbar (if needed) to maintain adequate water levels in the lagoon over the summer months.



Carmel Area State Parks General Plan

Floodplain Map of Carmel River State Beach

Legend

- Carmel Area State Parks
- Highway
- Creek/River
- 100-year Floodplain
- 100-year Floodplain (Coastal Areas)
- 500-year Floodplain

0 500 1,000

Feet

Parcel boundaries are approximate and should not be considered legal descriptions.
Source: Data provided by CSP in 2013.
NAIP 2014 Aerial Imagery G13010017 01 056

Figure 2-9 Floodplain Map of Carmel River State Beach

The lower reach of the lower Carmel River floodplain at the former Odello artichoke fields (Odello East and West fields) was cut off with the installation of a river levee system and with the construction of SR 1. The BSLT, with support from the County of Monterey, Caltrans, and CSP, will restore 23 acres of the historic floodplain within the historic Odello West field owned by CSP. This effort will restore the natural hydrological process in the lower floodplain area, as well as enhance riparian habitat.

The Carmel River has experienced extensive erosion and sedimentation, while Carmel Bay has sustained a notable decline in water clarity.

Water quality in the Carmel River lagoon varies throughout the year and is driven by changes in local weather, lagoon volume, stream flow, wave and tidal conditions, and whether the sandbar separating the river from the ocean is open or closed. During critically dry months, temperature and dissolved oxygen are monitored and managed to maintain water quality for south-central California coast steelhead.

Effluent from the CAWD treatment plant is recycled for use at local golf courses and is also discharged into the open ocean offshore of Carmel River Beach.

Shoreline Conditions

The State Beach has approximately 1.5 miles of shoreline that borders Carmel Bay including Carmel River Beach, Middle Beach, and Monastery Beach. Shoreline conditions along Carmel Bay are characterized by alternating rocky cliffs and points, sandstone areas, and extensive granitic sand beaches.

The submarine lands adjacent to the State Beach are in the Carmel Bay SMCA. Monastery Beach is also adjacent to the Point Lobos SMR. The Carmel Bay SMCA includes 6.7 miles of coastline and 2.12 square miles, from Granite Point north to Pescadero Point. Granite-walled Carmel Canyon, which dominates the submarine area of Carmel Bay, originates about 0.25-mile from shore near Monastery Beach (Caltrans 2004). Carmel Pinnacles SMR is also offshore from the State Beach and is a 0.53-square mile area of submerged granitic pinnacles and spires that is commonly visited by scuba divers. There is no fishing allowed within either of the state marine reserves, and recreational take of finfish and limited commercial fishing is allowed within the marine conservation area (Clifton and Johnson 2010). Carmel Bay is also an area of significant deep-water upwelling that makes the area nutrient rich and draws many species to the area (CSP 1979).

Sea Level Rise

Because of the low-lying elevation of the State Beach, it is anticipated that sea level rise will greatly affect this area (Figure 2-10). Sea level rise is anticipated to impact water quality at the Carmel River lagoon, erode the barrier beach resulting in more frequent breaching of the Carmel River to the ocean and impacting salmonids, and could result in changes in groundwater quality via more saline groundwater. Sea level rise also has the potential to affect all facilities within the State Beach, as shown on Figure 2-10.

Point Lobos Ranch Property

Topography

Point Lobos Ranch is within the Santa Lucia Mountains, which are a north-west trending range. Elevations range from approximately 6 feet above mean sea level near San Jose Creek and SR 1 to over 1,800 feet in the southeast corner of the property. The area's geologic history of uplift, erosion, and subsidence has resulted in the property's steep terrain.

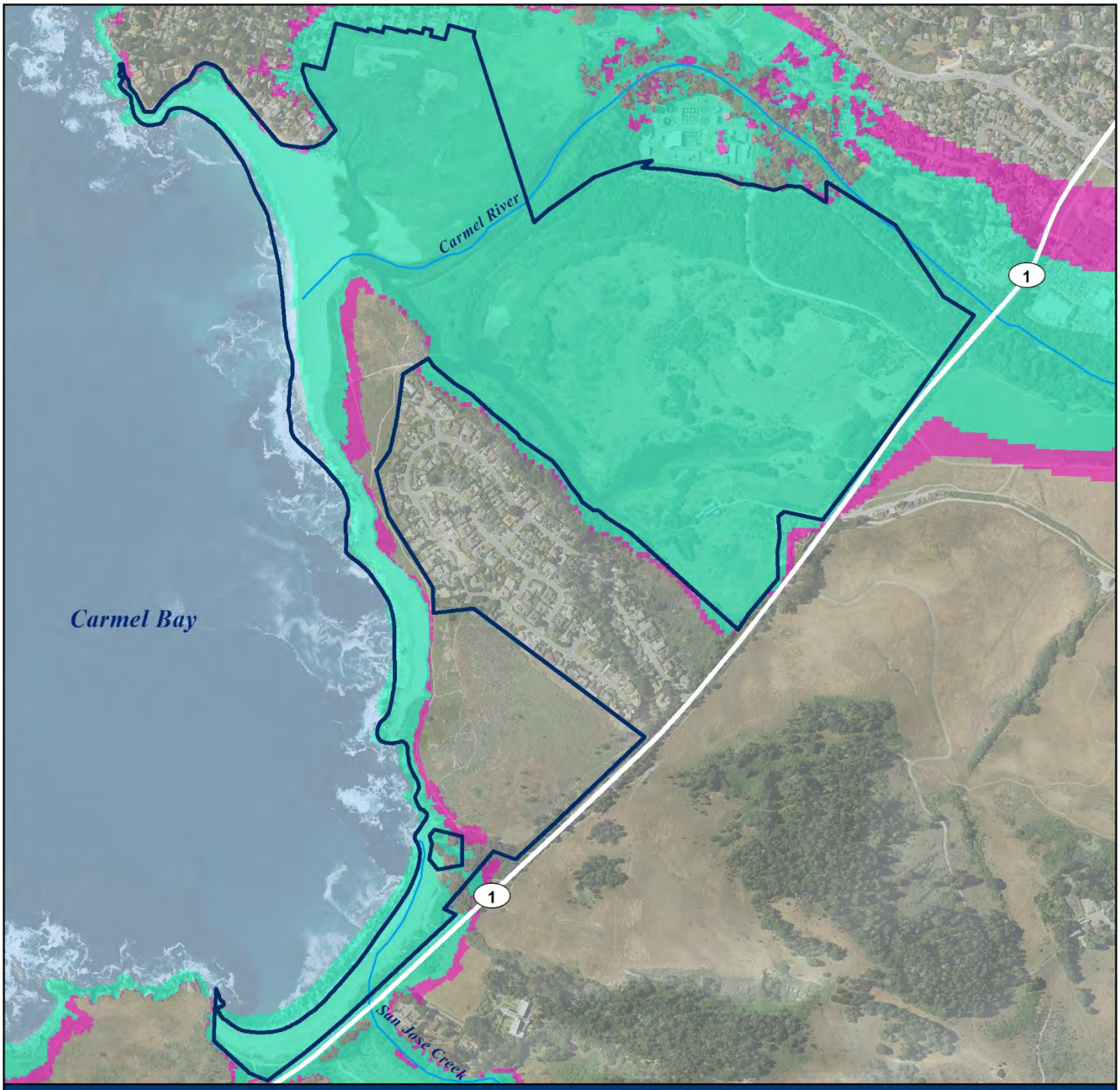
View of San Jose Creek Canyon within Point Lobos Ranch

Geology, Seismicity, and Soils

Because of the steep nature of Point Lobos Ranch topography, the area is prone to landslides. There have been landslides within the northeast corner of Point Lobos Ranch. In addition, there was a major older landslide above the north fork of San Jose Creek that measured 3,500 feet by 1,400 feet. Other potential geologic hazards identified for Point Lobos Ranch 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).

Hydrology, Water Quality, and Floodplains

Point Lobos Ranch is completely within the Big Sur River-Frontal Pacific Ocean watershed and comprises just over 6 percent of the total watershed area (Figure 2-6). San Jose Creek is the largest waterway within the watershed and 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. A small portion of Gibson Creek is also within Point Lobos Ranch. 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 Point Lobos Ranch that is within the 100-year floodplain. Structures located within the San Jose Creek floodplain include a barn and two residences (Figure 2-11). The third residence and shed in the San Jose Creek area are adjacent to the 100-year floodplain. No structures are identified within the Gibson Creek floodplain.



Carmel Area State Parks General Plan

Sea Level Rise at Carmel River State Beach

Legend

- Carmel Area State Parks
- Highway
- Creek/River

Area at risk from a 100-year coastal flood event

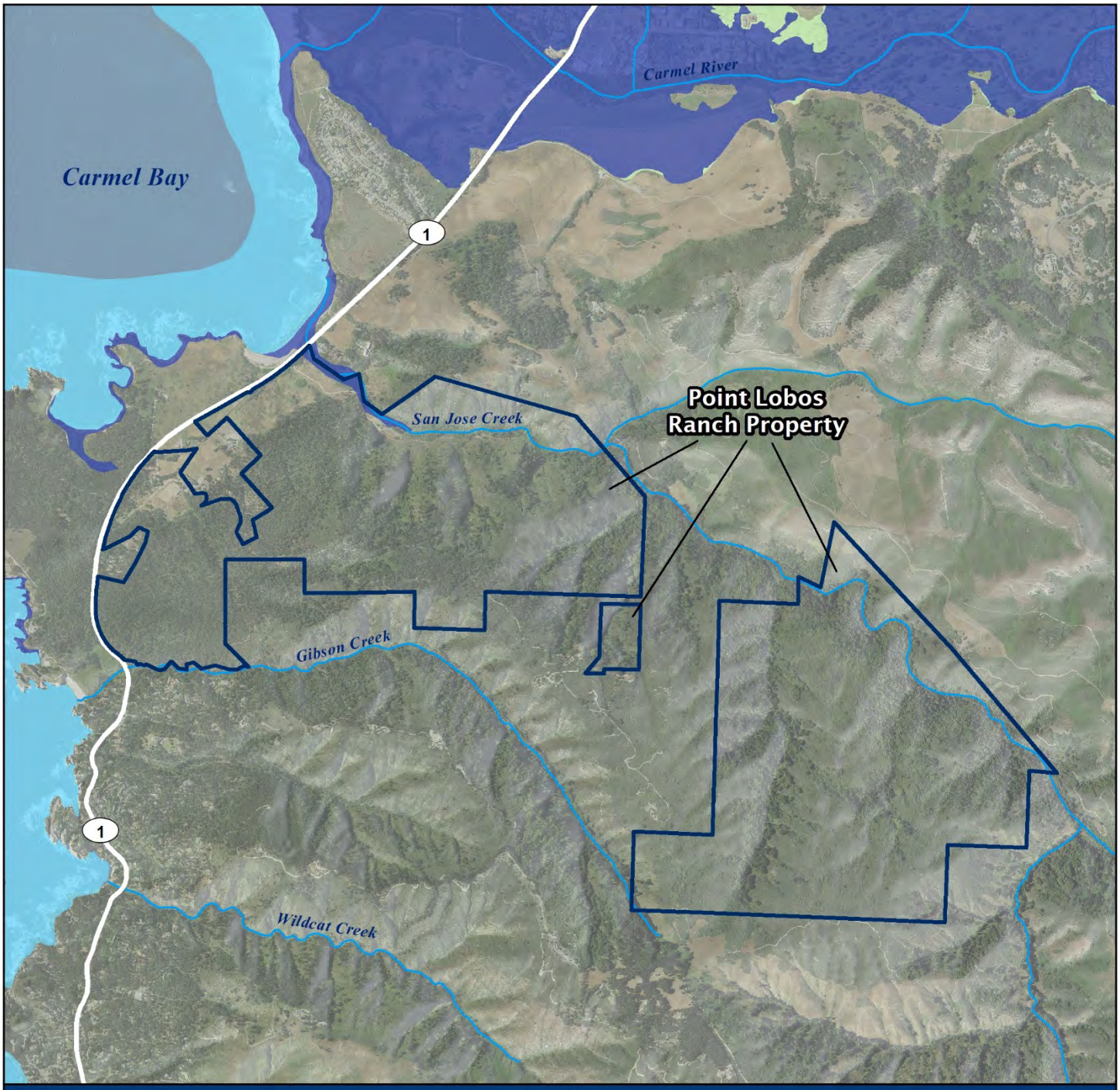
- Current
- With a 1.4 meter sea level rise

0 500 1,000

Feet

Parcel boundaries are approximate and should not be considered legal descriptions.
Source: Data provided by CSP in 2013 and Heberger and Herrera in 2009.
NAIP 2014 Aerial Imagery G13010017 01 066

Figure 2-10 Sea Level Rise at Carmel River State Beach



Carmel Area State Parks General Plan

Floodplain Map of Point Lobos Ranch Property

Legend

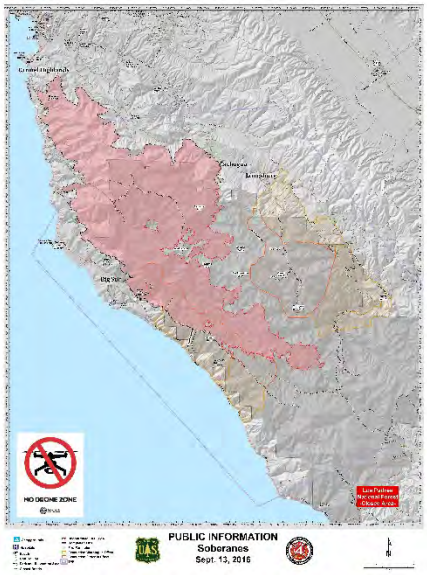
- Carmel Area State Parks
- Highway
- Creek/River
- 100-year Floodplain
- 100-year Floodplain (Coastal Areas)
- 500-year Floodplain

0 1,250 2,500

Feet

Parcel boundaries are approximate and should not be considered legal descriptions.
Source: Data provided by CSP in 2013.
NAIP 2014 Aerial Imagery G13010017 01 057

Figure 2-11 Floodplain Map of Point Lobos Ranch Property



Source: U.S. Forest Service

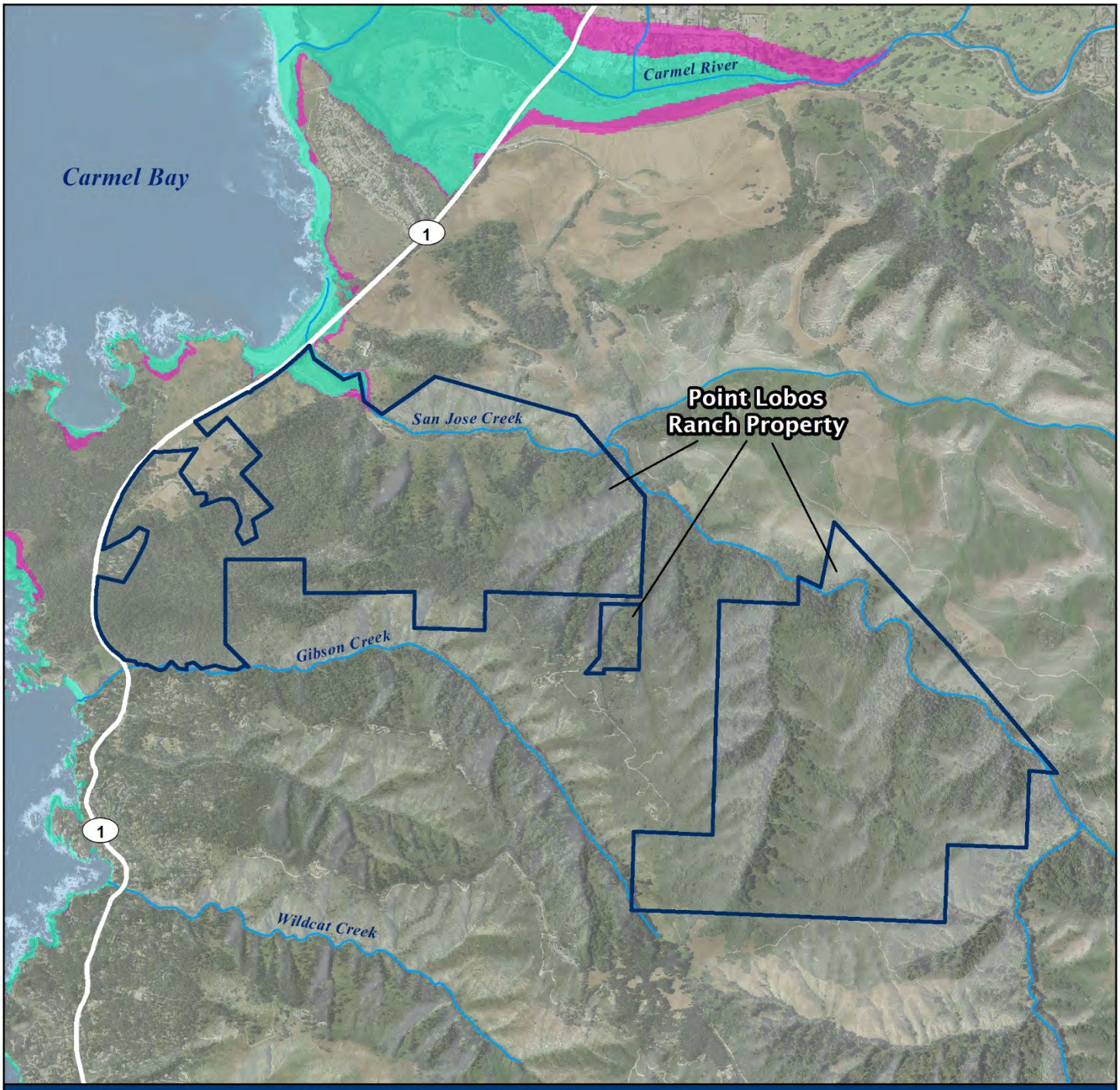
Soberanes Fire map, September 2016 - this fire touched eastern Point Lobos Ranch

Moderate levels of sedimentation have been observed in San Jose Creek, mostly caused by a few bank erosion sites, roads, and road crossings. 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). The area burned by the Soberanes fire in 2016 is also contributing sediment to San Jose Creek. Sedimentation and stream embeddedness is being studied by California State University Monterey Bay (CSUMB).

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. Saltwater intrusion is occasionally a problem for groundwater within Point Lobos Ranch (Monterey County Planning Department 1985).

Sea Level Rise

The northwestern edge of Point Lobos Ranch near San Jose Creek along SR 1 is at a high risk of inundation from 100-year coastal storm events and estimated 1.4-meter future sea level rise (Figure 2-12). With sea level rise, a significant portion of the lower watershed from SR 1 to the staff housing at San Jose Creek has the potential to become inundated, making access difficult; however, the structures within Point Lobos Ranch are projected to be outside of the inundation area from a 100-year coastal storm and the 1.4-meter future sea level rise inundation area (Figure 2-12).



Carmel Area State Parks General Plan

Sea Level Rise at Point Lobos Ranch Property

Legend

- Carmel Area State Parks
- Highway
- Creek/River

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.
Source: Data provided by CSP in 2013 and Heberger and Herrera in 2009.
NAIP 2014 Aerial Imagery G13010017 01 067

0 1,250 2,500
Feet

Figure 2-12 Sea Level Rise at Point Lobos Ranch Property

Hatton Canyon Property

Topography

Topography, habitats, and adjacent residence at Upper Hatton Canyon

The northern portion of Hatton Canyon encompasses a narrow canyon that is located at a lower elevation than the surrounding neighborhoods. The topography within Hatton Canyon is highly variable, ranging from the flat bottomlands near the mouth of the Carmel River in the southern portion to the steep hillsides of the Carmel Hills in the northern portion. Elevations within Hatton Canyon range from approximately 610 feet, at the northeastern edge to approximately 20 feet at the southern end of the property near the Carmel River.

Geology and Seismicity

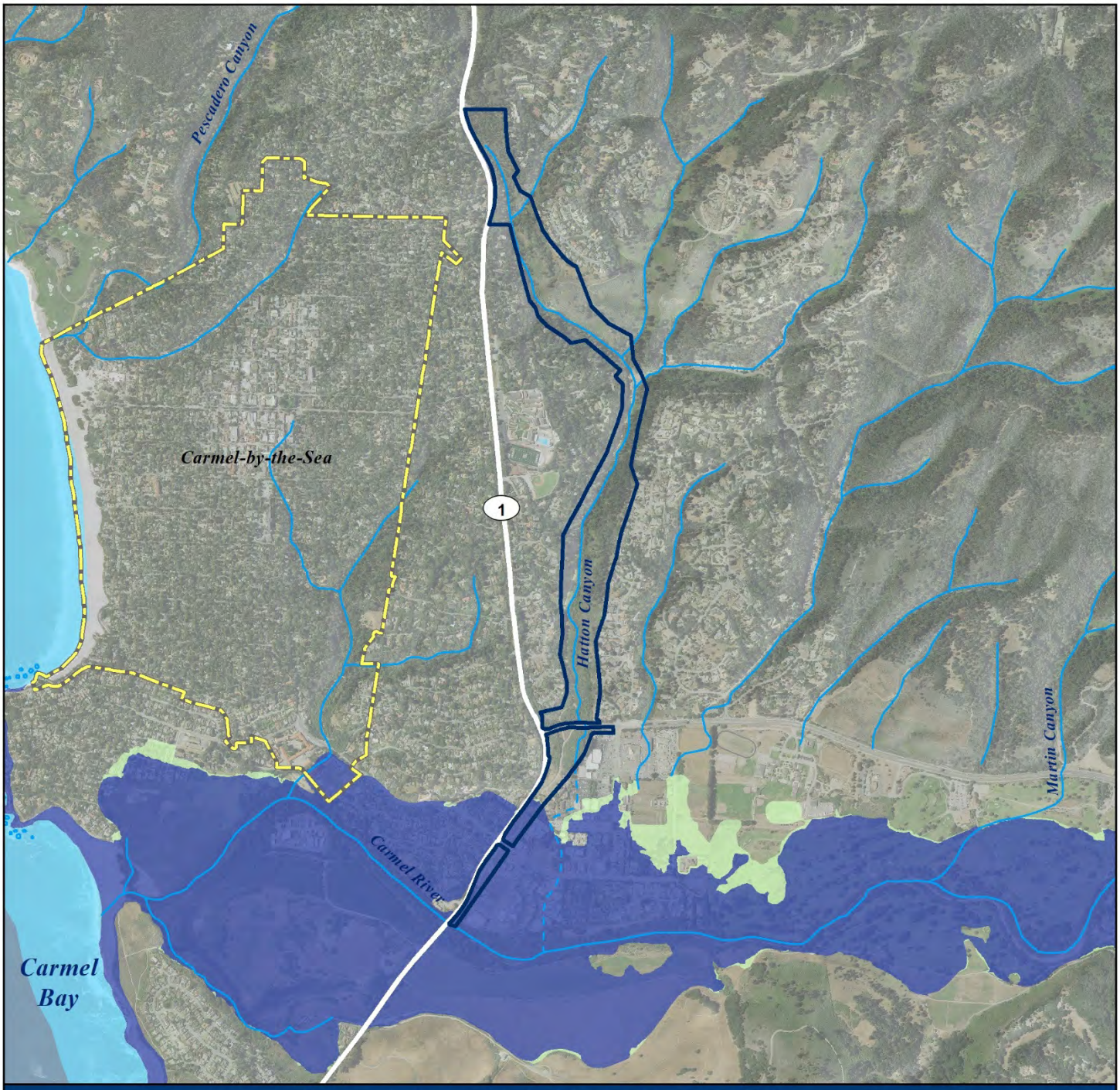
The seasonal drainage within Hatton Canyon eroded down through the Pleistocene marine terraces that lie along the coast of the Pacific Ocean into the underlying Monterey formation. Portions of the canyon are in areas designated as having a high susceptibility to landslide and erosion. These areas are primarily in the southern portion of Hatton Canyon (TAMC 2009). The potentially active Hatton Canyon Fault consists of a group of northwest-striking faults that extend from Carmel Valley Road northwest for approximately seven miles.

Hydrology, Water Quality, and Floodplains

Hatton Canyon is almost completely within the Carmel River watershed, with only a very small portion (i.e., less than 0.5 acre) within the Canyon Del Rey-Frontal Monterey Bay watershed (Figure 2-6). Hatton Canyon comprises approximately 0.6 percent of the Carmel River watershed.

The primary hydrologic feature within Hatton Canyon is a seasonal drainage that conveys water from upland runoff and sheetflow through a combination of confined channels, shallow wetlands, and culverts and empties directly into the Carmel River. Another small drainage joins the main seasonal drainage in the northern portion of Hatton Canyon from the north.

The southern portion of Hatton Canyon from just north of Rio Road to the Carmel River is designated as 100-year floodplain, and is subject to flooding during storms (Figure 2-13). Sedimentation is the primary water quality issue within Hatton Canyon and is attributed to high erosion soils and to the existing unpaved service road in the northern portion of the property.



Carmel Area State Parks General Plan

Floodplain Map of Hatton Canyon Property

Legend

- Carmel Area State Parks
- City Limits
- Highway
- Creek/River
- Creek (underground)
- 100-year Floodplain
- 100-year Floodplain (Coastal Areas)
- 500-year Floodplain

0 1,000 2,000

Feet

Parcel boundaries are approximate and should not be considered legal descriptions.
Source: Data provided by CSP in 2013.
NAIP 2014 Aerial Imagery G13010017 01 058

Figure 2-13 Floodplain Map of Hatton Canyon Property

Sea Level Rise

The portion of Hatton Canyon south of Rio Road near the Carmel River is at a high risk of inundation from a 100-year coastal storm event and estimated 1.4-meter future sea level rise (Figure 2-14). As shown on Figure 2-14, much of the Marathon Flats area, including the multi-purpose trail within this area, are at risk of being inundated during a 100-year coastal storm event and with a 1.4-meter future rise in sea level.

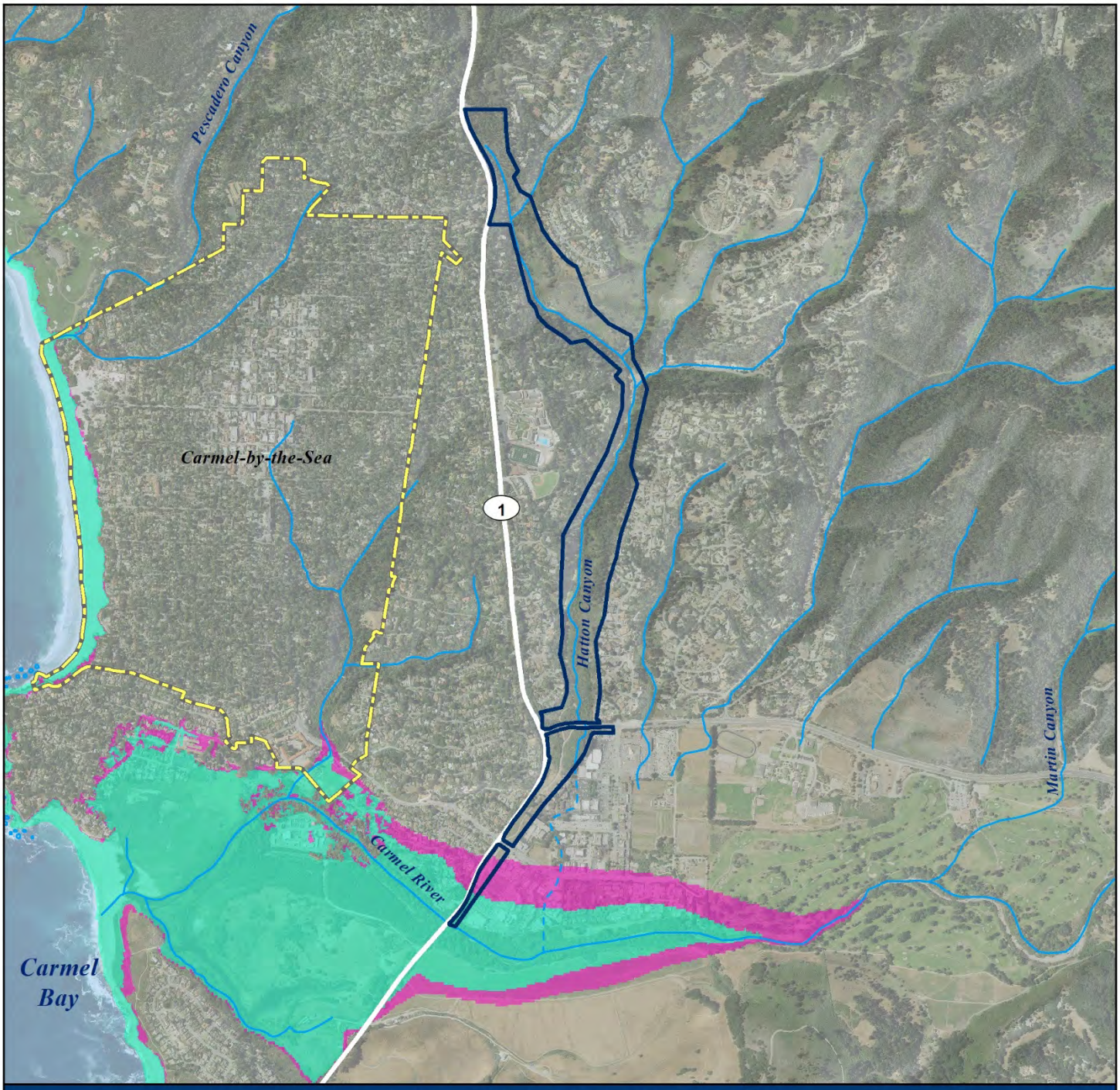
2.3.2 Natural Resources

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 plant 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).

Point Lobos State Natural Reserve

Plant Life

The Reserve 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 (Figure 2-15). Distinctive forest types within the Reserve include Monterey pine, Monterey cypress, and Gowen cypress. The Monterey pine forest is found naturally in only three places in the world (Año Nuevo, Monterey, Cambria). The "core" population exists on the Monterey Peninsula (TMPFW 2011). The Monterey cypress and Gowen cypress forests naturally occur in only two locations each on the Monterey Peninsula (TMPFW 2011, Barbour 2007, USFWS 2004). Coastal prairie is quickly dwindling throughout the state, due to development and invasion by non-native annual grasses and to natural successional processes such as the native forest and coastal scrub species that were historically kept at bay by grazing and fire (Ford and Hayes 2007). The Monterey Peninsula also contains maritime chaparral, an extremely sensitive and dwindling community (TMPFW 2011). Beaches and rocky shoreline also provide habitat for many sensitive species, as do wetlands and streams.



Carmel Area State Parks General Plan

Sea Level Rise at Hatton Canyon Property

Legend

- Carmel Area State Parks
- City Limits
- Highway
- Creek/River
- Creek (underground)

Area at risk from a 100-year coastal flood event

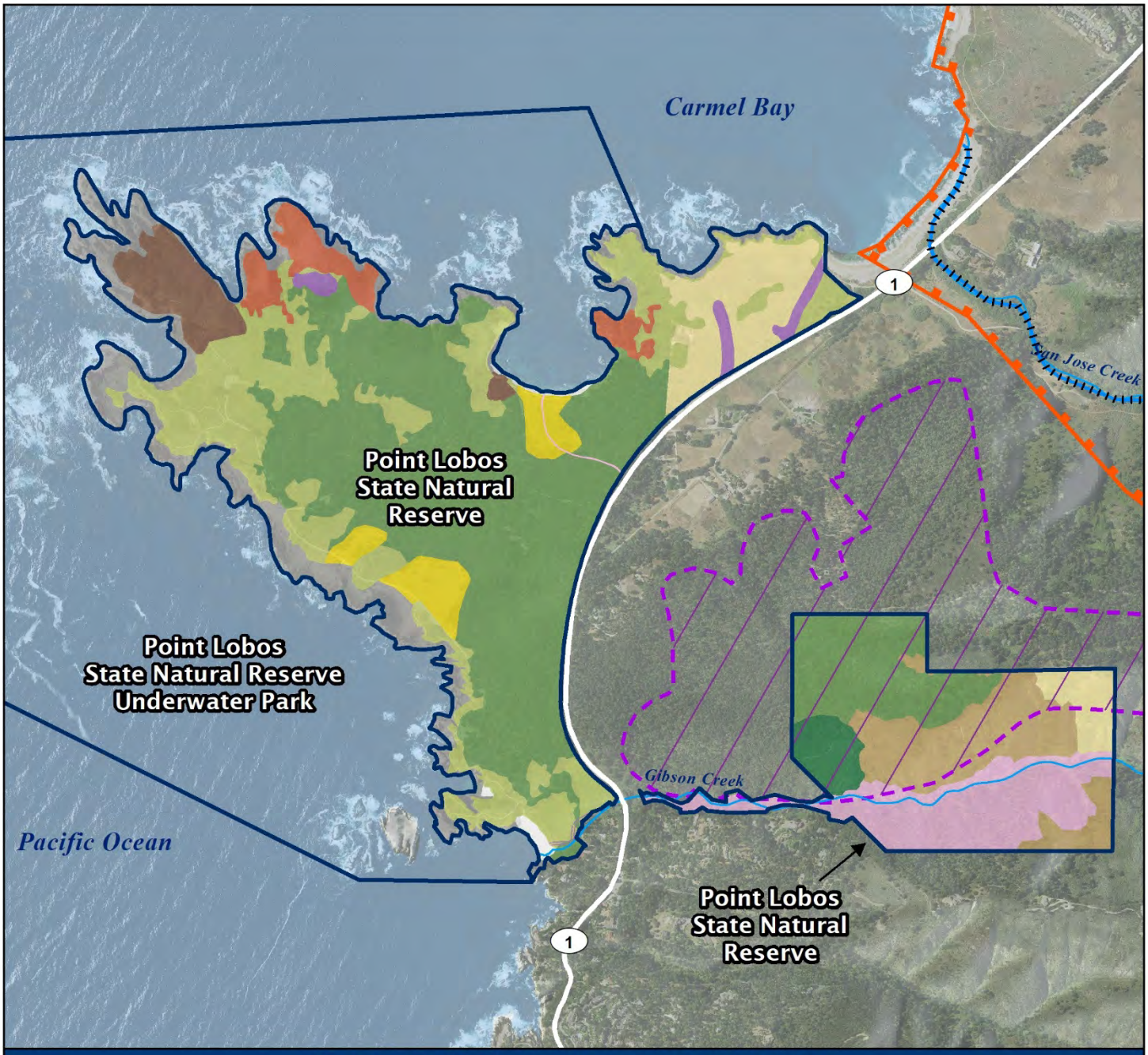
- Current
- With a 1.4 meter sea level rise

0 1,000 2,000

Feet

Parcel boundaries are approximate and should not be considered legal descriptions.
Source: Data provided by CSP in 2013 and Heberger and Herrera in 2009.
NAIP 2014 Aerial Imagery G13010017 01 068

Figure 2-14 Sea Level Rise at Hatton Canyon Property



Carmel Area State Parks General Plan

Vegetation Communities and Other Landscapes at Point Lobos State Natural Reserve

Legend

- Carmel Area State Parks
- Highway
- Creek

Vegetation Communities

- Beach
- Coastal Prairie
- Coastal Scrub
- Central Maritime Chaparral
- Gowen Cypress Forest
- Freshwater Wetland
- Monterey Cypress Forest
- Monterey Pine Forest
- Mixed Monterey Pine-Cypress Forest
- Grassland
- Riparian

Other

- Rocky Shore

Critical Habitat

- Yadon's rein orchid
- California red-legged frog
- Steelhead

0 750 1,500

Feet

Parcel boundaries are approximate and should not be considered legal descriptions.
Source: Data provided by CSP in 2013 and downloaded from USFWS in 2016.
NAIP 2014 Aerial Imagery G13010017 01 069

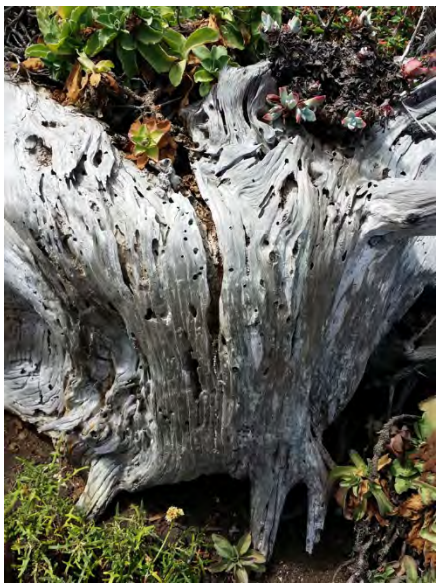
Figure 2-15 Vegetation Communities and Other Landscapes at Point Lobos State Natural Reserve

Monterey Pine Forest

Monterey pine (*Pinus radiata*) stands are widely distributed across the Reserve and vary in age, degree of recruitment, understory density, species composition, and structure (Patterson 1995). The dominant trees are Monterey pine and coast live oak (*Quercus agrifolia* var. *agrifolia*). Lace lichen (*Ramalina menziesii*) is frequently found hanging from the limbs of the pine and oak trees where openings in the canopy provide some light. The understory consists of low-growing shrubs and openings of duff and grass.

Monterey Cypress Forest

Monterey cypress (*Hesperocyparis macrocarpa*) forest supports pure stands of Monterey cypress, which is endemic to the Monterey area. The only remaining natural stands of Monterey cypress occur in the Reserve and to the north along the coast (in the Pebble Beach vicinity) (USFWS 2004, CSP 1979, Barry et al. 1977). Mixed Monterey pine and cypress forest is found in three locations along the headlands as well. Monterey cypress stands show low recruitment and are moderately dense with trees up to 20 meters tall in sheltered locations and shorter, wind pruned trees in areas more exposed to constant onshore winds and salt spray (Patterson 1995). The understory consists of very low vegetative cover in denser areas and supports sparse dwarf shrubs and herbs in more open areas.



Weathered cypress stump and dudleya

Gowen Cypress Forest

One of only two native populations in the world of Gowen cypress (*Hesperocyparis goveniana*) is present in the Reserve property east of SR 1. A dwarf woodland of stunted Gowen cypress trees grows on poor soil with woollyleaf manzanita (*Arctostaphylos tomentosa*), an uncommon species of Monterey manzanita (*Arctostaphylos montereyensis*), and sandmat manzanita (*Arctostaphylos pumila*). Larger and taller Gowen cypress trees are present on the more fertile soils surrounding the dwarf woodland where they intergrade with the Monterey pine forest. These areas share many of the same shrub and herbaceous species.

Coastal Scrub

Coastal scrub is a variable plant community that is widely dispersed throughout the Reserve on exposed, relatively steep slopes. Shrubs may be mat-like, prostrate, or upright, reaching up to 2 meters in height and may be dense or interspersed with grassy openings (Patterson 1995). Dominant species include coyote brush (*Baccharis pilularis*), mock heather (*Ericameria ericoides*), blue blossom (*Ceanothus thyrsiflorus*), California sagebrush (*Artemisia californica*), poison oak (*Toxicodendron diversilobum*), sticky monkeyflower (*Diplacus aurantiacus* var. *aurantiacus*), California coffeeberry

(*Frangula californica*), bush lupine (*Lupinus arboreus*), Douglas' silver lupine (*L. albifrons* var. *douglasii*), and seacliff (or wild) buckwheat (*Eriogonum parvifolium*).

Central Maritime Chaparral

Central maritime chaparral is present in the Gowen cypress forest within the Reserve east of SR 1, and is found on sandy, dry soils above Gibson Creek. Central maritime chaparral is found within the coastal fog belt from Monterey County to Santa Barbara County. Dominant species include woollyleaf manzanita, Monterey manzanita, golden chinquapin (*Chrysolepis chrysophylla*), scrub oak (*Quercus dumosa*), California huckleberry (*Vaccinium ovatum*), and chamise (*Adenostoma fasciculatum*).

Coastal Prairie

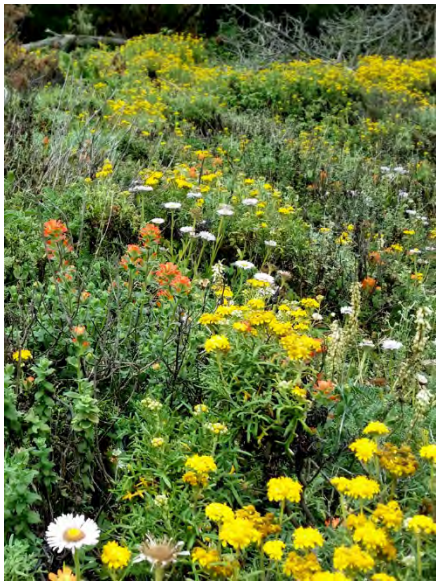
Coastal prairie is characterized by perennial grasses and forbs, with variable species composition reflecting local differences in soil moisture (Patterson 1995). At the Reserve, coastal prairie exists at Mound Meadow and Carmelo Meadow. The coastal prairie at the Reserve is one of the southernmost examples of north coastal prairie (Ford and Hayes 2007), containing unique species compositions and soil moisture relationships compared to the more northerly examples of this plant community (CSP 1979). Mound Meadow has been free from livestock grazing longer than any other prairie community in California (CSP 1979, Barry et al. 1977). Both meadows exhibit mima mound micro topography, with the mounds supporting bunchgrasses and prostrate shrubs that prefer drier conditions and the intermounds supporting grasses and herbs that tolerate more moist and saline conditions (Patterson 1995, DFG 1994, Barry et al. 1977). Sensitive species found in the coastal prairie habitat include pink johnny-nip (*Castilleja ambigua* ssp. *insalutata*) and fragrant fritillary (*Fritillaria liliacea*).

Grasslands

Grasslands are present in Hudson Meadow and are dominated by non-native annual and perennial grasses. The grasslands are being colonized by native woody shrubs, such as coyote brush and Monterey pines (CSP 2010a). Dominant species include Harding grass (*Phalaris aquatica*), velvet grass (*Holcus lanatus*), wild oats (*Avena sativa, A. barbata*), poison hemlock (*Conium maculatum*), soft chess (*Bromus hordeaceus*), sheep sorrel (*Rumex acetosella*), fiddle dock (*R. crispus*), ripgut brome (*Bromus diandrus*), barley species (*Hordeum brachyantherum, H. jubatum* ssp. *jubatum, H. marinum* ssp. *gussoneanum, H. murinum* ssp. *leporinum*), and field mustard (*Brassica rapa*) in drier sites; and perennial ryegrass (*Festuca perennis*), annual bluegrass (*Poa annua*), rabbits-foot grass (*Polypogon monspeliensis*), and silver hair grass (*Aira caryophyllea*) in moister areas (CNPS 2012a, Barry et al. 1977).

Beaches

Beaches support strand vegetation, which is made up of sparsely distributed plants which are usually prostrate and tolerant of wind, sand, and dry soil conditions (Barry et al. 1977). Dominant plant species include beach bur (*Ambrosia chamissonis*), sea fig (*Carpobrotus chilensis*), golden yarrow (*Eriophyllum confertiflorum*), and seaside daisy (*Erigeron glaucus*) (CNPS 2012a, Barry et al. 1977).



Indian paintbrush, seaside daisy, and lizard tail along the North Shore Trail in the Reserve

Freshwater Wetlands

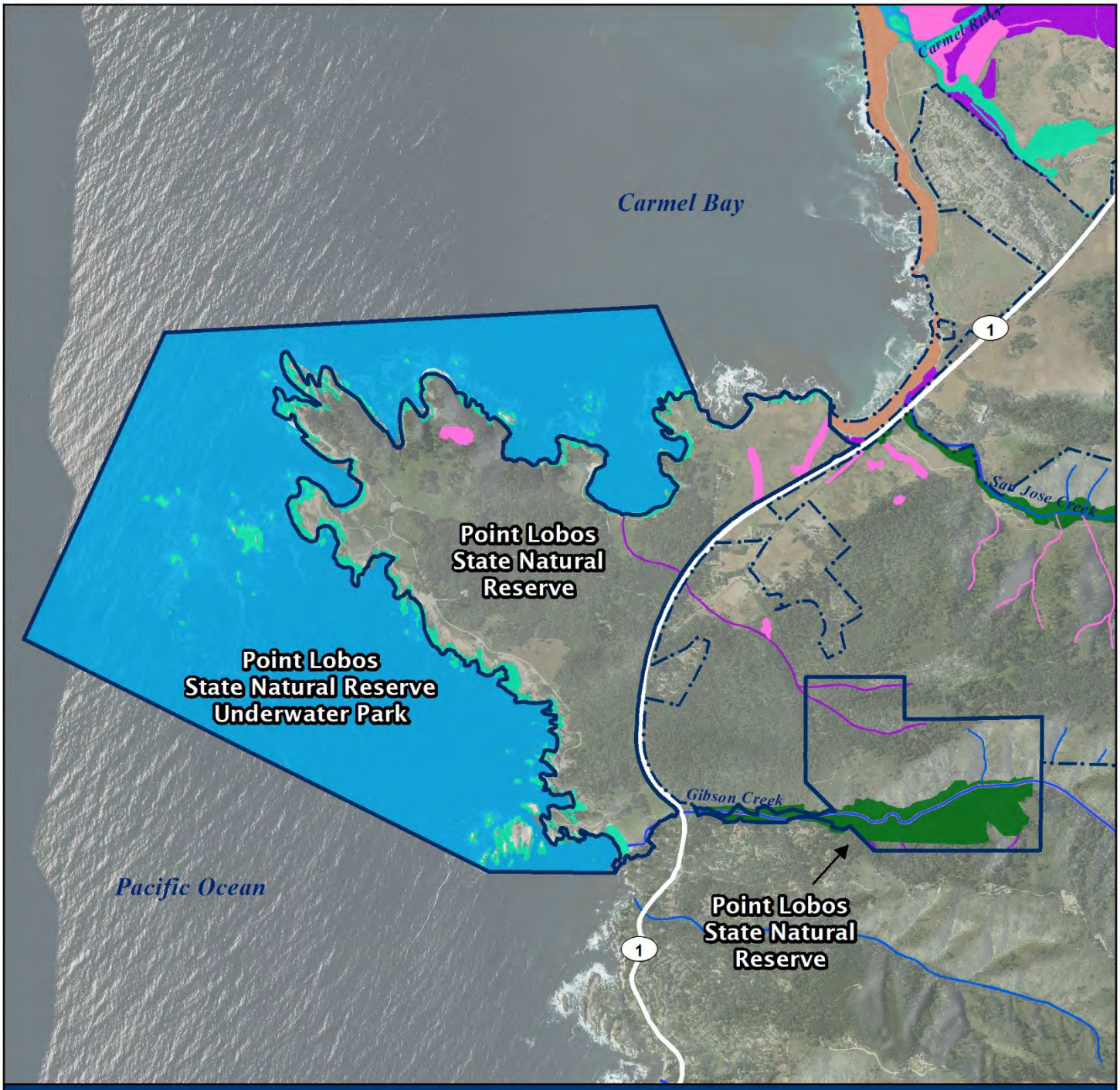
Three areas within the portion of the Reserve west of SR 1 support freshwater seeps – two north of the Hudson House and one near Whalers Knoll. Freshwater seeps are a type of wetland (Figure 2-16). Plants associated with the freshwater seeps at the Reserve include sedges (*Carex* sp.), rushes (*Juncus mexicanus, J. hesperius, J. patens, J. xiphioides*), Pacific silverweed (*Potentilla anserina* ssp. *pacifica*), fennel (*Foeniculum vulgare*), annual beardgrass (*Polypogon monspeliensis*), prickly ox-tongue (*Helminthotheca echioides*), dovefoot geranium (*Geranium molle*), poison hemlock, soft chess, shortpod mustard (*Hirschfeldia incana*), field mustard, and scarlet pimpernel (*Anagallis arvensis*) (CNPS 2012a, Patterson 1995). Freshwater wetlands are also present along many of the drainages within the Gowen cypress forest east of SR 1.

Riparian

Riparian vegetation is present along a small unnamed drainage bisecting Carmelo Meadow and along Gibson Creek. Shrubs, mainly marsh baccharis (*Baccharis glutinosa*), dominate the drainage in Carmelo Meadow. Herbs dominate the vegetation along Gibson Creek west of SR 1, including common reed grass (*Phragmites australis*) and giant wildrye (*Elymus condensatus*). Riparian areas at the Reserve are considered sensitive natural communities and qualify as wetlands.

Rocky Shore

The rocky shoreline is the transition zone between marine and terrestrial habitats. Many species of algae and marine animals can grow here (described under Aquatic Life, below), but vascular plants are typically absent. This landscape is considered part of the marine wetlands present along the shoreline. During low tides, this area can become crowded with park visitors exploring tidepools.



Carmel Area State Parks General Plan

Wetlands within Point Lobos State Natural Reserve

Legend

- Point Lobos State Natural Reserve
- Other Carmel Area State Park Units
- Highway
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland*
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Riparian
- Riverine
- Sandy Beach/Upper Intertidal*

*Adapted by CSP (2017)

Parcel boundaries are approximate and should not be considered legal descriptions.
Source: Data provided by CSP in 2013 and downloaded from USFWS in 2016.
NAIP 2014 Aerial Imagery G13010017 01 073

0 1,000 2,000
Feet

Figure 2-16 Wetlands within Point Lobos State Natural Reserve

Sensitive Communities

Sensitive natural communities are those that are of special concern to CDFW or that are afforded specific consideration under CEQA, Section 1602 of the California Fish and Game Code, the state's Porter-Cologne Act, or Section 404 of the Clean Water Act (CWA). Sensitive communities within the Reserve include Gowen cypress forest, Monterey cypress forest, Monterey pine forest, central maritime chaparral, coastal prairie, riparian, freshwater seeps, the giant kelp submarine forest, and submarine canyon habitat.

Special Status Plants

Special status plant species known to occur within the Reserve include Hooker's manzanita (*Arctostaphylos hookeri*), Monterey manzanita, sandmat manzanita, Monterey ceanothus (*Ceanothus rigidus*), pink johnny-nip, jolon clarkia (*Clarkia jolonensis*), Douglas' spineflower (*Chorizanthe douglasii*), marsh microseris (*Microseris paludosa*), Gowen cypress, Monterey cypress, Monterey pine, Yadon's rein orchid (*Piperia yadonii*), Hickman's cinquefoil (*Potentilla hickmanii*), small-leaved lomatium (*Lomatium parvifolium*), pine rose (*Rosa pinetorum*), and Pacific Grove clover (*Trifolium polyodon*) (California Natural Diversity Database [CNDDB] 2012; Palkovic, pers. comm., 2012; Patterson 1995; CSP 1979), and possibly Gairdner's yampah (*Perideridia gairdneri*) (Regents of the University of California 2018, Patterson 1995). Appendix B contains detailed information on all special status plants known to be present or with potential to occur within the Reserve. Critical habitat for Yadon's rein orchid has been designated by the U.S. Fish and Wildlife Service (USFWS) within the Gowen cypress forest east of SR 1.

Three of the special status plant species found in the Reserve are listed as federally threatened or endangered: Gowen cypress (threatened), Yadon's rein orchid (endangered), and Hickman's cinquefoil (endangered). Twelve of the special status plant species have a California Rare Plant Rank of 1B, meaning they are 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, Hickman's cinquefoil, and Pacific Grove clover (CNPS 2012b). Threats to special status plants in the Reserve include loss of habitat and competition from invasive plants, as well as disturbance by illegal off-trail hiking by Reserve visitors; herbivory; and fire suppression, especially for the Monterey pine, Monterey cypress, and Gowen cypress. Monterey pine is also specifically threatened by disease (pine pitch canker) and genetic contamination.

Invasive Plants

Several invasive plants are known to occur at the Reserve. Current invasive plant management activities involve manual, chemical, and mechanical treatments. French broom (*Genista monspessulana*), cape ivy (*Delairea odorata*), and jubata grass (*Cortaderia jubata*) are targeted for removal within the Monterey pine forest. Monterey pines are also susceptible to the introduced pine pitch canker disease, which is caused by a fungus (*Fusarium circinatum*). Panic veldt grass (*Ehrharta erecta*) is an invasive species that grows in the understory of the Monterey cypress forest, which is also susceptible to cypress canker caused by a fungus (*Seiridium cardinal*). A variety of invasive species occur in the coastal scrub and grasslands, including black mustard (*Brassica nigra*), poison hemlock, fennel, sea fig, French broom, cape ivy, and jubata grass.

Additional invasive plant species of concern within the Reserve include kikuyu grass (*Pennisetum clandestinum*) and periwinkle (*Vinca major*) (CSP 2006, 2010a).

Animal Life

More than 176 species of vertebrate animals, including 10 amphibians and reptiles, 19 mammals, and 200 birds, have been identified at the Reserve. These include resident and migratory species. Even the developed areas provide habitat for some animals, such as raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), Monterey dusky-footed wood rat (*Neotoma fuscipes luciana*), and bats. Mountain lion (*Puma concolor*), although not a resident of the Reserve, will use the Reserve to hunt, as do bobcats (*Lynx rufus*).

Special Status Animals

Special status wildlife known to occur in the Reserve include black swift (*Cypseloides nigra*), Monterey dusky-footed woodrat, southern sea otter (*Enhydra lutris nereis*), hoary bat (*Lasiurus cinereus*), monarch butterfly (*Danaus plexippus*), and Smith's blue butterfly (*Euphilotes enoptes smithi*). Appendix C contains detailed information on all special status animals known to be present or with potential to occur within the Reserve.

Southern sea otter is federally listed as threatened and Smith's blue butterfly is federally listed as endangered. Sea otters are threatened by boat traffic in their ocean habitat. Smith's blue butterfly is threatened by loss of its coastal dune and scrub habitat from invasive plant species and trampling by park visitors. Black swift and Monterey dusky-footed woodrat are California Species of Special Concern, meaning they are vulnerable to extinction and the CDFW has called attention to their plight to reverse that

trend. Hoary bat and monarch butterfly have no state or federal listing status, but have international rarity rankings.

Invasive Animals

No invasive animal species have been documented as causing problems in the Reserve. However, wild pigs (*Sus srcof*a) have been known to cause extensive damage in the adjacent State Beach and invasive American bullfrogs (*Rana catesbeiana*) are present in the Carmel River lagoon. Both species have potential to occur within the Reserve.

Aquatic Life

The Reserve includes a 775-acre Underwater Park located just off-shore. The Underwater Park is within a 5.36-square mile MPA managed by CDFW called Point Lobos State Marine Reserve (Clifton and Johnson 2010).

Studies of the nearshore portions of the Reserve have demonstrated that there are significantly more and larger fish in the Reserve than in other areas in central California (Starr et al. 2015). Similarly, submersible surveys have shown that the deeper portions of the Reserve contain a greater abundance of fish than most areas in central California (Starr and Yoklavich 2008).

The giant kelp (*Macrocystis pyrifera*) forest at the Reserve is widely recognized as a special community. Although the kelp's range is quite extensive, it only occurs as a community dominant from central Baja California to Bear Harbor in Mendocino County (CSP 1979, Monterey Bay Aquarium 1999). The kelp forest is highly productive, producing biomass at a rate that is higher than any plant community on earth. The northernmost recorded occurrences of the Gorgonian coral (*Lophogorgia chilensis*) are at the Reserve and Monterey Bay (Barry et al. 1977). The fish fauna is richer at the Reserve than at northern underwater parks, and includes many species of rockfish (*Sebastes* sp.), blacksmith (*Chromis punctipinnis*), kelp bass (*Paralabrax clathratus*), and sheephead (*Pimelometopon pulchrum*) (Barry et al. 1977). Whales, such as the Pacific gray whale (*Eschrichtius robustus*), humpback whale (*Megaptera novaeangliae*), blue whale (*Balaenoptera musculus*), and Minke whale (*B. acutorostrata*), as well as orcas (*Orcinus orca*), are commonly sighted from the Reserve (CSP 2006).

Fine sandy habitats, present in Whalers Cove and Bluefish Cove, are home to a diverse assemblage of species, including several polychaete worms, peanut worms, echiuroid worms, snails, and echinoderms (sea stars, brittle stars, sand dollars, and sea cucumbers). Rocky habitats, including tidepools, host assemblages of anemones, mussels, barnacles, algae, sponges, polychaete

worms, snails, small crustaceans, isopods, amphipods, chitons, limpets, hydroids, bryozoans, sea squirts, sea cucumbers, abalone, small crabs and shrimp, and sea urchins.

Natural Processes

Fire Ecology

The upland vegetation communities on the Monterey Peninsula are largely shaped by fire. 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 2005). Optimum seedling recruitment for the pine and cypress species takes place following a fire (CSP 1979, Barbour 2007). 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 (CSP 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.

A map of the fire hazard ratings and previous fires in the region are shown on Figure 2-17. Fire hazard ratings in the immediate vicinity of the Reserve are designated as high or very high by the California Department of Forestry and Fire Protection (CAL FIRE). With the detection of pine pitch canker in the park, concerns about die off and inadvertent kill of Monterey pines through controlled burns led to a halt on controlled burns. More recently, smaller scale controlled burns have been conducted. Controlled burns were conducted in Mound Meadow and Little Mound Meadow within the Reserve in 2011.

Succession

Plant succession is a directional, cumulative change in the species that occupy a given area, through time (Barbour et al. 1987). The vegetation within the Reserve has undergone considerable changes over the last several hundred years, partially driven by past land uses such as logging, grazing, burning, industrial and commercial development, the film industry, and other factors. However, once these uses ceased, the vegetation in the Reserve reverted towards a more natural state. Pine forests have spread and grasslands/meadows have shrunk.

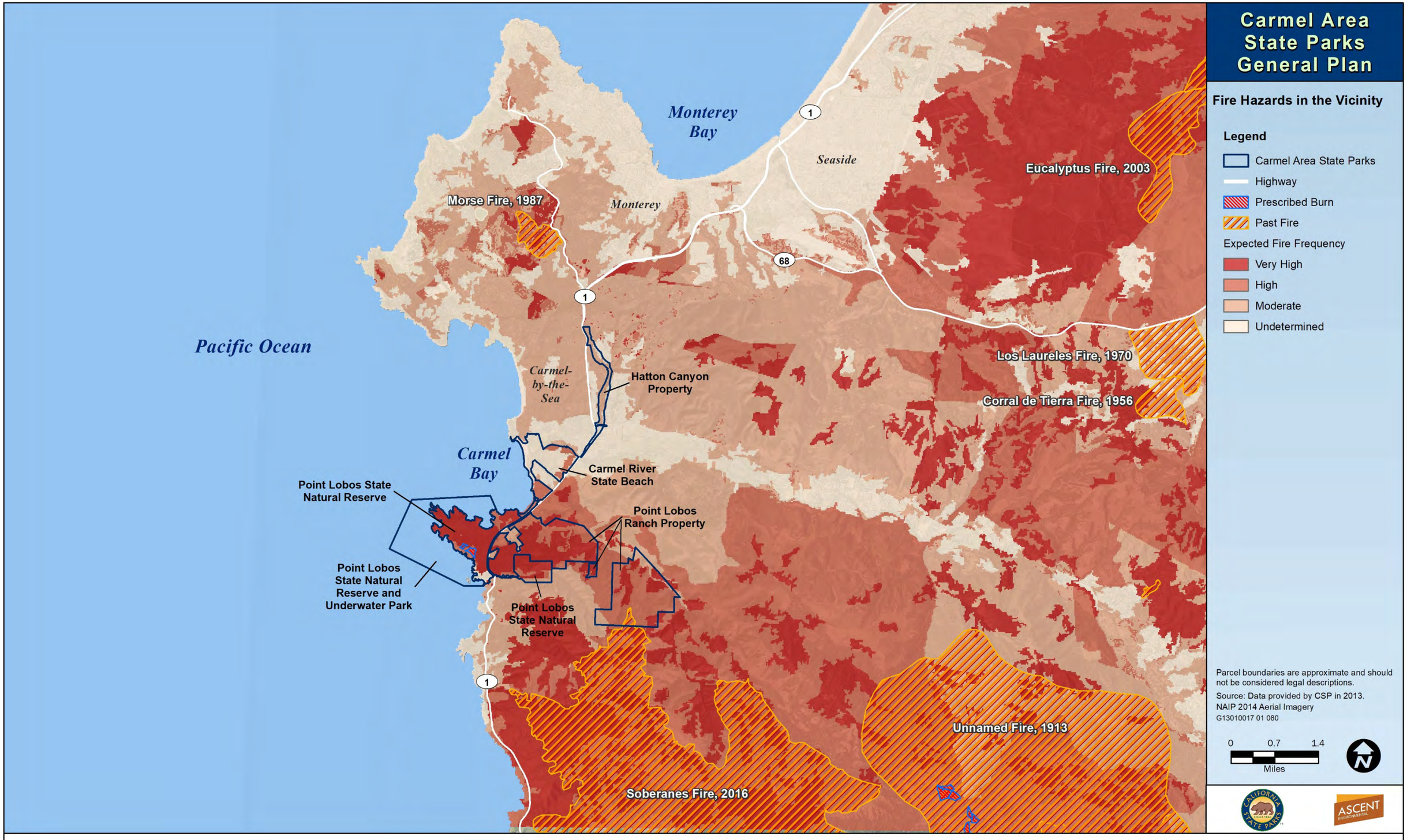


Figure 2-17 Fire Hazards in the Vicinity

Erosion

Erosion is the gradual process by which rock and soil are worn away by the forces of nature, such as wind and water. Ongoing erosion has implications for natural resource management, as it may result in loss of resources such as sensitive natural communities, common and special status species, suitable habitat for these species, loss of plants, and can negatively affect hydrology and drainage. Erosion may also have a negative effect on cultural resources. Ongoing erosion can also be exacerbated by visitor use off trails. Many of the visitors to the Reserve enjoy the scenic views and may step off trails to explore the headlands, pose for photographs or get a closer look at marine mammals in the coves below. Managing human-caused erosion within the Reserve is an ongoing challenge for resource managers. Many of the trails along the headlands such as North Shore Trail, Cypress Grove Trail, and South Shore Trail have visitor guide wires to keep visitors on trails for their own safety and to prevent resource damage caused by trampling and erosion. The State Water Resources Control Board (SWRCB) has also identified several areas of erosion that are contributing sediment to the Area of Special Biological Significance (ASBS) at Whalers Cove and the unpaved parking areas along the south shore.

Erosion control best management practices at Weston Beach

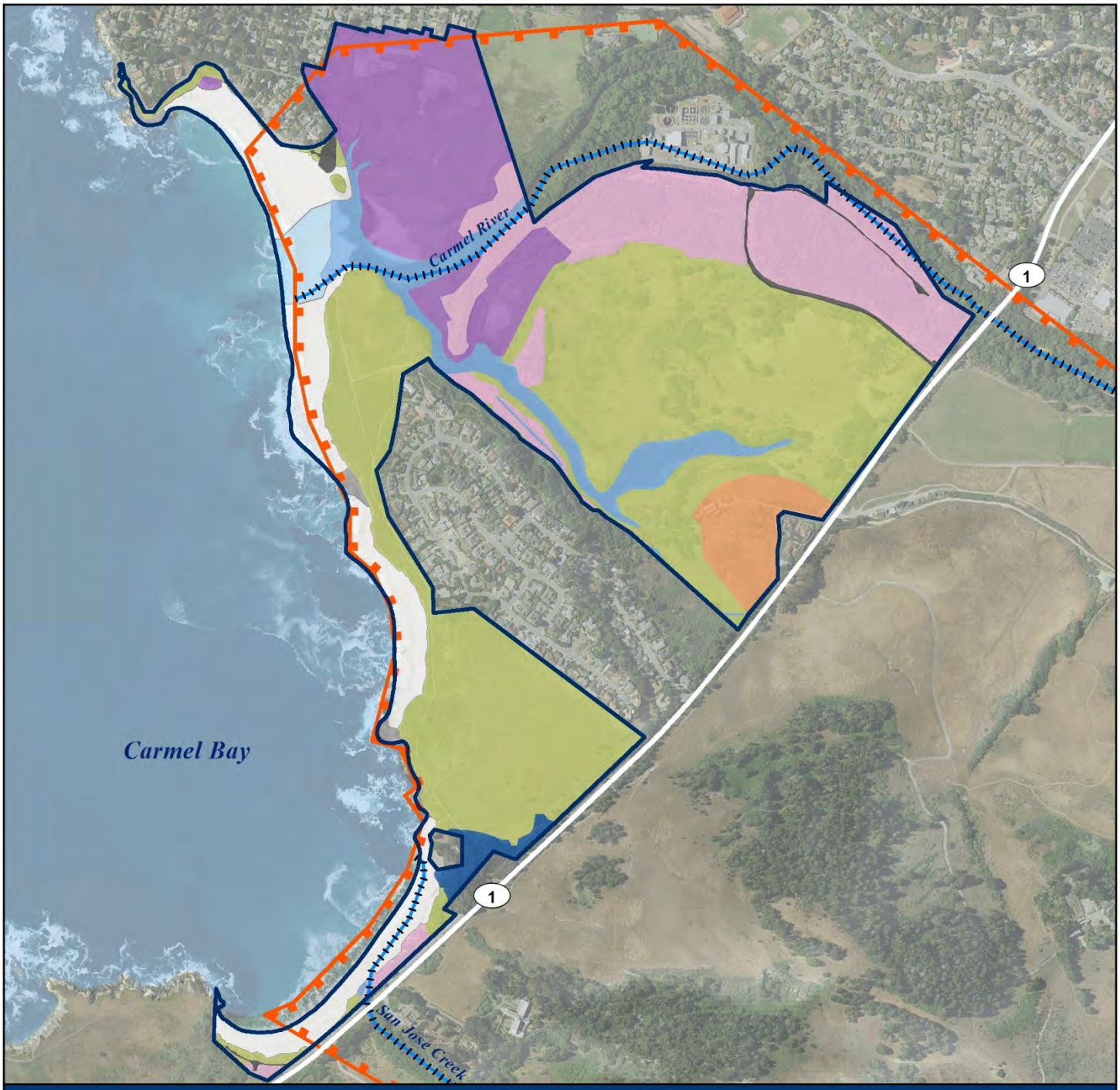
Carmel River State Beach

Plant Life

Vegetation communities at the State Beach include coastal scrub, riparian/willow forest, wetlands, beaches, and eucalyptus groves. Other features include the Carmel River mouth and lagoon, San Jose Creek, rocky shore, and developed areas. The location and extent of these communities and features is shown in Figure 2-18.

Coastal Scrub

Coastal scrub is present on the low bluffs just above the beach south of the mouth of the Carmel River and throughout the Odello West field. It is dominated by coyote brush, mock heather, golden yarrow, sticky monkeyflower, and seacliff buckwheat (CSP 1988). Dominant herbs include soft chess, quaking grass (*Briza maxima*, *B. minor*), slender wild oat (*Avena barbata*), and foxtail fescue (*Festuca myuros*) (CSP 1988). A mixed coastal scrub/dune scrub community is present at the mouth of San Jose Creek. This community is dominated by California sagebrush, beach bur, golden yarrow, and bush lupine (CSP 1988).



Carmel Area State Parks General Plan

Vegetation Communities and Other Landscapes at Carmel River State Beach

Legend

- Carmel Area State Parks
- Highway

Vegetation Communities
- Beach
- Beach/River Mouth
- Coastal Scrub
- Eucalyptus
- Riparian/Willow Forest
- Wetland
- River & Lagoon

Other
- Rocky Shore
- Roads & Parking
- Ruderal

Critical Habitat
- California red-legged frog
- Steelhead

0 500 1,000
Feet

Parcel boundaries are approximate and should not be considered legal descriptions.
Source: Data provided by CSP in 2013 and downloaded from USFWS in 2016.
NAIP 2014 Aerial Imagery G13010017 01 070

Figure 2-18 Vegetation Communities and Other Landscapes at Carmel River State Beach

Riparian/Willow Forest

Riparian vegetation is present along the Carmel River, along a small channel running through the Odello West field parallel to the south arm of the lagoon, along San Jose Creek, and at the southern end of Monastery Beach. Pacific willow (*Salix lasiandra* var. *lasiandra*), black cottonwood (*Populus trichocarpa*), white alder (*Alnus rhombifolia*), arroyo willow (*Salix lasiolepis*), and red willow (*Salix laevigata*) dominate the riparian forest (CSP 1987, 1996; CSP 2010a). The riparian vegetation at the State Beach is considered a freshwater forested/shrub wetland (USFWS 2012, The Watershed Institute 2006).

Freshwater Emergent Wetlands

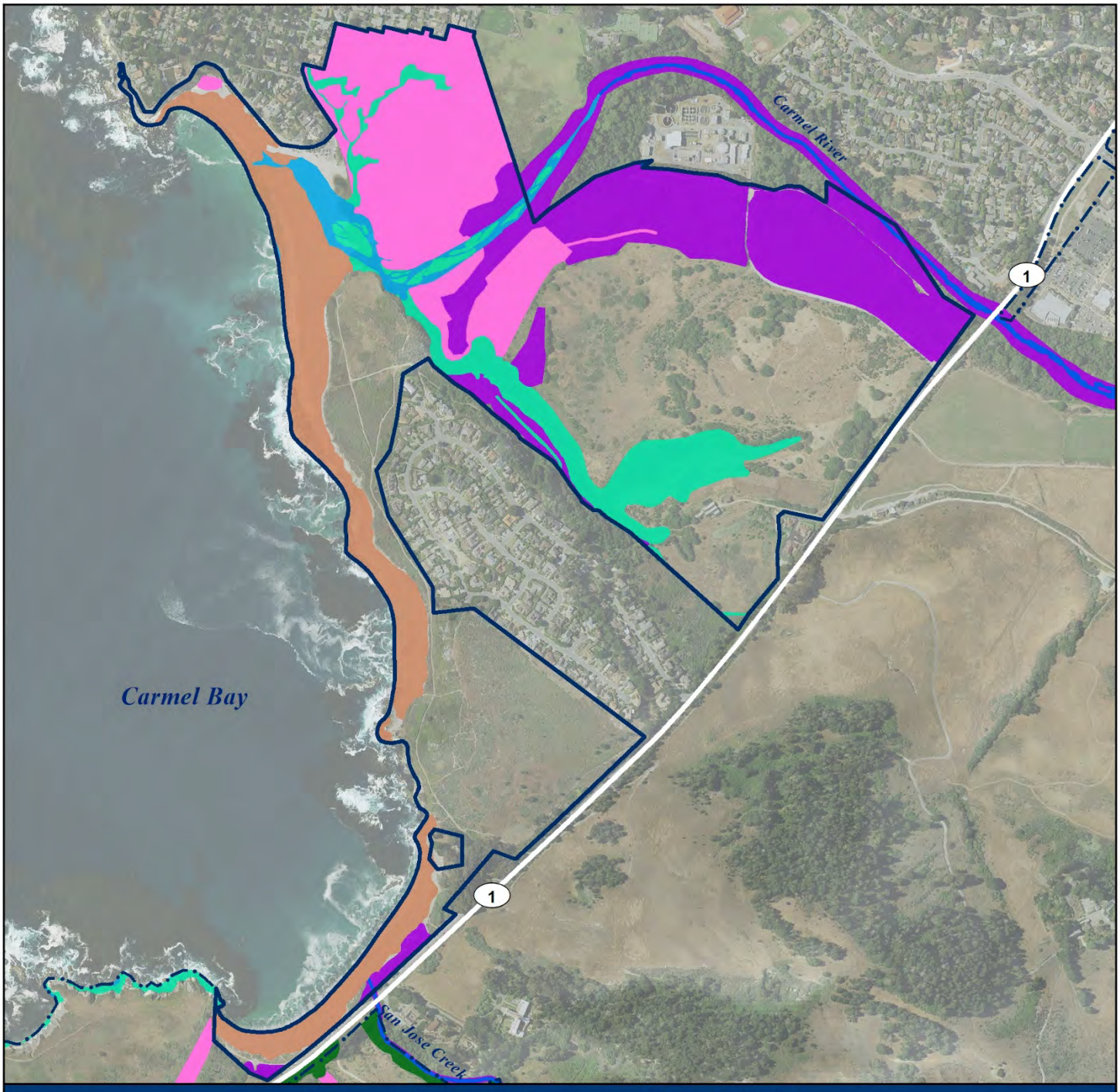
Several freshwater emergent wetlands are present at the State Beach (USFWS 2012, The Watershed Institute 2006) (Figure 2-19). Seasonally inundated freshwater marsh is adjacent to the Carmel River lagoon (CSP 2010a). California tule (*Schoenoplectus californicus*) is dominant in the deeper portions of the freshwater marsh; pickleweed (*Salicornia* sp.), marsh jaumea (*Jaumea carnosa*), salt grass (*Distichlis spicata*), spikerush (*Eleocharis macrostachya*), and Olney's three-leaved bulrush (*Schoenoplectus americanus*) dominate the mid-elevation marsh; and Baltic rush (*Juncus balticus*) and Pacific silverweed are dominant in the upper marsh, with marsh jaumea as a common associate species (MPWMD 1995, CSP 1985, Barry et al. 1977). The marsh wetland and lagoon is considered an environmentally sensitive habitat in the Carmel Area Land Use Plan and is the only major coastal wetland in the region (Monterey County 1983).

A small freshwater marsh wetland dominated by California tule is present on the beach at the base of a coastal scrub slope at the northern end of the State Beach.

Carmel River lagoon in the State Beach

Carmel River and Lagoon

The Carmel River, which drains an approximately 256-square mile watershed (CSU Pomona 2005), is the largest freshwater stream flowing into Carmel Bay. Vegetation in the channel is limited to the lower portion of the river and consists of willow saplings and non-native plants that are scoured out by high water flows each winter (The Watershed Institute 2006). Riparian vegetation is present along the banks of the river, and is described under "Riparian/Willow Forest," above. The river mouth typically remains closed for most of the year, forming a large lagoon. The south arm of the lagoon was expanded in the southeast (within the Odello West field) to provide additional habitat for south-central California coast steelhead (CSP 2010a). This part of the lagoon supports beds of pondweed (*Potamogeton* sp.). The central portion of the lagoon lacks vegetation (The Watershed Institute 2006). When water levels are low, mudflats and sandflats are exposed in the shallower portions of the lagoon.



Carmel Area State Parks General Plan

Wetlands within Carmel River State Beach

Legend

- Carmel River State Beach
- Other Carmel Area State Park Units
- Highway
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland*
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Riparian
- Riverine
- Sandy Beach/Upper Intertidal*

*Adapted by CSP (2017)

Parcel boundaries are approximate and should not be considered legal descriptions.
Source: Data provided by CSP in 2013 and downloaded from USFWS in 2016.
NAIP 2014 Aerial Imagery G13010017 01 074

0 500 1,000
Feet

Figure 2-19 Wetlands within Carmel River State Beach

The marsh wetlands adjacent to the lagoon are described above under "Freshwater Emergent Wetlands." The Carmel River and lagoon are estuarine wetlands (USFWS 2012, The Watershed Institute 2006) (Figure 2-19).

The northwestern portion of the State Beach immediately east of Carmel River Beach is designated as the Carmel River Lagoon and Wetland Natural Preserve. This area is approximately 53 acres and was designated as a natural preserve in 1985.

Current issues within the natural preserve include sandbar management for flood protection and management for special status species including California red-legged frog and south-central California coast steelhead.

San Jose Creek

San Jose Creek enters the Pacific Ocean just south of the Bay School, and a small backwater lagoon develops in this area. The creek mouth is closed during the summer, and a small lagoon and wetland form here (Hagar Environmental Science 2002). The wetland is dominated by beardless wild rye (*Elymus triticoides*) with rushes and salt grass (CSP 1988).

Beaches

Beaches support strand vegetation, which is made up of a sparse distribution of plants which are usually prostrate and tolerant of wind, sand, and dry soil conditions (Barry et al. 1977). Dominant plant species include beach bur, yellow sand verbena (*Abronia latifolia*), bush lupine, California poppy (*Eschscholzia californica*), seaside saltbush (*Atriplex californica*), and the non-natives New Zealand spinach (*Tetragonia tetragonioides*), European sea-rocket (*Cakile maritima*), sea fig, and Hottentot fig (*Carpobrotus edulis*) (CSP 1989, Barry et al. 1977). The beach is part of the marine wetlands present along the shoreline (USFWS 2012, The Watershed Institute 2006).

Eucalyptus Groves

Non-native blue gum (*Eucalyptus globulus*) has been planted very densely with Monterey pine near the southern end of the State Beach around a private inholding. Trees are over 50 feet high and litter from downed wood and bark is deep. Understory species are present primarily along the periphery of the grove and include poison oak and blackberry (*Rubus* sp.) (CSP 1988, CSP 2010a).

Rocky Shore

The rocky shoreline is the transition between marine and terrestrial habitats. It is subject to ocean waves, strong winds, and salt spray. Tidepools are a common feature along the rocky shore.

This landscape is part of the marine wetlands present along the shoreline (USFWS 2012, The Watershed Institute 2006).

Sensitive Communities

Sensitive communities at the State Beach include riparian areas along the Carmel River and San Jose Creek, wetlands, and marine communities (Monterey County 1983).

Special Status Plants

Special status plant species known to occur within the State Beach include Monterey Indian paintbrush (*Castilleja latifolia*), branching beach aster (*Corethrogyne leucophylla*), and Hutchinson's larkspur (CNDDB 2012; CSP 1988, 1979). Monterey pine likely historically occurred in the area now covered by coastal scrub (CNDDB 2012, CSP 1988). Appendix B contains detailed information on all special status plants known to be present or with potential to occur within the State Beach.

Invasive Plant Species

Invasive plant species of most concern in the State Beach include blue gum, sea fig, Hottentot fig, cape ivy, black mustard, jubata grass, fennel, French broom, and poison hemlock, all found in the coastal scrub. The restoration area in the Odello West field is heavily infested with several species of invasive plants. Select invasive species are controlled through manual, mechanical, and chemical treatments.

Animal Life

The varied plant communities and landscapes of the State Beach provide habitat for diverse and abundant wildlife. The Carmel River and San Jose Creek channels are important wildlife corridors, and several special status animal species are known to occur, including more than 325 species of migratory songbirds.

Special Status Animals

Special status wildlife species known to occur within the State Beach include south-central California coast steelhead, California red-legged frog, western snowy plover (*Charadrius alexandrinus nivosus*), western pond turtle (*Emys marmorata*), southern sea otter, and black legless lizard (*Anniella pulchra nigra*). Appendix C contains detailed information on all special status animals known to be present or with potential to occur within the State Beach.

South-central California coast steelhead, California red-legged frog, western snowy plover, and Southern sea otter are federally listed as threatened. In Carmel River lagoon, specifically, south-central California coast steelhead are threatened by sedimentation, lack of freshwater inflows in the summer due to groundwater extractions

and other upstream diversions along the Carmel River, and breaching the sandbar in the winter which can displace south-central California coast steelhead and subject them to increased predation and salinity-related stress (MPWMD 1995; MPRPD, CCC, and CSP 1999). California red-legged frog populations are threatened by groundwater extractions and other upstream diversions along Carmel River which dewaters portions of the river, predation by and competition from bullfrogs, road maintenance and traffic at San Jose Creek, and invasive plants altering upland habitat (CNDDB 2012). Western snowy plovers are threatened by human activity along the beaches where the birds nest and predation of eggs by crows, ravens, and other predators (CNDDB 2012). Sea otters are threatened by boat traffic and have experienced increased disturbance from kayakers (CNDDB 2012).

Invasive Animal Species

The non-native American bullfrog has been observed throughout the Carmel River lagoon and has the potential to occur in San Jose Creek. Wild pigs are present in the Odello West field and surrounding wetlands. Their foraging habits cause extensive ground disturbance and damage to vegetation.

Aquatic Life

Aquatic habitats within the State Beach include the Carmel River and lagoon and the mouth of San Jose Creek. The Carmel River lagoon forms at the mouth of the Carmel River. The entire lagoon area consists of diverse seasonal and perennial wetland habitats that serve as critical wildlife habitat for a wide range of species including several federally-listed species. Ecologically, the lagoon serves as keystone habitat for multiple threatened and protected species, including a distinct population segment of south-central California coast steelhead and California red-legged frog (CCC et al. 2007).

The marine aquatic areas of the State Beach contain rocky tidepools, giant kelp forests, and rocky and sandy bottoms, which provide habitat for a diverse and abundant assemblage of species.

Kelp beds are found on rocky bottoms and at the head of Carmel Canyon and are dominated by giant kelp, southern sea palm (*Eisenia arborea*), and woody-stemmed kelp (*Pterygophera californica*). Sea otters use the kelp beds for pupping and rafting, and the canopy serves as an important energy supply.

Natural Processes

Fire Ecology

A map of the fire hazard ratings and previous fires in the region are shown on Figure 2-17. Fire hazard ratings in the immediate vicinity of the State Beach are designated as moderate or undetermined by CAL FIRE. Controlled burns have not been conducted at the State Beach.

Flooding

The Carmel River forms a lagoon at its mouth when ocean waves and sediment transported by the river build a sand bar on the beach, which blocks the river from flowing into the ocean. Fresh water from the river floods the lagoon, providing important habitat for many species, including south-central California coast steelhead which use the lagoon during their migration. The level and duration of this flooding varies from year to year, and the sand bar naturally breaches at an elevation of approximately 11.8 to 13.1 feet National Geodetic Vertical Datum. This level of flooding threatens surrounding homes and infrastructure, so Monterey County has regularly artificially breached the sandbar at the mouth of the Carmel River during the winter rainy season. A memorandum of understanding (MOU) between Monterey County and CSP has been drafted and outlines flood-related activities.

Point Lobos Ranch Property

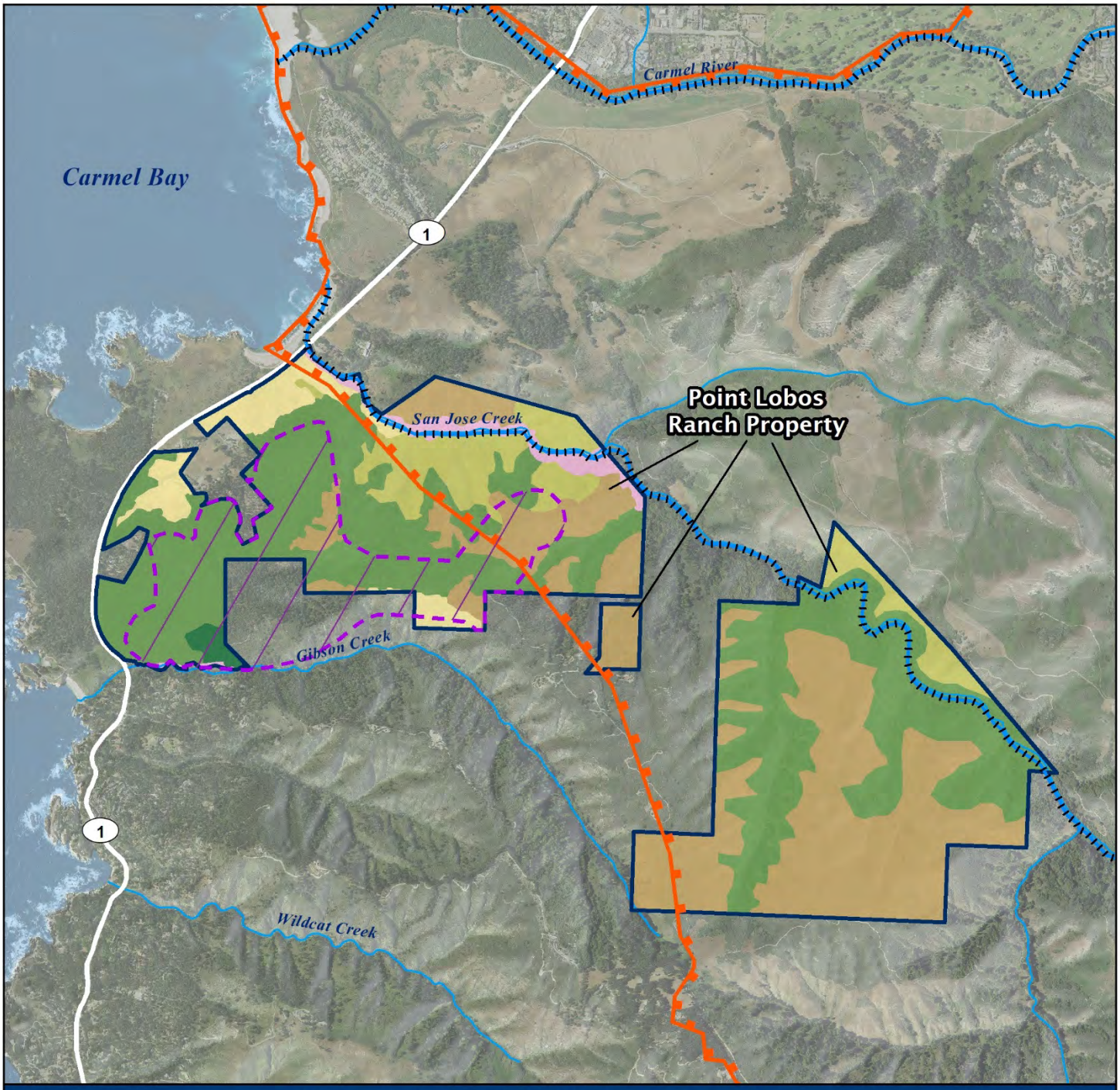
Expansive backcountry habitat on Point Lobos Ranch

Plant Life

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 Figure 2-20.

Monterey Pine Forest

Monterey pine forest occupies most 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 pine trees are infected with western gall rust (*Endocronartium harknessii*) and mistletoe (*Arceuthobium* sp.), and numerous snags (dead standing trees) are present. Coast live oak is a common associate in the lower canopy, with poison oak, manzanita, toyon (*Heteromeles arbutifolia*), salal, California coffeeberry, silk tassel (*Garrya elliptica*), California huckleberry, sticky monkeyflower, and Monterey pine seedlings in the understory.



Carmel Area State Parks General Plan

Vegetation Communities and Other Landscapes at Point Lobos Ranch Property

Legend

- Carmel Area State Parks
- Highway
- Creek/River

Vegetation Communities
- Central Maritime Chaparral
- Coastal Scrub
- Gowen Cypress Stand
- Monterey Pine Forest
- Grassland
- Riparian Forest

Critical Habitat
- Yadon's rein orchid
- California red-legged frog
- Steelhead

0 1,250 2,500
Feet

Parcel boundaries are approximate and should not be considered legal descriptions.
Source: Data provided by CSP in 2013 and downloaded from USFWS in 2016.
NAIP 2014 Aerial Imagery G13010017 01 071

Figure 2-20 Vegetation Communities and Other Landscapes at Point Lobos Ranch Property

One of the two native populations of Gowen cypress is within Point Lobos Ranch.

Gowen Cypress Forest

One of the two native populations of Gowen cypress in the world is present at 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. Coastal scrub within Point Lobos Ranch is dominated by a diverse mix of native perennial shrubs and herbs. Monterey pine is invading coastal scrub in some areas.

Central Maritime Chaparral

Central maritime chaparral is widespread within Point Lobos Ranch, 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).

Riparian Forest

Riparian vegetation is present along San Jose and Gibson creeks. The San Jose Creek riparian forest is dominated by black cottonwood, white alder, red willow, California sycamore (*Platanus racemosa*), coast redwood (*Sequoia sempervirens*), buckeye (*Aesculus californica*), California bay laurel (*Umbellularia californica*), bigleaf maple (*Acer macrophyllum*), and madrone (*Arbutus menziesii*). Hutchinson's delphinium, a rare species that is endemic to Monterey County, is found within the riparian forest along San Jose Creek (Barry et al. 1977, CNPS 2012).

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 (*Polystichum munitum*), California huckleberry, thimbleberry (*Ribes parviflorus*), red-flowering currant (*R. sanguineum* var. *glutinosum*), lady fern (*Athyrium filix-femina* var. *cyclosorum*), California blackberry (*Rubus ursinus*), giant chain fern (*Woodwardia fimbriata*), and the non-native and invasive panic grass and French broom in the understory.

Wetlands

Wetlands are present along many of the drainages throughout Point Lobos Ranch; these include wetlands dominated by herbs and those dominated by trees and shrubs.

Swales and ditches are present in the grassland south of Allen Road. These features are dominated by common rush (*Juncus effusus*) and Baltic rush, and the non-native ryegrass, 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 2012) (Figure 2-21).

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 (CSP 2010). Dominant species are similar to those described above for the Reserve.

Sensitive Communities

Sensitive communities within Point Lobos Ranch include central maritime chaparral, Monterey pine forest, Monterey pygmy cypress forest (Gowen cypress dwarf woodland), wetlands, and riparian habitat along San Jose and Gibson creeks. One of the southernmost native populations of rhododendron (*Rhododendron macrophyllum*) is also found in the eastern parcel of Point Lobos Ranch.

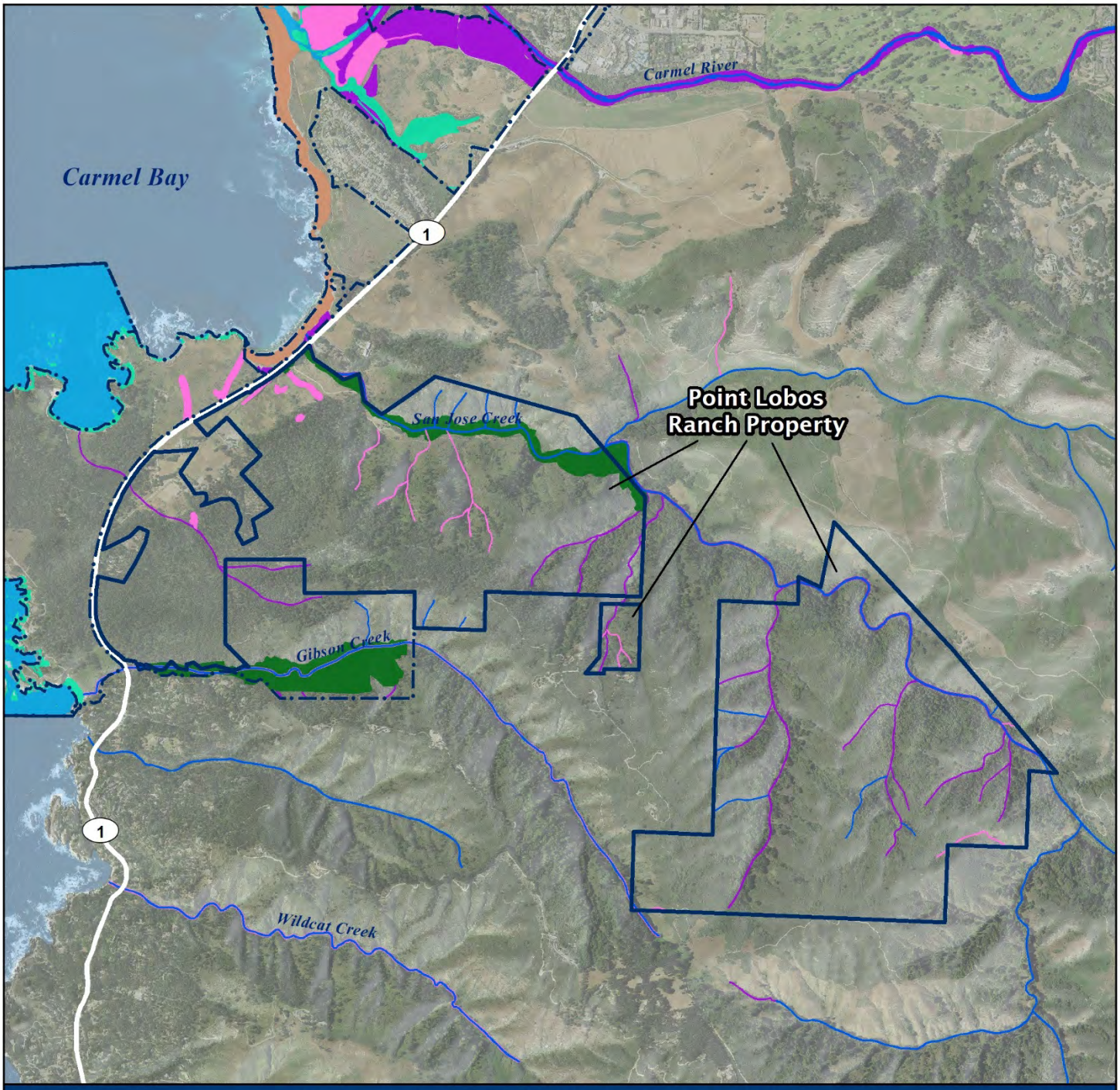
Special Status Plants

Special status plant species that are known to occur within Point Lobos Ranch are Hutchinson's larkspur, Gowen cypress, Monterey pine, Yadon's rein orchid, pine rose, and Pacific Grove clover. Appendix B contains detailed information on all special status plants known to be present or with potential to occur within Point Lobos Ranch.

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 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 (Monterey pine, Yadon's rein orchid, and Pacific Grove clover) (CNPS 2012). Threats to special status plants within Point Lobos Ranch 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.

Invasive Plants

More than 10 acres of French broom have been mapped within Point Lobos Ranch. French broom, cape ivy, and jubata grass are targeted for removal within the Monterey pine forest. French broom is managed through both mechanical and chemical treatment.



Carmel Area State Parks General Plan

Wetlands within Point Lobos Ranch Property

Legend

- Point Lobos Ranch Property
- Other Carmel Area State Park Units
- Highway
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland*
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Riparian
- Riverine
- Sandy Beach/Upper Intertidal*

*Adapted by CSP (2017)

Parcel boundaries are approximate and should not be considered legal descriptions.
Source: Data provided by CSP in 2013 and downloaded from USFWS in 2016.
NAIP 2014 Aerial Imagery G13010017 01 075

0 1,250 2,500
Feet

Figure 2-21 Wetlands within Point Lobos Ranch Property

A variety of invasive species are treated in the coastal scrub and grasslands, including black mustard, poison hemlock, fennel, iceplant, cape ivy, kikuyu grass, 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*), foxglove (*Digitalis purpurea*), and calla lily (*Zantedeschia aethiopica*) also occur within Point Lobos Ranch. Monterey pines are also susceptible to the introduced pine pitch canker disease. Gowen cypress is susceptible to cypress canker.

Animal Life

Point Lobos Ranch 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.

Special Status Animals

Special status wildlife species known to occur within Point Lobos Ranch include south-central California coast steelhead, Smith's blue butterfly, California red-legged frog, Monterey dusky-footed woodrat, and hoary bat. Monarch butterfly occurred previously but has not been observed recently. A large portion of Point Lobos Ranch is considered critical habitat for California red-legged frog, and San Jose Creek is critical habitat for south-central California coast steelhead. Appendix C contains detailed information on all special status animals known to be present or with potential to occur within Point Lobos Ranch.

Invasive Animals

No invasive animal species have been documented within Point Lobos Ranch; however, bullfrogs have the potential to occur in San Jose Creek.

Natural Processes

Fire Ecology

A map of the fire hazard ratings and previous fires in the region are shown on Figure 2-17. Fire hazard ratings in the immediate vicinity of Point Lobos Ranch are designated as high or very high by CAL FIRE. Current vegetation management activities include mowing and limited vegetation clearing to reduce fuel load. Fire fuel management is focused along the SR 1 corridor and is carried out in coordination with CAL FIRE.

Hatton Canyon Property

Plant Life

Vegetation communities within Hatton Canyon include Monterey pine forest, coastal scrub, riparian forest, grasslands, and wetlands. Other landscape features represented within the unit include ruderal and developed areas. The location and extent of these communities and features is shown in Figure 2-22.

Monterey Pine Forest

Monterey pine forest occupies the slopes above the canyon bottom. As described above, it is dominated by Monterey pine and coast live oak. The understory is dominated by Carmel ceanothus (*Ceanothus thyrsiflorus* var. *griseus*), California coffeeberry, oso berry (*Oemleria cerasiformis*), hairy honeysuckle (*Lonicera hispidula*), poison oak, and spreading snowberry (*Symphoricarpos mollis*).

Vegetation within Upper Hatton Canyon

Coastal Scrub

Coastal scrub occurs on the slopes above the canyon bottom. Coastal scrub at Hatton Canyon is similar to the coastal scrub described above, and is dominated by coyote brush, California sagebrush, and California coffeeberry.

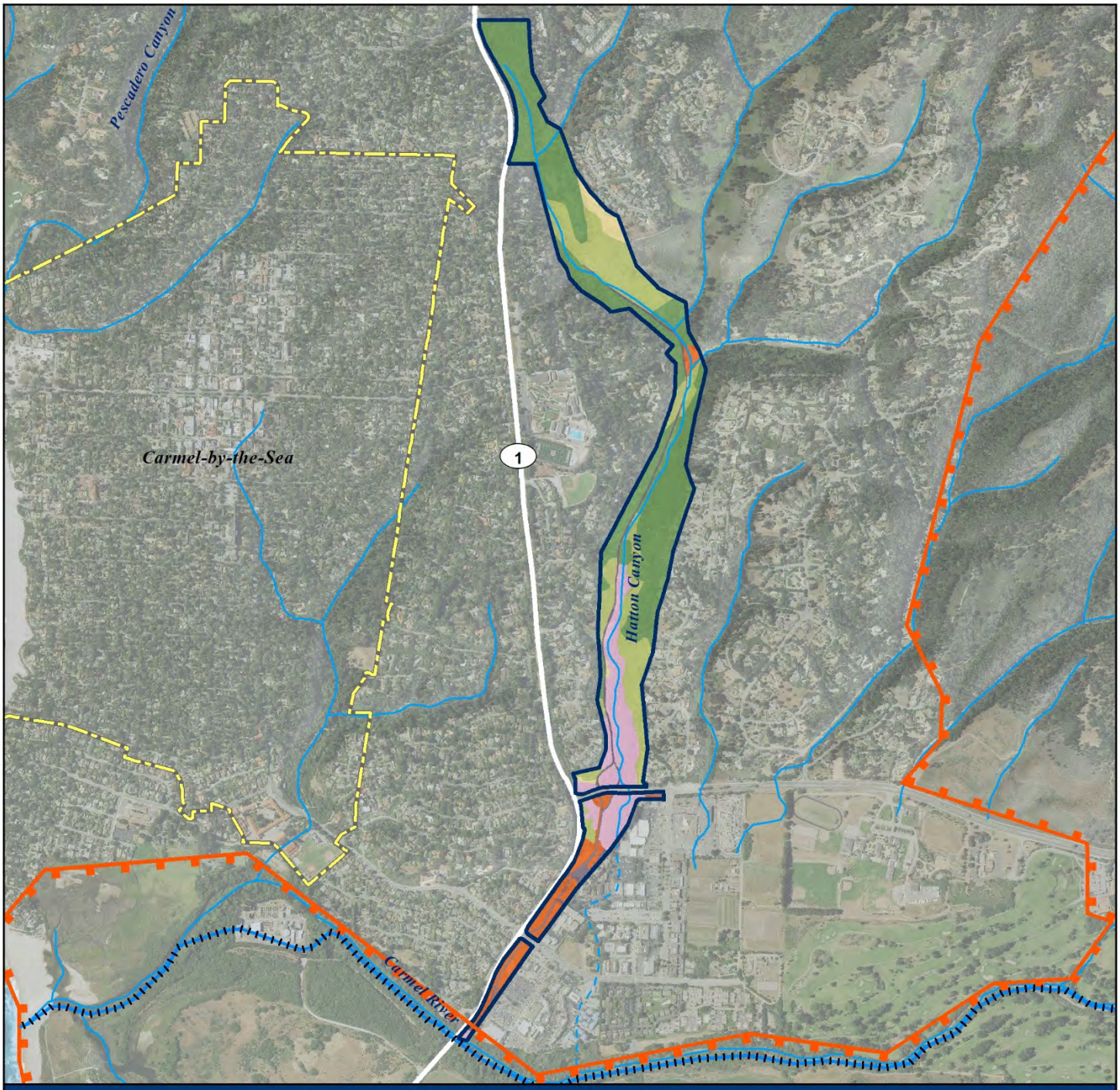
Riparian Forest

Riparian vegetation is associated with the drainage that flows through Hatton Canyon. Similar to the riparian forest described above, it is dominated by arroyo willow, black cottonwood, and western dogwood (*Cornus sericea* ssp. *occidentalis*).

The riparian vegetation in Hatton Canyon is likely considered a freshwater forested/shrub wetland (U.S. Department of Transportation, Federal Highway Administration (FHWA), and Caltrans 1973).

Wetlands

Portions of the drainage that flows through the bottom of Hatton Canyon are considered a riverine, freshwater emergent, and freshwater forested/shrub wetland (USFWS 2012), depending on the vegetation present (Figure 2-23). The riverine portions flow through areas dominated by riparian forest, which is described above. The freshwater emergent wetland portions are dominated by tall cyperus (*Cyperus eragrostis*), giant horsetail (*Equisetum spp.*), toad rush (*Juncus bufonius* var. *bufonius*), common rush, spreading rush (*J. patens*), Mexican rush (*J. mexicanus*), grass poly (*Lythrum hyssopifolia*), watercress (*Nasturtium officinale*), and panicled bulrush (*Scirpus microcarpus*). The freshwater forested/shrub wetland flows through Monterey pine forest, described above.



Carmel Area State Parks General Plan

Vegetation Communities and Other Landscapes at Hatton Canyon Property

Legend

- Carmel Area State Parks
- City Limits
- Highway
- Creek/River
- Creek (underground)

Vegetation Communities
- Coastal Scrub
- Grassland
- Monterey Pine Forest
- Riparian Forest
- Ruderal

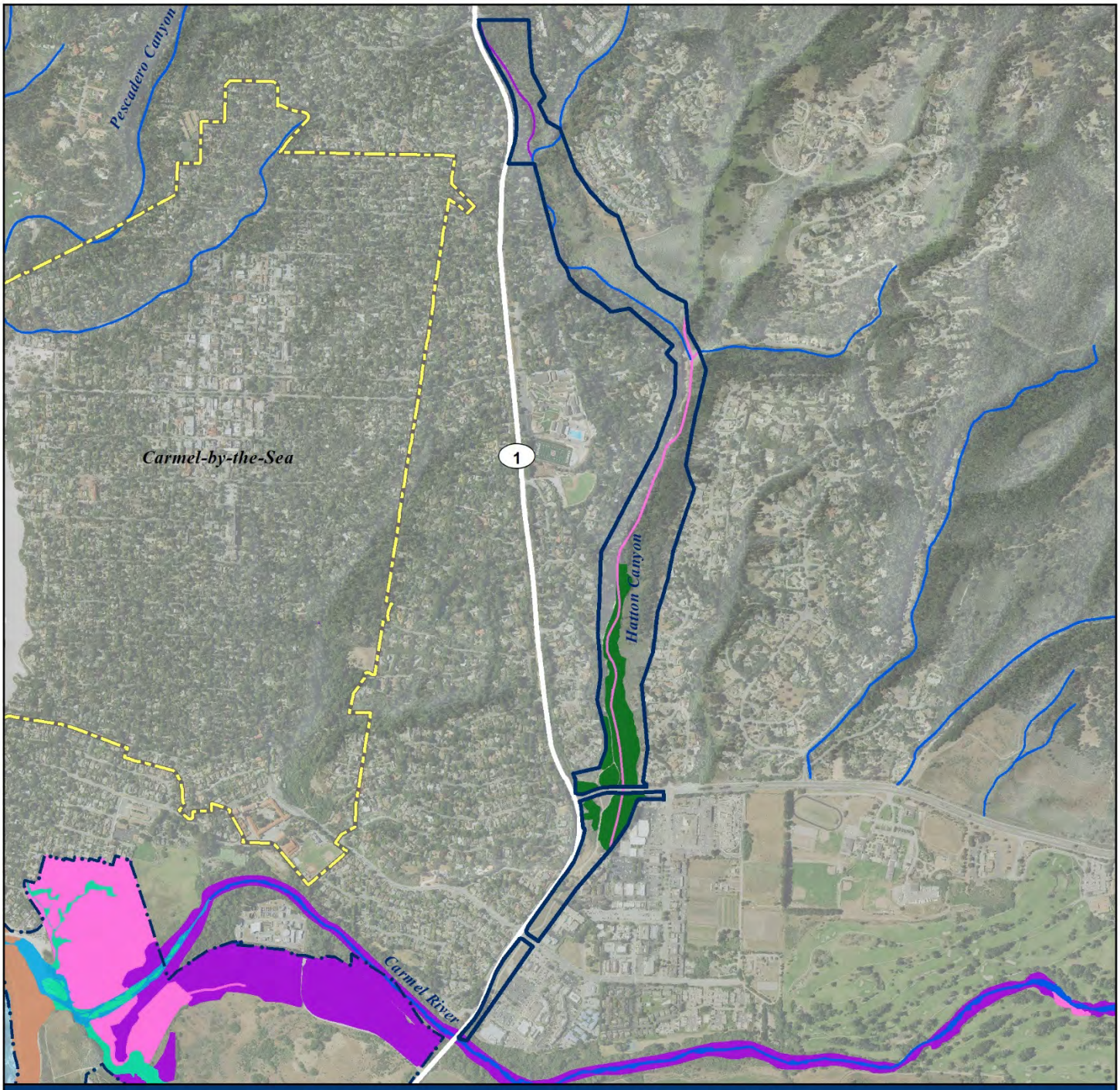
Other
- Roads & Parking

Critical Habitat
- California red-legged frog
- Steelhead

0 800 1,600
Feet

Parcel boundaries are approximate and should not be considered legal descriptions.
Source: Data provided by CSP in 2013 and downloaded from USFWS in 2016.
NAIP 2014 Aerial Imagery G13010017 01 072

Figure 2-22 Vegetation Communities and Other Landscapes at Hatton Canyon Property



Carmel Area State Parks General Plan

Wetlands within Hatton Canyon Property

Legend

- Hatton Canyon Property
- Other Carmel Area State Park Units
- City Limits
- Highway
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland*
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Riparian
- Riverine
- Sandy Beach/Upper Intertidal*

*Adapted by CSP (2017)

Parcel boundaries are approximate and should not be considered legal descriptions.
Source: Data provided by CSP in 2013 and downloaded from USFWS in 2016.
NAIP 2014 Aerial Imagery G13010017 01 076

0 800 1,600
Feet

Figure 2-23 Wetlands within Hatton Canyon Property

Grasslands

The grassland is described as remnant coastal prairie with significant influence from the surrounding urban areas. Native species found in the grassland include California oat grass (*Danthonia californica*), purple needle grass (*Stipa pulchra*), blue-eyed grass (*Sisyrinchium bellum*), checkerbloom (*Sidalcea malviflora*), gamble weed (*Sanicula crassicaulis*), fescue (*Festuca* sp.), and marsh microseris (U.S. Department of Transportation, FHWA, and Caltrans 1973).

Sensitive Communities

Sensitive communities present include Monterey pine forest, riparian forests, and wetlands.

Special Status Plants

Monterey pine, marsh microseris, and Hickman's onion (*Allium hickmanii*) have been documented within Hatton Canyon. Several other special status species may have occurred in the canyon historically: Hooker's manzanita, sandmat manzanita, Santa Lucia bush mallow (*Malacothamnus palmeri*), Eastwood's goldenbush (*Ericameria fasciculata*), Kellogg's horkelia (*Horkelia cuneata* var. *sericea*), and Jolon clarkia. Appendix B contains detailed information on all special status plants known to be present or with potential to occur within Hatton Canyon.

The four special status plants present in Hatton Canyon have a California Rare Plant Rank of 1B, designated as rare, threatened, or endangered in California and elsewhere. Threats to special status plants in Hatton Canyon include loss of habitat and competition from invasive plants; disturbance associated with surrounding residential neighborhoods; herbivory; and improper fire regime, especially for the Monterey pine and Monterey cypress.

Invasive Plants

English ivy, fennel, Pampas grass (*Cortaderia jubata*), French broom, and poison hemlock have all been documented within Hatton Canyon. In addition, many ornamental plants have spread from adjacent private properties and are encroaching into Hatton Canyon, including German ivy (*Delairea odorata*) and periwinkle.

Animal Life

A variety of wildlife occurs within Hatton Canyon including animal species associated with Monterey pine forest, coastal scrub and grassland, riparian forest, and ruderal habitats. The drainage connecting Hatton Canyon to the Carmel River is an important wildlife corridor.

The CASP units provide habitat for special status species, including California red-legged frog, western snowy plover, and south-central California coast steelhead.

Special Status Animals

Special status wildlife species known to occur within Hatton Canyon include California red-legged frog and Monterey dusky-footed woodrat. The southern portion of Hatton Canyon is included within federally designated critical habitat for California red-legged frog. Monterey dusky-footed woodrat is a California Species of Special Concern, meaning the CDFW has determined the species is vulnerable to extinction because of population declines, limited ranges, and/or other continuing threats.

Appendix C contains detailed information on all special status animals known to be present or with potential to occur within Hatton Canyon.

Invasive Animals

No invasive animal species have been documented within Hatton Canyon.

Natural Processes

Fire Ecology

A map of the fire hazard ratings and previous fires in the region are shown on Figure 2-17. Fire hazard ratings in the immediate vicinity of Hatton Canyon are designated as moderate or undetermined by CAL FIRE. Although there are no structures within Hatton Canyon, CSP staff are working with CAL FIRE to reduce fuel loads and will continue working with CAL FIRE in the future. Current vegetation management activities include mowing and limited vegetation clearing to reduce fuel load in cooperation with CAL FIRE.

Wildlife Corridors

The CASP units provide important habitat linkages for wildlife. Together with other protected public lands in the area, such as Palo Corona Regional Park, the Santa Lucia Preserve, Garrapata State Park, and Odello East field located on the east side of SR 1 directly across from the Odello West field, the CASP units form an important regional network of wildland habitats (Figure 2-1). Palo Corona Regional Park provides a critical link for a wildlife corridor that now extends from the Carmel River to San Luis Obispo County. San Jose and Gibson creeks are also wildlife corridors for California red-legged frog, as well as other reptiles, amphibians, mammals, and birds.

2.3.3 Cultural Resources

A summary of important prehistoric and historic cultural resources within the Carmel area and the CASP units is presented below, as well as traditional cultural places and resources; sacred sites; and historic buildings, structures, landscapes, and sites.

Prehistory

People have lived in the Monterey area for at least 9,000 years, and probably longer. From the earliest times, each group of people has left distinctive and irreplaceable marks on the landscape. To interpret the archaeological record, archaeologists construct cultural chronologies for different cultural areas based on perceived significant changes in the archaeological record, and particularly on transitions in artifact styles through time.

The chronological sequence for the central coast of California used in the following discussion is adapted from Jones et al. (2007). It recognizes five general time periods – Paleoindian, Millingstone, Early, Middle, Middle/Late Transition, and Late. No evidence of the Paleoindian Period (before 10,000 years ago) has been found in the Monterey area.

Millingstone/Early Archaic Period

The Millingstone or Early Archaic Period is typically characterized by abundant milling slabs, hand stones, and other ground and battered stone implements relative to the number of flaked stone tools and bifaces (knives and projectile points), as well as crude core and cobble tools and shell debris, suggesting a diet focused on seeds and shellfish. Seven sites in the Monterey area date to, or have components dating to, this period. There are no sites in the Carmel state parks that date to this period.

Early Period

The Early Period (5,600–2,700 years ago) is better represented in this area. In the Monterey-Carmel area, residential sites tend to occur on the coast at the mouth of major streams, on major points of land, such as Carmel Point and Pescadero Point, and along the southwest shore of Monterey Bay. Artifacts reflect an emphasis on hunting (both terrestrial and marine species) and fishing. The abundance of fish remains at one Early site, a large summer occupation village, has led some researchers to speculate that fish were being harvested for trade (Breschini and Haversat 1993). Shellfish collecting occurred during the Early Period, but does not appear to have been as important as hunting and fishing. Obsidian makes its first appearance in Early Period sites in

Monterey. Mortars and pestles also first appear in Early Period archaeological sites and some believe this is indicative of intensified acorn processing (Jones and Waugh 1997, Mikkelsen et al. 2000). One archaeological site within the State Beach dates to the Early Period (Garlinghouse et al. 2009).

Middle Period

The Early Period is followed by the Middle Period which lasted from 2,700 to 1,100 years ago (Jones et al. 2007, Mikkelsen and Jones 2010). Hunting and fishing continued to be important and circular shell fishhooks were introduced during this period. An abundance of obsidian from east of the Sierra Nevada in Middle Period sites indicates strong trade networks. The use of mortars and pestles seems to have increased indicating a greater reliance on acorns. Middle Period residential sites tend to be larger, suggesting significant population growth. One large seasonal residential site with a Middle Period component is located near San Jose Creek within what is now Point Lobos Ranch. The site is known to locals as the Hudson Mound (which also includes the adjacent area known as the polo field) and contains a large and diverse artifact assemblage and evidence of a broad diet including mussels and other shellfish, fish, large mammals (deer, sea otters and pinnipeds), and birds (Howard and Cook 1971, Schwaderer 2004).

At least three sites within the Reserve have components dating to the Middle Period (Schwaderer 2005, 2007; Mikkelsen and Jones 2010). One appears to be a seasonal residential site with a variety of shellfish and animal bone present. Another is a coastal fishing, hunting, and gathering site, and the third may also be a fishing, hunting, and gathering site. Fragments of mussel shell fishhooks were found at these sites.

Middle/Late Transition Period

The Middle/Late Transition (1,000–750 years ago) is a short period of time during which there appears to be a rapid disruption in settlement and subsistence patterns. Large coastal villages were abandoned and settlements were relocated to interior valleys, although visits were still made to the coast for collecting and processing shellfish.

Coinciding with the Middle/Late Transition, California underwent a dramatic warming trend and series of drought cycles known as the "Medieval Climatic Anomaly" (Graumlich 1993, Jones et al. 1999), resulting in population decline, a less diverse diet, and the collapse of trade networks. Fish, marine mammal, and obsidian essentially disappear from coastal sites by the end of this period (Jones 1995).

There is at least one site at Point Lobos dating to the Middle/Late Transition Period and two sites at Point Lobos with components dating to that period. These sites appear to be collecting and processing sites with a variety of shellfish and animal bone, including abundant fish and sea mammals. A site on what is currently Point Lobos Ranch also contains a component dating to the Middle/Late Transition.

Late Period

During the Late Period (750 years ago to European contact) populations lived in inland villages (i.e., the Carmel Valley for the Monterey area), concentrating on acorns and other terrestrial resources. Bedrock mortars were common and hopper mortars – shallow stone mortars used in conjunction with a bottomless basket or hopper – made their first appearance. These inland populations continued to make frequent visits to the coast to gather and process shellfish.

Most of the coastal sites in the Monterey area (including Point Lobos) dating to this period represent specialized shellfish processing stations. These sites are found along the coastline from Point Lobos to Point Pinos and the southwest shore of Monterey Bay. The vast majority of these processing sites indicate a focus on abalone collecting and processing with few tools or other dietary remains. This intense focus on abalone has resulted in massive layers of abalone shells, sometimes up to a foot or more thick. Known as "abalone pavements," this phenomenon is unique to the Monterey area during the Late Period.

The site near San Jose Creek in Point Lobos Ranch known as the Hudson Mound has a large component dating to the Late Period. This site is unique in being a coastal residence that appears to have been occupied seasonally but continuously from the Middle Period up to the Contact Period (Schwaderer 2004). It is here that the Portolá expedition first encountered the native people of Monterey, who were on a seasonal visit to the coast from their village in Carmel Valley (Brown 2001).

This site near San Jose Creek has been long associated with the village of *Ishxenta* (also spelled *Ichxenta*), although some scholars disagree as to the location, and alternate locations have been suggested (Culleton 1950:249; Milliken 1981:27, 62; Harrington 1934:67–208, 273). The best evidence for *Ishxenta* being located at San Jose Creek comes from Isabel Meadows, a woman of Rumsen and Esselen ancestry, who served as the primary consultant to linguist/ethnographer John P. Harrington in the 1930s. She reported that *Ishxenta* was the area where the Allans (the A.M. Allan family) were, below San Jose Canyon (Harrington 1934:68–261). That area is the current Reserve, most of the northern portion of Point Lobos Ranch, and much of what is now the State Beach.

Ethnographic Background

The Carmel area lies within the traditional territory of the Costanoan or Ohlone people. "Costanoan" is derived from the Spanish *costaños*, meaning "coast dweller." Ohlone (or Alchone, Olchone, Oljon, or Olhon) was the name of a tribe between San Francisco and Santa Cruz who spoke one of the Costanoan languages, and it has come to replace the Spanish-derived term Costanoan for both the language family and the speakers of those languages (Bean 1994, Heizer 1967, Levy 1978).

The Ohlone lived in approximately 50 politically autonomous villages called tribelets (Kroeber 1925). 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 (Broadbent 1972, Margolin 1978, Milliken 1995).

The Ohlone may have come into the San Francisco and Monterey Bay Area relatively late in time, perhaps as late as 1,500 years ago, from the San Joaquin-Sacramento River system (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 approximately 5,000 years ago (Whistler 1977).

The Rumsen and Esselen existed peacefully in this region for thousands of years before Spanish Missionaries arrived in the 1760s.

Some linguists and archaeologists believe that the Esselen ancestors lived in the Monterey-Carmel area prior to the arrival of the Ohlone when they were displaced to the upper Carmel Valley and rugged Santa Lucia Mountains (Breschini 1983, Moratto 2984). Their language is believed to be a member of the hypothesized Hokan language stock, an isolate within the Hokan Phylum, or even the sole remnant of a language family that has long since vanished (Kroeber 1925:544, Goddard 1996:319, Shipley 1978:81).

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

The Rumsen used boats made of tule reeds to fish offshore. They fished with lines, using mussel shell fishhooks and abalone shell lures, and with nets, using grooved net-sinkers. They managed the landscape through periodic burning to create and maintain a diverse habitat, including meadows, coastal prairies, and grasslands to promote the growth of seeds and fruit, to increase the grazing area for wild game, and to facilitate the gathering of acorns. They made intricate baskets, which they used for gathering, cooking, winnowing and roasting nuts and seeds, sifting flour, and many other uses. Ceremonial baskets were often decorated with feathers and shell beads. The Rumsen developed plant medicines for every ailment and created songs for every occasion.

Milliken, using census information from the Mission San Carlos baptismal register for 1770, estimates that the Rumsen were distributed between five villages much of the year. 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 *Ishxenta*, which was probably located at the mouth of San Jose Creek (Mikkelsen and Jones 2010).

Rumsen lands were bordered by three other Rumsen-speaking groups: the *Calendaruc* in the Castroville-Moss Landing area; the *Ensen* of the Salinas River Valley; and the *Sargentaruc* of the Big Sur coast at the mouths of the Little Sur and Big Sur rivers. One Esselen-speaking group, the *Excelon* of the upper Carmel River watershed, also bordered on Rumsen territory (Mikkelsen and Jones 2010).

Territorial boundaries were known and defended. Yet, during the Mission Period, Father Serra documented an intensive summer fish harvest in 1774 involving the local Rumsen as well as other surrounding Rumsen and Esselen tribes (Tibesar 1956(2):145). Whether this land use practice of allowing fishing in one's territory by other tribes can be extended into the pre-contact period is not known.

At the time of European contact, the Esselen were one of the least numerous groups in California. Estimates of their numbers at contact are in the range of 1,200-1,300. (Breschini and Haversat 2004). According to Milliken (1990:59), at the time of European contact there were five Esselen districts: *Excelen*, *Eslenahan*, *Imunahan*, *Ekheahan*, and *Aspasniahan*. Within each district there were a number of villages which were sequentially occupied on a seasonal basis depending on the availability of resources such as food, water, shelter, and firewood.

There is very little available ethnographic data on the Esselen and as a result, relatively little is known about Esselen culture. Most of what is known about the Esselen people derives from mission records and archaeology. Archaeological assemblages in Esselen territory are generally comparable with Rumsen collections from the same period (Breschini and Haversat 2004), and include such items as projectile points and other flaked stone tools; mortars and pestles, particularly hopper mortars; and bone awls, tubes, and gaming pieces. Excavations at a dry cave yielded evidence of both twined and coiled basketry and cordage made of a variety of materials including grasses, yucca, dogbane, animal skins, and even human hair (Meighan 1955). Personal ornamentation included *Olivella* shell beads, clamshell disc beads, steatite beads, and abalone shell ornament. The Esselen may be best known for their unique rock art – painted hands on the walls of a few remote caves in what is now Los Padres National Forest.

History

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. While camped at Monterey, the expedition was visited on several occasions by local Rumsen people who brought gifts of shellfish. Diaries of the expedition provide the earliest descriptions of Rumsen lifeways. 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 at the State Beach. 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 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).

Replica of cross erected by the Portolá-Crespi expedition

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, camping in the same locations. On both expeditions, while camping along San Jose Creek, they encountered Rumsen people who brought them gifts of food (Brown 2001). 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 Portolá 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). 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).

The establishment of Mission San Carlos in 1770 brought drastic changes to the traditional way of life for the Rumsen and the Esselen people. Initially, some were probably drawn to the Mission out of curiosity, or impressed by the material wealth of the Spanish. However, alteration of the landscape by the Mission through livestock grazing and farming soon depleted traditional food sources; European diseases spread through native communities, killing people in large numbers; and the high death toll resulted in a breakdown of communities, leaving the survivors little choice but to join the Mission.

The first baptism of a Rumsen speaker was in December 1770. By the end of 1778 most members of the Rumsen local tribe joined the Mission and the five Rumsen villages had been abandoned. The missionaries then reached out to the Esselen-speaking people of the upper Carmel River watershed. Between 1778 and 1791, the Mission absorbed large groups from all of the surrounding Rumsen-speaking tribes as well as *Excelens* from the Big Sur mountains, and *Eslenajans* from the Soledad area down the Salinas River Valley, both groups being Esselen speakers. The final tribal baptisms took place at Mission Carmel between 1804 and 1808 after which the Mission stopped taking in tribal converts (Milliken et al. 2009).

At the time of Mission secularization in 1834, only 188 native people remained at the Mission. Two thirds spoke Costanoan/Ohlone, one third spoke Esselen, and there were numerous bilingual Rumsen/Esselen descendants (Milliken et al. 2009). These intermarried descendants came to be known as Carmeleños. While some Esselen released from the Mission may have returned to the mountains, many remained in the area and their descendants, along with the Rumsen descendants, consider this area their homeland.

The promise that Mission lands would be returned to the Indians was decreed by Spanish law and implied by a number of Mexican laws. In reality, only a small number of Mission Indians actually received land grants during the 1840s, and most of those were lost in the 1850s when the Americans came to power. After secularization, some Mission Indians remained at the Mission for several years. Some found work and housing as laborers or domestic servants for families in town. In 1836 about one third of Monterey households had domestic servants; three quarters of those were former Mission Indians (Monterey Census of 1836, cited in Hackel 2005). Still others found work on local ranchos, in support of the hide and tallow trade.

Rancho Period

After the secularization of California's missions in 1834, Teodoro Gonzales applied for a land grant for 8,876 acres of land that stretched from the Carmel River to Big Sur. (Lydon 2006:3). In 1839, Marcelino Escobar was re-granted the land and named it Rancho San Jose y Sur Chiquito. At the same time Lazaro Soto was granted a one square league of land, Rancho Cañada de la Segunda, from Jose Castro. 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 1980:2–3).

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 1980:3). The claim was denied, and Emery and Bassett were left to pursue the claim (Stammerjohan 1980:3, Lydon 2006:4).

In 1853, Soto had sold The Rancho Cañada de la Segunda property to Andrew Randall and Fletcher M. Haight. The two men filed a claim with the California Lands Commission, which was confirmed in 1855. By 1858 a road was established that crossed the western boundary of Rancho Cañada de la Segunda. The patent was issued to Haight in 1859, after the death of Andrew Randall (Perez 1996, Hoover et al. 1966). Dominaga Goni de Atherton, wife of Faxon Dean Atherton, acquired the rancho in 1869. By 1892, rancho manager William Hatton purchased it from Mrs. Atherton (Basin Research Associates 2008:17, Cloud 1858, Howard 1978, Clark 1991 cited in TAMC 2009).

Early American Period

19th Century Commercial Development

Quarrying and Mining

Shortly after Emery and Bassett purchased their rancho land they established a granite quarry, located west of Whalers Cove at Point Lobos. Both men were stonemasons from New England and they won a contract to supply granite for the construction of Fort Point in San Francisco. Granite from their operation was also used in the construction of the U.S. Mint in San Francisco, the jail adjacent to Colton Hall in Monterey, the Point Sur Lighthouse, and the Navy shipyards at Mare Island in San Francisco Bay (Lydon 2006:4, Stammerjohan 1980:3). The quarry operated until at least the early 1860s and was one of several business enterprises of Emery and Bassett (Stammerjohan 1980:3, Motz 1987:5).

A granite quarry that was located near Whalers Cove supplied granite for construction of the U.S. Mint in San Francisco.

The San Carlos Gold Mining Company was established in 1863 after rumors of abundant gold at Point Lobos. Despite searching and prospecting, no gold was ever found and the company closed in 1866 (Stammerjohan 1980:5). Coal, however, was discovered in the hills southeast of Point Lobos (Stammerjohan 1980:5). In1878, William Strader leased land from Emery and the other owners of the rancho and established a coal mine in Malpaso Canyon, south of Point Lobos, but Strader's company went bankrupt the next year. After Emery received title to the rancho, he and his partners established the Carmelo Land and Coal Company (CLCC) (Lydon 2006:6–7).

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. For the next several decades, more 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, Lydon 2006:4).

During these years of uncertain land ownership, a group of Chinese citizens settled at the cove at Point Lobos and a larger village was established at Point Alones. At Point Lobos, the Chinese fishermen constructed small shacks at what is today known as the Whalers Cabin. These first Chinese immigrants came by boat and were from southeastern China where they lived and worked as fishermen.

Soon after their arrival they began harvesting abalone. The main industry was harvesting and drying to send back to China. By the 1860s, they expanded to other activities including line fishing from boats, kelp harvesting, and collecting squid and sea urchins. Point Alones was the most important of the villages in the region and it included temples, stores, restaurants, and gambling halls (Lydon 1985:29, 32, 35, 48).

Whaling and Abalone Fishing

Whalers Cabin Museum near Whalers Cove in the Reserve

Portuguese whalers from the Azores islands established a shore whaling station in 1862 on the edge of present-day Whalers Cove. The whaling industry in the region declined in the 1890s with the introduction of kerosene lamps, but at Point Lobos it may have ended as early as 1880 (Motz 1987:6, Stammerjohan 1980:4, Starks 1922:22).

Although the whaling industry was declining in the 1890s, the abalone industry remained robust. In 1895, a Japanese fisherman in Monterey alerted the Agricultural Ministry of Japan to the vast amounts of red abalone along Monterey's coast. The Japanese government enlisted Keio University's recent graduate, Gennosuke Kodani, a young Japanese marine biologist to investigate the fisherman's claim. Kodani arrived in Monterey and identified Whalers Cove as a prime location for his abalone operation because it offered good harvesting opportunities and was close to steamship transportation to move his product. He first rented land from the CLCC in 1897 (Hirahara 2003:104–105).

In 1898, Kodani became partners with local landowner Alexander MacMillan (A.M.) Allan, who had purchased 640 acres at Point Lobos from the CLCC. Together they built the Point Lobos Canning Company which constructed its cannery at Point Lobos in 1903 (Motz 1987:16, Stammerjohan 1980:8). In time, the Point Lobos Canning Company canned three-quarters of the abalone sold in California. Kodani and his family lived at Point Lobos for 30 years. He resided in the Whalers Cabin before constructing his own residence (Hudson and Wood 2004:48-49).

19th Century Settlement and 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 CLCC. The CLCC planned a subdivision with more than 1,000 lots surrounding Whalers 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, A.M. Allan (Lydon 2006:7–8, Stammerjohan 1980:6).

After acquiring the 600 acres from the CLCC, A.M. Allan purchased lots that were previously sold to private individuals. He also owned a parcel on the east side of what is now SR 1 and it contained a ranch house where he and his family resided (Bloner 2007 1–4). Shortly after acquiring his property, A.M. Allan established the Point Lobos Ranch and Dairy and the operations of the dairy were managed largely by his daughter, Eunice. By the early 1950s, small family dairies were unprofitable, and the Point Lobos Dairy closed (Lydon 2006:18, Hudson and Wood 2004:30).

Over the years, A.M. Allan and his descendants repurchased all the lots that had been sold by the CLCC; the last lot was acquired in 1950 (Bloner 2007 1–4). A.M. 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 scenic beauty of Point Lobos, A.M. Allan erected a gate in 1899 and charged a 50-cent fee to enter Point Lobos. Throughout A.M. 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). A.M. Allan's family continued to live at Point Lobos and another of his daughters, Margaret and her husband Adam L. J. Hudson built their home on the property currently known as the Hudson House, in 1949 (Hudson and Wood 2004:68). In the late 1990s, CSP acquired this portion of the A.M. Allan landholdings.

Constructed in 1949, the Hudson House was designed by builder Hugh Comstock.

This region was also developed by settlers like the Greggs, Olivers, and Odellos who engaged in cattle ranching, dairying, and farming. Joseph Gregg came to California in the early 1850s and by 1871 he had established his ranch at the mouth of the Carmel River. It became known as the Gregg Ranch (Schwaderer 2013:4). This ranch ultimately stretched from Carmel River on the north to San Jose Creek on the south, and eastward to The Rancho El Potrero de San Carlos, which was owned by Bradley Sargen. By 1900, Joseph Gregg was retired, but remained on his ranch with his daughter Mary Ann and her husband Montague Steadman and two of his grandchildren. In 1905, after moving to Monterey, Gregg died and his ranch was inherited by his three daughters. The oldest daughter, Elizabeth Gregg Oliver took controlling interest of the ranch (Schwaderer 2013:4–5). She and her husband, Tom Oliver, changed the name of the ranch to the Oliver Ranch (Bischoff 2007a:5). In 1924, the Oliver Ranch focused on milk production because it was more profitable (Schwaderer 2013:6). Tom Oliver died in 1925 and in 1927 his wife sold a large section of the ranch to Sidney Fish. This became the Palo Corona Ranch, and was often referred to as the Fish Ranch. The Oliver family operated a grade B dairy and also owned the Molera Ranch at Big Sur, and the September Ranch in the near vicinity of their San Jose Creek Ranch (Bischoff 2007a:3–4).

The Odello family arrived in the area in the early 1920s when Batista Odello moved his family from South San Francisco. Around 1925 (after Tom Oliver's death), Batista Odello leased land from the Oliver family and established an artichoke farm. The Odellos purchased the property from the Olivers after Elizabeth Oliver's death in 1953. When they acquired the Oliver property the Odellos utilized some of the existing buildings, including the barn and cookhouse/creamery building and demolished others, including a bunkhouse and horse barn. When the family expanded its operations to the west side of SR 1 they moved the blacksmith shed to its present location near the family's old residence. To prevent the Carmel River floods from reaching their ranch, the Odellos would open the sand bar and create a channel for the water to drain. Not only did their efforts protect their ranch, it also aided the neighbors whose backyards were close to the river and were at risk of being inundated with water. The Odellos continued this practice until about 1957 (Bischoff 2007a:8, 18–19, 21, 31–33).

Point Lobos State Natural Reserve

Acquisition and Development

A.M. Allan and others were interested in preserving the natural beauty of Point Lobos. The Save-the-Redwoods League (League) was created in 1917 and focused on the preservation of California's redwood forests. By the early 1920s, the League recommended that the preservation movement be expanded to include redwood forests across the state and land that could be used for future parks (Engbeck 1980:45). This was the start of a movement to create a State Park System. In 1928, California voters approved a bond measure to create the California Division of Beaches and Parks. The State Park and Recreation Commission hired landscape architect Frederick Law Olmsted, Jr. to recommend lands for acquisition. Olmsted recommended Point Lobos because he considered it to be one of the most significant scenic and scientific areas that should be acquired by the state (Roland 2003:7, Engbeck 1980:62).

Landscape architect Frederick Law Olmsted, Jr. was hired by CSP to conduct a survey and provide recommendations on which lands would be best for acquisition and development as state parks. Point Lobos was promoted by Olmsted because of its significant scenic and scientific attributes.

In 1932, the League raised the necessary matching funds to allow California to acquire Point Lobos. The following year Florence Allan deeded the property to the state (CSP 1969:1). Not long afterwards, a 14-acre cypress grove, located southeast of The Pinnacle, was gifted by the Allan family as a memorial to A.M. and Satie Allan. In 1934, the League re-hired Olmsted to prepare a master plan for Point Lobos, which took 2 years to complete (Engbeck 2002:87). The primary objective of the Master Plan was to maintain and preserve the natural conditions of Point Lobos for the enjoyment, education, and inspiration of others. The Master Plan was adopted in 1936 and served as the guiding principles for the Reserve. The plan was implemented soon after it was adopted. Trails, roads and parking lots, an entrance gate, and ranger quarters were constructed. Implementation of the Master Plan created a cultural landscape at the Reserve.

Civilian Conservation Corps

During the early 1930s, the development of California's state parks was completely dependent on the Civilian Conservation Corps (CCC), because the 1928 State Park Bond Act only afforded funds for the acquisition of park land. In 1934, the National Park Service produced an illustrated handbook that emphasized basic design principles that allowed buildings and structures to blend into the natural setting of the parks. CSP adopted this approach and the Park Rustic architectural style became the dominant architectural style in California state parks (Engbeck 2002:12).

The Master Plan adopted for the Reserve limited the CCC projects. As a result, the only CCC-related projects were the re-modeling of residences, located at the entrance of the Reserve; building some new employee housing, an office and maintenance center; a stone walkway at Whalers Cove; and various picnic areas (Engbeck 2002:87–88). Unlike at other California state parks where landscape architect Daniel R. Hull approved most of the CCC projects, CCC projects at the Reserve were approved by Frederick Law Olmsted, Jr. (Roland 1991:25, Engbeck 2002:87).

Film Industry

Motion picture filming at Point Lobos began in 1914, with the movie *Valley of the Moon*. Point Lobos has served as the location for scenes in nearly 50 movies, half of which were filmed before Point Lobos became part of the State Park System (Hudson and Wood 2004:103). For a scene in the 1929 production of *Evangeline* a set designed as a village was burned to the ground. Nearby trees were burned and large sections of grasslands were destroyed (Hudson and Wood 2004:106). It took decades for these damaged sections of the park to recover. This prompted the State Park Commission in 1944 to pass a resolution mandating that public hearings be held before a film permit was granted. The damage caused by the film industry also spurred the creation of the Point Lobos League, an organization created to protect the Reserve during film production (PLF 2018b).

World War II

Because of the threat of war, the U.S. military undertook efforts to patrol California's coastline as early as 1941. U.S. Army reserves were housed at Point Lobos and in 1942 the Army Signal Corps installed radar on Whalers Knoll. Military personnel also occupied the Whalers Cabin, and approximately 100 soldiers were housed in tents at Point Lobos. By 1943 the Whalers Cabin was used by eight sergeants of the 543rd Regiment, 3rd Amphibious Brigade. The military also utilized Whalers Cove and conducted Landing Craft, Personnel, Ramp training to prepare personnel for amphibious landings. Military operations at the Whalers Cabin and the Reserve ended after the war and the cabin was returned to the Reserve to be used for rangers' quarters (Motz 1987:19, Clifton and Johnson 2010, Hudson and Wood 2004:108).

Post World War II

In 1944, CSP developed a series of standard plans to be used in designing all new park facilities, including residences, service areas and recreational structures. In 1945, CSP hired Colonel Edward Kelton, a former U.S. Army Corps engineer, to implement the first post-CCC construction program (Roland 1993:9–10). By

1948, it was realized that the program needed to be expanded to include residences for the increasing field employees. In response, the State Park Residence Program built 54 employee residences and garages within the State Park System. At the Reserve, two residences and garages were constructed as part of this program (Bischoff 2007b:3). The buildings constructed during this early post-World War II period followed a standard set of plans and were a variation of the 1930s adopted Park Rustic style (Roland 2003:17). Unlike other state parks, little further construction was done at the Reserve because the Master Plan was strictly adhered to even during a time when the State Park System was rapidly expanding (Bischoff 2007c:3). In 1960, 775 underwater acres were added to the Reserve. This created the first marine reserve in the United States. In 1973, the Reserve was dedicated as an Ecological Underwater Reserve (Hudson and Wood 2004:122).

Archaeological Investigations

Early Investigations

The Reserve was initially surveyed by Waldo Wedel in 1935 under the sponsorship of the League. The purpose of the survey was to formally document resources, develop a regional context, and plan for their protection. Wedel described two kinds of sites, shell deposits and bedrock mortars. He noted that artifacts were sparsely distributed on the surface, and he did not note any evidence of structures, burials, or petroglyphs. He summarized that most of the sites at the Reserve are extensive, but shallow deposits containing primarily abalone and mussel. Wedel identified two sites that he thought were "true" shell mounds; Wedel described these two sites as seasonal villages occupied during spring and summer. He also noted that Chinese fishermen in the area used flat locations to dry large amounts of abalone during the late 19th century, making it sometimes difficult to distinguish pre-contact deposits from historic-era deposits, though the historic-era abalone deposits tended to be thin (Wedel 1935).

Since Wedel conducted his survey in 1935, there have been other surveys, probably most notably Pilling and Meighan in 1949 and 1950 (as noted in Kelly et al. 1976), and a limited number of excavations.

Recent Investigations

There are currently 35 documented archaeological sites dating from, or containing components dating from, the pre-contact period and three historic period sites within the Reserve. A few of these sites have not been identified since their initial recordation, and some have been evaluated for eligibility for listing in the California Register of Historical Resources (CRHR) or the

National Register of Historic Places (NRHP). Six of the sites that have been evaluated are considered eligible for listing, and one other is likely eligible for listing, but have not been submitted for State Historic Preservation Officer (SHPO) concurrence. In addition, the historic site containing the Whalers Cabin is listed on the National Register as part of the Whalers Cabin nomination. Although most of the sites appear to have retained integrity, some sites adjacent to the immediate coastline have suffered from erosion. Likewise, trails and associated pedestrian traffic, particularly on unauthorized user-created trails, has contributed to erosion of several resources.

Architectural Resources

There are 14 architectural resources located in the Reserve. Four of these are the Whalers Cabin, Shop Building, Custodian's Lodge, and the Hudson House, and are considered historical resources for the purposes of CEQA. Detailed information on these structures can be found in Appendix D.

Collections

The Whalers Cabin Museum and Whaling Station Museum, located at Whalers Cove, contain a diverse collection of objects, including objects from indigenous peoples, Chinese fishermen, Japanese abalone fishermen, and Portuguese whalers. Fewer than 100 catalogued CSP museum objects and approximately 206 loaned objects make up the Reserve's museum collections.

The Whalers Cabin Museum contains displays documenting the cultural history of the Reserve including the early settlers, Japanese and Chinese fishermen, military history, and the history of movies that have been filmed within the Reserve. It also includes a view "through the floor" of the museum that displays artifacts from various time periods by showing them in their original placement beneath the cabin.

The Whaling Station Museum is the only on-site whaling museum on the West Coast and the collections focus on whaling equipment and the lives of whalers and their families (Thomson 1997). It documents the historic whaling activities in the area and contains a collection of whale bones, baleen, harpoons, whale-oil barrels, an oil barrel display, a model of a shore whaling boat, diagrams of whale-oil processing, and photographs of the old Monterey Peninsula whalers. The Whaling Station Museum, opened in 1994, is housed in a building that was a former garage.

Carmel River State Beach

Acquisition and Development

During the post-World War II period, Point Lobos, like most parks in the system, was experiencing an overwhelming number of visitors, and in response there was tremendous support for expanding and developing a large State Park System in California. Monastery Beach and Carmel River Beach were proposed for acquisition in 1947, and in 1952 the State acquired 27 acres on the north side of the Carmel River lagoon owned by James C. Doud and his wife, and Corum B. Jackson. This was followed by acquisition of 22 acres on the south side of the lagoon in 1953 from Helen A. Burnette. The area was renamed Carmel River State Beach and was officially an operating unit of the State Park System in 1953. The following year, the unit was expanded when the Carmel Development Company deeded another four acres on the north side of the river's mouth (CSP 1988).

In 1974, Californians approved Proposition 1, a $250 million bond issue. Ninety million of that money was spent on land acquisition, including the 155-acre agricultural area known as the Odello West field (Engbeck 1980). In 1974, the agricultural land was deeded by the Odello family to the state with a stipulation that the Odello family would lease the land in 5-year increments and continue their farming operations (CSP 1988, Bischoff 2007a). In 1979, a combined General Plan for the Reserve (then called Point Lobos State Reserve) and the State Beach was approved by the State Park and Recreation Commission on May 11, 1979 (CSP 1979).

Thirty-five additional acres located south of the Carmel Meadows subdivision was added to the park unit in 1981. A general plan amendment (GPA) was approved in June 1987 to designate 36 acres of this newly acquired property south of Carmel Meadows subdivision for day use and to allow visitor facility development including new parking facilities (CSP 1988). In 1995, after extensive flooding, farming operations on the Odello West field ended and in 1996 plans to convert the agricultural land to riparian and wetland habitat were underway (Bischoff 2007a, CSP 1996). A second GPA was approved in March 1996 to change the land use designation of the 155-acre Odello West field within the State Beach from agricultural use to riparian and wetland habitat to help reduce the risk of flooding and to address resource enhancement goals (CSP 1996).

Archaeological Investigations

The information in this section has been gathered from the Management Plan for the Ohlone Coastal Cultural Preserve in Carmel River State Beach (CSP 1987), A Cultural Resource Inventory of Carmel River State Beach (Woodward 1986) for CSP, and personal communication with CSP Archaeologist Rae Schwaderer and CSP Historian Matt Bischoff.

There are currently four archaeological sites located entirely within the State Beach. Three additional sites are partially within the unit.

In 1987, 25 acres of the State Beach were classified as a cultural preserve, the Ohlone Coastal Cultural Preserve, by the State Park and Recreation Commission. The area designated as the preserve includes four sites located in the Middle Beach area as described in the Management Plan for the Ohlone Coastal Cultural Preserve in Carmel River State Beach. As stated in the management plan for the preserve, the intent of the plan is to provide additional protection to the sites within the preserve, noting that the sites had not been disturbed as well as to recognize significant cultural resource values within the park unit, with the goals to protect and preserve the archaeological sites within the preserve (CSP 1987).

Architectural Resources

Old Odello Farm residence within the State Beach

The State Beach contains the Odello farm complex, which consists of four architectural resources. None of the resources have been formally evaluated for the NRHP or the CRHR. However, the property, as a part of a larger area, was evaluated and found to qualify as a cultural landscape and is CRHR and NRHP eligible at the local level of significance for its strong association with the agriculture of Monterey County as well as its connection to the Odello family. This cultural landscape includes the remaining buildings at the Odello farm complex including the Old Odello Residence, creamery/cookhouse, barn, and blacksmith shed (Garavaglia Architecture, Inc. 2016). Detailed information on these structures can be found in Appendix D.

Collections

There is one archaeological collection from testing and evaluation of an archaeological site within the State Beach by Albion Environmental, Inc., which is currently curated at the Monterey District office. The collection consists of a variety of shell, debitage, bone, fire affected rocks, hand stones, milling stones, ground stone, glass, burned wood, and soil samples (CSP 2018).

Point Lobos Ranch Property

Acquisition and Development

In the 1990s, extensive private development, including a conference center and condominiums, was proposed for Point Lobos Ranch. In response, BSLT purchased the 1,312-acre Point Lobos Ranch property in 1993 and reached an agreement with CSP to transfer the land to CSP over a 10-year period. Transfer of the Point Lobos Ranch property to CSP concluded in 2003. Proposition 117, the California Wildlife Protection Act of 1990, funded the acquisition, with interim financing provided by the David and Lucile Packard Foundation (Saunders, pers. comm., 2017).

Acquisition of the property was a pivotal step in protecting lands within the San Jose Creek watershed that provide the stunning scenic backdrop for the Reserve while expanding future public outdoor recreation opportunities. Point Lobos Ranch is forested with dense Monterey pine, stately redwood trees and unique Gowen cypress, as well as maritime chaparral, coastal prairie and other significant habitat areas. Point Lobos Ranch is important wildlife habitat for deer, mountain lion, and gray fox, and San Jose Creek within Point Lobos Ranch provides important habitat for threatened south-central California coast steelhead. Point Lobos Ranch also contains important archaeological sites and architectural resources including ranch buildings and historic cottages that were used more than a century ago by whalers and fishermen that docked at Point Lobos (Saunders, pers. comm., 2017).

Archaeological Investigations

There are three known pre-contact era archaeological resources within Point Lobos Ranch that are extensive and possibly eligible for listing in both the CRHR and NRHP. One of the sites has been recommended as eligible for listing on both the CRHR and NRHP, but has not received SHPO concurrence. There are also four documented historic-period archaeological sites and several historic landscape features, such as roads and power lines. Additional sites within Point Lobos Ranch may also be found to be eligible for listing following a complete inventory and evaluation.

The historic Foreman's House within Point Lobos Ranch

Architectural Resources

Two potential historic districts, the Point Lobos Ranch Historic District (PLRHD) and the San Jose Creek Historic District (SJCHD) were identified by CSP in 2012 as part of the Point Lobos Ranch Cultural Resource Inventory. Contributing resources to the PLRHD include the loafing barn, Owl's Nest/First Residence #1,

Morales House/Residence #2, Victorine House/Middle Residence #3, Gould House, dairy barn, hay barn, and Foreman's House. Contributing resources to SJCHD include the barn, main ranch house, dynamite shack, back house, and middle house. Detailed information on these structures can be found in Appendix D.

Hatton Canyon Property

Acquisition and Development

During the 19th century, Rancho Cañada de la Segunda was part of larger ranch holdings of William Hatton. Hatton was born in Ireland in 1849 and came to California in 1870. He managed several dairies in Carmel Valley, including Pacific Improvement Company's Del Monte Dairy at Rancho los Laureles, and by 1888 was managing Rancho Cañada de la Segunda for Mrs. Atherton. Hatton introduced Durham cattle to his stock of Holsteins and successfully increased his stock breed and the milk butter fat from his dairies. Although he was managing the Atherton dairy, he operated his own dairy, the Hatton Lower Dairy that was situated at SR 1 and Carmel Valley Road (now the site of a modern shopping center) (Barratt 2010:44–45). Shortly after purchasing the rancho, Hatton died in 1894. His wife, who died in 1922, continued to manage the family ranching properties until the responsibility was passed to her children (USGenWeb 2013, Sand-Realty 2012, Basin Research Associates 2008:17). Caltrans acquired the right-of-way through Hatton Canyon in 1956 for potential use as a new alignment of SR 1. After several lawsuits challenging the environmental analysis for the SR 1 bypass, the plan to build the bypass officially ended in 1999. In 2001, AB 434 rescinded the SR 1 realignment project and declared the property as surplus. The property was subsequently purchased by CSP in 2001.

Archaeological Investigations

There is little information regarding cultural resources within Hatton Canyon. Information in this section is based primarily on Archaeological Survey Report, Carmel Hill and River Bike Trail near Route 1 from Rio Road to Canyon Drive, Monterey County, by C.I. Busby of Basin Research Associates in San Leandro, prepared for Caltrans District 5 in April 2008. Busby's investigation included most of Hatton Canyon and included an intensive pedestrian survey. The investigation was conducted in support of the Carmel Hill and River Bike Trail project. That report produced for the project noted that a record search at the Northwest Information Center identified one pre-contact cultural resource as being within or adjacent to Hatton Canyon. The report also noted that after thorough additional research, including a field survey of the project site, the cultural resource

was found to be misplotted by the Information Center and not located on CSP property. No other cultural resources were documented during the field survey. Therefore, there are no known pre-contact period cultural resources within Hatton Canyon (Busby 2008). Native American consultation for this General Plan revealed a post-mission period Native American cabin site within Hatton Canyon. No standing structures remain; however, archaeological deposits may be present. The site has not yet been inventoried or recorded.

Architectural Resources

No CRHP or NRHP listed, determined eligible, or pending properties have been identified within Hatton Canyon. In addition, no historic archaeological resources have been identified within the property (TAMC 2009).

2.3.4 Aesthetic Resources

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. Maps showing scenic features within each of the CASP units are included in Appendix E.

Point Lobos State Natural Reserve

Scenic Resources

Scenic resources are viewed by passing motorists and bicyclists along SR 1, residences in Carmel Highlands, Carmel Meadows subdivision, and other surrounding developments at higher elevation. Recreational users within the Reserve enjoy spectacular scenic views. The Reserve is known for its outstanding scenic qualities and was acquired primarily to preserve its scenic beauty and the unusual natural landscape. The unique and significant visual resources within the Reserve have been recognized for decades as evidenced by the Olmsted Master Plan developed for the Reserve in 1935 that describes the outstanding and unique visual resources within the Reserve in depth. Some of the outstanding visual features acknowledged by the Olmsted Master Plan include granitic headlands, coastal and interior cypress forests, the saddle south of Big Dome, pine covered knolls, and north-facing sea bluffs (Olmsted Brothers 1935). The spectacular combination of unique geology, vegetation, and ocean has created a world-renowned place to visit.

Point Lobos was referred to as "…the greatest meeting of land and water in the world," by landscape artist Francis McComas.

Reserve shoreline near Whalers Cove

Scenic resources at the Reserve include the presence of the most outstanding natural grove of Monterey cypress. Once widely distributed, this picturesque tree is found in its natural state only in the Monterey area. Within the Reserve, there are many scenic vistas and overlook sites that are accessible via trails including Whalers Cove, Cypress Grove/Sea Lion Point, and Bird Island. Vistas provide panoramic views of the Pacific Ocean and shoreline, Carmel Bay, white sand beaches and emerald-green waters, wildlife, and the many sea stacks and coves of the Reserve (CSP 1979).

The Reserve also has significant underwater viewsheds that are available to divers. There are views of dramatic underwater geology and kelp forests that are abundant with marine life including sea lions, otters, fish, and other marine organisms. Brightly colored marine life such as anemones, corals, and sea stars are so abundant that they completely envelop rocks and stone formations. Underwater geologic features include large pinnacles, reefs, and granite walls. Bluefish Wall, which is an undersea mountainous mass of granite, is completely carpeted with life (Davis 2010, Thomson 1997).

The unique landscape and its special aesthetic qualities have been an inspiration for artists, photographers, poets and writers for many generations. The PLF website provides a platform for artists to post fine art, photography, poetry, writing, videos and student work to share them with the community (PLF 2018a). The landscape of the Reserve also changes seasonally. Summer fog is frequent, producing a cool, misty, and quiet quality to the Reserve. 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, with the most pronounced changes in the spring. Wildflower displays in the spring create a sea of brightly-colored California golden poppy, Douglas iris, lilac, and blue-eyed grass (Bancroft 2011).

Designated Scenic Areas and Routes

SR 1 was designated as the first State Scenic Highway in California.

SR 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 SR 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). In addition, the Carmel Area Land Use Plan contains policies that the existing forested corridor along SR 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 SR 1 within the Reserve 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.

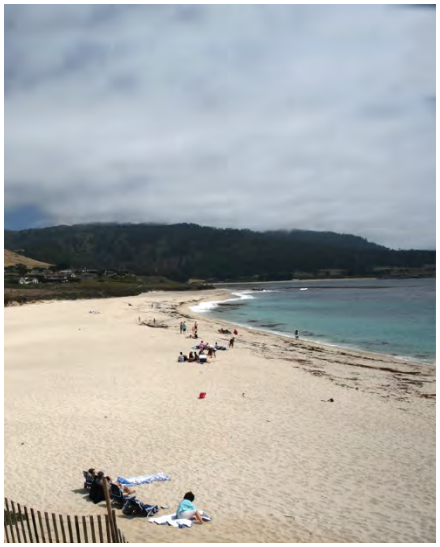
Auditory Resources

The predominant sounds at the Reserve are natural: the ocean waves and surf, wind, birds (including migratory songbirds), and marine mammals such as the California sea lions. There is also some ambient noise produced by traffic within the Reserve and from SR 1, and from various visitor activities, including school groups. However, much of the noise from traffic is reduced by intervening vegetation.

Carmel River State Beach

Scenic Resources

The primary viewers of the State Beach include park visitors, surrounding residences in the Carmel Meadows subdivision and in Carmel-by-the-Sea, and other developments at higher elevations. Portions of the State Beach are visible to motorists on SR 1 and the private road providing access to the CAWD wastewater treatment plant. The State Beach is an area of high scenic value. From north to south along the beach, the downcoast scenic vistas change constantly and increase in prominence. The headlands are a focal point for mid-ground vistas. However, there are several prominent negative features in the viewshed of the State Beach. These include automobile traffic, power lines paralleling SR 1, and nearby development (CSP 1988).


Carmel River State Beach

The landscape of the State Beach also changes seasonally. In May, a sandbar forms, closing the river mouth and turning the backwater area into a tranquil lagoon. During winter, the river can cut through the sand barrier berm and flush the backwater lagoon to the sea. When the river breaches to the sea, south-central California coast steelhead trout swim upriver to spawn.

Designated Scenic Areas and Routes

There are no designated scenic areas within the State Beach. Portions of the State Beach are within the scenic corridor for SR 1.

The most vivid images of the State Beach along SR 1 are of the Carmel River lagoon, beach, and open ocean. Natural features of the corridor such as the geology, climate, streams, vegetation, and wildlife all contribute to the viewshed. Human-made features that contribute to the viewshed include the historic structures at the Odello farm complex, and the cross near the Carmel River mouth.

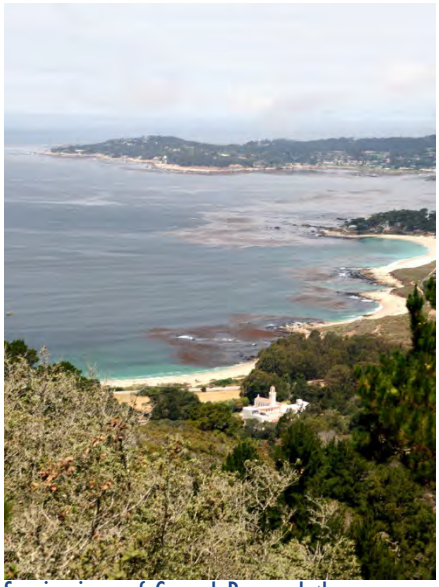
Auditory Resources

The predominant sounds at the State Beach are natural: the ocean waves and surf, wind, and abundant shorebirds that come to feed in the lagoon. There is also some noise produced by traffic from SR 1 and the nearby CAWD wastewater treatment plant. However, much of the noise from traffic and the wastewater treatment plant is reduced by intervening vegetation, except at Monastery Beach where the highway is immediately adjacent to the beach.

Point Lobos Ranch Property

Scenic Resources

Because of the steep topography of Point Lobos Ranch, there are many distant views to and from the property. Viewer groups with more distant views of Point Lobos Ranch include visitors within the Reserve, the State Beach, Palo Corona Regional Park, the Carmelite Monastery, and residences in nearby subdivisions. 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 the Reserve. The high ridges provide breathtaking views of the Pacific Ocean, Carmel-by-the-Sea, and Monterey Bay (Dornbusch Associates 2010). Point Lobos Ranch is covered by dense Monterey pine forest and oak woodland, maritime chaparral, riparian, and chamise chaparral habitat. Foreground views also include residences and historic structures associated with farming and ranching.



Scenic views of Carmel Bay and the Carmelite Monastery from Point Lobos Ranch

Designated Scenic Areas and Routes

A portion of Point Lobos Ranch is visible from SR 1 and CSP 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).

Auditory Resources

Most of Point Lobos Ranch is remote and dense vegetation creates a quiet, peaceful experience. There is some noise produced by traffic from SR 1 and the nearby residences. However, much of this noise is reduced by intervening vegetation.

Hatton Canyon Property

Scenic Resources

The northern portion of Hatton Canyon is not widely visible because of the canyon topography. The primary viewer groups consist of residences and neighbors using the area for informal recreation. Views in this area include a steep-sided canyon with some heavily wooded habitat with mature trees.

The southern portion of Hatton Canyon is much more visible. The main viewer groups of this area are motorists, pedestrians, and bicyclists using SR 1, Rio Road, and Carmel Valley Road; residents; and patrons of the commercial areas east of SR 1. Views from the southern portion include SR 1 and commercial development fringed with narrow patches of undeveloped land, including the riparian area along the Carmel River.

Designated Scenic Areas and Routes

There are no designated scenic vistas within Hatton Canyon; however, the Greater Monterey Peninsula Area Plan designates this area as a highly sensitive visual area. Areas designated as highly sensitive are defined as possessing those scenic resources that are most unique and have regional or countywide significance (TAMC 2009).

SR 1, designated as an All-American Road and State Scenic Highway, is adjacent to the southern portion of the property.

Auditory Resources

Dense vegetation and steep topography in the northern portion of Hatton Canyon creates a quiet, peaceful experience for park users.

2.4 Park Operations and Maintenance

2.4.1 Facility Management

CSP's facilities maintenance staff maintains the existing structures and infrastructure (water, sewer, electric, gas, and telecommunication services) within the CASP units. The CASP units are served by the Monterey District maintenance shop located on Garden Road in Monterey. CSP maintains all utilities in coordination with the respective utility providers. Facilities maintenance staff also maintain roads, trails, interpretive signage, and other facilities.

2.4.2 Public Safety

CSP Rangers and Lifeguards are trained peace officers that help to operate and manage the CASP units. They provide public safety law enforcement, aquatic rescue services, and public education through interpretation (CSP 2010b).

CSP peace officers have the primary public safety and law enforcement responsibility for the CASP units. The Monterey County Sheriff's Office has concurrent law enforcement jurisdiction for park property in the unincorporated area of Monterey County. The California Highway Patrol has concurrent law enforcement jurisdiction for all state facilities. CSP peace officers occasionally are called to assist or back up a local police agency, California Highway Patrol, or other law enforcement agencies. CSP peace officers also provide emergency medical response for all CSP properties. CSP peace officers routinely patrol the CASP units. CAL FIRE provides the primary fire protection services for the CASP units and CSP staff conducts vegetation clearing for fire management to maintain defensible space.

2.4.3 Concessions

There are currently no concessions within any of the CASP units.

2.4.4 Point Lobos State Natural Reserve

Contracts and Agreements

In 2013, CSP, MPRPD, BSLT, and PLF initiated a partnership effort known as the Lobos-Corona Parklands Project (LCPP) to create 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. This agreement applies to lands within all of the CASP units, including the Reserve.

Visitor use on a Reserve trail

Public Safety

Safety for visitors that park along SR 1 to visit the Reserve is a safety concern for CSP. Scuba diving safety is also a top priority for the Reserve and the State Beach. In 2016, there were two fatalities and five rescues in the Reserve. Enforcement citations at the Reserve are often related to visitors leaving designated trails and dogs in the Reserve (dogs are not allowed in the Reserve). There were also four arrests and 33 citations in the Reserve in 2016. Other enforcement issues include illegal collection of resources.

The nearest fire station is the Carmel Highlands Fire Protection District located approximately 1 mile southeast of the Reserve. This Fire Protection District is operated under a cooperative agreement with CAL FIRE (Cypress Fire Protection District 2017). There are also approximately 18 fire hydrants within the Reserve for fire control. Wildfire management in California state parks is guided by 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 (CSP 2008), and the Guidelines for Protection of Structures from Wildland Fires (CSP 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 (CSP 2008).

2.4.5 Carmel River State Beach

Contracts and Agreements

Flood prevention and habitat protection within the Carmel River lagoon are managed cooperatively with Monterey County.

There is currently a MOU between Monterey County and CSP for sandbar management, flood prevention, and habitat protection within the Carmel River lagoon. This MOU provides for implementation of an interim plan for flood prevention and habitat protection in the lagoon and mutual planning for long-term solutions to resolve these issues. The long-term plan for the lagoon is to balance the natural environment and built environment. The LCPP agreement described above also covers lands within the State Beach.

Public Safety

Warning sign at Monastery Beach

Water and beach safety are priorities for the State Beach. There were seven water-related fatalities in the State Beach between 2008 and 2017, and all but one occurred at Monastery Beach. The steepness of Monastery Beach and dangerous waves/tides have resulted in yearly drownings. Activities that lead to these fatalities include people walking on the beach, swimming, scuba diving, posing for photographs, and attempting to rescue other people in the water.

The State Beach is within the Cypress Fire Protection District. The nearest fire station to the State Beach is the Cypress Fire Protection District located approximately 0.5-mile northeast of the park on Rio Road. This fire protection district is operated under a cooperative agreement with CAL FIRE (Cypress Fire Protection District 2017).

2.4.6 Point Lobos Ranch Property

Contracts and Agreements

CSP, MPRPD, and BSLT prepared a MOU for implementation of the San Jose Creek Trail Project. The project is an approximately 1.5-mile pedestrian recreation trail that will link Point Lobos Ranch with the MPRPD Palo Corona Regional Park. The project includes a picnic area and three pedestrian bridges spanning San Jose Creek. The MOU states that BSLT will take the lead on building the trail and that CSP and MPRPD will take responsibility for maintaining the trail for a minimum of 20 years. The LCPP agreement described above also covers lands within Point Lobos Ranch.

Public Safety

The nearest fire station to Point Lobos Ranch is the Carmel Highlands Fire Protection District located approximately 1 mile southeast of Point Lobos Ranch. 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 native vegetation within Point Lobos Ranch. CSP staff is coordinating with CAL FIRE on this matter.

2.4.7 Hatton Canyon Property

Contracts and Agreements

There is one contracted lessee for Hatton Canyon. Sima-Barnyard LLC has a 10-year lease for the portions of Hatton Canyon that started in June 2011. The lease is for maintaining a landscaped open area that integrates the paved multi-purpose trail with the Barnyard Shopping Village. The lease permits the lessee to use 2.4 acres of the property adjacent to the shopping center for community events, working/organic gardens, orchards, sculpture placements, produce stands, seasonal farmer's market, approximately 30 parking spaces, and a compost bin and recycle storage area. The LCPP agreement described above also covers lands within Hatton Canyon.

Public Safety

In 2016, there were four citations issued within Hatton Canyon, but no arrests. The nearest fire station is the Cypress Fire Protection District located approximately 0.25-mile to the east on Rio Road (Cypress Fire Protection District 2017).

2.5 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 CSP. The existing interpretive opportunities, programs, and facilities within each unit are described below.

2.5.1 Existing Interpretation and Education

Point Lobos State Natural Reserve

The Reserve has an extensive array of interpretive and educational opportunities and media resources for visitors. The Reserve has two buildings that are used for interpretation. The Whalers Cabin Museum, staffed by docents, was built by Chinese fishermen in the 1850s and functions as the Reserve's cultural history museum. Located north of the Reserve entrance at Whalers Cove, the 760-square-foot facility includes displays and artifacts documenting the cultural history of the Reserve, including the early settlers, Japanese and Chinese fishermen, military history, and the history of movies that have been filmed there.

The Whaling Station Museum, which opened adjacent to the Whalers Cabin Museum in 1994, functions as an extension of the Whalers Cabin Museum. The Whaling Station Museum contains a collection of whale bones, baleen, harpoons, rendering pots, and other artifacts from the whaling industry.

In addition to the museums, the Reserve has the following interpretive infrastructure and opportunities:

- Several self-guided interpretive nature trails including Cypress Grove Trail, Sea Lion Point Trail, and South Plateau Trail.
- An outdoor exhibit shelter at Whalers Cove with three interpretive panels featuring photos of invertebrates, a map of the diving areas, and the Marine Protected Area.
- The Parks Online Resources for Teachers and Students (PORTS) long-distance learning program, which is broadcast out of Whalers Cove, has become CSP's leading program with more than 10,000 students reached in the 2016/17 fiscal year.
- A low profile interpretive panel by the Bird Island restrooms featuring the Marine Protected Areas near the Reserve.
- An Information Station near the Sea Lion Point parking area, staffed by docents, that has interpretive materials such as posters of scenery and wildlife, postcards, books and booklets on wildlife and natural resources, and field guides. The Information Station also has animal furs to touch, a collection of wildlife skulls, and information on guided walks, weather, and tides.

A number of interpretive media resources can also be found, including an audio-visual film available at the Whalers Cabin Museum, free publications in many languages, and sales publications about the Reserve that can be downloaded from various online websites, including CSP's websites and the PLF website. The PLF also publishes the quarterly Point Lobos Magazine, which is available to PLF members, about the Reserve and the Foundation's work.

Interpretive topics that are covered in brochures include the following:

- Welcome to Point Lobos
- Observation Checklist (including plants, animals, and geologic features)
- Whalers Cabin
- South Plateau Guide
- Cypress Grove Walk
- Sea Lion Point Nature Walk
- Please Don't Feed the Wildlife
- Exploring Tidepools
- Diving at Point Lobos
- Camping (Santa Cruz to the Big Sur Coast)
- The Rocks of Point Lobos State Reserve
- Birds of Point Lobos
- The Southern Sea Otter
- Whales
- Tribal Uses of Plants

Interpretive Facilities at the Reserve

- Whalers Cabin Museum exhibits
- Whaling Station Museum exhibits
- Information Station displays and literature
- Interpretive trails
- Interpretive shelter and displays at Whalers Cove (Underwater Reserve)
- Information shelter by entrance
- Bulletin board by entrance
- Marine Protected Area interpretive panel
- Docent/staff building, library and interpretive collections (e.g., mounts, pelts)

Interpretive Media

- Films at the Whalers Cabin Museum
- Free CSP publications
- PLF publications
- California State Parks and PLF websites
- Cell Phone Tour

Carmel River State Beach

The existing interpretive facilities at the State Beach are limited. No specific CSP brochures exist for the State Beach, although the CDFW, CSP, Monterey Bay National Marine Sanctuary, and the California Marine Sanctuary Foundation offer a brochure for the Carmel Bay SMCA, which is offshore of the State Beach. Fixed interpretive opportunities include the following:

Interpretive panels at Carmel River Lagoon and Wetland Natural Preserve

- The following three interpretive panels are located at the Carmel River Lagoon and Wetland Natural Preserve on the north bank of the river next to the existing parking lot:
  - Endangered Species in the Carmel River
  - The Dynamic Lagoon
  - A Question of Balance

These panels interpret the delicate balance between the historic and current uses of the Carmel River for drinking and irrigation water, the needs of endangered species such as south-central California coast steelhead and California red-legged frogs in the lagoon and river, and the need for flood control to protect adjacent homes and businesses.

- Additional information on regulations pertaining to dogs on the beach and beach safety is provided at a kiosk near the restroom.

- Signs regarding beach safety are posted at Monastery Beach.

Point Lobos Ranch Property

There are no existing interpretation or education facilities at Point Lobos Ranch because the property has not been open to the public.

Hatton Canyon Property

There are no existing interpretation or education facilities within Hatton Canyon.

2.5.2 Interpretive Audience Demographics

Interpretive audience demographics are similar to the overall park visitor demographics described in Section 2.7, Planning Influences, except for the interpretive opportunity associated with organized programs through Carmel, Big Sur, Monterey, and Salinas area schools. For those interpretive and educational programs, the audiences are young and reflect local/regional income, ethnicity, language, and cultural characteristics, rather than statewide, national, or international visitor origins. Multi-lingual language presentations for school groups are important when a substantial number of English-language learner students are participating.

The known or expected variations in demographics between visitors to the Reserve, State Beach, Point Lobos Ranch, and Hatton Canyon are important to note for interpretive facilities and programs. The origin of visitors is expected to vary between the areas from the generally known sources of local communities, greater Monterey Bay/Salinas region, San Francisco Bay Area, Sacramento/Stockton/ Central Valley region, other California regions, other states nationally, and international origins. At the Reserve, the national and international components of visitation influence the strategies for conveying interpretive themes and messages, such as variations in language and cultures of visitors. Because visitors to the State Beach originate primarily from the local and Monterey Bay/Salinas region, they reflect the typical demography of that region. The trail use opportunities of Point Lobos Ranch are expected to draw visitors representing both the region's residents and statewide profile of the trail use/hiking communities.

CSP's Docent Corps serves as the primary interpretive team at the Reserve. The Docent Corps includes:

- A full-time Docent Coordinator who is a CSP employee
- About 200 docents available to work in the Reserve
- Specialized interpretive equipment and technology, such as spotting scopes
- Volunteer support tools, such as an interactive web site, training resources, and identifying green jackets
- Bilingual brochures
- School outreach program
- Library of research and historic reports
- Interpretive collections

2.5.3 Support for Interpretation

The most active interpretation support currently provided is within the Reserve. Interpretation facilities are limited to static displays at the State Beach and activities are absent at Point Lobos Ranch and Hatton Canyon.

In the Reserve, the CSP District Interpretive Specialists and docents work closely together to help inspire and educate visitors to preserve and protect natural, cultural and scenic resources. PLF supports the docents at the Reserve.

CSP docent staff supported by PLF is a group of more than 200 trained volunteers who supplement the existing CSP staff. Docents lead nature walks for visitors including school groups and people who are mobility-constrained, set up wildlife viewing

Interpretation by volunteer at the Reserve

locations with spotting scopes to offer views of the marine mammals and birds, and staff the Reserve's Information Station and the Whalers Cabin Museum. The docents are essential for the interpretive and educational programs found within the Reserve, acting as volunteers conveying information and helping to improve and expand on the interpretive and educational opportunities provided to visitors.

The Reserve is used by schools providing a unique opportunity to study the natural history of the Monterey/Carmel/Big Sur coast. The Reserve is well suited to a number of learning opportunities for school field trips. The goal is to offer the Reserve as an outside classroom to support and achieve California Science Content Standards, to instill in youth the enjoyment, appreciation, and awareness of the natural environment, and to practice and foster a conservation ethic.

2.5.4 Local, Regional, and Statewide Context

Major interpretation topics in the region are recreation; marine life and its protection, including marine mammals and tidepools; wetlands; Native California tribes; special status species; and the coastal landscape.

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

- CSP 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); and the Junior Lifeguard Programs;

- 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;

- 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;
- 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;
- Carmel Mission – includes museums, exhibitions, and tours;
- Monterey Bay Aquarium – includes field trips, classroom curriculum, Teen Conservation Leaders volunteer program;
- Monterey County Toro Park and Environmental Center – field trips for grades 1-4;
- CSUMB 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;
- Monterey State Historic Park – school programs, a collection of significant historic houses and buildings including the Pacific House Museum;
- MPRPD Garland Ranch Visitor Center;
- Monterey County Visitor Center;
- Monterey County Agriculture and Rural Life Museum; and
- Pfeiffer Big Sur State Park – Nature Center.

At Monterey Bay Aquarium, another premier interpretive facility in the region, over 2 million people visit annually, with 95 percent being inspired to consider action for ocean conservation. Many aquarium visitors also visit the Reserve.

2.6 Park Support

This section describes the volunteers that are currently active within each CASP unit, cooperating associations, and/or supporting organizations that support one or more of the CASP units.

2.6.1 Volunteers

Point Lobos State Natural Reserve

The Reserve had approximately 200 active docents who volunteered more than 25,000 hours in 2016.

There are over 200 active docents who are part of the CSP Volunteers in Parks Program at the Reserve. They work to enhance visitor's experience and knowledge about the Reserve. Some of the docents have been volunteering for more than 35 years and new recruits are regularly added (CSP 2012). In 2016, more than 25,000 hours were volunteered by the docents (CSP 2017).

The docents provide many services to the visitors of the Reserve, such as:

- Leading nature walks for visitors and school groups;
- Staffing the Information Station which includes providing interpretation and information services to visitors, including free brochures about the Reserve, and selling a variety of publications and other items relevant to the Reserve;
- Staffing and visitor interpretation at the Whalers Cabin Museum and Whaling Station Museum;
- Providing spotting scopes to enhance wildlife views;
- Staffing the mobile interpretive van (Mint); and
- Staffing the Easy Access Adventure program for visitors with mobility issues.

CSP holds regular training and meetings with the docents to keep them up-to-date with park-related information.

Carmel River State Beach

Volunteers at the State Beach help with cleanup activities, such as the Coastal Cleanup Day. School and volunteer groups are working on the restoration areas and south-central California coast steelhead protection. Volunteers from the Monterey Bay National Marine Sanctuary also assist with beach monitoring activities at the State Beach, including Carmel River south-central California coast steelhead counts, monitoring rates of stranding for all species of marine birds and mammals, and water quality monitoring.

Point Lobos Ranch Property

Volunteer groups assist with weed control and management. Return of the Natives Restoration Education Project, which is the education and outreach branch of the Watershed Institute of CSUMB, has helped with weed control. The California Native Plant Society and Chuck Haugen Conservation Fund have also sponsored weed eradication events.

Hatton Canyon Property

There are no active volunteers for Hatton Canyon.

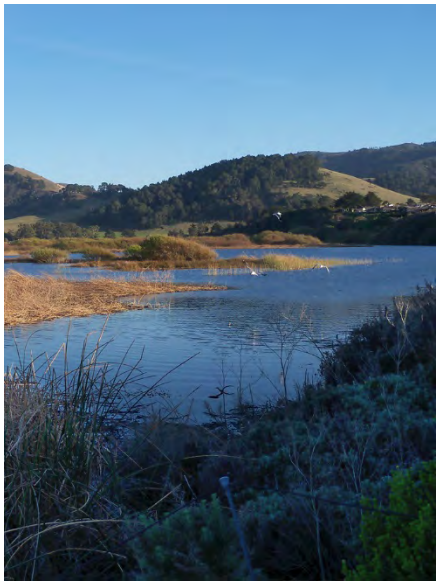
2.6.2 Cooperating Associations and Supporting Groups

Associations and groups supporting CSP include the following (in alphabetical order).

- **Big Sur Land Trust (BSLT)** – CSP is coordinating with BSLT to address resources, features, facilities and recreation opportunities for properties in the immediate vicinity of the CASP units. BSLT is also working on the Odello East project, which is a flood protection bypass/causeway, trails, parking, and 90 acres of restoration directly east of the State Beach. BSLT has also contracted with PRBO Conservation Science/Point Blue Conservation Science to prepare a comprehensive bird plan for the lower Carmel River watershed. In 2013, CSP, MPRPD, BSLT, and PLF initiated the LCPP MOU described above under Contracts and Agreements. The BSLT has also taken a leadership role in the Carmel River FREE Project to restore habitat and reduce flood risks where the natural and built environments intersect along the lower Carmel River and Carmel Lagoon (BSLT 2017).

- **Caltrans** – maintains a mitigation bank within the State Beach and located along the Carmel River for impacts from regional transportation projects.

- **California Marine Sanctuary Foundation** – has been an active partner of the CSP properties by funding community outreach programs and workshops to raise awareness about the marine protected areas that are part of the Reserve and the State Beach.



Lagoon at the State Beach

- **Carmel River Steelhead Association** – has a mission to restore and conserve the south-central California coast steelhead fishery on the Carmel River and its watershed (Carmel River Steelhead Association 2017).
- **Carmel River Task Force** – meets four times a year to discuss issues concerning the Carmel River watershed.
- **Carmel River Watershed Conservancy** – the primary mission is to protect the natural resources of the Carmel River watershed.
- **Carmel River Watershed Council** – participates in fish rescues and cleanup activities on the Carmel River.
- **Monterey County Resource Management Agency** – works collaboratively with interested parties to develop a comprehensive strategy and coordinated approach for the management of the Carmel River lagoon.
- **Monterey Peninsula Regional Park District (MPRPD)** – CSP continues 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.

Since 1978, the PLF has raised more than $2 million for various restoration, education, and interpretive activities at the Reserve.

- **Point Lobos Foundation (PLF)** – is the non-profit organization supporting the Reserve. PLF assists CSP by providing financial support of the CSP docent program and projects and programs benefitting the Reserve and/or its visitors. These include trail and facility improvements, school and youth program support, and interpretive improvements like the development of the "Discover Point Lobos" iPad application for children. PLF also places critical priority on the health of the natural resources within the Reserve, financially supporting ongoing natural resources research through the CSUMB Graduate Intern Research program, invasive species removal programs, and habitat restoration projects.
- **Transportation Agency of Monterey County (TAMC)** – plans and funds a transportation system that enhances mobility, safety, access, environmental quality and economic activities (TAMC 2014). TAMC funded and constructed the existing paved multi-purpose trail within Hatton Canyon, and will continue to be an important partner for funding and implementing future projects and improvements within Hatton Canyon.

2.7 Planning Influences

This section describes the planning context of the General Plan and the influential factors considered during its preparation. Detailed information on Planning Influences can be found in Appendix F.

2.7.1 Systemwide Planning

Systemwide planning influences are applied to the entirety of the California State Park System. They include CSP's mission and long-range planning documents that apply to all CSP units.

Bedrock mortar in the Reserve

Planning Documents

A summary of systemwide information that influences planning within the CASP units is provided below:

- **Department Operations Manual (DOM)** – The DOM provides the policies and procedures that are pertinent to the operation of the State Park System. It is intended as a working document for Department personnel. Section 0300, Natural Resources, guides the management of the natural resources under the jurisdiction of CSP. Section 0400, currently under revision, will provide cultural resource management guidance. Until it is complete, Section 1832 of the Resource Management Directives, the Cultural Resources Management Handbook, and the Departmental Notices provide the policies, definitions, processes, and procedures to guide the management of cultural resources under the jurisdiction of CSP. DOM 2000, Museum Collections Management, guides the management of the Department's museum collections, which include cultural objects, natural history specimens, archival materials, and archaeological and paleontological collections.

- **Statewide Comprehensive Outdoor Recreation Plan (SCORP)** – SCORP provides a strategy for statewide outdoor recreation leadership, information on public opinion regarding outdoor recreation, and actions to address issues largely based on the public participation efforts.

- **California Recreational Trails Plan** – The plan is a guide to trails within California managed by a variety of agencies and other recreation providers. One of the trails discussed in the plan is the Pacific Coast/California Coastal Trail, which passes through the Carmel area and continues south along the coast. This trail is envisioned to be 1,150 miles long, spanning from

The Pacific Coast/California Coastal Trail, envisioned to be 1,150 miles from Mexico to Oregon at completion, passes through the Carmel area.

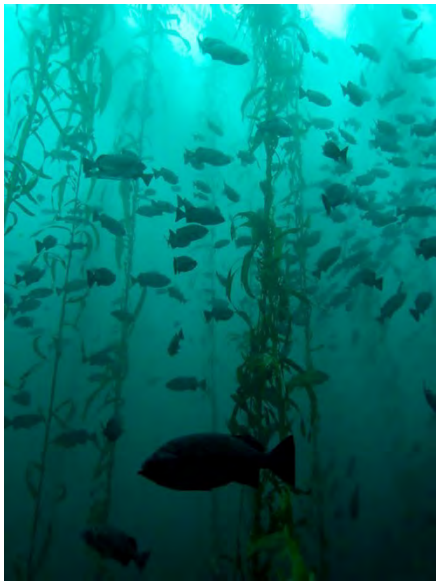
Mexico to Oregon. As of 2017, it was considered approximately 60 percent complete (California State Coastal Conservancy 2017).

- **Systemwide Park Operations and Concessions Policies** – CSP partners with a variety of businesses, non-profits, and public agencies through concession contracts, cooperative agreements, and operating agreements to offer the public these goods and services.

- **Americans with Disabilities Act (ADA)** – ADA prohibits discrimination on the basis of disability, and applies to all actions by the states, including the preparation of state park general plans. CSP published the Accessibility Guidelines which states that universal accessibility is integrated into CSP's culture and embodied in its programs, providing visitors, regardless of their abilities, with high quality recreational opportunities while preserving the integrity of park resources (CSP 2015a).

- **California Heritage Task Force** – This task force was created to develop a set of policies and programs for California's cultural heritage resources.

- **California History Plan** – This plan provides a holistic framework to guide interpretation of cultural resources throughout the state. The Reserve, the State Beach, and Point Lobos Ranch all contain important artifacts and elements of California's history. The California History Plan specifically states that interpretation at the Reserve should recognize the contribution of Japanese commercial abalone fishing and processing to the "Evolving Economies" theme in the History Plan/Framework.



Kelp forest

- **California Underwater Parks and Reserves Plan** – A cumulative and comprehensive summary of laws, policies, documents, studies, and surveys concerning the marine areas of the State Park System is provided in this plan.

- **Sea Level Rise and Extreme Event Guidance for California State Parks** – CSP developed guidance that provides updated information regarding adaptation to sea level rise predicted along the California coast.

Additional detail on these systemwide planning documents is provided in Appendix F.

2.7.2 Regional Planning

Various regional plans govern lands in the vicinity of and adjacent to the CASP units. Below, in alphabetical order, is a list of these plans and how they may relate to the General Plan. Additional detail is provided for each of these plans in Appendix F.

- **Big Sur Coast Highway Management Plan** – This management plan covers a 75-mile length of SR 1, including portions that run through the CASP units.

- **Carmel Area Land Use Plan/Local Coastal Program (CALUP)** – The Reserve, the State Beach, and Point Lobos Ranch are within the CALUP area. The CALUP contains a number of policies relating to fuel load management, noxious weeds, interpretive programs, water resources, sensitive biological resources, parking, recreation opportunities, and visual resources that are pertinent to one or more of the CSP properties.

- **Carmel Valley Master Plan** – This plan covers the area of Hatton Canyon not included in the Greater Monterey Peninsula Area Plan.

- **City of Carmel-by-the-Sea General Plan/Coastal Land Use Plan** – The City of Carmel-by-the-Sea's sphere of influence extends to Hatton Canyon to the east and the State Beach to the south.

- **Greater Monterey Peninsula Area Plan** – This area plan covers the northernmost area of Upper Hatton Canyon.

- **Monterey County General Plan** – The County General Plan includes policies to address unincorporated areas within the county.

- **Monterey County Regional Transportation Plan** – Transportation Agency of Monterey County (TAMC) completed the last update of the regional transportation plan (RTP) in 2014, and the only improvements listed in the vicinity of the CASP units are a proposed climbing lane along SR 1 between Rio Road and Carmel Valley Road, and installing a Class I path from Carmel Valley Road to SR 1.

Adjacent MPRPD property, such as Palo Corona Regional Park, provides great opportunities for collaboration with the CASP units.

- **Monterey Peninsula Regional Park District (MPRPD)** – Several MPRPD properties are adjacent to CSP properties. The largest is Palo Corona Regional Park, located directly east of SR 1 from the State Beach and adjacent to Point Lobos Ranch. MPRPD is in the process of preparing a General Development Plan for Palo Corona Regional Park, which is anticipated for completion in 2018.

- **Watershed Assessment and Action Plan of the Carmel River Watershed** – This action plan identifies areas within the river and watershed in need of restoration and provides guidance to develop restoration and conservation measures.

2.7.3 Regulatory Influences

Federal, state, and local laws and regulations influence resources within the CASP units. Various agencies have regulatory or management authority within the planning area, and compliance with applicable regulations was considered in development of the General Plan. A summary of applicable regulations is provided below. Additional detail related to these regulations is provided in Appendix F.

Federal Laws and Regulations

Source: (c) 2012 Charles M. Bancroft

Yadon's rein orchid

- **Federal Endangered Species Act (ESA)** – U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) have authority over projects that may result in take of a species listed as threatened or endangered under the ESA.

  - **Recovery Plan for Five Plants from Monterey County** – USFWS prepared a recovery plan for coastal dunes milk-vetch, Yadon's rein orchid, Hickman's cinquefoil, Monterey clover, and Gowen cypress. These species occur or could occur within the CASP units.

  - **South-Central California Coast Steelhead Recovery Plan** – NMFS prepared this plan for recovery of south-central California coast steelhead. Chapter 10 of the plan specifically focuses on the Carmel River Basin Biogeographic Population Group.

- **Magnuson-Stevens Fishery Conservation and Management Act** – This act is the primary law governing marine fisheries management in United States federal waters.

- **Migratory Bird Treaty Act (MBTA)** – The MBTA provides for international protection of migratory birds and authorizes the Secretary of the Interior to regulate the taking of migratory birds.

- **Marine Mammal Protection Act (MMPA)** – The MMPA established a federal responsibility to conserve marine mammals. Among other prohibitions, the MMPA prohibits the "take" of marine mammals.

- **Clean Water Act (CWA)/ Porter-Cologne Water Quality Control Act (Porter-Cologne Act)** – The CWA is the primary federal law that governs and authorizes water quality control activities, and the Porter-Cologne Act is California's statutory authority for the protection of water quality (discussed below under State Laws and Regulations).

- **Federal Clean Air Act /California Clean Air Act** – The federal and state acts authorize the establishment of ambient air quality standards. The local air quality control agency is the Monterey Bay Unified Air Pollution Control District.

- **National Historic Preservation Act** – Section 106 of the act requires scoping, identification, assessment, and consultation to determine effects on properties included in or eligible for listing on the National Register of Historic Places.

- **Native American Graves Protection and Repatriation Act (NAGPRA)** – NAGPRA was established in 1990 and provides for the protection of Native American graves. This act requires federal agencies and recipients of federal funds to document Native American human remains and cultural items within their collection, to notify all tribes that are or are likely to be affiliated with these holdings, and to provide an opportunity for the repatriation of appropriate human remains or cultural items.

- **The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings** – These are principles that promote historic preservation best practices that will help to protect cultural resources. The Standards are a series of concepts about maintaining, repairing, and replacing historic materials, as well as designing new additions or making alterations. The Guidelines offer general design and technical recommendations to assist in applying the Standards to a specific property.

State Laws and Regulations

- **California Environmental Quality Act (CEQA)** – CEQA requires state and local agencies to regulate activities with consideration for environmental protection. General plans typically contain a programmatic environmental impact report (EIR), and park development projects require appropriate environmental review, which may include an EIR.

- **Assembly Bill 52, CEQA Guidelines Update for Tribal Cultural Resources** – As part of the 2013/14 legislative session, AB 52 established a new class of resources under CEQA, tribal cultural resources, and requires that lead agencies undertaking CEQA review must, upon written request of a California Native American Tribe, begin consultation once the lead agency determines that the application for the project is complete. CEQA also requires lead agencies to consider whether projects will impact tribal cultural resources. Tribal cultural resources are defined as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are included or determined to be eligible for inclusion in the CRHR or included in a local register of historical resources, and a resource determined by the lead agency to be significant pursuant to PRC Section 5024.

- **Public Resources Code (PRC)** – The PRC authorizes certain powers and responsibilities in CSP. PRC sections specifically pertaining to entering into contracts and agreements, preparing general plans, classification of park units, and concessions include sections 513, 5002.2, 5010.1, 5019.50–5019.80, 5024, and 5080. A number of PRC sections focus on cultural resources, discussed below.

    - **PRC 5024 and 5024.5** – PRC 5024 requires that each state agency shall formulate policies to preserve and maintain, when prudent and feasible, all state-owned historical resources under its jurisdiction listed in or potentially eligible for inclusion in the National Register of Historic Places or registered or eligible for registration as a state historical landmark. PRC 5024.5 further states that a state agency must give notice to the SHPO early in the planning process should an action potentially have an adverse effect on a significant historical resource. If the SHPO determines that the action will have an adverse effect on a listed historical resource, prudent and feasible measures that will eliminate or mitigate the adverse effects will be adopted by the state agency and SHPO.

- **PRC 5097.5** – Makes it a misdemeanor for anyone to knowingly disturb any archaeological, paleontological, or historical features situated on public lands.

- **PRC 5097.9 et seq.** – Prohibits a public agency or private party from interfering with the free expression or exercise of Native American religion, or from causing severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine located on public property. It also established the Native American Heritage Commission (NAHC) and stipulates that no public agency can alter, modify, disturb, remove, destroy, or damage any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine except with the consent of the NAHC. PRC 5097.99 states that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated.

- **California Code of Regulations (Archaeological Features)** – Title 14, Section 4308, Archaeological Features, states that no person shall remove, injure, disfigure, deface, or destroy any object of archaeological, or historical interest or value within a State Park.

- **Executive Order W-26-92** – Requires state agencies to take specific measures to preserve significant state-owned properties and to administer historic properties under their control in a spirit of stewardship. It directs all state agencies to recognize, and to the extent prudent and feasible, to preserve and maintain the state's significant historical resources.

- **Executive Order B-10-11** – Establishes the role and responsibilities of the Governor's Tribal Advisor and directs that every state agency and department under the Governor's executive control communicate and consult with federally recognized tribes and other California Native Americans, and permit elected officials and other representatives of tribal governments to provide meaningful input into the development of legislation, regulations, rules, and policies on matters that may affect tribal communities.

- **State Lands Commission and Public Trust Doctrine** - Tidelands and submerged lands, including those that have been filled, are subject to the Public Trust Doctrine, under which these lands are held in trust for the statewide public and are dedicated to uses such as commerce, fisheries, navigation, environmental preservation, and recreation (CSLC 2015).

- **California Ocean Protection Council Act** – This act established the California Ocean Protection Council (OPC) to conserve, restore, and manage the California's ocean, bays, estuaries, and coastal wetlands. A Vision for Our Ocean and Coast is the OPC's 5-year strategic plan that guides the agency's priorities. In April 2017, OPC released its Rising Seas in California: An Update on Sea level Rise Science policy document. The report includes new information regarding the science and projections of sea level rise under various greenhouse gas (GHG) emission scenarios.

- **California Endangered Species Act (CESA)** – CESA directs state agencies to decline approval of projects that would jeopardize the continued existence of an endangered or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of a species.

- **California Fish and Game Code:**

  - **Section 1602 Lake and Streambed Alteration** - All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by California Department of Fish and Wildlife (CDFW) under Section 1602 of the California Fish and Game Code.

  - **Section 3503.5** – This section states that it is unlawful to take, possess, or destroy any raptors (i.e., species in the orders Falconiformes and Strigiformes), including their nests or eggs.

  - **Sections 3511, 4700, 5050, and 5515** – These sections state that no permits may be issued to allow for the take of fully protected species. To date, no fully protected species have been documented in any of the CASP units.

- **Marine Life Protection Act** – This act established a Central Coast Region, composed of 29 marine protected areas (MPAs), from San Mateo County to Santa Barbara County. The offshore area directly adjacent to the Reserve has been included in the Central Coast Marine Protected Area as the Point Lobos State Marine Reserve. In addition, the Point Lobos SMCA extends seaward from the Point Lobos State Marine Reserve (see Figure 2-1).

Harbor seal at the Reserve

The northern portion of the State Beach is located adjacent to the Carmel Bay SMCA, and Carmel Pinnacles State Marine Reserve is located further offshore.

- **California Coastal Act** – The Coastal Act includes specific policies that address issues such as shoreline public access and recreation, lower cost visitor accommodations, terrestrial and marine habitat protection, visual resources, landform alteration, agricultural lands, commercial fisheries, water quality, transportation, development design, and public works. The Coastal Commission partners with local municipalities, such as Monterey County, to plan and regulate the use of land and water in the coastal zone. Development activities within the CASP units in the coastal zone generally would require a coastal permit from the Coastal Commission or Monterey County.

- **Porter-Cologne Water Quality Control Act** - Under Section 401 of the federal CWA, an applicant for a Section 404 permit must obtain a certificate from the appropriate state agency stating that the intended dredging or filling activity is consistent with the state's water quality standards and criteria. In California, the authority to grant water quality certification is delegated by the State Water Resources Control Board to the nine regional water quality control boards. The CASP units are under the jurisdiction of the Central Coast Regional Water Quality Control Board.

- **2009 California Climate Adaptation Strategy** - This state plan outlines adaptation strategies for seven major sectors organized around risks to the state's natural resources, infrastructure, and public health in the face of climate change. CSP was part of the Coastal and Ocean Working Group that developed strategies related to oceans and coastal resources, most of which focus on sea level rise.

The 2009 California Climate Adaptation Strategy and 2014/2018 Safeguarding California Plan promote the protection of regionally significant development and habitat that are vulnerable to sea level rise.

- **2014 and 2018 Safeguarding California: Reducing Climate Risk** – Safeguarding California, originally released in 2014, provides policy guidance for state decision-makers, and is part of continuing efforts to reduce impacts and prepare for climate risks. Safeguarding California Plan: 2018 Update was released in January 2018. The Plan provides an updated programmatic survey of existing efforts to combat climate change throughout the state (CNRA 2018).

- **Assembly Bill 32** – The California Global Warming Solutions Act established regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions. AB 32 put a cap on GHG emissions, setting a target

of reducing GHG emissions to 1990 levels by 2020. As part of its implementation of AB 32 and Executive Order S-3-05, the California Air Resources Board (CARB) developed the Climate Change Scoping Plan (Scoping Plan) in 2008. California is currently on track to meet or exceed the AB 32 current target of reducing GHG emissions to 1990 levels by 2020.

- **Executive Order B-30-15** – This executive order established a new GHG emissions reduction target 40 percent below 1990 levels by 2030. Executive Order B-30-15 also directed CARB to update the AB 32 Scoping Plan to reflect the path to achieving the 2030 target.

- **Senate Bill 32 and Assembly Bill 197** – Two bills enacted in 2016 served to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030.

- **Climate Change Scoping Plan and Updates** - The 2017 Climate Change Scoping Plan Update (2017 Scoping Plan Update) provides the framework for achieving the mandate of SB 32 (2016) to reduce statewide GHG emissions to at least 40 percent below 1990 levels by the end of 2030 (CARB 2017a).

2.7.4 Demographics, Trends, and Projections

Population Increase and Park Visitation

The California Department of Finance (DOF) projects that the population of Monterey County will grow an average 0.5 percent per year for a total of 18.8 percent growth between 2010 and 2050. In the same timeframe, the population of California is expected to grow 26.9 percent (DOF 2012). The Association of Monterey Bay Area Governments (AMBAG) 2014 Regional Growth Forecast estimates that the region is projected to add 152,292 residents between 2010 and 2035 for an increase of 20.5 percent (AMBAG 2014).

In 2017, the service-providing industry, which includes tourism, was the largest employer in Monterey County. The second largest industry was agriculture, and government the third largest industry in Monterey County (California Employment Development Department 2017). According to the 2015 American Community Survey 1-Year Estimate, the median

household income in Monterey County was $60,494. This is slightly less than the $64,500 median household income in California. Monterey County has a lower percentage of persons with a bachelor's degree or higher education at 19.5 percent versus 34.7 percent statewide (U.S. Census 2015).

Overall, Monterey County is a tourist destination that attracts visitors year-round, with peak visitation in the Monterey region between Memorial Day weekend and Labor Day weekend. Almost 14 percent of the County's land area is devoted to parks and recreation facilities operated by governmental agencies. The County parks system makes up about 10 percent of the County's total park acreage (Monterey County 2010). In the context of regional influences, the visitation to other state parks in the Monterey region is shown in Table 2-4.

Table 2 4 Annual Visitation to Regional State Parks

	2014	2015	2016
Monterey SB	418,356	470,601	412,045
Monterey SHP	196,191	179,104	132,989
Asilomar SB	674,718	697,851	810,905
Andrew Molera SP	93,654	129,325	56,773
Julia Pfeiffer Burns SP	153,738	261,200	106,551
Total	1,649,567	1,845,089	1,635,405

Source: CSP 2014a, 2015b, 2016

As noted on Table 2-4, overall visitation to state parks in the region increased between 2014 and 2015, and declined in 2016 due to wildfires and the temporary closure of SR 1 (CSP 2014a, 2015b, 2016).

Population Diversity/Changing Ethnic Patterns

As of the 2010 U.S. Census, California had 37,253,956 residents. Of the total population 57.6 percent were white, 13 percent Asian, 6.2 percent Black or African American, 1 percent American Indian and Alaskan native, and 0.4 percent native Hawaiian or other Pacific native. Seventeen percent were some other race, 4.9 percent were two or more races, and 37.6 percent were of Hispanic or Latino origin (of any race) (US Census 2015).

The service-providing industry, which includes tourism, is the largest industry in Monterey County.

CASP units are within unincorporated Monterey County, and adjacent to the City of Carmel-by-the-Sea. As of the 2010 U.S. Census, Monterey County had 415,057 residents. Categorized by race, there were 55.6 percent white, 6.1 percent Asian, 3.1 percent

Black or African American, 1.3 percent American Indian and Alaskan native, 0.5 percent native Hawaiian or other Pacific native, 28.3 percent were some other race, and 5.2 percent were of two or more races. Of this population total, 55.4 percent were of Hispanic or Latino origin (of any race). Demographic projections for Monterey County show a decrease in the white and Asian populations and an increase in the multiracial population. The percentages of other races are projected to stay about the same for Monterey County (DOF 2017). Categorized by age, the majority of Monterey County population (62.6 percent) is between 18-64 years, followed by 18.9 percent 5-17 years, 10.7 percent 65 years and over, and 7.8 percent 4 years and younger.

As of the 2010 U.S. Census, the City of Carmel-by-the-Sea had 3,722 residents, of which 93.1 percent were white, 3.0 percent Asian, 0.3 percent Black or African American, and 0.2 percent native Hawaiian and other Pacific native. Of the total population, 4.7 percent were of Hispanic or Latino origin (of any race). Grouped by age range, the 2010 census reported 10.2 percent of the population under age 18, 54.1 percent between 18-64 years, and 35.7 percent over 65 years. According to the 2007-2011 American Community Survey 5-Year Estimates, the median household income in the City of Carmel-by-the-Sea is $76,463, significantly higher than the statewide median. Residents in Carmel-by-the-Sea are generally more educated than residents in the county or statewide, with 63.3 percent of the population having a bachelor's degree or higher (DOF 2012).

Trail within the Reserve

Recreation Trends

Statewide Trends

As recorded within the Complete Findings of the Survey on Public Opinions and Attitudes on Outdoor Recreation in California (CSP 2014b), respondents to a 2012 statewide recreation survey were asked about the activities in which they participated. The top five activities mentioned by the highest percentage of participants were the following:

- Picnicking (70.4 percent)
- Walking (63.8 percent)
- Beach activities (52.8 percent)
- Shopping at farmer's market (49.5 percent)
- Swimming in a pool (48.2 percent)

The top three most popular activities are available at the Reserve and State Beach. The top four recreation activities that survey respondents would like to participate in more often include picnicking, walking, camping, and beach activities. The most common facilities and amenities used by respondents included the following:

- Community/facility buildings (65.4 percent)
- Unpaved multiuse trails (60.2 percent)
- Picnic tables/pavilions (56.6 percent)

Regional Patterns and Use

The Central Coast region had a high percentage of respondents who visited a park within a month of the survey, and 85.9 percent had visited a park within 6 months. The type of parks Central Coast region respondents visited most frequently during the previous year were highly developed parks and recreation areas. The top five activities that Central Coast participants would like to participate in more often include the following (CSP 2014b):

The Central Coast region had a high percentage of respondents that reported visiting a park within a month of the survey.

- Picnicking in picnic areas
- Walking for fitness or pleasure on paved surfaces
- Beach activities (i.e., swimming, sunbathing, surf play, wading, playing on beach)
- Attending outdoor cultural events
- Day hiking on unpaved trails

The Reserve is a popular destination for visitors living within the region, the state, the country, and even the world. With the advent of social media, awareness of the Reserve has contributed to a steady increase in visitation. The State Beach is popular with locals and is less well-known to visitors from outside the region. Point Lobos Ranch is currently not open to the public. Hatton Canyon is currently used for walking and bicycle riding.

2.7.5 Public Concerns, Interests, and Opportunities

Public Meetings and Workshops

The planning process has required close coordination with a variety of agencies and stakeholders.

In addition to holding a number of agency and stakeholder meetings, the planning team conducted two public workshops and an open house to inform the general public and receive public input on the General Plan. The State Park and Recreation Commission also conducted an additional listening session. The first workshop introduced the planning process, anticipated planning schedule, and sought public input. The second workshop presented the alternative concepts that had been developed based on different thematic ideas envisioned for the CASP units, and early public and stakeholder ideas and input. The public provided comments on the alternative concepts. In addition, the planning team met with neighborhood groups representing residents of Hatton Canyon, Red Wolf Drive, Ribera Road/Carmel Meadows, and Carmel Highlands to solicit further input. These comments helped to form the draft preferred alternative, which was presented to the public at an open house. The purpose of the State Park and Recreation Commission's listening session was to receive additional input on the preferred alternative and share information about coordination among the agencies and organizations involved in regional land conservation. The preferred alternative was further refined in response to public input and is presented in Chapter 4 as the Park Plan.

Native California Indian Consultation

Ongoing consultation has occurred throughout the planning process with Native California Indian representatives of the Rumsen, Ohlone/Costanoan-Esselen Nation, Esselen Tribe of Monterey County, Ka Koon Ta Ruk Band of Costanoan-Ohlone Indians of the Big Sur Rancheria, and the Pajaro Valley Ohlone Indian Council. Through telephone discussions, email, in-person meetings, and site visits tribal representatives shared information, interests, and concerns regarding known cultural resources, future interpretation and management opportunities, and suggestions for a potential park name.

The main concern identified was the protection and preservation of Native California Indian cultural sites, particularly the area near San Jose Creek known as the Hudson Mound and Polo Field. All were supportive of a new cultural preserve proposal intended to provide a high level of resource protection. Concern remains regarding the appropriate level of public access to the area.

All discussions reflected interest in seeing the Native California Indians interpreted to the public in these parks and all were enthusiastic about working collaboratively with CSP to develop sensitive and informative interpretation.

Nearly the entire area of the CASP GP planning area was historically known to the Native California people as Ishxenta. Most of the tribal representatives consulted would like to see the name Ishxenta restored as the name of the new state park.

Continued Public Involvement

Following the General Plan process, opportunities for continued public involvement will be provided during future planning of project-specific areas of the CASP units, including future management plans and development plans that are prepared. This also includes public review of proposed projects required under CEQA.

Future management plans and project efforts will implement the recommendations, goals, and guidelines presented in this General Plan.

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