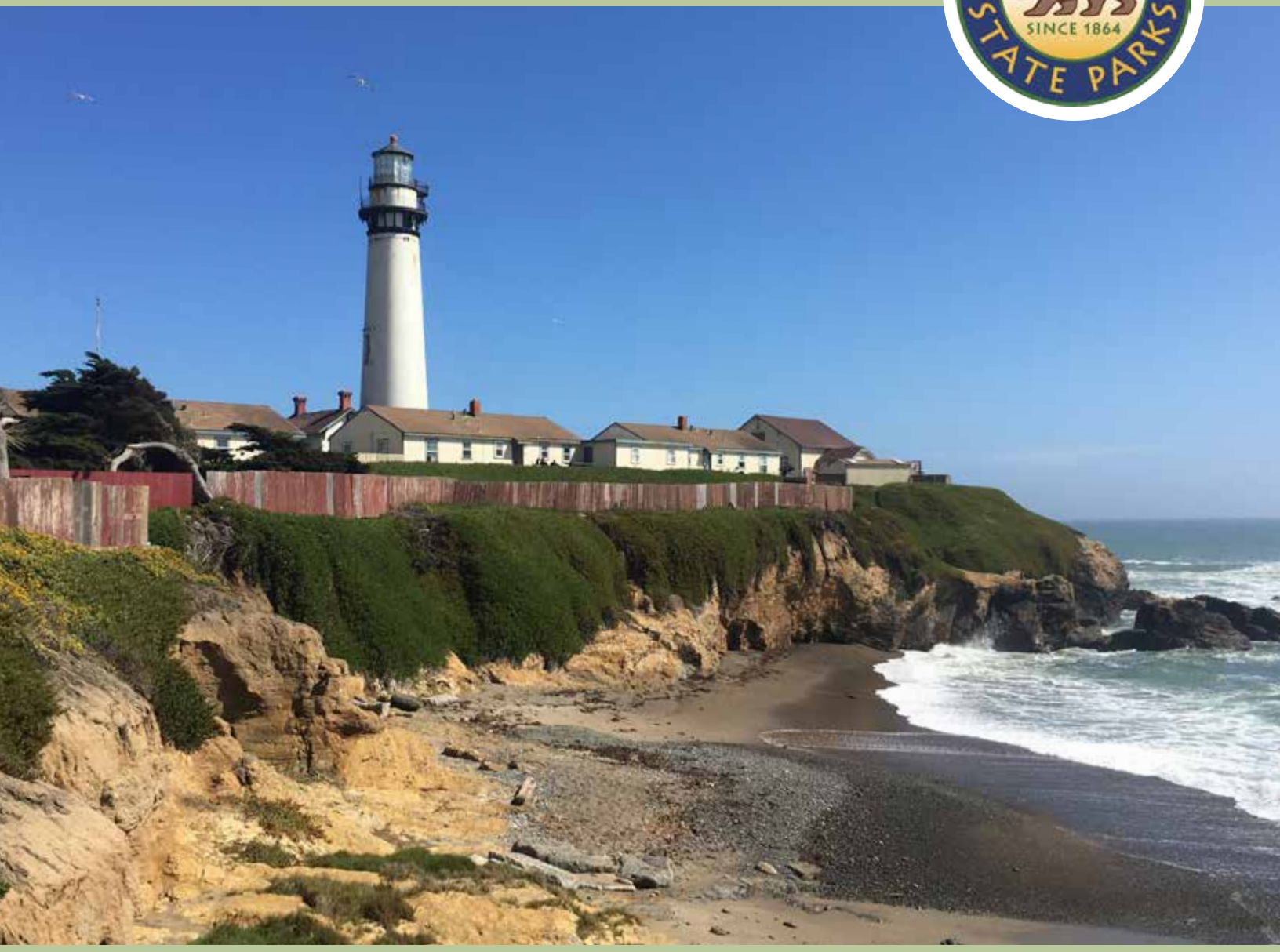
Pigeon Point Light Station State Historic Park



General Plan and

Initial Study/Mitigated Negative Declaration (IS/MND)

Final Draft March 10, 2017

Written inquiries regarding this General Plan should be submitted to the address below:

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Pigeon Point Light Station State Historic Park

General Plan and Initial Study/Mitigated Negative Declaration (IS/MND)

Final Draft March 10, 2017

Edmund G. Brown, Jr.
Governor

John Laird
Secretary for Natural Resources

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The Mission of California Department of Parks and Recreation is to provide for the health, inspiration and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high-quality outdoor recreation.

This Document was prepared by:

PLACEWORKS

In Association With: **ESA**

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WELCOME
to Pigeon Point – part of the California Coastal Trail
The California Coastal Trail (CCT) extends 1,200 miles from Oregon to Mexico and is one of our nation's great trails. Over half the trail is complete and new segments are opened to the public each year. The CCT is a "braided" trail system. Some sections are on the beach or the bluffs above. Others run along the shoulder of Highway One or nearby roads. The trail connects travelers to California's varied and ever-changing landscapes, from remote wind-swept beaches and historic lighthouses, to bustling piers, ports and urban waterfronts. Wherever you travel on the CCT, you can often find spectacular ocean views and memorable glimpses of marine life.
Gray Whale
You Are Here
CALIFORN

Executive Summary

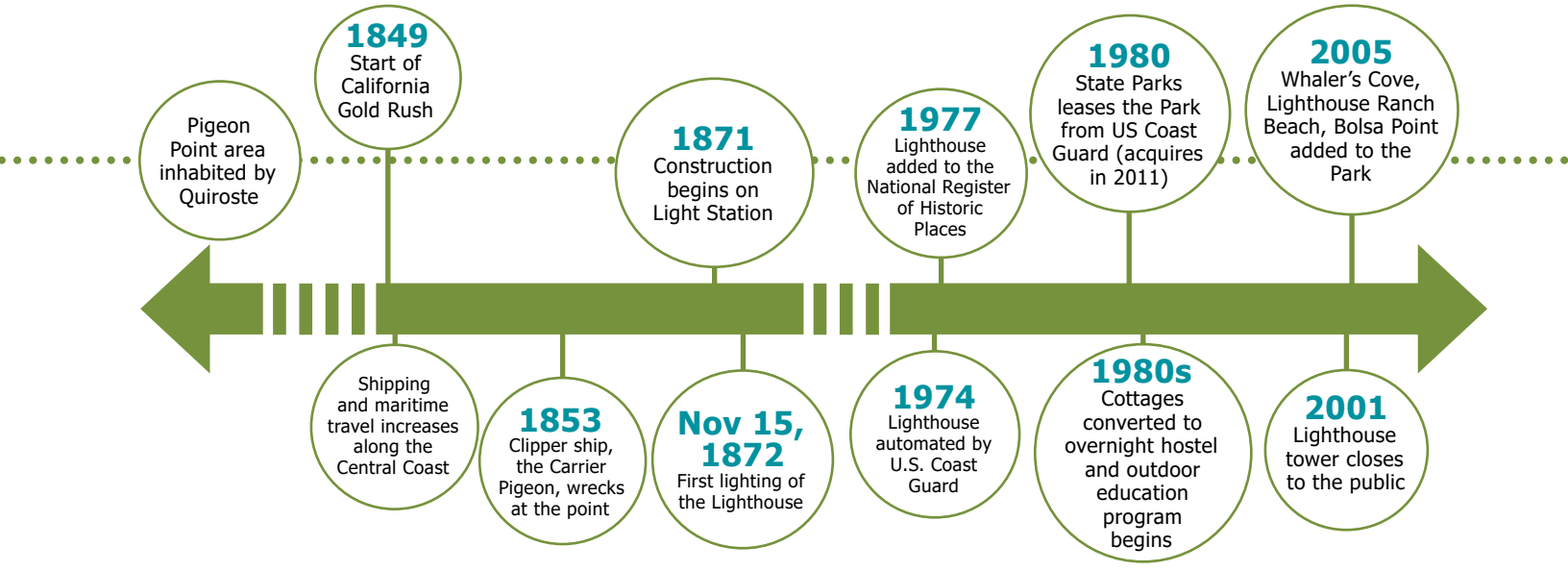
INTRODUCTION TO THE PARK

Pigeon Point Light Station State Historic Park (the Park) is a 66-acre park located on the California Central Coast. The Park contains the iconic Pigeon Point Lighthouse (the Lighthouse), which is listed on the National Register of Historic Places and is a California landmark. The Lighthouse is part of the Pigeon Point Historic Light Station, (Light Station), which, as a whole, was added to the National Register in 2002.

The Park serves approximately 200,000 visitors annually. Visitors travel to the Park to see the Lighthouse and other historic structures, stay overnight in the cottages at the Light Station, and take in the scenic coastal views. In 2005, the Park expanded, including a new area to the north, which is not currently open to the public.

BRIEF HISTORY OF PIGEON POINT

The timeline below provides a brief history of events that helped to shape the Park.



LIGHT STATION HISTORY

During the 1850s and 1860s, at least four major shipwrecks occurred in the waters surrounding the modern day Park, including the 1853 wreck of the clipper ship, the Carrier Pigeon, for which the Point was name. This created significant public outcry, and in August 1854, US Congress appropriated funds for a lighthouse in the area.[1] Pigeon Point was selected because it offe ed greater visibility compared to other nearby locations.[2]

Although construction was slow, the Lighthouse was completed in October 1872. The first lighting occurred one month later on November 15, 1872. The Lighthouse was constructed along with other buildings that together form the Light Station, including fog signal building, keepers dwelling, and a carpenters shop. Upon initial construction, the complete light station cost a total of $184,625.[3]

During this time, the US Government frequently used standardized plans for its buildings and the Lighthouse plans were adapted from those employed on the eastern seaboard. Although similar to those on the east coast of th United States, Pigeon Point is unique tower for the Pacific Coast, in particular for its height and construction material.[4] Made of brick and 115 feet tall, Pigeon Point shares the distinction, along with Point Arena Lighthouse in Mendocino County, of being the tallest tower on the west coast. Additionally, the firs -order Fresnel lens used in the tower set it apart from other lighthouses. It was the largest and most powerful lens used in lighthouses in the west. After its installation, it was the only one of its kind in use in California until the 1890s.

The Lighthouse was remodeled several times between 1871 and 1908 with the lamp being upgraded as advances in technology occurred. Under the US Coast Guard's Lighthouse Automation Program, the Lighthouse was automated with an aero beacon in 1974. In November 2011, the Fresnel lens was removed from the tower and put on exhibit in the fog signal building out of concern for the tower's structural integrity and to facilitate structural improvements

Historic Photo of Pigeon Point Light Station
(source: United States Coast Guard)

In 1980, California Department of Parks and Recreation (CDPR) began to lease the Light Station from the US Coast Guard for use as a historic park. CDPR acquired the property in 2011.

1 Perry, Frank, The History of Pigeon Point Lighthouse. GBH Publishers, Soquel, CA, 1986.

2 E.G. O'Keefe, LCDR, Chief, Marine Environmental Protection Branch. 12th US Coast Guard District. "National Register of Historic Places Inventory—Nomination Form: Pigeon Point Lighthouse" (10 November 1976) Sect 7.

3 Regnery, Dorothy, National Register of Historic Places—Nomination Form for CA-SMA-170H, the Pigeon Point Lighthouse. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, 1976.

4 Architectural Resources Group, Inc. (ARG), Draft Historic Structures Report Pigeon Point Light Station, Pescadero, California. Prepared for California State Parks Foundation and California State Parks. April 2013.

PARK DESCRIPTION

Landscape painters enjoying a view of the Lighthouse

The Park is composed of two non-contiguous areas. The two areas are referred to throughout the General Plan as the Light Station Area and the Bolsa Point Area and are shown in Figure E.1. Both areas are located west of Highway 1 and bounded to the west by the Pacific Ocean. The Light Station Area is 29 acres and contains the Light Station as well as land between the ocean and Pigeon Point Road. This Light Station is considered the heart of the Park and contains the Park's key cultural resources. The Bolsa Point Area is not currently open to public and does not contain any park uses. It is 37 acres in size and includes a long sandy beach and a large, relatively flat upland area between the bluff and Highway 1. CDPR additionally has an easement with the US Coast Guard on a 9-acre property on the east side of Highway 1. This area is referred to as the Easement in the General Plan and will not be part of the public park.

The primary visitor experience at the Park is a visit to the Light Station. Visitors can explore the historic setting and learn about maritime navigation along the Central Coast. The Lighthouse was previously open to the public for tours but was closed in December 2011 due to safety issues with the tower's foundation. There is a strong initiative to complete a renovation and reopen it to the public. CDPR completed plans and a cost estimate for the renovation, and in partnership with the California State Parks Foundation and Coastside State Parks Association, is currently raising funds to pay for the effort. While visitors cannot go inside the Lighthouse, they can experience it from the ground. As a prominent vertical feature on the landscape, it is a popular subject for photographers, painters, and sketchers.

The other historic buildings at the Light Station are open to the public and contain interpretive exhibits. Visitors may stay overnight in the Light Station by reserving a room in the cottages that are managed by a CDPR concessionaire. Built in the 1960's, the cottages are some of the newest structures in the Light Station. They were built to replace the keepers' residence that was built when the Light Station was first established.

In addition to visiting the Light Station, visitors to the Park may visit several dramatic vista points that offer scenic views of the rocky coastline. Visitors may also make a trip to the beach to explore the sandy beaches or tide pools. There is a small network of formal trails and a significant number of unauthorized "social" trails along the bluff. The formal trails total approximately 0.4 miles and are considered offici segments of the California Coastal Trail. These segments are ADA-compliant and paved with decomposed granite. The informal trail network within the Light Station Area includes approximately 1 mile of interconnected

FIGURE E.1: Park Context

Pigeon Point Light Station State Historic Park
Easement
10 Foot Contours

Existing Park Trails
Maintained
Social

earthen pathways through vegetation along the bluff, which change as visitors create new routes. Within the Bolsa Point Area, an informal dirt road runs approximately 0.2 miles through the Area to the beach. There is a formal beach access stairway to the Whaler's Cove Beach and a trail to Pistachio Beach in the Light Station Area. There are various informal access points over the bluff to reach the beach.

The Park contains seven vegetation communities or wildlife habitat areas, including two habitat areas (coastal terrace prairie and coastal dune scrub) that the California Department of Fish and Wildlife have prioritized for conservation in the Central Coast ecoregion. The Park contains two riparian drainage areas: Yankee Jim Gulch located at the northern end of the Light Station Area and Spring Bridge Gulch along the southern edge of the Bolsa Point Area. While there is potential for nine special status plants and fi e special status animals to occur at the Park, they were not observed during site investigations. There are tide pools located in the intertidal area north of the Light Station Area These are a popular destination for visitors to explore, particularly school groups and environmental education programs.

PURPOSE OF THE GENERAL PLAN

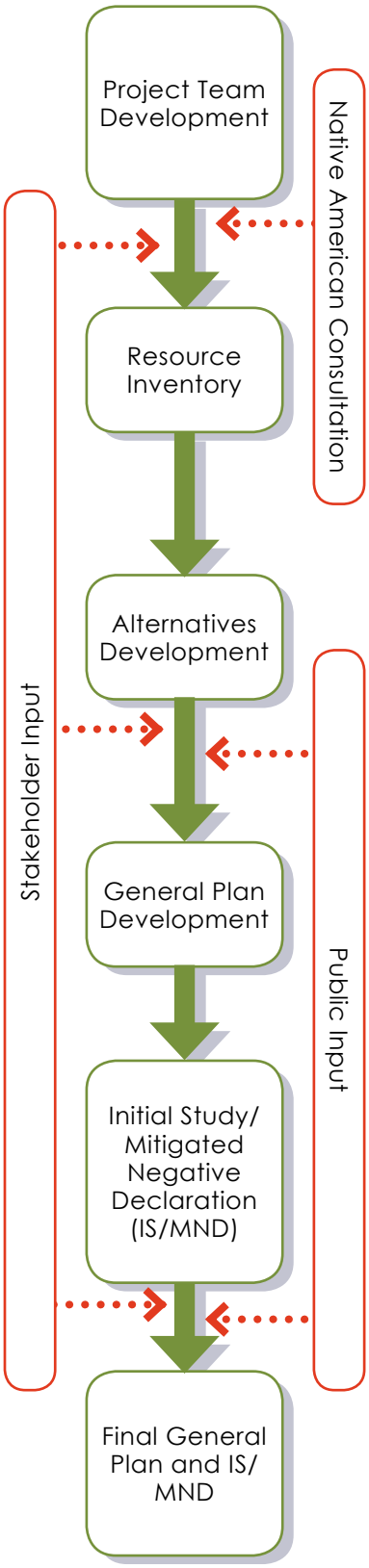
The Park does not currently have a General Plan. While the Park is actively managed by the Santa Cruz District, a General Plan must be in place before CDPR can dedicate resources for improvements. Due to the size of the Park, the focused resource protection intent, and high need for a General Plan, this project was selected for a "streamlined" process that included accelerated planning and focused analysis on previous planning efforts. The project team developed project goals to facilitate this streamlined approach. These goals can be found in Chapter One. Figure E-2 illustrates the Planning process that was conducted in developing the General Plan.

PUBLIC INVOLVEMENT

The planning process, described in the diagram to the right, included input from key stakeholders and the general public. Key stakeholders, including local non-profit partners, environmental education groups, and adjacent landowners, were interviewed early in the project to guide opportunities and constraints analysis and provided input on products developed during the planning process. Feedback from the general public was gathered through a project website and through an on-site kiosk at the Park. The public provided feedback on preferred park use and priorities for the General Plan. The public also responded to preliminary General Plan Concepts to help refine the fina plan.

The public involvement is described in more detail in Chapter One. Results are summarized in Chapter Two and detailed in Appendices A and B.

FIGURE E.2: Planning Process



KEY ISSUES

The planning process revealed the following key issues for the Park:

Sensitive Cultural Resources. The Park contains historic structures protected by national- and state-level historic designations. Preserving and managing these cultural resources is a high priority for the Park.

Balancing Growth with Park Character. The Park is highly valued by visitors for its secluded character, scenic quality, and peaceful locale. Maintaining this "sense of place" is important for maintaining a high quality visitor experience.

Parking and Infrastructure Capacity at the Park. Current infrastructure, including parking, potable water, and wastewater treatment are at capacity or inadequate. These services must be considered for future Park operations.

Protecting Habitat and Listed Species. Although no sensitive resources were observed at the Park, there is potential for nine special status plants and fi e special status species to occur. Additionally, coastal dune scrub and coastal terrace prairie habitats are high priorities for conservation.

Agricultural Interests and Adjacent Land Uses. There is strong support for agriculture preservation in San Mateo County. While the Bolsa Point Area has not been used for agriculture since the late 1990s, it is considered prime agricultural land. Balancing the need for recreational use with agricultural interests will ensure public support for the project.

Park visitors at vista point overlooking Pacific Ocean.

Bluff Erosion and Sea Level Rise. The Park's coastal bluff is subject to natural processes of erosion, which will likely increase with anticipated sea level rise. The impact of these processes must be considered to ensure public safety and effect ve use of Park resources in the future.

Coastal Climate. The climate on California's Central Coast can be dramatic with high winds and deep fog. Visitor comfort and experience are influenced y these conditions.

Visual Obstructions and Wayfinding. Views of the ocean and the Lighthouse are important and protected viewsheds. The Park will strive to protect these views and limit obstructions.

PARK OPPORTUNITIES

The planning process identified important opportunities, which are incorporated into the General Plan. These opportunities summarize concepts that were identified during the existing conditions study, public outreach process, and planning influences and trends analysis, described in detail in Chapter Two.

Coastal Trail sign with Light Station in the background.

Expand Recreational Trail Options and Connect to Other Open Spaces. New trails within the Park and trail connections to nearby open spaces are popular ideas and help meet public demand for walking and hiking. This also is in line with system wide and regional planning efforts Formalizing trails would also have environmental benefits if informal social trail network is reduced.

Reopen the Lighthouse. Reopening the Lighthouse to the public would provide new park experiences. This would require successful fundraising effort and detailed geotechnical study determines that the project is feasible, The public is supportive of this effort

Improve Historic Light Station. Upgrades to the Light Station, consistent with the historic period of significance, would strengthen the visitor experience with the landmark.

Support Low Cost Accommodations along the Central Coast. The overnight accommodations currently offe ed at the Park are a unique low-cost option for travelers along California's Central Coast. By developing camping or expanding the hostel, there would be more opportunities for visitors to stay overnight at the Park.

Create Space for Indigenous Agriculture and Land Stewardship. A potential partnership with a tribal group to provide land management practices utilizing native techniques would offer a benefit for natural habitat restoration and interpretive opportunities to engage with the indigenous cultural history of the Central Coast.

Improve Beach Access and Preserve Coastal Bluffs. Beyond the stairs to Whaler's Cove, there are no formal beach access points at the Park. However, many users create their own routes down to the beach. In addition to being somewhat diffic t to access, these "social" access points increase erosion along the bluff. Concentrating beach access to certain areas and mitigating impacts would improve these conditions.

Entrance to the Light Station.

Offer Concessions. The Park can be a windy, foggy, and cold stopping point along the coast. Park visitors commonly ask where they can purchase hot food and drinks. Offer ng these provisions at the Park would produce new revenue opportunities.

Offer New Opportunities for Picnic and Gathering. Spaces for large gatherings are popular recreational uses. Creating these spaces or enhancing existing ones at the Park would help provide for this demand.

Enhance Natural Resources. While there has been an active volunteer program to revegetate the Park with native plants, there continues to be a significant problem with non-native species, specifica ly ice plant. Native plant restoration effort and protection of rare vegetation communities would enhance natural resources in the area.

Develop a Dark Skies Initiative. Although known for its Lighthouse, the Park is actually extremely dark at night and well-suited for viewing the night sky. Developing a"dark sky" program would limit light pollution and enhance the experience of seeing the night sky.

Expand Historic Status. The Lighthouse and Light Station have landmark status. The development of a multiple property Maritime Historic District that includes Pigeon Point Light Station, Año Nuevo Island Light Station, and Franklin Point Historic Shipwreck Cemetery would add further distinction to the Park and would strengthen the historical theme of the Park.

SUMMARY OF THE PLAN

The General Plan introduces a new Declaration of Purpose and Vision Statement for the Park. These are presented in Chapter Four along with the proposed park management zones, concept master plan for the Park, goals and guidelines for implementing the General Plan, and an adaptive management plan for evaluating and responding to future conditions. Chapter Four presents a vision that preserves and protects the Park's important historic resources and expands recreational opportunities and natural resource conservation.

The General Plan suggests potential acquisition of adjacent properties to expand park services and avoid affect ng park resources. In total, these acquisitions would add approximately 26 acres to the Park. These areas are presented in the discussion of management zones in Chapter Four.

MANAGEMENT ZONES

The General Plan establishes six management zones with distinct character and management objectives. The management zones include:

Historic (3.76 acres). This zone includes the Light Station and associated facilities. The zone will be maintained to preserve the historical integrity and interpretive value of the light station.

Upland Recreation (22.43 acres). This zone provides most of the visitor services outside of the Historic Zone. It includes vehicular roads and parking areas, as well as primary recreational amenities, such as restrooms, picnic areas, and outdoor education gathering places. Within the Bolsa Point Area, the zone includes space for an indigenous agriculture and land management practice center, as well as other flex ble day use activities.

Upland Conservation (32.26 acres). This zone includes the bluff and the upland area inland of the bluff edge. The zone will be managed primarily for natural resource protection with limited recreational use. In the Bolsa Point Area, management ideas include a partnership with local Quiroste descendant groups practicing their traditional agricultural and land stewardship techniques.

Beach Recreation (21.69 acres). This zone includes the beach area between the bluff and the Pacific Ocean. It is a predominantly sandy area that includes impassible rock outcroppings and important intertidal and tide pool habitat. Key marine habitat would be protected and monitored for potential impacts.

Riparian (11.75 acres). This zone includes the riparian habitat within the Park and includes a 100 foot buffer from the drainage areas in the Park. It is characterized by Central Coast riparian scrub plant species. The zone will be managed primarily to preserve sensitive riparian species.

Operations (9.09 acres). This zone is located across Highway 1. It will serve as the location of a well for the Light Station Area and operational needs of staff It will continue to be owned by the US Coast Guard and not become a part of the Park.

Park visitors exploring tide pools.

CONCEPT MASTER PLAN

The Concept Master Plan provides a schematic vision for park layout utilizing the strategies presented in management zones. The Concept Master Plan illustrates potential trail alignments and connections, recreational amenities, and park facilities. While the Concept Master Plan does not provide specifi design direction, it helps to illustrate the vision of the General Plan. Specifi features within the Concept Master Plan will require addition site planning and design development.

GOALS AND GUIDELINES

The goals and guidelines found in Chapter Four include management actions to implement in vision presented in the Plan. This section includes fundamental parkwide goals that represent management actions for the park as a whole. This section additionally includes goals and guidelines for visitor experience, access and circulation, resource management, interpretation and education, operations, utilities, and future planning.

VISITOR CAPACITY AND ADAPTIVE MANAGEMENT

The General Plan is a long range vision document. Adaptive management is a strategic approach to ensure resiliency in the Park's management approach to future challenges and conditions. Chapter Four presents an estimate for future use and anticipated visitor experience within each of the management zones. These are used as the baseline for examine visitor capacity and resource protection. The General Plan anticipates a potential increase in visitor use of 25 percent over the lifetime of the General Plan. However, it is anticipated that visitor use will be distributed throughout areas of the Park that are not currently open to the public, potentially reducing concentration of visitors in heavily used areas.

Display with draft Concept Master Plan on display at the Fog Signal Building for public feedback.

The visitor capacity and adaptive management approach described in Chapter Four utilizes CDPR's methodology described by CDPR, including determining desired outcomes for visitor experience and resource conservation, developing measurable indicators to evaluate their condition, and monitoring and adjustment protocols.

ENVIRONMENTAL ANALYSIS

The environment analysis conducted as part of this General Plan planning process was prepared in conformance with the California Environmental Quality Act (CEQA). CEQA is the principal statute governing the environmental review of projects in the State. CEQA requires lead agencies to determine if a proposed project would have adverse effect on the environment.

The goals and guidelines of the General Plan are designed to avoid or minimize potential adverse environmental effects. After completion of an Initial Study (IS) for the General Plan, it was determined that with mitigations there is no substantial evidence that the plan may have a significant impact. Per CEQA Guidelines Section 15070(a), an IS and Mitigated Negative Declaration (MND) satisfies the CEQA requirement in these circumstances.

The environmental analysis and discussion of potential environmental effect are presented in Chapter Five.

Central Dune Scrub in Bolsa Point Area.

1 Introduction

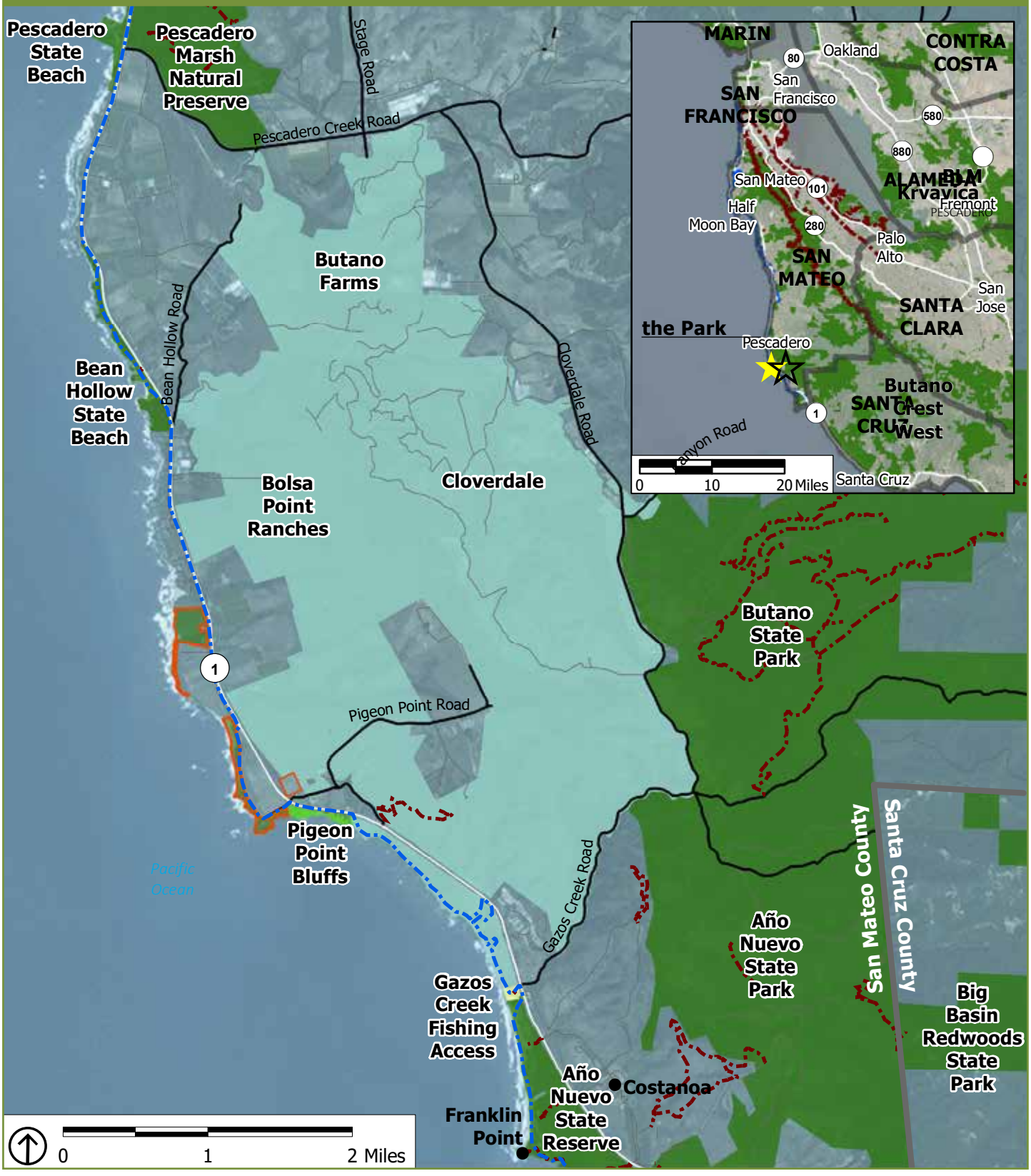
Pigeon Point Light Station State Historic Park (the Park) is an iconic destination along the Central California coast with a rich cultural history in a dynamic natural setting. Serving approximately 200,000 visitors annually, the Park is best known for the 115-foot lighthouse perched atop a long promontory extending dramatically into the Pacific Ocean near the southern end of the park. In 2005, the Park expanded through the addition of nearby properties. In 2015, the California Department of Parks and Recreation initiated a General Plan process. This document is the result of this planning effort and serves as the first General Plan developed for the Park.

The Introduction chapter presents a summary of Park's location and characteristics. It provides a brief overview of the history of the area, culminating in the development of the State Historic Park, and a description of the acquisition purpose and sense of place. The chapter additionally provides an overview of the planning process, including a summary interagency and stakeholder involvement. The chapter culminates with an overview of the components of the General Plan.

1.1 LOCATION AND PARK CHARACTERISTICS

As shown in Figure 1.1, the Park is located in San Mateo County, approximately 50 miles south of San Francisco, California. The Park sits between the Pacific Ocean and State Route 1, also called Highway 1 or the Cabrillo Highway. Highway 1 is a "Scenic Corridor," as discussed later in this document, and is a popular driving and cycling route for local and regional visitors, as well as national and international tourists. As shown in Figure 1.2, the Park is predominately surrounded by other open space and active agricultural land. The nearest population center is the town of Pescadero, located approximately 11 miles northeast of the Park. Año Nuevo State Park is located approximately 4½ miles south, and Bean Hollow and Pescadero State Beaches are located four and 6 miles north, respectively.

FIGURE 1.1: Local and Regional Context



- Pigeon Point Light Station State Historic Park
- Easement
- Existing or Proposed Coastal Trail Route
- Existing Trails
- California Department of Fish and Wildlife
- California Department of Parks and Recreation
- Peninsula Open Space Trust
- San Mateo County Parks and Recreation Department

FIGURE 1.2: Park Context

Pigeon Point Light Station State Historic Park

Easement

As shown in Figure 1.2, the Park is composed of two non-contiguous areas. The southern area, which contains the historic Pigeon Point Lighthouse (the Lighthouse), is the only area that is currently open to the public. In this document, this area is referred to as the "Light Station Area," because it includes the peninsula which contains the Lighthouse and adjacent buildings. The area directly around the historic Pigeon Point Light Station is referred to as the "Light Station," or alternatively the "Historic Zone," in the discussion of management zones in Chapter Four. The Light Station Area was expanded in 2005 to include Lighthouse Ranch Beach and Whaler's Cove, located north and south of the Light Station, respectively. These areas were purchased from Peninsula Open Space Trust (POST), a local open space advocacy organization. In total, the Light Station Area is approximately 29 acres. In addition to the Light Station, the area includes the bluff and beach areas to the north and south of the peninsula, which feature both formal and informal trails and access points to sandy beach areas, rocky overlooks, and tide pools.

The northern area is approximately 37 acres and is located 2 miles north of the Light Station Area. In this General Plan, this area is referred to as the "Bolsa Point Area." It includes a coastal plateau between Highway 1 and the Pacifi Ocean, the bluff, a sandy beach area, and a riparian drainage corridor called Spring Bridge Gulch. A section of the area extends to the south along the ocean, creating a thin offshoot between the bluff and the water. The Bolsa Point Area was additionally purchased from POST in 2005; however, this area is currently not open to the public nor does it have any utility connections.

In addition, CDPR has an easement with the US Coast Guard for a property located east of Highway 1 from the Light Station Area. This area is referred to as the "Easement" throughout the General Plan. The Easement is approximately 9 acres. The intended use of this area is the development of a new well to provide water to the Light Station Area. The Easement Area will not be open to the public and additional uses beyond the construction of the new well require approval by the US Coast Guard.

1.2 ACQUISITION PURPOSE

CDPR acquired title to the Light Station in 2011, although it had been leased for use as a park since 1980. The deed ensures that CDPR will continue to maintain the Light Station in a manner consistent with national and State guidelines for historic preservation. At the time of the transfer, the property was designated to be used for education, park, recreation, and cultural or historic preservation purposes.

CDPR acquired Whaler's Cove, Lighthouse Ranch Beach, and Bolsa Point from POST in 2005. While the Light Station was already in use as a park through the lease agreement, these acquisitions allowed the Park to expand, offe

new recreational opportunities, and preserve additional coastal open space. CDPR indicates that these areas, in particular, offer key opportunities for viewing wildlife, including marine mammals and seabirds, and offer significan preservation value for wildlife habitat. CDPR also indicates the expansion allows for increased recreational options, including picnicking and beach activities. CDPR identified that Bolsa Point contained the elements to be a recreational park asset with space for parking and an accessible beach. While the Bolsa Point is not currently open to the public, it was acquired for park purposes and their use will be consistent with CDPR's mission:

> *To provide for the health, inspiration and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high-quality outdoor recreation.*

1.3 HISTORIC CONTEXT

The historic light station is a valuable cultural resource and was the primary reason for acquisition and preservation by CDPR as a State Historic Park. The context of the development of the Lighthouse is tied directly the conditions of the Central California coastline, which serves as the setting and important interpretive feature of the Park. Following is a brief overview of the history of the Park area to give context to the site as it exists today.

Pre-European Period

Prior to European settlement along the California coast, the Pigeon Point area was inhabited by the Ohlone, a large interconnected network of smaller tribes that shared a primary language group, "Costanoan."[1] Costanoan-speaking people once occupied a large territory from San Francisco Bay in the north to the Big Sur and Salinas Rivers in the south.[2] Some descendants still prefer the term "Costanoan," while others prefer "Ohlone," or more readily identify with more specific tribelet names.

The area directly around Pigeon Point area was inhabited by an Ohlone tribelet, called the Quiroste, who inhabited the coastal and inland areas from Bean Hollow to Año Nuevo.[3] The Quiroste hunted and fished the area and harvested plant foods, such as grass seeds, acorns, bulbs and tubers. There is also evidence that the Quiroste used fi e as a landscape management tool to control plant production and progate species that were used in daily life. Additionally, the

1 Levy, Richard. "Costanoan" in *Handbook of North American Indians*, eds. William C. Sturtevant, and Robert F. Heizer, vol 8 (California). (Washington, DC: Smithsonian Institution, 1978).

2 Milliken, Randall, Richard T. Fitzgerald, Mark G. Hylkema, Randy Groza, Tom Origer, David G.Bieling, Alan Leventhal, Randy S. Wiberg, Andrew Gottfie d, Donna Gillette, Vaviana Bellifemine, Eric Strother, Robert Cartier, and David A. Fredrickson. "Punctuated Culture Change in the San Francisco Bay Area" in *Prehistoric California: Colonization, Culture, and Complexity*, eds. Terry L. Jones and Kathryn A. Klar (Lanham, MD: AltaMira Press, 2007). 99–124.

3 Milliken, et al., Punctuated Culture Change in the San Francisco Bay Area," 2007.

Quiroste controlled the local source of Monterey chert, the primary stone tool material among coastal groups.

Spanish and Mexican Periods

The first European expedition into the vicinity of Pigeon Point occurred on October 23, 1769 with the arrival of Spanish expeditionary forces. As was common throughout the Americas following the arrival of Europeans, population numbers of indigenous people decreased significant y due to food shortages and the introduction of new diseases. The Spanish established their presence in the greater region by founding missions and presidios. During the mission period, the Pigeon Point area was a cattle ranch station for Mission Santa Cruz.

The missions waned in control during Mexican rule of California from the 1820s to 1848. Settlement in the region began to expand at this time as the Mexican government awarded large grants of land to wealthy and politically influent al individuals willing to settle the area. The Pigeon Point area was part of the Mexican land grant, Rancho Punta del Año Nuevo, in which the grantees used the lands for cattle pasture and agriculture.[4]

Early American Period

Originally called *Punta Ballena* ("Whale Point"), the modern day Park was utilized as a whaling station from the mid-1800s into the early twentieth century.[5] [6] Increased maritime activity, as well as the arrival of new Californians during the Gold Rush, led to higher levels of ships passing along the Central Coast. The coast's rocky shoreline coupled with limited visibility due to fog, proved dangerous for many ships that wrecked while navigating the area. During the 1850s and 1860s, at least four major shipwrecks created significant public outcry, including the 1853 wreck of a clipper ship, the Carrier Pigeon, for which the point was renamed.

Development of the Light Station

Determined to make this location safer for shipping, the United States government approved and appropriated funds for a lighthouse in the region. Although there were early debates over the location, the "Coast and Geodetic Survey Report" dated June 9, 1855, concluded that Pigeon Point possessed many advantages over other locations due to greater visibility.[7]

4 Clark, Matthew R., *An Expanded and Revised Archaeological Reconnaissance of the Pigeon Point Public Access Improvement Project, San Mateo County, California*. Rohnert Park: Northwest Information Center, California Historical Resources Information System, Sonoma State University, 2005.

5 San Mateo County Department of Environmental Planning, Planning Division, *Coastside Cultural Resources of San Mateo County, California*. (Redwood City, CA, 1980), 65.

6 Hynding, Alan. *Frontier to Suburb: The Story of the San Mateo Peninsula* (Belmont, CA: Star Publishing Company, 1982).

7 E.G. O'Keefe, LCDR, Chief, Marine Environmental Protection Branch. 12th US Coast Guard District. "Pigeon Point Lighthouse." National Register of Historic Places Inventory/Nomination Form. 10 November 1976.

Pigeon Point Light Station circa 1950 (source: United States Coast Guard).

Work on the Lighthouse and the Fog Signal Building at Pigeon Point began in June 1871 and it was pronounced ready for its first light on November 1872. The lighthouse was designed and built based on a standardized design adapted from ones used on the eastern seaboard, making it unique because it is the only tower of this type constructed on the Pacific Coast. Additionally, it is unusually tall for the region.[8] Upon completion, the foundation at the base of the tower was designed to be over 8 feet thick, and the completed structure was 115 feet high, making the entire structure 150 feet above the water. The Pigeon Point Lighthouse shares the distinction of being one of the tallest towers on the west coast with Point Arena Lighthouse in Mendocino County, which is also 115 tall, although constructed in a diffe ent style.[9]

The other unique feature of the Lighthouse was the Fresnel lens that was used as the light in the tower. Constructed in Paris, France, the lens was "firs -order", meaning it was the largest and most powerful lens used in lighthouses on the Pacific Coast at the time of construction. The lens is 7 feet 10 inches high with an inside diameter of 6 feet 1 inch.

The light station complex at Pigeon Point also included lighthouse keepers' dwellings and accompanying outbuildings for keepers and their families to live at the point. Houses for keepers and assistant keepers were an essential component of light stations. At Pigeon Point, the keepers' dwelling was constructed as a freestanding building, which was typical of larger light stations. The original keepers' dwelling was a Victorian duplex and included a shed outbuilding. Around 1900, a rear addition was built, creating a fourplex.

8 Architectural Resources Group, Inc. (ARG).*Draft Historic Structures Report Pigeon Point Light Station, Pescadero, California*. San Francisco, CA, 2013. (Prepared for California State Parks Foundation and California Department of Parks and Recreation).

9 Regnery, Dorothy. "CA-SMA-170H, the Pigeon Point Lighthouse." National Register of Historic Places Nomination Form. On file, Rohnert Park: Northwest Information Center, California Historical Resources Information System, Sonoma State University, 1976.

Although the light sources have been upgraded over time, the Lighthouse has been in continuous operation since its first lighting and has been using the same flash pattern to guide ships along the course for the entire time of its operation. Pigeon Point's flash pattern is one flash every ten seconds.

No major structural changes have been made to the Lighthouse, although some of the other buildings have been remodeled since original construction. In 1899, the original fog signal building was in poor condition and was replaced with the current structure. The keepers' dwelling and outbuilding were demolished in 1960, and four new cottages were built.[10]

CDPR Era

In 1980, CDPR leased Pigeon Point Light Station from the United States government for use as a public park. By 1986, the Cottages were converted to a hostel offer ng overnight accommodations for up to 59 people. Pigeon Point was one of the early pilot projects associated with the 1978 California State Park System Coast Hostel Facilities Plan, and was "designed to be integrated into a complete system of future coastal hostels stretching from Oregon to Mexico." Environmental education programs for local school-aged youth in the area have been operating out of the site and utilizing the hostel for overnight stays since the mid-1980s. During early years of the Park, CDPR offe ed tours into the Lighthouse. Public access to the tower was stopped in December 2001, due to issues with structural integrity.

In the early 2000s, the area to the east and south of the Lighthouse, today known as Whaler's Cove, was owned by a private owner who constructed small cabins along the bluff with the intent of operating a bed-and-breakfast-style hotel catering to dog owners. The property was later sold to POST and then transferred to CDPR for long-term management in 2005. At this time, CDPR additionally acquired the Bolsa Point Area and Lighthouse Ranch Beach, the bluff and beach area within the Light Station Area. The cabins at Whaler's Cove were later demolished and POST worked with CDPR to develop the Council Circle and Mel's Lane along the bluff in this area. Later, POST helped to develop the path and stairway to the beach at Whaler's Cove. Although the Bolsa Point Area is disconnected from the Light Station Area, they are still considered part of the same park unit. The Bolsa Point Area remains closed to the public.

In September 2011, the property containing the Lighthouse and the adjacent beach area were transferred from the United States government to CDPR at no cost. In November 2011, the Fresnel lens was removed from the Lighthouse and put on exhibit in the Fog Signal Building.[11] The move was an initial step in drawing public support for renovating the tower, spearheaded by the California State Parks Foundation. Renovation documents and cost estimates have been

10 Regnery, "CA-SMA-170H, the Pigeon Point Lighthouse," 1976.

11 ARG, *Draft Historic Structures Report Pigeon Point Light Station, Pescadero, California*, 2013.

completed and fundraising is underway. For purposes of the General Plan, it is expected that the Lighthouse will reopen to the public and serve as a major new visitor draw for the Park.

Additionally, in 2015, San Mateo County issued a violation for poor water quality in the existing well serving the Park. CDPR gained an easement from the United States government for the 9-acre area east of Highway 1 to dig new wells for potable water.

View of Lighthouse and Carpenters Shop from overlook behind the Fog Signal Building.

1.4 SENSE OF PLACE

The Park offers important visitor experiences that reflect the unique conditions of the Park's historic features and display the best of the dynamic Central California coastline. Following are some of those experiences that help to define the "sense of place" at the Park.

Learn about Light Station and Maritime History

The lighthouse is the primary visitor destination within the Park. Although it is currently closed to the public, visitors are drawn to the historic structure. There are key vista points throughout the Park to view the Lighthouse. Amateur and professional photographers and visual artists also come to photograph, paint, or draw the Lighthouse out on the bluff. Historic structures and interpretive elements at the Park help visitors learn about the history of the Lighthouse and the regional story of maritime navigation along the Central Coast. From the point, it is possible to view the rocky coastline that dictated the need for a lighthouse and imagine the maritime voyage along the coast or the role of the lighthouse keeper in managing navigation. Additionally, it is possible to look to other key locations in regional maritime history that help to expand the story beyond the site, including Año Nuevo Island Light Station and Franklin Point Shipwreck Cemetery, both located south along the coast.

Experience Seclusion and Wild Scenic Coastline

While the Park serves approximately 200,000 visitors annually, it is located in a relatively isolated location and many visitors appreciate the secluded feel that they achieve at the Park and the long, unobstructed views of the coastline. The coastal climate is known for being rugged and the Park offers the opportunity to connect with this experience and feel the impacts of coastal conditions, such as high winds and fog. Fog can sometimes shroud the coastline, obscuring views of the Lighthouse and the landscape, but it creates opportunities for a more personalized experience with the landscape.

Visitors at the Park with view of coast south of the Park.

View the Beach and Coastal Habitat

Although much of the Central California Coast is characterized by rocky terrain, a significant amount of the Park, particularly the Bolsa Point Area, has sandy beaches. Whaler's Cove and Pistachio Beach are two popular beach destinations in the Light Station Area. From key points in the Park, visitors can also partake in wildlife viewing. Whales and seals are often seen from the deck behind the Fog Signal Building. In addition, many visitors come to explore the tide pools located just north of the Light Station, which contains a diverse variety of plants and animal life.

Stay Overnight at the Hostel

Spending the night at the Pigeon Point Hostel is a memorable experience for many guests as it is unusual to be able to be at such a remote and dramatic location for such a reasonable price. In addition to providing rooms, guests have access to lounges, kitchens, and a beautiful outdoor setting. Events at the hostel have included stargazing, concerts, and holiday events.

Visit as Part of an Environmental School Program

Exploring New Horizons, an environmental education nonprofit, began offer ng an outdoor educational program at Pigeon Point in 1983 and has operated at the Park since that time. The program runs Monday to Friday, from August to November and from January to June. A typical group consists of 30 fifth- or sixth-grade students, although classes can include students from kindergarten to eighth grade, with between 15 and 50 students at a time. Groups are also accompanied by parent/teacher chaperones. Staff from the program teach marine and cultural history and also lead exploratory trips through the Park.

1.5 PURPOSE OF THE GENERAL PLAN

The Park does not currently have a General Plan. According to the CDPR Planning Handbook (April 2010):

> *The general plan is the primary management document for a unit, defin ng a framework for resource stewardship, interpretation, facilities, visitor use, and operations. General plans define an ultimate purpose, vision, and intent for unit management through goal statements, guidelines, and broad objectives, but stop short of defin ng specific objectives, methodologies designs, and timelines on how and when to accomplish these goals.*

Importantly, General Plans must be in place before CDPR can dedicate resources to improvements of a park unit. The goal of a General Plan is not to suggest specific projects. Rather it provides a larger framework and it helps move the Park forward towards implementing necessary and significant improvements.

With the expected renovation of the Lighthouse and the recent expansion of the Park to the north, the Park is in a transitional phase. The General Plan is intended to serve as a guiding document that highlights the many assets of the Park and provides guidance for the future improvements. The following goals were identifie for the General Plan process. The goals were set to ensure that the plan is in line with CDPR' mission and address the unique conditions of the Park.

1. Develop a streamlined, implementation-focused approach to the General Plan process. The project should build on key find ngs from previous studies and move the Park closer to implementing improvements.
2. Plan a comprehensive site with enhanced visitor experience. The Park is an exciting visitor destination and the experience should be dynamic, with numerous recreational opportunities.
3. Highlight the California State Historic Park experience. The Park is a unique asset for California residents and should be featured as an important public resource.
4. Strengthen access to the Park and connectivity within and between the Light Station Area and the Bolsa Point Area and to other regional open spaces. Orientation within the Park should be clear for all visitors and site amenities should be easy to access and enjoy. Wayfind ng and signage should help orient visitors to the Park.
5. Provide affo dable coastal recreation amenities. The Pacific coastline is a popular recreational destination; however, accommodations can be costly and access can be limited. In addition to services provided by the hostel, improved recreational amenities and potentially camping at the Park could provide low-cost opportunities for both local residents and visiting tourists.

6. Increase habitat and ecological resource protection, particularly coastal habitat. The plan for the area should restore and enhance native ecological conditions.
7. Consider the long-term use of the Park and create a document that takes the Park into the future. The General Plan will guide long-term improvements at the Park. The plan must provide a vision that will last and continue to provide inspiration to visitors for years to come.
8. Provide operation and maintenance suffi ent to support Park improvements and programs. The plan components must be realistic in terms of site amenities and availability of CDPR staffing Future improvements must prioritize self-sustaining elements that benefi from increased operations but do not depend on them.

1.6 PLANNING PROCESS

The General Plan followed a similar planning process used by CDPR for other General Plans as presented in the Planning Handbook.

Project Team Development

The General Plan process began with the establishment of the project team. The team included CDPR staff from the Southern Service Center and the Santa Cruz District. PlaceWorks was selected as an outside consultant to develop the General Plan and manage the planning process. The team consisted of staff familiar with the Park and key components of the General Plan Process. The Park was selected to serve as prototype for a "streamlined" General Plan process. Considerations for this streamlined process were developed early in the project and the team developed an approach to complete the General Plan within the accelerated schedule.

Public Outreach

Public outreach and stakeholder engagement is an important component of park planning. They ensure that parks are responsive to the needs of the community and provide a valuable opportunity for participation that can lead to long-term interest in a park facility. Public input was invited and considered throughout the General Plan process. A summary of the public outreach is described in the Interagency and Stakeholder Involvement section below.

Resource Inventory

A study of site conditions was completed as an early planning effort in the General Plan process. The Resource Inventory included an overview of the Park's location and site characteristics, a brief history of the Park, and an analysis of circulation and visitor use, as well as thorough review park resources, including physical, biological, and cultural resources. The Resource Inventory

culminated in an expansive review of key opportunities and constraints. Some opportunities include a variety of new potential use areas, future trail alignments and connections, natural resource enhancement opportunities, and interpretive assets. Potential constraints include historic status considerations, coastal environmental conditions, and site use capacity, among others.

Alternatives Development and Preferred Alternative

Following the development of the Resource Inventory, the project team participated in a design charrette to develop two alternative plans for the Park. During the charrette, the team reviewed key opportunities and constraints and prioritized amenities and uses that were appropriate for the Park based on site analysis, stakeholder feedback, and staff's understanding of the day-to-day operations at the Park. The charrette concluded with a matrix outlining two approaches to future development and use at the Park and site maps roughly illustrating the concepts.

Following the charrette, two alternatives that included site plans and a list of potential future amenities and interpretive features were developed. These alternatives were reviewed by the project team and presented to CDPR Planning Policy and Programming Committee (PPPC) for additional feedback.

The project team used feedback on the two alternatives to develop a single preferred alternative for the Park. The preferred alternative included a schematic concept plan, potential future amenities, and interpretive opportunities. The preferred alternative is presented as the Concept Master Plan in Chapter Four of this General Plan.

General Plan Development

The administrative draft of General Plan was written and distributed through an administrative review within CDPR. After incorporating edits, a public review draft of the General Plan was compiled and made available to the public for comment. Feedback from this process was incorporated in the Final Draft General Plan.

Park visitors enjoying the Light Station Area

Initial Study/Mitigated Negative Declaration

Because General Plans are considered a "project" for purposes of the California Environmental Quality Act (CEQA), the Park General Plan process is accompanied by an Initial Study/ Mitigated Negative Declaration (IS/MND). Project-level environmental review may be needed as specific projects move forward at the Park.

1.7 INTERAGENCY AND STAKEHOLDER INVOLVEMENT

The planning process included outreach to agencies, non-profit stakeholders, and the public for feedback on park needs and perspectives on alternatives. Following is a summary of the outreach completed as part of the Planning Process. Summaries of the Stakeholder interviews can be found in Appendix A and summaries of the online and on-site surveys can be found in Appendix B.

Stakeholder Interviews

To gain a more robust understanding of visitor needs and ongoing projects in the area, interviews were conducted with the following stakeholders:

Coastside State Parks Association supports State parks along the San Mateo Coast, including the Park, through fundraising for capital improvement projects, maintenance, and the support of the docent program.

Coastal Conservancy provides grants, outreach assistance, and technical guidance for projects that help facilitate coastal protection and public coastal access. The Coastal Conservancy also leads efforts to fin sh construction of the California Coastal Trail, which is partially completed through the Park.

Peninsula Open Space Trust (POST) advocates, protects, and constructs open space and trail projects throughout San Mateo County and works with agricultural landowners to develop best practices for active farm and pasture land. POST additionally has two easements located adjacent to the Park that are intended for future trail development.

Hosteling International USA operates the existing 60-bed youth hostel at the Park, located in the former Coast Guard housing units.

Exploring New Horizons Outdoor Schools operates the environmental program for middle-school youth. The program utilizes the Park for two sessions of three-day courses every week throughout the school year. Students from around the Central Coast region participate in the program, exploring and learning about the coastal environment and spending the night in the youth hostel.

Additionally, upon recommendation from POST, the agricultural landowner located adjacent to the southern area of the Park was interviewed regarding their views on public use at the Park.

Native American Consultation

The Tribal Liaison from CDPR notified Native American Most Likely Descendants about the General Plan and invited them to consult on the project in compliance with California Assembly Bill 52 (AB-52), which amends the California Public Resources Code relating to the consultation with Native American groups as

part of compliance with the California Environmental Quality Act (CEQA). No tribes responded regarding the General Plan. In consultation regarding nearby projects, the Tribal Liaison found that the Park was generally not considered to have Native American cultural resources but that there is interest in incorporating interpretive features that acknowledge Native American presence in the area and their use of the intertidal zone.

Online Survey

A project website was active from May 23 to July 8, 2016. The website asked people to provide feedback on activities in which currently participate at the Park and activities or facilities that they would like to see at the Park in the future. The site additionally presented a draft site plan for the Park and asked the public for comments on the plan. CDPR promoted the online survey through social media on the the Park and CDPR Facebook pages. Pocket-sized fl ers that included the survey website address and a QR code were distributed at the Park and at nearby public facilities. Eighty two (82) people responded to questions online.

On-Site Survey

Additionally, between June 1 and July 6, 2016 during a peak summer holiday visitation window, there was an informational booth located in the Fog Signal Building at the Park. The booth included two large illustrations of the draft site plan and a paper survey with the same questions as the online survey that visitors could answer. One hundred and fif y one (151) surveys were returned.

On-site survey station at the Park from June 1, 2016 to July 6, 2016

Targeted Outreach to Local Open Space Advocates

Emails were sent to open space and community groups in the area to promote the online survey and participation in the General Plan process. The email gave a brief description of the project and asked the groups to publish a post, which included a link to the online survey, on their social media platforms, including Facebook, Twitter, and Instagram. The following groups were contacted:

- San Mateo County Parks Department
- Trust for Public Land
- Monterey State Historic Park Association
- Friends of Santa Cruz State Parks
- Friends of Fitzgerald Marine Reserve
- Sequoia Audubon Society
- The HEAL Project/San Mateo County School Farm

- Half Moon Bay Coastside Foundation
- Sempervirens Fund
- Midpeninsula Regional Open Space
- Half Moon Bay Coastside Chamber of Commerce and Visitors' Bureau
- Pie Ranch
- Committee for Green Foothills
- State Parks Foundation

Interviews with Park Diversity and Youth Groups

CDPR has rededicated itself to "park access to reach all Californians" through their Parks Forward Initiative. However, robust participation in outreach effort can be a challenge or it may not fully represent the diverse demographic of California. Additionally, the Park's remote location makes it a destination park for local visitors, as well as visitors from across the region, state, country, and international locations. This creates a challenge for determining the scale of community outreach, as the Park not only needs to meet the needs of nearby residents but also visitors from far away. According to data from the 2010 Census, approximately 2,300 people live within 10 miles of the Park; however, the Park has approximately 200,000 visitors a year. Many of these visitors are likely not able to return to the site for specific outreach events.

To address limitations in both park access and participation in planning, interviews were conducted with representatives from advocacy organizations who work to increase diversity in parks and open space, as well as youth-focused environmental groups. These groups represent voices who may not have been engaged by typical park planning outreach efforts like on-site workshops. Interviews were conducted with the representatives from the following groups:

- Outdoor Afro
- Latino Outdoors
- SF Inspiring Connections Outdoors (SFICO)
- CuriOdyssey

Visitors on viewing deck in the Light Station.

1.8 ORGANIZATION OF THE GENERAL PLAN

The General Plan includes fi e chapters that introduce the site, provide background on planning challenges and site opportunities, present the vision and guiding plan for the Park, and offer environmental assessment. Following is a description of each chapter in the General Plan:

Chapter One: Introduction. This chapter presents an overview of the Park in terms of its location and brief history and goals for the project and provides an overview of the General Plan planning process.

Chapter Two: Existing Conditions. This chapter presents the site in geographical context as well as the environmental setting, provides an overview of access, describes biological resources, provides a brief overview of cultural resources of the site, and discusses relevant planning efforts, regulatory considerations, and recent projects. This chapter additionally summarizes circulation, key uses/activity density, facilities, views, and beach assets.

Chapter Three: Issues Analysis. This chapter highlights planning assumptions for the General Plan and considerations and limitations for new facilities or restoration at the Park.

Chapter Four: The Plan. This chapter presents proposed plan for the Park including park purpose and vision, management zones and schematic concept, goals and guidelines, and visitor capacity analysis.

Chapter Five: Initial Study/Mitigated Negative Declaration (IS/MND). This chapter includes potential environmental effects of the proposed plan and includes potential mitigation measures. This is considered to be a programmatic IS/MND based on the level of detail available in the General Plan.

Visitors having a picnic at the Park.

2 Existing Conditions

Pigeon Point Light Station State Historic Park (the Park) can offer site visitors a unique mix of interactive cultural history and memorable outdoor experiences. This chapter provides an introduction to the site through a discussion of environmental conditions of the region; an examination of site features and park layout; and a review of existing biological, cultural, and recreational resources. The chapter additionally provides a planning context for the General Plan through the examination of on-going efforts at the Park and the region, and regulatory considerations that apply to the Park.

2.1 ADJACENT LAND USE

The central coast is characterized by agriculture, private residences and protected open space. Recent historic and current use of the flat ands within this section of the coast is primarily agricultural, and there is a strong agricultural community and support network within the region.

2.1.1 REGIONAL RECREATIONAL FACILITIES

There is a significant amount of protected open space in the region. The regional open space network is shown on Figure 2.1. Pigeon Point Bluffs is located directly south of the Light Station Area and is owned by the San Mateo County Parks Department. This property includes the area between the beach and Highway 1. The Peninsula Open Space Trust (POST) owns the property south of Pigeon Point Bluffs to Gazos Creek State Beach, which also includes the area from the beach to Highway 1.

POST also owns Cloverdale Coastal Ranches, a 6,391-acre open space property located to the east of Highway 1 across from the Park. POST partners with local farmers and ranchers for management of the property. The site also includes some trail features, including Wilbur's Watch, which brings hikers up the hill to a viewpoint overlooking the ocean, and the coast, including views of the Park.

Along the coast, Año Nuevo State Reserve is located approximately 4½ miles south, and San Gregorio State Beach and Half Moon Bay State Beach are located 10 and 20 miles, respectively, to the north of the Park. Nearby inland parks include Butano State Park, Big Basin Redwoods State Park, Memorial County Park, and West Waddell Creek State Wilderness. Half Moon Bay State Beach has 52 sites for either tents or RVs up to 40 feet in length, and Butano State Park has 21 sites for drive-in campers and 18 sites for walk-in campers. Small RVs of less than 24 feet are allowed at Butano State Park, but there are no hook-ups. Memorial County Park has 158 campsites, primarily for tent campers.

Costanoa Lodge and KOA campground are located on the east side of Highway 1 approximately 4 miles south of the Park. The Costonoa Lodge is a private recreational operation that includes 93 tent bungalows, 20 cabins, and 55 lodge rooms. Comfort stations provide restrooms and showers for all but the lodge accommodations. The lodge includes a restaurant, general store, spa, and meeting space. The KOA campground is located within the same area as the lodge but managed separately. It has 125 RV sites and 10 "pitch-it-yourself" sites.

Pelican Point RV Park is another private operation located approximately 19 miles north of the park. This RV parks has approximately 17 sites and tent camping is not allowed.

2.1.2 REGIONAL OPEN SPACE CONNECTIONS

The California Coastal Trail is a network of public trails for walking, biking, and equestrian uses along the 1,100-mile California coastline. Although Mel's Lane, shown in Figure 2.1, is a segment of the Coastal Trail, there is no continuous connection to the California Coastal Trail from Pigeon Point traveling south. The closest connection is near Gazos Creek, about 2½ miles from Whaler's Cove.

2.2 ACCESS

Visitors to the Park typically arrive by motor vehicle. While most arrive in personal cars, some school fie d trips arrive in school buses, tour groups arrive in passenger vans or large tour buses, and some travelers bring their recreation vehicle (RV) to the Park. Some visitors arrive by bicycle, although this is less common than arriving by car. While the Park may be the only destination for some visitors, its location along Highway 1 makes it a popular stopping point for travelers continuing on as part of a longer journey.

2.2.1 VEHICULAR

The Park is located along Highway 1. The Light Station Area is accessed from Pigeon Point Road, which intersects with Highway 1 at two places at either end of the area. The Bolsa Point Area is directly adjacent to Highway 1. As part of the

FIGURE 2.1: Adjacent Open Spaces

California highway system, Highway 1 is managed by California Department of Transportation (Caltrans), while Pigeon Point Road is managed by San Mateo County. The road is approximately 25 feet wide; however, the County owns a 50-foot right-of-way for the road. Historically, RVs parked along Pigeon Point Road; a berm was constructed along the road to prevent this use.

The existing parking lot is located adjacent to Pigeon Point Road in the southern section of the Park. The parking lot can accommodate 28 vehicles. Parking can be diffic t, as the existing parking lot is often full. Furthermore, parking stalls are not delineated in the existing lot resulting in ineffi ent parking. When the parking lot is full, visitors tend to park along the shoulder of Pigeon Point Road both to the north and to the east. Additionally, there is no RV or bus parking, resulting in parking of these larger vehicles along the road. CDPR rangers that monitor the Park indicate that that vehicles parked along the coastal side of Pigeon Point Road have accelerated bluff erosion in some areas.

2.2.2 BICYCLE

Many bicyclists travel to Pigeon Point along Highway 1. This section of the highway is part of the Pacific Coast Bike Route, attracting bicycle tourists on longer rides or those making shorter trips down the coast. Many bikers will stop for water at the Park during their passage either to the north or south.

2.3 PARK LAND USE AND FACILITIES

As described in Chapter 1, Location and Park Characteristics, the Park is composed of two non-contiguous use areas and the Easement. The following section describes these areas in greater detail.

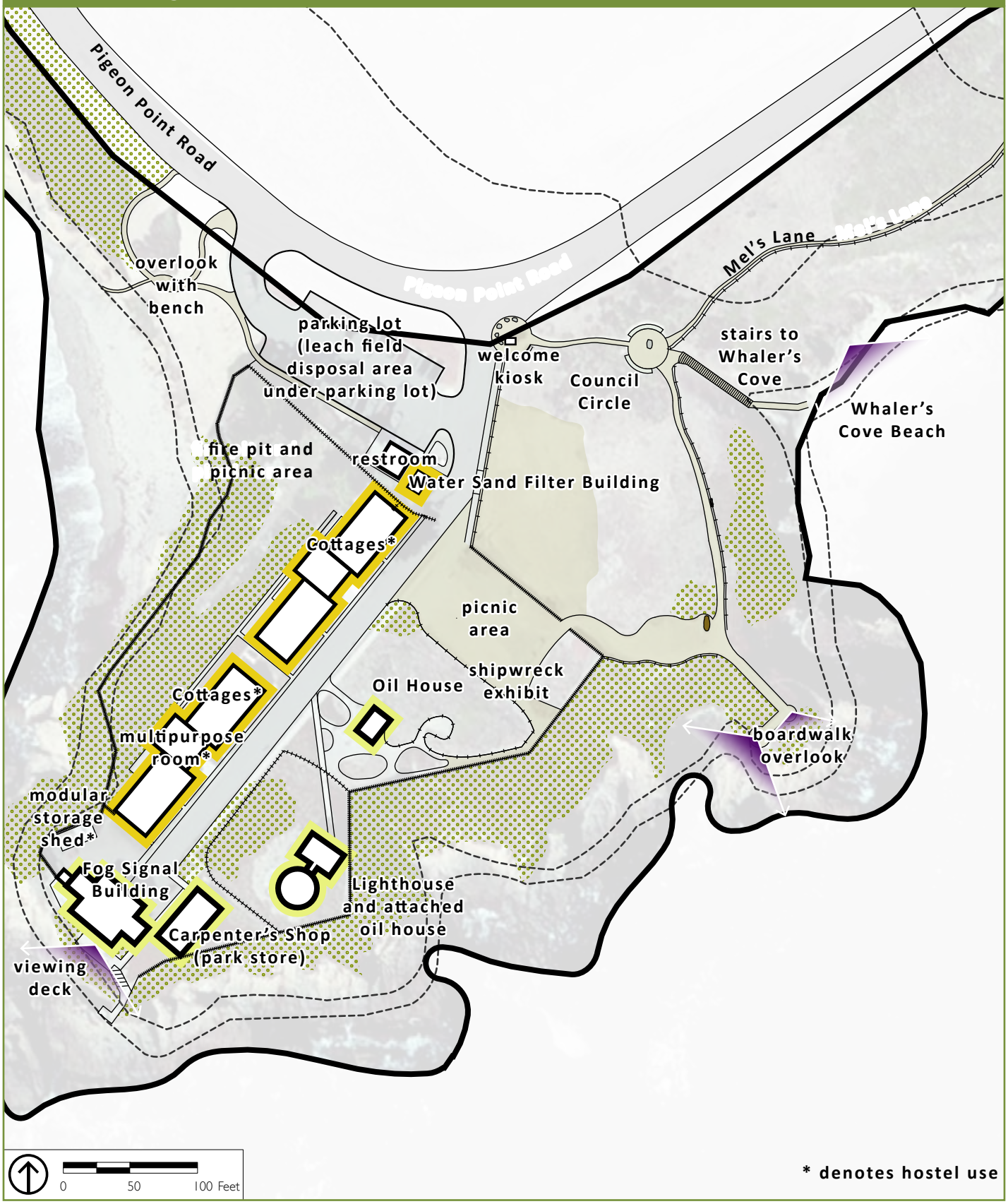
2.3.1 LIGHT STATION AREA

The Light Station Area contains the historic Pigeon Point Light Station (the Light Station). The area around the Light Station is currently the most active part of the Park; however, the Light Station Area as a whole, includes additional assets, including beaches, bluffs, and trails. Figure 2.2 illustrates the features within the Light Station, and Figure 2.3 shows the entire Light Station Area and site components outside beyond the Light Station.

Light Station Structures

The Light Station includes the Pigeon Point Lighthouse (the Lighthouse), as well as additional buildings that contributed to the daily functioning of this maritime navigational center. Many of these buildings are the original structures constructed before or around the turn of the twentieth century. These buildings contribute to the Light Station's historic status as a Light Station of California, described below in the Cultural Resources section. Other buildings were constructed,

FIGURE 2.2: Light Station



Pigeon Point Light Station State Historic Park

10 foot contour

buildings contributing to historic status

buildings recommended for historic review

other buildings

views

disturbed dune scrub (predominately ice plant)

Lighthouse and attached oil house.

Fog Signal Building (west facade) and viewing deck.

modified, or demolished at later points in history and, although they have not been designated as contributors to the historic status, they may be considered contributors following additional review. Figure 2.2 illustrates the buildings that are considered contributors to historic status and ones recommended to be considered contributors. Following is a description of the current structures within the footprint of the Light Station. Discussion of historical status is included in the cultural resources section below, including a summary of modifications to the historic layout.

Lighthouse and Attached Oil House

The Lighthouse and attached oil house are the most visually prominent structures within the Light Station. Situated near the center of the point, the Lighthouse and attached oil house sit slightly above the structures on a slight berm. As the tower is not currently open to the public, a temporary chainlink fence has been placed around the structures. The fence will be removed once the tower reopens.

Fog Signal Building

The Fog Signal Building is located at the western-most end of the point. It currently houses the Fresnel lens and serves as museum space. Due to its location at the end of the main pathway and its function as a museum, the Fog Signal Building is the most visited attraction at the Park. During operating hours, docents are stationed in the Fog Signal Building to answer questions from park visitors.

The building is made up of one large central room, approximately 50 feet by 20 feet in dimension, and two smaller north and south wings. The main room houses the lens and interpretive exhibits about the Light Station, including an architectural model of the Light Station. The southern wing is a private offic for docents and the northern wing is a private offic for the manager of the hostel. The wings have windows on the east and west sides of the building.

There is a viewing deck located on the western side of the Fog Signal Building. Fog signal horns are located on the exterior west façade above the viewing deck. In order to access the deck, visitors must leave through the east doorway and walk around the building. The exterior door is made of a wood rail-and-stile, while the interior door is partially made of glass. This configu ation allows for the wooden door to remain open, providing visitors the ability to see the Fresnel lens and interior of the building, while the closed glass door prevents cold air and wind from entering the building.

Carpenter's Shop

The Carpenter's Shop is located directly adjacent to the Fog Signal Building to the south. Today, a portion of the Carpenter's Shop is used as the Park store, which is managed by the Coastside State Parks Association (CSPA) and staffed by volunteer docents. The shop is located on the east side of the Carpenter's Shop and sells historical material and souvenirs. There is a small restroom for docents and employees located in the center of the Carpenter's Shop, which has running water. The residence for the hostel manager is located on the west side of the Carpenter's Shop.

Carpenters Shop

Oil House

The detached Oil House was historically used to hold kerosene for the tower and later paint storage. The small structure is located near the Lighthouse, just outside of the chain link fence barrier. It was previously used as a gift shop, but now houses an interpretive display of historic photos and artifacts. Although the material is interesting for its historic value, the presentation seems out of date with other interpretive features and is not inviting for park visitors. Once the tower reopens, the detached Oil House could alternatively serve as ticket booth or staging area for people waiting for their tour, although electricity and accessibility reconfigu ation would be needed.

Detached Oil House

Cottages

In 1960, the US Coast Guard demolished the original keepers' residence at the Light Station and constructed four new Cottages in its place. In the 1980s, the Cottages began to operate as a hostel managed by Hosteling International through a concessionaire's agreement with CDPR, who began leasing the Light Station from the US Coast Guard in 1980. The Cottages are located linearly along the main access pathway with the main entryways facing the Lighthouse. The Cottages are only accessible through a keycode by hostel guests and staff, although they may interact with park users as they move between the hostel facilities.

The back of the Cottages have a north-facing view overlooking the ocean and beach. There is a small concrete walkway and patio directly behind the Cottages, which hostel guests use to sit and watch the ocean or eat meals. The area directly beyond the walkway slopes moderately down towards the bluff and then drops dramatically to the ocean below. There is a tall red wooden post fence separating guests from the steepest drop. The area between the walkway and fence is heavily dominated by non-native ice plant, although there is a stand of Monterey cypress trees located on the eastern end near the parking lot.

Exhibits in Detached Oil House

Cottages.

Water Sand Filter Building.

The cottage closest to the parking lot, "Pelican," is used for check-in and operational uses, and also has some guest facilities in addition to the offic The remaining Cottages, "Dolphin," "Seal," and "Whale," are used for guest facilities. In total the hostel contains 59 beds. They are split between male and female dorms with six beds per room; private, double, and triple rooms with shared bathroom; and private four- to six-person rooms with private bathrooms. Each cottage has a central living room or common space area and a communal kitchen. For operational needs, the hostel uses a modular storage shed located on the west side of the Cottages. Also, there is one garage located between the Pelican and Dolphin buildings.

Water Sand Filter Building

The Water Sand Filter Building is currently located east of the Cottages at the entrance to the Light Station. This small structure was originally constructed away from the Light Station at an area referred to as "Parcel B." Parcel B was located northeast of the Light Station and included a spring used to supply water. It is estimate that the originally construction occurred around 1950, although it is known that the Water Sand Filter Building was relocated to its current location in 1964.[1]

The Water Sand Filter Building was constructed to hold the water and sand filtration system; however, these features were removed in 1990. It is a wood-framed, rectangular building with a gabled roof covered with wood shingles. There is a metal door on the southern façade and a window on the western side. While the roof is in good condition, the Water Sand Filter Building is missing some shingles. The paint is chipping in some places and there are some areas with broken trim.

1 Architectural Resources Group, Inc. (ARG). *Draft Historic Structures Report Pigeon Point Light Station, Pescadero, California*. San Francisco, CA, 2013. (Prepared for California State Parks Foundation and California Department of Parks and Recreation), 32.

Restroom

The restroom is located east of the Cottages, directly north of the Water Sand Filter Building, adjacent to the parking lot. The restroom is a prefabricated pit toilet structure that was added to the site in 2011 and is good condition. The restroom does not have potable water or flush toilets, and site users have complained of odors they encounter directly upon arrival.

Modular Storage Shed

The modular storage is located between the Fog Signal Building and the western-most cottage building. The modular storage shed was constructed in 2012 and is rectangular in shade. The structure has wood siding, a low-pitched gable roof with shingles, and a window and door on the southern façade facing the main access way. The modular storage shed is used by the hostel to store tools and equipment to maintain the area around the Cottages.

Picnic Areas

A large picnic area is located south of the main access way, below the Lighthouse. The space is large and open but protected from the wind by surrounding buildings and a berm located between the Lighthouse and the picnic area. There are currently four moveable wooden picnic tables located in the area. In November 2016, a hull fragment of a ship that wrecked at Pigeon Point was relocated from Año Nuevo State Park to the Park. It is located at the edge of this picnic area and positioned to provide a view of the Lighthouse through a porthole in the hull relic.

There is also fi e pit and picnic area behind the hostel. Although it is technically open to the public, because this area is separated from the main use area, it is commonly perceived to be for exclusive use by hostel guests.

Installation of the hull of the Point Arena Schooner that shipwrecked at the modern-day Park in 1913.

Picnic area east of the Lighthouse.

Council Circle.

Council Circle

The Council Circle is a resting place near the Light Station. It located along the trail that departs from the parking lot and heads to Whaler's Cove. The Council Circle includes a round rock bench engraved with the names of donors who contributed to POST to purchase the land and help build the Whaler's Cove project. It is surrounded by native plantings and protected from the harshest ocean winds. The space is accented with large boulders and paved with decomposed granite. The Council Circle also serves as an axis for the trail network along the southern bluff and is used as a picnic or snacking location.

Vista Points

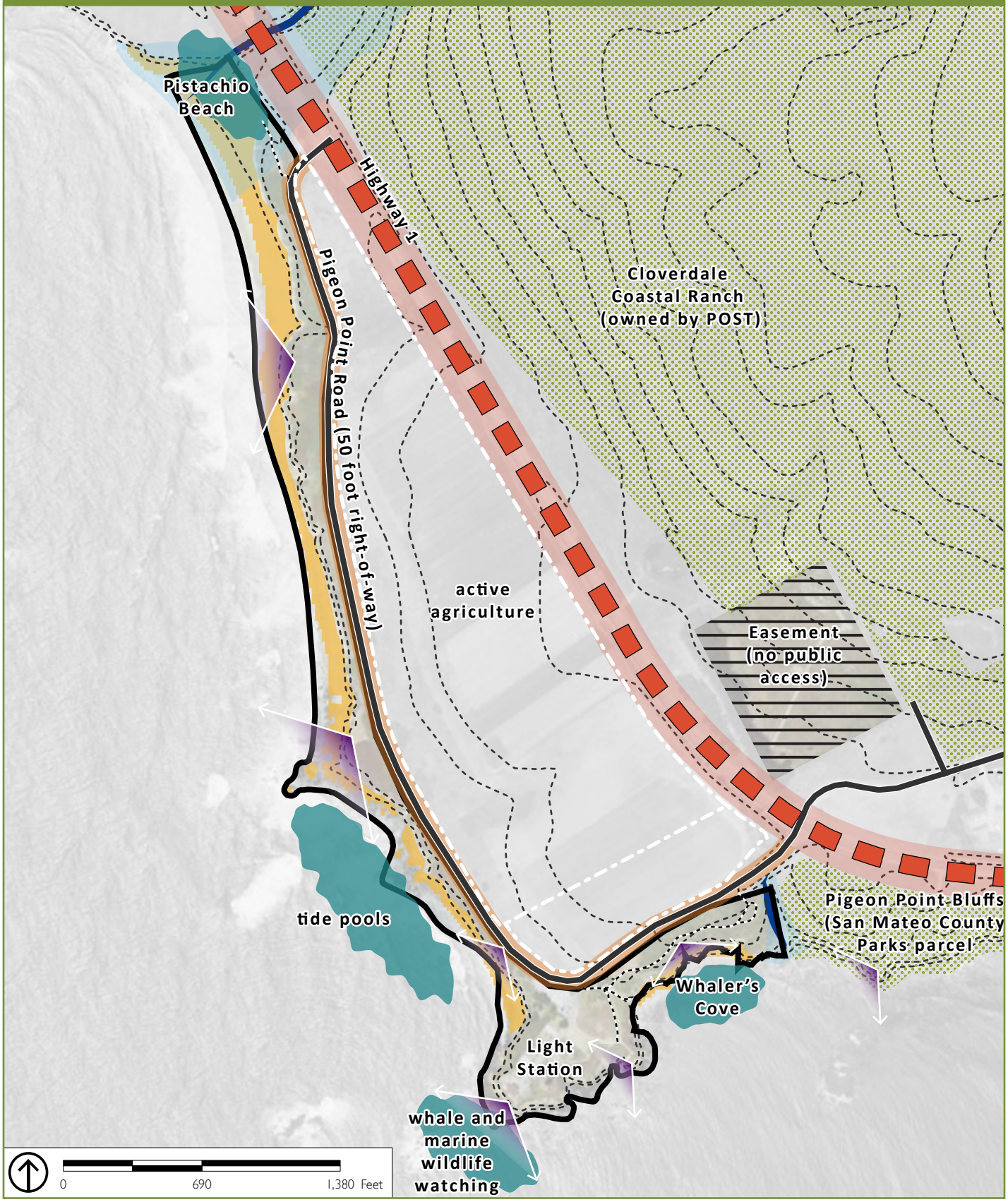
In addition to the Light Station, major attractions for the Light Station Area are the beach and coastal views. There are numerous sites within the area that offer excellent views of the ocean, rocky coastline, or the Lighthouse. These viewpoints are particularly popular during sunsets, during whale migration periods, and when sea life, such as seals and seabirds, are active during the day. As shown on Figure 2.3, these priority viewpoints include the deck adjacent to the Fog Signal Building, the bluff along Pigeon Point Road, and the overlook located on the south side of the Light Station.

Boardwalk overlook south of the Light Station.

The viewing deck at the back of the Fog Signal Building in the Light Station is the most popular ocean viewing because it hangs over the rocky bluff that are home to many sea animals, and offers excellent uninterrupted views to the Pacific Ocean. There are plans to expand the deck and this popular experience at the Park.

The viewing platform and bluff area to the south of the Light Station is popular for photographers wanting to capture the Lighthouse, particularly at sunset. This view can be especially memorable on a cloudy day with dramatic or colorful lighting.

FIGURE 2.3: Light Station Area



Benches are placed sporadically along the bluff adjacent to Pigeon Point Road to the north of the Light Station. These provide resting places for those walking the social trails along the bluff. They also offer an opportunity for those who cannot access the beach from the bluff to watch the ocean. While the views from Pigeon Point Road and along the bluff can be spectacular, these views are negatively impacted by the overhead utility lines along the west side of the road.

One of the more popular seating areas from which to enjoy ocean views is located directly adjacent to the parking lot. There is a trail made of decomposed granite that leads from the parking lot to an overlook with a bench and interpretive signage about the Coastal Trail and coastal California habitat types. These amenities help to formalize the space; however, bluff erosion has made the space diffic t to access.

Loading Chute

A loading chute and associated buildings were constructed around 1865. Remnants of what appear to be a historic loading chute used during early late nineteenth century whaling and shipping operations are located south of the Light Station and west of Whaler's Cove. During the construction of the Light Station, this area remained owned by private owners for separate shipping industry. Historic photos indicate the approximate location of the loading chute and remnant structural elements at the Park suggest this earlier use. Historical records suggest that the loading chute and landing were in operation until the turn of the twentieth century.[2]

Beach

The coastline within the Light Station area is rocky with some areas of sandy beach. In most areas, the beach is between 10 and 25 feet below the bluff with a steep drop between the two areas; however, the grade change between the bluff and the beach is less severe at the Pistachio Beach, located at the northern end of Pigeon Point Road. Yankee Jim Gulch drains into the ocean at Pistachio Beach. This drainage created a flat open, sandy area at Pistachio Beach, which is not inundated at high tide and partially protected from high winds. There is no formal parking at Pistachio Beach; although, cars park along the road and there is a dirt trail to the beach with regulatory signage for beach use.

Whaler's Cove.

Whaler's Cove is another popular beach destination, located closer to the Light Station on the southern end of the Park. Set in the historic location of the whaling operations at the point, the cove sits approximately 30 feet below the bluff. This location offer views of the coastline to the south, and of waves breaking over rocky offsho e outcroppings. Whaler's Cove includes a sandy

2 ARG, *Draft Historic Structures Report Pigeon Point Light Station, Pescadero, California*, 2013, 12.

beach and large boulders used by visitors for sitting or climbing. The cove is approximately 130 feet long and is only accessible from a stairway from the bluff above. The beach provides a pleasant location for ocean viewing and water access. However, it cannot accommodate numerous beachgoers for long periods of time, offers limited options for beach walking, and does not contain tide pools. Santa Cruz District staff also reports that visitors occasionally use the beach at Whaler's Cover to fish, as well as to launch small watercraft, which they carry down the stairs.

Tide Pools

At low tide, tide pools become exposed along the beach directly north of the Light Station. This area is particularly popular for the environmental education groups that visit the Park. Many students indicate that visiting the tide pools was their favorite experience at the Park. The main access point to the tide pools is from an overlook and path directly to the north of the parking lot. The access is very informal and takes users directly over the bluff

Park visitors exploring tidepools near Light Station.

2.3.2 BOLSA POINT AREA

Unlike the Light Station Area, the Bolsa Point Area is not currently open to the public. Figure 2.4 illustrates the existing site conditions in the Bolsa Point Area. The land was acquired by CDPR from POST and added to the Park in 2015. The Bolsa Point Area is predominately a coastal terrace that occupies the land between Highway 1 and the Pacific Ocean. There is a vegetated screen of trees along Highway 1, consisting predominately of ngaio (*Myoporum laetum*) shrubs that are approximately 15 to 20 feet tall and 25 to 30 wide.

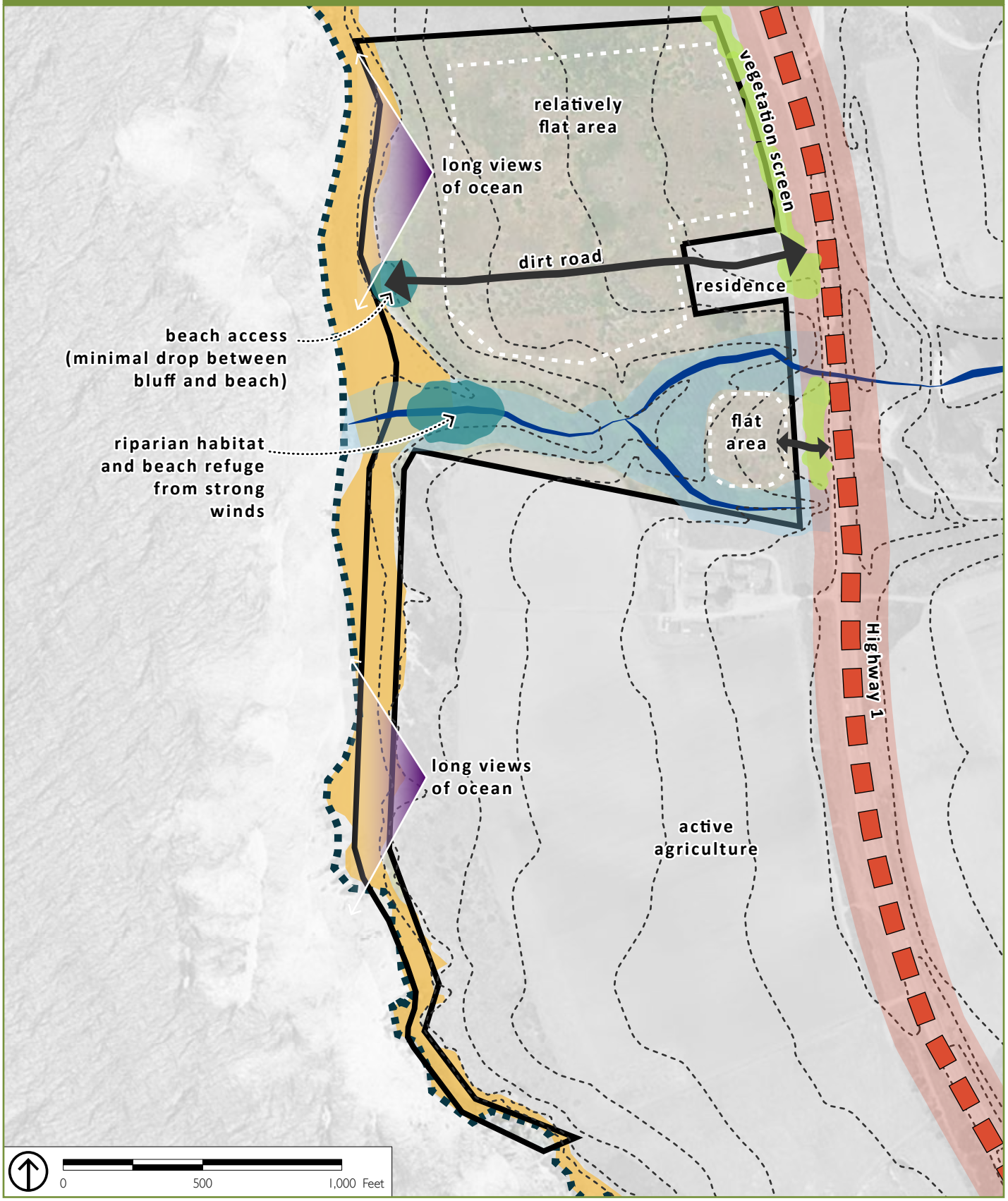
Vegetation screen along Highway 1 in Bolsa Point Area.

Across the coastal terrace, the land slopes gently from Highway 1 to the bluff where it drops more steeply to the beach or steps down with large boulders. The distance between Highway 1 and the bluff is approximately 1,200. There is a small spur that extends to the south but only includes the land between the bluff and ocean. There is an existing residence located near Highway 1, which is surrounded by the Bolsa Point Area but not included in the Park.

There is an existing dirt road extending from the existing residence across the Bolsa Point Area to the beach. Generally, the grade between the bluff and the beach is severe, with a drop between 20 and 30 feet; however, at the point where the existing dirt road meets the beach, the bluff is relaxed and the access is more permissible than in other areas.

Mouth of Spring Bridge Gulch.

FIGURE 2.4: Bolsa Point Area



The beach is predominately sandy with some outcropping of large boulders. Spring Bridge Gulch drainage runs across the Bolsa Point Area and arrives at the Pacifi Ocean near the linear spur toward the south. Although the creek is intermittent, the drainage area is quite large, which makes crossing the bluff difficut.

Historic aerial photography suggests that a portion of the Bolsa Point Area was previously used for row-crop agriculture but that practice ended in the late 1990s. The end of agricultural use has allowed for the return of some rare and native coastal terrace and scrub habitat, although it is still degraded as noted in the biological resources section. The large, relatively flat area provides significan value for park uses.

Existing Dirt Road in the Bolsa Point Area.

2.4 PARK CIRCULATION

As the Bolsa Point Area is not currently open to the public, this analysis of circulation focuses exclusively on the Light Station Area. However, for the General Plan, circulation through the Bolsa Point Area will take into account access from Highway 1, beach access points, potential trail alignments, and circulation between proposed uses. Figure 2.5 illustrates existing circulation in the Light Station Area.

2.4.1 PIGEON POINT ROAD

The Light Station Area is located along Pigeon Point Road, which connects at two points to Highway 1. The main parking lot is located off Pigeon Point Road, which serves as the arrival point for most visitors to Pigeon Point. Some visitors will continue driving along Pigeon Point Road and park along the side in order to access the beach or walk along the bluff

Highway 1 is a popular scenic roadway for both vehicles and cyclists. Some cyclists will utilize Pigeon Point Road as a short respite from Highway 1 as cars travel slower along the smaller road. Some cyclists may also stop at the Park.

2.4.2 TRAILS

There is a small network of trails along the bluff overlooking Whaler's Cove. These trails were developed by POST. There is a kiosk across from the parking lot that serves as a gateway to the trails and highlights the natural and cultural history of the site. From this entrance, the trail passes to Council Circle, where three trails intersect. Stairs to the south lead down to the beach at Whaler's Cove. The trail to the east then leads out along the bluff. The trail to the west leads to the Lighthouse. The east-west trail, Mel's Lane, continues to the east until it reaches the end of the Park property and the drainage channel that separates the Park from Pigeon Point Bluffs, the area to the south of the Park owned by San Mateo County. From this point, hikers can return along the bluff or connect to Pigeon Point Road. In this location, the trail is dirt and is separated from the bluff with a post-and-cable fence. Most of the area surrounding the trail has been planted with native vegetation in contrast to other bluff areas, which are dominated by non-native ice plant. Although the trail is pleasant and the view is interesting, the trail is short and offers minimal challenge to the trail user.

Mel's Lane along southern bluff in the Light Station Area.

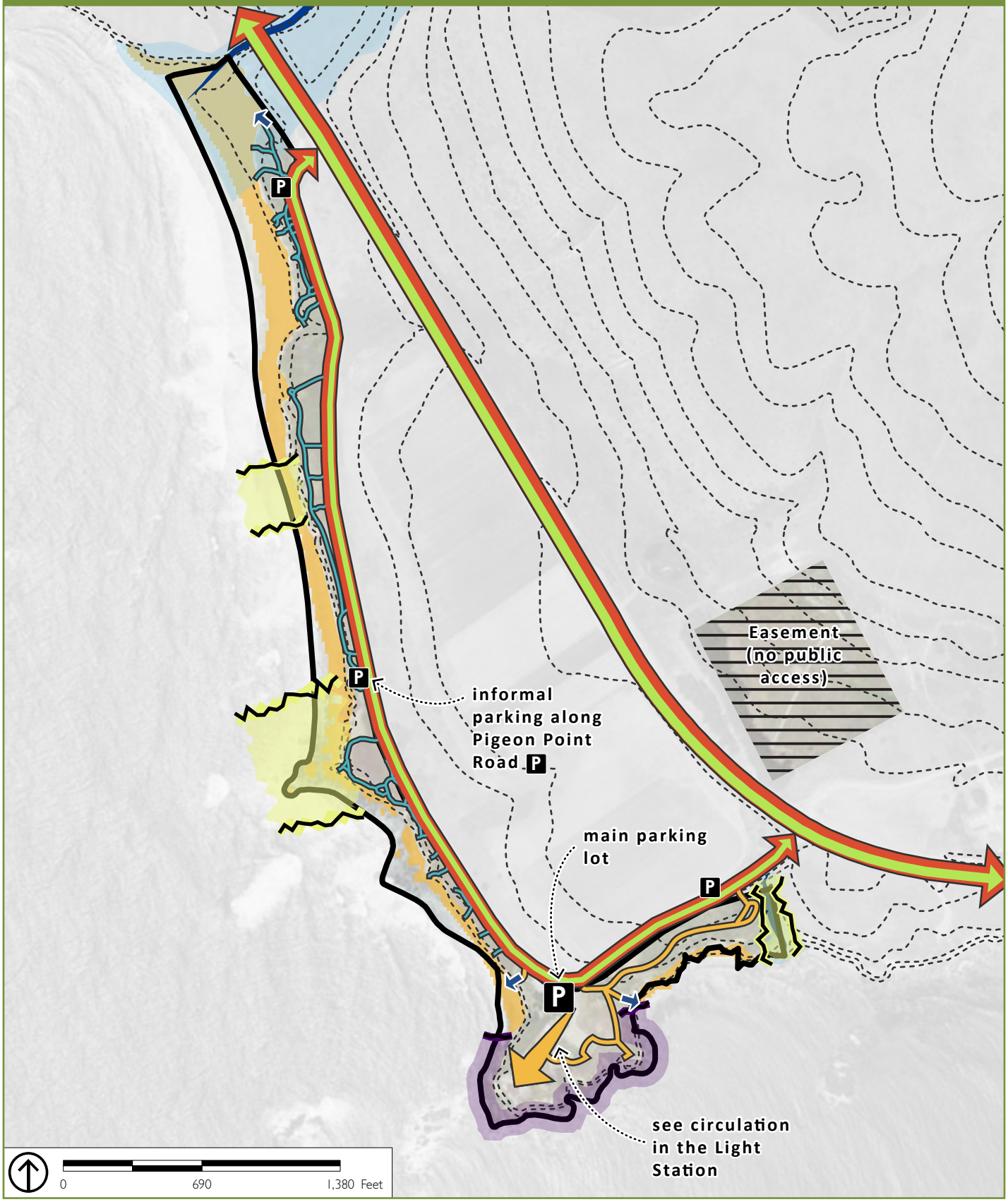
Mel's Lane is part of the Coastal Trail. Connecting it further along the coast could potentially expand its use and improve the experience for the trail user. The trail is multipurpose, although it is predominately used for hiking. As part of extending the trail, additional improvements could be made to better accommodate bicycling.

The Coastal Trail continues to the north from the POST kiosk across from the parking lot area to a small overlook with a bench and interpretive signage about the Coastal Trail. The trail is made of decomposed granite and includes curb ramps to make the trail accessible. A non-accessible path connects the parking lot more directly with the overlook. Many users, including students in the Exploring New Horizons environmental education class, access the beach from this point by scrambling down the eroded bluff below the overlook.

Coastal Trail along parking lot at the Light Station.

The Park segment of the Coastal Trail ends at this overlook point. However, there are numerous "social trails," or trails created by frequent use rather than a planned installation, along the northern bluff area beside Pigeon Point Road. Many of these trails take walkers to the bluff s edge, to a bench,

FIGURE 2.5: Circulation within Light Station Area



Social Trails along bluff near Pigeon Point Road.

or to a beach access point. These trails appear to have been created at points where the beach becomes impassable at high tide and users walking along the beach need to retreat to higher ground.

There is a maintained dirt trail connecting Pigeon Point Road to Pistachio Beach near the northern end of the Light Station Area. There is regulatory signage along the trail indicating beach hours and park rules, but no trailhead signage that indicates the distance to Pistachio Beach. The dirt trail is not currently accessible for wheelchairs.

Trail to Pistachio Beach

2.4.3 LIGHT STATION

Circulation within the Light Station is shown in Figure 2.6. Entrance into the Light Station is through an asphalt roadway to the south of the parking lot, referred to here as the "main pathway." As noted in Chapter Two, the parking lot was relocated in 2011 to improve the view to the Lighthouse upon arrival. Although the new parking lot is not directly obscuring the view of the Lighthouse, it creates some confusion about how to enter the Light Station as the main pathway seems to be designed for cars. As the restroom is directly adjacent to the parking lot, many people who are simply stopping along their drive on Highway 1 do not make it farther than the restroom. Many tour bus groups spend time in this area without moving fully into the site.

Within the Light Station, most movement is focused along the linear main pathway that leads to the Fog Signal Building. This asphalt path is wide but enclosed by the Cottages to the north and the hill where the Lighthouse sits to the south. This enclosure limits views to the ocean and tends to direct traffic

FIGURE 2.6: Circulation within Light Station

Main pathway in the Light Station

through the space quickly. The Fog Signal Building and the Fresnel lens create a strong visual draw on the western end, suggesting that site visitors should walk to the end of the point. Students use the main pathway to move between activities. The chainlink fence that surrounds the Lighthouse is a major impediment to the viewshed along the main pathway, although it is understood that this will be removed once access to the Lighthouse is restored.

Once visitors reach the Fog Signal Building, some will continue into the park store and many will go around to the viewing deck on the west side. Most days, this viewing platform is very popular for watching seals, whales and other marine life, although it is not visible upon arrival or from many points within the Light Station.

Aside from the main access way, site visitors use secondary routes, such as the pathway around the detached Oil House, to the lookout points south of the Lighthouse. Many of these visitors are seeking good vantage points for photographs of the Lighthouse or ocean.

2.5 PARK SIGNAGE AND WAYFINDING

The Park entrance sign with the Park name and CDPR's logo is located east of the parking lot in a planting area along Pigeon Point Road. There are no park signs along Highway 1 indicating the entrance to the Park; although the Lighthouse is visible from both directions and may draw travelers from the highway into the Park. There is a sign for the hostel on Highway 1, visible to passengers traveling north.

Across from the Park entrance sign, there is a roofed kiosk with informational signage about the Park and coastal conservation. The kiosk was developed as part of the Mel's Lane and Council Circle improvements along the southern end of the Park, and includes a dedication panel to donors that supported the project. There are additionally plaques in Council Circle that identify donors. The kiosk serves as the trailhead for Mel's Lane and informs park visitors about the Coastal Trail network. There are additional Coastal Trail signs north of the parking lot to inform visitors that the Park is part of this trail system. However, the Coastal Trail does not continue north of this sign within the Park and there are only informal social trails along the bluff

Coastal Trail signage at the Park.

There are some regulatory signs along Pigeon Point Road that indicate motor vehicles, camping, and fi es are not permitted, and that dogs must be on leashes. There are additional "No Parking 7pm to 7am" signs along Pigeon Point Road to prevent overnight use.

2.6 CULTURAL RESOURCES

This section provides a summary of cultural resources at the Park. It incorporates information from the Archaeological Survey Report completed by Environmental Science Associates (ESA), which can be found as an appendix to the 2016 Resource Inventory to the Park. This section also incorporates find ngs from the 2013 Historic Structures Report for Pigeon Point Light Station (HSR) conducted by Architectural Resources Group, Inc. (ARG) and the 1998 Pigeon Point Light Station Project Resource Summary (Resource Summary) completed by CDPR.

2.6.1 PREHISTORIC AND ETHNOHISTORIC CONTEXT

Archaeologists have developed individual cultural chronological sequences tailored to the archaeology and material culture of each subregion of California. Each of these sequences is based principally on the presence of distinctive cultural traits and stratigraphic separation of deposits. Archaeological studies of the San Francisco Peninsula coast and northern Monterey Bay, also called the Santa Cruz Locality, have defined four general archaeological phases: the Metcalf Phase (ca. 8000–3500 B.C.), the Sand Hill Bluff Phase (ca. 3500–1000 B.C.), the Año Nuevo Phase (ca. 1000 B.C.–A.D. 1100), and the Bonny Doon Phase (A.D. 1100–Spanish colonization).[3] This scheme uses economic and technological types, socio-politics, trade networks, population density, and variations of artifact types to diffe entiate between cultural periods. In many parts of California there is an additional Paleoindian Period dating from 11500–8000 B.C., which is characterized by big-game hunters occupying broad geographic areas. Evidence of human habitation during the Paleoindian Period has not yet been discovered in the Santa Cruz Locality.

During the Metcalf Phase (ca. 8000 B.C.–3500 B.C.), geographic mobility continued from the Paleoindian Period and is characterized by the millingslab and handstone as well as large wide-stemmed and leaf-shaped projectile points. Metcalf Phase sites have been identified in the Santa Clara and Saratoga areas.

During the Sand Hill Bluff Phase (ca. 3500 B.C.–1000 B.C.), locally available Monterey Chert from the Año Nuevo Point source dominates the lithic materials in most Santa Cruz Locality sites. However, the occurrence of non-local lithic materials and the variety of forms indicates higher group mobility than in the later Año Nuevo Phase. The mortar and pestle are first documented in Sand Hill Bluff phase sites, indicating the increasing important of acorns and a greater dependence on storable foods.

In contrast to the San Francisco Bay Area, geographic mobility in the Santa Cruz Locality greatly reduced during the Año Nuevo Phase (ca. 1000 B.C.–A.D. 1100). As evidenced by lithic assemblages at coastal sites, bifaces and points from this time period were almost exclusively made from the local Monterey chert

3 Hylkema, Mark G., and Rob Q. Cuthrell. "An Archaeological and Historical View of Quiroste Tribal Genesis," *California Archaeology*, Vol 5, No 2 (Dec 2013): 225–245.

source. While the people of the Bay Area established longer term base camps and hierarchical leadership as evidenced by large cemeteries, coastal populations maintained older strategies of small group foraging and an exclusive reliance on local resources. It was also during this time that a group from the interior valley entered the southeast Bay Area and increased violence and conflict is apparent. The population movements and territorial disputes of the Bay Area may have led the coastal populations of the Santa Cruz Locality to become more isolated with a focus on local resources.

Beginning in the Sand Hill Bluff Phase and into later periods Olivella, shell beads were used in central and southern California as a symbol of wealth. Whole Olivella beads and unmodified Olivella shells have been found at most coastal sites during the Año Nuevo Phase; however, very few shaped beads are present, indicating that expressions of wealth and social or political hierarchy may have been less important to coastal peoples. Access to this valuable resource was part of the Santa Cruz Locality's economic organization with interior groups.

During the Bonny Doon Phase (A.D. 1100–Spanish colonization), activities associated with Olivella bead production are common yet similar to the earlier Sand Hill Bluff Phase, and drilled and shaped beads remain infrequent. Artifacts associated with the Bonny Doon Phase include the bow and arrow and associated small corner-notched obsidian points, primarily from the Napa source. Stone tobacco pipes have been identified from this phase. There is also evidence that people in the Santa Cruz Locality as well as elsewhere in the Bay Area used fi e as a landscape management tool, indicating increased residential permanency in the area.

The ethnohistoric Native American group in the vicinity of Pigeon Point is referred to as the *Quiroste*, who inhabited the coast from Bean Hollow to Año Nuevo Point. *Quiroste* territory encompassed both coastal and inland environments in the Santa Cruz Mountains that maintained a wide variety of resources including control of the local source of Monterey chert at Año Nuevo Point, the primary stone tool resource among coastal groups.

Today, the Muwekma Ohlone and Amah Mutsun Tribal Band incorporate descendants of the *Quiroste* people. *Quiroste* still have a strong presence in San Mateo County, and are highly interested in their historic and prehistoric past. The 220-acre *Quiroste* Valley Cultural Preserve, established in 2009 within Año Nuevo State Park, honors *Quiroste* identity and place.

2.6.2 PREHISTORIC ARCHAEOLOGICAL RESOURCES

Records indicate that there are no previously recorded prehistoric archaeological sites in the Park or within a ½-mile radius. The nearest recorded prehistoric sites are nearly three miles to the south at Franklin Point (CA-SMA-207) and three miles

to the north at Bean Hollow (CA-SMA-117, -118, 158). Previous survey effort [4] [5] did identify three prehistoric Monterey chert artifacts in the Park. Monterey chert is a common prehistoric tool material in the region, with a source and workshop area at Año Nuevo south of the Park. No midden soil indicative of occupation or intensive use was identified or expected to be on the coastal bluff however, the sandy beach and rocky tidal areas below would have supplied numerous resources used by Native Americans.

A general surface survey conducted in 2015 did not identify prehistoric archaeological materials, including midden soil, artifacts, or other evidence of past human use and occupation. Despite these negative survey results, there has been some evidence of prehistoric use of the area as evidenced by an undocumented surface scatter of Monterey chert debitage in the Bolsa Point Area observed by an archaeologist from CDPR. Survey results can be influenced by a variety of factors, including the existing conditions at the time of survey, weather, movement of dune sands, and changes in vegetation. The evidence of chert debitage is not surprising due to the intensive use of the coastal area during the prehistoric and ethnohistoric periods.

Based on the prehistoric and ethnohistoric context, the previous cultural resources documentation, and the current and past survey efforts, the Park, specifica ly the Bolsa Point Area, has a moderate sensitivity for prehistoric archaeological sites. There is the potential that prehistoric archaeological materials could be identified which would illustrate the intensive use of the general coastal area during the prehistoric period. Archaeological materials in this geologic context would be on or near to the surface and could include obsidian and chert tools or toolmaking debris, groundstone milling tools, heat-affected rocks, and/or shell and faunal remains.

2.6.3 NATIVE AMERICAN CONSULTATION

The Tribal Liaison for the Santa Cruz District is the primary point of contact between Native American Most Likely Descendants (MLDs) and CDPR. As the planning process began for this project, the Tribal Liaison notified MLDs of the General Plan and invited them to consult on the plan. As of the publication of this report, there was no response or request for further consultation.

2.6.4 HISTORIC-ERA ARCHAEOLOGICAL RESOURCES

Review of records indicates that there are no previously recorded historic archaeological sites in the Park or within a ½-mile radius of the Park. Previous

4 Clark, Matthew R., *An Expanded and Revised Archaeological Reconnaissance of the Pigeon Point Public Access Improvement Project, San Mateo County, California*. Rohnert Park: Northwest Information Center, California Historical Resources Information System, Sonoma State University, 2005.

5 Clark, Matthew R., *An Archaeological Reconnaissance of the Pigeon Point Public Access Improvement Project, San Mateo County, California*. Rohnert Park: Northwest Information Center, California Historical Resources Information System, Sonoma State University, 2003.

survey effort [6] [7] have identified historic-era archaeological materials, such as pre-20th century bottle fragments and pre-1915 clear glass and ceramic fragments, in the Park. These materials do not represent an archaeological site but do indicate the general intensive use of the area during historic-era agricultural activities, commerce and whaling enterprises, and of course the construction, use, and occupation of the Light Station.

The survey conducted in 2015 did not identify historic-era archaeological resources, such as refuse concentrations or other deposits, or features such as fence lines, ditches, or other water conveyance features. Two undiagnostic glass fragments, three white improved earthenware fragments, and one piece of oxidized metal were identified near the existing parking area; these resources do not constitute an archaeological site but indicate the general use of the area during the historic-era. Additionally near the stairs to Whaler's Cove numerous oyster shells were observed in the cut bank of the slope. These shells may represent the use of the cove during the historic-era for whaling or other maritime activities.

Based on the historic context, the previous cultural resources documentation, and the current survey, effort the Park has the potential for historic-era archaeological resources. During the several studies conducted within the Park between 1995 and 2005, artifacts consistent with Euro-American use of the project vicinity during the 19th and 20th centuries have been identified, although no evidence of structural remains have been identified to date. Archival research has revealed a long history of use of the Park and such uses would be expected to leave evidence detectable by archaeological methods. Deposits associated with agricultural, maritime activities, and the construction of the Light Station may be present in the Park.

2.6.5 HISTORIC RESOURCES

The remaining structures of the Light Station are historic resources for the Park. The HSR provides a detailed review of all structures in the Park and a historical timeline of construction within the Light Station. Construction of the Light Station began in 1871 with the Lighthouse and attached oil house, the original Fog Signal Building, and the original keepers' dwelling. Modificat ons have been made to the Lighthouse, including lighting improvements and eventual automation in 1974, electricity upgrades, and structural stabilization; however, the original structure still exists today, and the original Fresnel lens is still fully intact and on display at the Park. When it was constructed, the Lighthouse was unique for its size, 115 feet tall, and for its unique material. Brick was an unusual choice for a

6 Clark, *An Expanded and Revised Archaeological Reconnaissance of the Pigeon Point Public Access Improvement Project, San Mateo County, California*, 2005.

7 Clark, *An Archaeological Reconnaissance of the Pigeon Point Public Access Improvement Project, San Mateo County, California*, 2003.

California Lighthouse in the 1870s. Out of the 26 towers constructed after 1856, only four were made of brick.[8]

The HSR notes that when nominated for registration on the National Register of Historic Places (NRHP), the Lighthouse was described as follows:

> *Pigeon Point Lighthouse has been long considered the most beautiful and best architectural Lighthouse structure on the Pacific Coast. It is a superb example of the mid-nineteenth century traditional, classic Lighthouse. It is an impressive landmark, not only for its structural design and its historical background, but also because its surrounding land setting has changed so very little over the intervening years.*[9]

The original Fog Signal Building was located in the same location as the current Fog Signal Building at the western edge of the point; however, the original structure had limited protection from wind and sea spray and was demolished and rebuilt in 1899 as the structure that remains today. The Fog Signal Building is a simple structure; however, the HSR notes that the style reflects the "utilitarian nature" of the building.[10] The Fog Signal Building contains the original diaphone horns, three metal tanks, and connecting pipes used to make the fog signal; however they are not currently functional. The horns are visible though and communicate the building's historic use.

The HSR cites an account from George Davidson from 1889 that described the original keepers' dwelling as a "large two-story house, built of wood, and painted light buff with a red roof."[11] The HSR points out that this color scheme was likely later changed and cites an article from the *San Francisco Call* from 1896, which states:

> *All of the buildings on the Pigeon Point station are painted a pure white with black or gray trimmings. The tower is white with the exception of the lantern, which is black. At one time the Government used to allow the residences to be painted any color that suited the tastes of the keepers, but now they can only be white with black or gray trimmings. Only black and white paint is supplied and the keepers can mix this any way the please to get the desired shade of gray.*[12]

The HSR additionally notes that the article from the *San Francisco Call* provides insight on the landscape within the Light Station, which had limited to no plants. The article states:

8 Regnery, Dorothy. "CA-SMA-170H, the Pigeon Point Lighthouse." National Register of Historic Places Nomination Form. On file, Rohnert Park: Northwest Information Center, California Historical Resources Information System, Sonoma State University, 1976.

9 E.G. O'Keefe, LCDR, Chief, Marine Environmental Protection Branch. 12th US Coast Guard District. "Pigeon Point Lighthouse." National Register of Historic Places Inventory/Nomination Form. 10 November 1976.

10 ARG, *Draft Historic Structures Report Pigeon Point Light Station, Pescadero, California*, 2013, 41.

11 George Davidson, *Pacific Coast Pilot* (Washington D.C.: U.S. Government Printing Office 1889), 154.

12 "The Pigeon Point Lighthouse." *San Francisco Call*, May 24, 1896.

The buildings are on a long reef that stretches from the mainland into the ocean, the outer end jagged and ugly looking. The portion occupied by the Lighthouse is as level as a floor and about twenty feet above water at high tide. There is no sign of a garden. Not even a plat of grass to rest the eye. Nothing but a gravel-covered rock as barren as the top of a billiard-table[13].

Around 1900, a rear addition was added to the keepers' dwelling to expand it to accommodate four families, although it kept the Victorian-style of the original structure. The original keepers dwelling and expansion was demolished in 1960's and replaced with the Cottages that currently exist in the Light Station. During the reconstruction, a play area was constructed north of the eastern-most cottage building, which contained a sand lot, swing, and barbecue.

The detached Oil House was constructed in 1905 and remains today. It was originally designed to store kerosene away from the Lighthouse but became a point locker by the 1950's. The lamp converted from a lard oil lamp to a kerosene wick lamp in 1887, moved to an incandescent oil vapor lamp between 1911 and 1912, and switched to an electric bulb in 1926. Other technological modificat ons were introduced over time to improve maritime navigation or lighthouse operations. These include the installation of a radio beacon antenna east of the Lighthouse in 1943 to transmit a unique morse code signal to ships passing the Light Station. It was removed in 1996. Additionally, the Lighthouse became automated in 1974 with the installation of a cantilever platform at the lantern level and automated 24-inch aero beacon and 300mm emergency lantern were installed. While the original Fresnel lens was no longer used for illumination, it remained in the Lighthouse until 2011 when it was relocated to the Fog Signal Building, where it is currently located.

The Carpenter's Shop was constructed in 1909 and remains at the Park today. Similar to the Fog Signal Building, the Carpenter's Shop is a simple wood structure that reflects its "utilitarian nature." The HSR additionally notes that he wood framing of both buildings help to reflect the "integrity of workmanship" at the Light Station.[14]

Various outbuildings and structures associated with the Light Station were constructed and demolished over the years. These included a blacksmith shop constructed around 1910; a water tank shed, constructed in 1905 and demolished in 1965; a double gabled shed, constructed around 1920; a chicken house and run, constructed around 1940 and demolished in 1960; a general storage structure constructed around 1955; and a one-car garage constructed around 1955.

The HSR includes an integrity evaluation for the Light Station, which examines the seven aspects of integrity utilized by the NRHP and the California Register, including location, design, setting, materials, workmanship, feeling, and

Historic Structures Report (HSR)

A HSR provides documentary, graphic, and physical information about a property's history and existing condition. The report serves as an important guide for all changes made to a historic property during a preservation, rehabilitation, restoration, or reconstruction project. A HSR was completed for the Pigeon Point Lighthouse in 2012, and a HSR was completed for the Pigeon Point Light Station, including all other structures with the exception of the lighthouse, in 2013.

- Historic Structures Report for Pigeon Point Light Station (2013)

13 "The Pigeon Point Lighthouse," *San Francisco Call*, 1896.

14 ARG, *Draft Historic Structures Report Pigeon Point Light Station, Pescadero, California*, 2013, 41.

association. In most categories, with the exception of association, the HSR determines that the Light Station retains good integrity. The HSR notes that while modifications to the Light Station, including the demolition of the original keepers' residence and the water tank shed, compromise the integrity somewhat, the original design, feeling, and setting of the Light Station is still communicated. Additionally, the HSR notes that a lit tower and a sound signal improve the integrity of feeling; however the Light Station does not use the original Fresnel lens to light the tower nor does it have a functioning fog signal. The HSR indicates that this does not impede the Light Station from having good integrity of feeling.

2.6.6 HISTORIC DESIGNATION

The Lighthouse was recognized as a California Historic Civil Engineering Landmark in 1976 and listed on the NRHP in 1977. It is also listed on the California Register of Historical Resources, and was designated as a California Historical Landmark (No. 930) in 1980. The Lighthouse and the Carpenter's Shop were both formally recorded for the Historic American Buildings Survey (HABS) in 1974. The Light Station was included in the 2002 NRHP Multi-Property Documentation titled "Light Stations of the United States," and is also listed in the Historic Lighthouses and Light Stations inventory with the National Park Service's Maritime Heritage Program.

The HSR described the features of the Light Station that contribute to this designation: the Lighthouse [tower] and attached Oil House, the Fog Signal Building, the carpenter's' shop, and the detached Oil House. While this HSR identified the period of significance for the property to be limited to 1871-1915, it also indicated that the boundary for a potential Light Station District should include "the portion of the site that historically operated as a Light Station." The National Park Service's Summary Context for National Historic Landmark (NHL) Lighthouse Nominations states that "we are generally using the year of the station's automation to indicate the end of the period of significance . On this basis, it is recommended that the period of significance be extended to the date of the facility's automation (1974) and that the National Register nomination for the property be updated to include all buildings and structures greater than 50 years old that related to the Light Station's operation. This would include the Lighthouse and attached Oil House; Carpenter's Shop; Fog Signal Building; detached Oil House; Water Sand Filter Building; and four Cottages.

National Register of Historic Places (National Register)

The National Register of Historic Places is the offi al List of the Nation's historic places worthy of preservation. Authorized by the National Historic Preservation Act of 1966, the National Park Service's National Register of Historic Places is part of a national program to coordinate and support public and private efforts to identify, evaluate and protect America's historic and archaeological resources.

- National Parks Service

The text of this marker reads:
Pigeon Point Lighthouse
This brick lighthouse was built to incorporate a French, first order Fresnel lens. Although no longer used, the lens is still operable in the lantern room. Previously the lens had been installed at Caper Hatteras, North Carolina. It first flashed over the Pacific in November, 1872 and the lighthouse has served continuously without structural modificat ons since that time.

California Register Historical Landmark No. 930

Plaque placed by the State Department of Parks and Recreation in cooperation with the United States Coast Guard October 3, 1980.

In addition to the National Register boundary expansion, CDPR historians and park docents expressed interest in expanding the historic designation for Light Station beyond the current property to develop a multiple property "Maritime Historic District" that would include Pigeon Point Light Station, Año Nuevo Island Light Station, and Franklin Point Historic Shipwreck Cemetery. Maritime Districts can receive National Historic Landmark Status as they help to preserve and celebrate the "maritime heritage of the United States."[15]

The Año Nuevo Island Light Station operated from 1890 to 1948 on the small island off the coast of modern day Año Nuevo State Park. During operation, the Light Station included various structures, including a lens tower, Fog Signal Building and keeper's dwelling; however, through either fi e or general deterioration, nearly all of the buildings have been significant y decayed and there are no structures on the island. The island is currently occupied by the many elephant seals, sea lions, and birds that occupy the State Reserve and is closed to the public.[16]

Franklin Point Shipwreck Cemetery is located between Pigeon Point Light Station State Historic Park and Año Nuevo State Park along Highway 1. The site was used as burial ground for sailors who died during shipwrecks and drifted to shore.[17] This includes the bodies of sailors from the ship "Sir John Franklin," which wrecked on the rocks off the point on January 17, 1865 and for which the point is named. Over time, many of the graves became exposed due to coastal erosion. Through grant funding, cultural historians and archaeologists from CDPR were able to exhume some of the remains for study and eventual return to the point. CDPR developed a boardwalk and platform at Franklin's Point over the remains, although there is currently no interpretation of the site's history.

2.7 PHYSICAL RESOURCES

Physical resources at the Park include geologic and hydrologic features, including the coastal bluff, streams and waterways, and soils. Descriptions of these resources are included below.

2.7.1 CLIMATE

The climate along California's Central Coast is characterized by cool, wet winters and drier, warmer summers. Average temperatures from November to March range between 45 and 61 degrees Fahrenheit, while average temperatures from

15 US Department of the Interior, US National Park Service. "Maritime Districts, Buildings, and Structures (National Historic Landmarks) | Maritime Heritage Program." https://www.nps.gov/maritime/ref/landmarks/districts.htm (accessed November 16, 2016).

16 California Department of Parks and Recreation. "Año Nuevo Light Station: Documentation of the Light Station Complex, Año Nuevo Island, Año Nuevo State Reserve, San Mateo County, California," by Matt C. Bischoff (Sacramento, CA: Northern Service Center, 2005).

17 Stannard, Matthew B. "Graves Safe from Wind, Waves, Time / Shipwreck Victims Buried under Deck." *SFGate*. April 21, 2003. Accessed November 16, 2016. http://www.sfgate.com/bayarea/article/Graves-safe-from-wind-waves-time-Shipwreck-2620938.php#photo-2106687http://www.parks.ca.gov/?page_id=22648.

April to October range between 54 and 73 degrees Fahrenheit. Typically, wind blows in from the north down the Pacific Coastline. Average wind speeds are nine miles per hour; however, wind speeds can be dramatically higher on the point at times, with a record high of 64 miles per hour during the winter months.[18]

Rain generally falls in the winter months, although fog continues year round with approximately 100 days of fog annually. Approximately 80 percent of annual precipitation falls in the form of rain between November and March. Fog contributes to precipitation totals in the summer and helps slow evapotranspiration rates among plants.[19] Average annual precipitation in the nearby community of San Gregorio, located approximately 9 miles north of the Park, is 29.5 inches.[20] California recently experienced severe levels of drought throughout the state, with extremely low or lower than average precipitation in the 2012, 2013, 2014, and 2015 "water years," or the annual period between October and September. The National Oceanic and Atmospheric Administration (NOAA) tracked water year totals for Santa Cruz since 2002. While water year 2016 shows an increase from the drought years, State lawmakers continue to estimate that drought conditions are likely to continue throughout the state into the future.[21] [22]

2.7.2 TOPOGRAPHY AND COASTAL BLUFF

Elevation within the Park ranges from sea level at the beach to between 20 and 35 feet along the bluff in both the Light Station Area and Bolsa Point Area. The coastal bluff runs along the western edge of the Park separating the upland areas from the beach. The width, elevation change, and steepness varies throughout the Park. At most points along the bluff the elevation change is steep and sudden, although there are some sections along the where the slope is less than 10 percent. Figures 2.7 and 2.8 illustrate approximate steepness along the bluff in the Light Station Area and the Bolsa Point Area, respectively. These images use data from the National Ocean and Atmospheric (NOAA) "Digital Coast" data tool which provides an approximate estimate of the Pacific coastline. While this is a rough assessment, these figu es illustrate the areas with the steepest bluff conditions. Even at some of the steeper sections, there is evidence of site users scaling the bluff to access the beach. The area between the bluff and Hig way 1 in the Bolsa Point Area is relatively fla with approximately 40 feet of elevation change across this section of the

Bluff near the lighthouse circa 1900
Source: San Mateo County Historical Society Association Archive, A607.1

Bluff near the lighthouse circa 2016

18 "Almanac: Historic Information" MyForecast. March 30, 2016. Accessed November 16, 2016. http://www.myforecast.com/bin/climate.m?city=K93Q&metric=false.

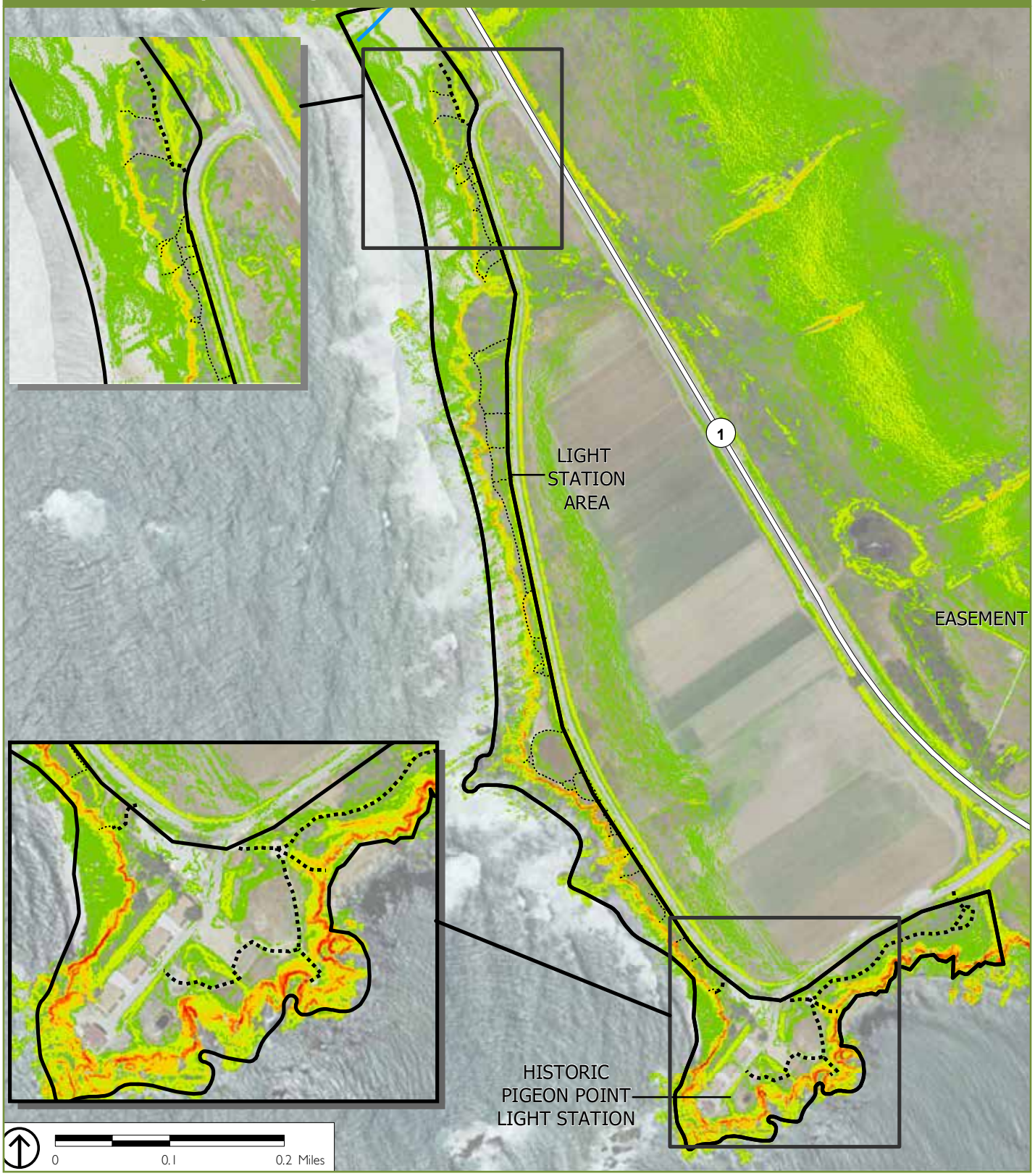
19 California Department of Parks and Recreation. "Pigeon Point Light Station Project Resource Summary." by Robert M. Acrea, Roy W. Martin, Robert M. Wood, Jim Woodward (Sacramento, CA: Northern Service Center, 1998).

20 "Climate San Gregorio." US Climate Data. October 27 2016. Accessed November 16, 2016. http://www.usclimatedata.com/climate/san-gregorio/california/united-states/usca0990.

21 National Oceanic and Atmospheric Administration National Weather Service. "Observed Precipitation." *California Nevada River Forecast Center*. Accessed November 16, 2016.http://www.cnrfc.noaa.gov/rainfall_data.php#monthly.

22 US Geological Survey. "California Drought." *California Water Science Center*. Accessed November 16, 2016 http://ca.water.usgs.gov/data/drought/.

FIGURE 2.7: Steepness in Light Station Area



Pigeon Point Light Station State Historic Park

Existing Park Trails

- Maintained
- Social
- Streams

Slope (Percent)

- 0 - 8.33 Percent
- 8.34 - 20 Percent
- 21 - 64 Percent
- 65 - 132 Percent
- 133 - 261 Percent
- >262 Percent

FIGURE 2.8: Steepness in Bolsa Point Area

Pigeon Point Light Station State Historic Park

Existing Park Trails

- Maintained
- Social
- Streams

Slope (Percent)

- 0 - 8.33 Percent
- 8.34 - 20 Percent
- 21 - 64 Percent
- 65 - 132 Percent
- 133 - 261 Percent
- >262 Percent

California Coastal Act (Coastal Act) and California Coastal Commission

The Coastal Act is a 1976 law that established standards for development within the State's Coastal Zone. The California Coastal Commission is the State agency charged with managing natural resources and development within this zone.

San Mateo County Local Coastal Program (LCP)

The California Coastal Commission delegates authority for implementing the Coastal Act to local governments by certificating Local Coastal Program (LCPs), which defin standards for issuing Coastal Development Permits (CDPs) within a jurisdictional area. The Coastal Commission approved the San Mateo County LCP in 1981 and the County assumed responsibility for issuing CDP's for areas within the State's Coastal Zone in San Mateo County.

site. The Easement Area east of Highway 1 slopes gently upward to about 80 feet in elevation.[23]

Coastal bluffs are active features of the landscape and susceptible to erosion from a variety of natural and human factors, including waves, storms, surface or groundwater flows, or frequent use. Anticipated sea level rise will likely accelerate these processes due to increases in wave action and reduction of beach area. For this reason, development is typically limited in areas around coastal bluffs. Section 9.8 of the San Mateo County Local Coastal Plan (LCP) includes regulation of the development of coastal bluff tops and establishes setback distances. These policies are described below in Regulatory Context.

ESA compiled an Assessment of Coastal Erosion and Hazard Areas and Potential Bluff Setback Requirements, which can be found in Appendix C. This study discusses and illustrates the LCP setback at the Park. The study additionally examines potential rates of erosion based on historic rates and with anticipated acceleration due to sea level rise. This study utilized state-wide data in the analysis but site-specific geotechnical analysis would be required for detailed site planning.

Section 0307.3.2.1 of CDPR's Department Operations Manual (DOM) indicates that "it is the policy of the Department that natural coastal processes (such as wave erosion, beach deposition, dune formation, lagoon formation, and seacliff retreat) should be allowed to continue without interference." The policy additionally provides guidelines in determining whether development is appropriate in areas that have the potential to be impacted by coastal hazards.

2.7.3 SOILS

The soils in the southern part of the Bolsa Point Area are Elkhorn sandy loam, which has a thick surface and is well drained. Erosion hazard is slight. Watsonville loam is located further north of the Elkhorn sandy loam. Watsonville loam's water capacity is low, runoff is slow to medium, and erosion hazard is moderate.[24] Most of the Light Station Area, including the Light Station, consists of Elkhorn sandy loam where the water holding capacity is good, rate of runoff is slow, and erosion hazard is slight.[25]

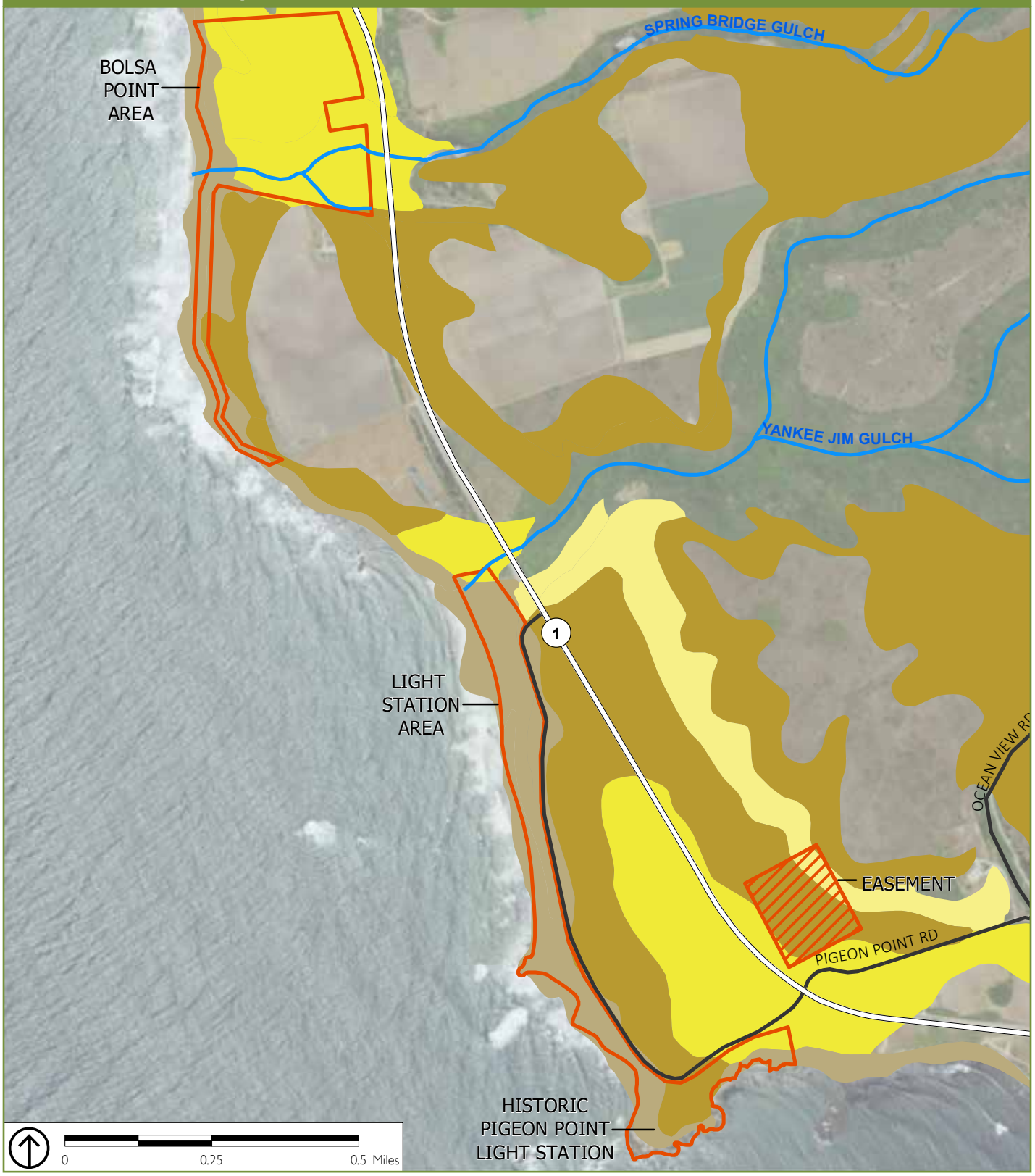
Storie index is a measure of rating for agricultural productivity and potential use based on soil and site conditions. Soils with a Storie Index between 80 and 100 are considered prime agricultural lands per Section 5.1 of the LCP. Figure 2.9 illustrates the Storie Index of soils in and around the Park. Much of the Bolsa Point Areas contains soils with a Storie Index that qualifies as prime agricultural land.

23 California Department of Parks and Recreation. "Pigeon Point Light Station Project Resource Summary." November 1998.

24 US Department of Agriculture. "Web Soil Survey." http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx (accessed November 16, 2016)

25 California Department of Parks and Recreation. "Pigeon Point Light Station Project Resource Summary." 1998.

FIGURE 2.9: Soils Map



Appendix H: Existing Laws Codes and Policies includes the characteristics used in the LCP to define "prime agricultural land" and considerations for use of areas that contain these soils.

2.7.4 HYDROLOGY AND WATER RESOURCES

The 2016 Basin Plan from the Central Coast Regional Water Quality Control Board (CCRWQCB) indicates that the Park is located within the Big Basin Hydrologic Unit and Año Nuevo Hydrologic Area. A riparian drainage, called Yankee Jim Gulch, is located near Pistachio Beach in the Light Station Area. A second riparian drainage, called Spring Bridge Gulch, is located in the Bolsa Point Area. The willow riparian wetland habitat is more robust around Spring Bridge Gulch, as shown on Figure 2.10. Both riparian drainages originate east of Highway 1 and flow under the highway before reaching the Park. Neither of the riparian drainages is listed in the Basin Plan for monitoring inland surface waters nor are they listed for beneficial uses.

Currently, drainage for the Park is primarily via overland (sheet) flow from the east with eventual drainage to the ocean over the bluff or via Yankee Jim Gulch and Spring Bridge Gulch. There currently is no storm drain infrastructure in the area.

Flooding

The Federal Emergency Management Agency (FEMA) publishes maps that show areas of flood risk throughout the United States. The Flood Insurance Rate Maps (FIRMs)[26] [27] shows that the seaward portions of the Park and the Spring Bridge Gulch drainage in the Bolsa Point Area are within the 100-year floodplain. The seaward portions of the floodplain are zoned V, which are designated as areas subject to the 1-percent-annual chance 100-year flood event with additional hazards associated with storm-induced waves. The Spring Bridge Gulch drainage is zoned A, which is an area subject to inundation from the 1-percent-annual flood event.

Tsunami

According to the California Emergency Management Agency (CalEMA) map, the tsunami evacuation zone for the Park does not extend beyond the shoreline. There are various precautions and warning systems that will be implemented by San Mateo County and in the event of a tsunami. The County maintains an Emergency Alert System on commercial television and radio as well as over the National Weather Service All Hazard Radios to notify the public of an impending tsunami threat. In addition, the County provides local warnings and instructions to tsunami hazard areas through the County's telephone emergency notification system (TENS) and San Mateo County (SMC) alert, which is used to contact the public via email, cell phone, and/or smartphone devices.

26 US Department of Homeland Security, Federal Emergency Management Agency. "Flood Insurance Rate Map (FIRM) Map No. 06081C0445E." October 16, 2012.

27 US Department of Homeland Security, Federal Emergency Management Agency. "Flood Insurance Rate Map (FIRM) Map No. 06081C0435E." October 16, 2012.

FIGURE 2.10: Hydrology and Water Resources

Groundwater and Water Supply

The Park is not located within a designated groundwater basin. Currently, potable water is being imported to the Park in trucks and then pumped into an existing tank for Park use. There are plans to develop a new well across Highway 1, described below. There are no groundwater cleanup or remediation sites in the vicinity of the plan area, as per the State Water Resources Control Board's Geotracker database. Therefore there are no known constraints for the use of new private groundwater wells.

2.8 BIOLOGICAL RESOURCES

Below is a summary of the site's biological resources, based upon the site background information and site survey conducted by ESA. A full report of their methodology and find ngs and summaries of species found in the vegetation communities can be found as an appendix to the 2016 Resource Inventory to the Park.

2.8.1 VEGETATION COMMUNITIES AND WILDLIFE HABITATS

The seven vegetation communities and wildlife habitats found at the Park are shown on Figure 2.11 and include the following:

Central Dune Scrub

Central dune scrub is present within the Light Station Area, along the social trails to the north and along Mel's Lane. Within the Bolsa Point Area central dune scrub is found above the beach and atop the bluffs. Central dune scrub vegetation is characterized by a mix of dune species with varying cover on sandy soils. Central dune scrub vegetation within the Park is characterized by a mix of dune species with varying cover on sandy soils, including coast buckwheat (*Eriogonum latifolium*), coyote brush (*Baccharis pilularis*), coastal sagewort (*Artemisia pycnocephala*), lizard-tail (*Eriophyllum staechadifolium*), yellow bush lupine (*Lupinus arboreus*), common yarrow (*Achillea millefolium*), and saltgrass (*Distichlis spicata*). Characteristic herbs include California acaena (*Acaena pinnatifid* var. *californica*), contorted sun cup (*Camissonia contorta*), and beach evening primrose (*Camissonia cheiranthifolia* ssp. *cheiranthifolia*).

Central dune scrub within the Park could support northern alligator lizard (*Elgaria coerulea*), southern alligator lizard (*Elgaria multicarinata*), western fence lizard (*Sceloporus occidentalis*), and gopher snake (*Pituophis catenifer*); small rodents such as deer mouse (*Peromyscus maniculatus*), vagrant shrew (*Sorex vagrans*), and California vole (*Microtus californicus*); and a variety of birds such as white-crowned sparrow (*Zonotrichia leucophrys*), Bewick's wren (*Thryomanes bewickii*), American robin (*Turdus migratorius*), common bushtit

FIGURE 2.11: Biological Resources

Central Dune Scrub in Bolsa Point Area

(*Psaltriparus minimus*), house finch (*Haemorhous mexicanus*), and mourning dove (*Zenaida macroura*) which are common inhabitants of this community.

Disturbed Dune Scrub

Disturbed dune scrub occurs within the Light Station Area and Bolsa Point Area and includes a historic area of dune scrub vegetation that is now dominated by non-native species, particularly iceplant. Disturbed dune scrub occurs where native dune vegetation alliances have been largely displaced by non-native iceplant (*Carpobrotus edulis, C. chilensis*), brought to California in the early 1900s and widely used for stabilizing soils along railroad tracks highways and medians, drifting sand, general erosion control, and ornamental landscaping into the 1970s.[28] Disturbed dune scrub within the Park is characterized by large areas dominated by iceplant and occasionally interspersed with vegetated sand dune deflat on planes and remnant native species of the central dune scrub alliance. These areas occur along the bluff terraces of the Light Station Area and portions of the coastal trails, and in patches among native dune vegetation within the Bolsa Point Area. Animals identified for central dune scrub, above, can also be found using disturbed dune vegetation; however, this community provides marginal habitat value in comparison to central dune scrub.

Northern Coastal Scrub

Northern coastal scrub within the Park is present within the Light Station Area and along coastal trails and Pigeon Point Road, and within the Bolsa Point Area. Shrubs are dominant in this vegetation type, which may be monotypic or supporting a mix of shrubs and herbaceous species. Coyote brush is the dominant shrub within the Park's coastal scrub community, though generally interspersed with coast buckwheat, California coffeeberry (*Frangula californica* previously classified as *Rhamnus californica*), and sticky monkeyflower (*Mimulus aurantiacus*). Coastal scrub is more prevalent on terraces with stabilized soils

28 California Department of Parks and Recreation. *Iceplant.* 2009. Accessed November 16, 2016. http://www.parks.ca.gov/pages/23071/files/iceplant%203up%20fina .pdf.

(compared to sandy soils that support central dune scrub), or on other soil types where it may have invaded previously disturbed coastal terrace prairie.

Wildlife species likely to occur here include a variety of small reptiles, such as western fence lizards, alligator lizards, and California striped racer (*Coluber lateralis lateralis*), as well as a variety of small mammals, including deer mice, brush mice, and jackrabbit (*Lepus californicus*). Birds likely to occur here include the California thrasher (*Toxostoma redivivum*), western scrub-jay (*Aphelocoma californica*), wrentit (*Chamaea fasciata*), and Anna's hummingbird (*Calypte anna*).

Northern coastal scrub in the Light Station Area.

Coastal Terrace Prairie

Remnant coastal terrace prairie is present in the Bolsa Point Area where former agricultural fie ds were allowed to lie fallow and eventually return to grassland. Coastal prairies historically occurred on coastal terraces from the North Coast Ranges and Klamath Mountains to northern San Luis Obispo County and the nutrient rich soils were commonly cultivated or grazed along the coast in California. In an intact or relatively undisturbed condition, the dominant grasses of coastal terrace prairie are perennial bunchgrasses, primarily purple needlegrass (*Nassella pulchra*) and California oatgrass (*Danthonia californica*), though often intermixed with native and non-native annual grasses, depending on the level of disturbance. Other associates include sedges (*Carex* spp.), rushes (Juncus spp.), and a variety of perennial forbs such as Douglas' iris (*Iris douglasiana*), blue-eyed grass (*Sisyrinchium angustifolium*), mariposa lily (*Calochortus argillosus*), lupine (*Lupinus* spp.), and gumweed (*Grindelia hirsutula*).

Coastal terrace prairie in Bolsa Point Area.

This community within the Park is highly disturbed and dominated by non-native perennial Harding grass (*Phalaris aquatics*) with a variety of non-native annual grasses including ripgut brome (*Bromus diandrus*), soft brome (*Bromus hordeaceus*), annual fescue(*Festuca myuros*), wall barley (*Hordeum murinum* ssp. *leporinum*), rattlesnake grass (*Briza maxima*), and wild oat (*Avena fatua*);. Non-native forbs listed under the annual grassland community were also present though dominated in the northern half of the Bolsa Point Area by bristly ox-tongue. Invasive, non-native ngaio (*Myoporum laetum*) shrubs and native coyote brush are scattered throughout this area, a common occurrence in retired agricultural or grazing lands. Groupings of rushes and iris were observed within this area and native perennial grasses are likely present among the non-natives. Similar animals can be found using coastal terrace prairie as non-native grassland, described below.

Non-native Annual Grassland

Non-native grassland is present within the Easement and the Light Station Area. This community can occur by itself or interspersed with a variety of other communities, as it is within the Light Station Area, and is common along roadsides. The largest expanse of non-native grassland within the Park is within the easement. This community is comprised of a variety of non-native annual grasses, introduced weedy forbs, and a few native grasses and forbs. Common dominants of the Park's non-native grassland include Italian ryegrass (*Festuca perennis*), ripgut brome (*Bromus diandrus*), soft brome (*Bromus hordeaceus*), annual fescue(*Festuca myuros*), wall barley(*Hordeum murinum* ssp. *leporinum*), rattlesnake grass (*Briza maxima*), and wild oat (*Avena fatua*); associated forbs include filaree (*Erodium botrys*), English plantain (*Plantago lanceolata*), wild radish (*Raphanus sativus*), shortpod mustard (*Hirschfeldia incana*), and prickly sow thistle (*Sonchus asper*). The occasional native grass such as purple needlegrass (*Stipa pulchra*) and creeping wildrye (*Elymus triticoides*) may also occur.

Annual grasslands provide little cover for wildlife, yet numerous species forage, and several species breed, in this community. Small mammals such as deer mouse, California ground squirrel (*Otospermophilus beecheyi*), and Botta's pocket gopher (*Thomomys bottae*) are common residents in annual grasslands in Monterey County. Larger mammals such as coyote (*Canis latrans*) and bobcat (*Lynx rufus*) occasionally forage in this community as well.

A variety of birds use annual grasslands as foraging habitat, including savannah sparrow (*Passerculus sandwichensis*), horned lark (*Eremophila alpestris*), western meadowlark (*Sturnella neglecta*), lesser goldfinch *Carduelis psaltria*), and barn swallow (*Hirundo rustica*). Western meadowlarks, horned larks, and mourning doves may nest in grasslands in the Park. Raptors, such as red-tailed hawk (*Buteo jamaicensis*) and northern harrier (*Circus cyaneus*) commonly forage over grasslands as well. Some species of raptors, such as red-tailed hawks and white-tailed kite (*Elanus leucurus*), may occasionally nest in trees bordering grasslands. Coast range fence lizard (*Sceloporus occidentalis bocourtii*), gopher snake (*Pituophis catenifer*), and other snakes are also likely to occur in the Park's non-native grassland.

Central Coast Riparian Scrub

Often associated with a consistent water source, this vegetation community is present within the two riparian wetland drainages: Yankee Jim Gulch and Spring Bridge Gulch. Numerous shrubs, herbs, and vines also occur in the understory of this community, including coyote brush, mulefat (*Baccharis salicifolia*), poison oak (*Toxicodendron diversilobum*), native and non-native blackberries (*Rubus ursinus*, R. *armeniacus*), rushes (*Juncus* spp.), and sedges (*Carex* spp.). Willows (Salix spp.) are the dominant trees within this community and only occur within the Spring Bridge Gulch riparian corridor.

Central coast riparian scrub offers cover and resources for a variety of wintering and breeding birds, such as yellow-rumped warbler (*Setophaga coronata*), warbling vireo (*Vireo gilvus*), orange-crowned warbler (*Oreothlypis celata*), and Wilson's warbler (*Cardellina pusilla*). The mixed understory in this community supports a variety of small mammals and reptiles, including raccoon (*Procyon lotor*), deer mouse, and coast garter snake (*Thamnophis elegans terrestris*).

Non-native Forest

Non-native forest consisting of dense stands of eucalyptus (*Eucalyptus* spp.) trees or occasional Monterey cypress (*Hesperocyparis macrocarpa*) occur along the western border of the Easement and the east border of the Bolsa Point Area, respectively. Beginning in the late 1800s eucalyptus was widely planted throughout California for timber, shade, or as a windbreak, as is the case for the easement. The eucalyptus stand understory includes unvegetated areas carpeted with leaf letter, as well as a mix of nonnative annual grasses and non-native invasive species such as iceplant and periwinkle (*Vinca major*). Mature eucalyptus groves provide nesting habitat for a number of raptors, including red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), and great horned owl (*Bubo virginianus*). Eucalyptus may also provide winter roosting sites for Monarch butterfly (*Danaus plexippus*).

Beach/Intertidal Zone

The intertidal zone includes the beach area exposed during the lowest low tide up to the start of terrestrial vegetation (primarily central dune scrub or disturbed dune scrub) or bluff faces along the seaward boundary of the Park within the Light Station Area and the Bolsa Point Area. This community is not shown in Figure 2.11 as its location is easily identifiab e with the underlying aerial image.

Tide pool in beach/intertidal zone.

Beach consists of the sand particles along the active coastline that are continuously shifting from wind and ocean waves. Vegetation is generally absent from beach habitat due to wind and wave disturbance, but kelp, driftwood, and other debris that is washed onshore from wave action, also known as beach wrack, provide habitat for a variety of invertebrates such as amphipods, polychaetes (marine worms), and flies that provide food for shorebirds. Common birds found along the beach include western sandpiper (*Calidris mauri*), least sandpiper (*Calidris minutilla*), and many species of gull (*Larus* spp.). Park beaches also provide foraging and overwintering habitat for western snowy plover (*Charadrius alexandrinus nivosus*), a bird species identified by the federal government as endangered and identified by the State of California as a species of special concern.

Numerous species of waterbird occur in the open water marine and rocky intertidal habitats offsho e of the Park. These species include a mix of migrant, wintering, and breeding species, such as surf scoter (*Melanitta perspicilllata*), black oyster catcher (*Haematopus bachmani*), red-throated loon (*Gavia stellata*), Pacific loon (*Gavia pacific*), common murre (*Uria aalge*), western grebe (*Aechmophorus occidentalis*) and a variety of gulls and terns.[29] Marbled murrelet (*Brachyramphus marmoratus*), a species listed as threatened by the federal government and as endangered by the State of California, is regularly observed in the offsho e waters of Whaler's Cove.[30]

2.8.2 WILDLIFE MOVEMENT CORRIDORS

Wildlife movement corridors are considered an important ecological resource by California Department of Fish and Wildlife (CDFW), the U.S Fish and Wildlife Service (USFWS), and under the California Environmental Quality Act (CEQA). Continuous swaths of undeveloped or unobtrusively developed land along the coast, such as is the case in the Park and vicinity, provide easy access for wildlife movement between diffe ent habitat types used for foraging or cover.

Environmentally Sensitive Habitat Areas (ESHAs)

Any area in which plant or animal life or their habitats are either rare or especially valuable and any area which meets one of the following criteria: (1) habitats containing or supporting 'rare and endangered' species as defined by the State Fish and Game Commission, (2) all perennial and intermittent streams and their tributaries, (3) coastal tide lands and marshes, (4) coastal and offsho e areas containing breeding or nesting sites and coastal areas used by migratory and resident water-associated birds for resting areas and feeding, (5) areas used for scientific study and research concerning fish and wildlife, (6) lakes and ponds and adjacent shore habitat, (7) existing game and wildlife refuges and reserves, and (8) sand dunes.

- San Mateo County Local Coastal Program

2.8.3 SENSITIVE NATURAL COMMUNITIES AND SENSITIVE HABITAT AREAS

A sensitive natural community is a biological community that is regionally rare, provides important habitat opportunities for wildlife, is structurally complex, or is in other ways of special concern to local, State, or federal agencies. Most sensitive natural communities are given special consideration because they perform important ecological functions, such as maintaining water quality and providing essential habitat for plants and wildlife. Some plant communities support a unique or diverse assemblage of plant species and therefore are considered sensitive from a botanical standpoint. CDFW indicates which natural communities are of special status and formerly tracked this through the California Natural Diversity Database (CNDDB), until the mid-1990's when the program was discontinued. The CNDDB continues to provide provide occurs of sensitive natural communities prior to the program ending. The CNDDB reports several sensitive natural community occurrences

29 eBird. "Pigeon Pt. Hotspot." *eBird: An online database of bird distribution and abundance.* (Ithaca, New York: the Cornell Lab of Ornithology) Accessed November 16, 2016. http://ebird.org/ebird/hotspot/L271476.

30 Portia Halbert, personal communication, March 22, 2016.

near the Park. Upon review of the CNDDB data for the Park and considering site observations, none of these sensitive natural communities occurs within the Park. While most native grassland alliances that would occur within intact or undisturbed coastal terrace prairies are considered sensitive by CDFW, the current condition of the Bolsa Point Area, dominated by non-native and invasive species, does not qualify as such. Central dune scrub, however, found at several locations within the Park, is considered to be a sensitive natural community due to its limited distribution in the state and the diversity of special-status plant species that often occur there.

The San Mateo County's LCP defines several environmentally sensitive habitat areas (ESHA) that are affo ded special protection. These sensitive habitat areas include, but are not limited to, riparian corridors, wetlands, marine habitats, sand dunes, sea cliffs, and habitats supporting rare, endangered, and unique species. Many of these resources occur within the Park however the designation of these habitats as ESHA are made by County staff on a case-by-case basis at the time a development project is proposed.

2.8.4 SPECIAL-STATUS SPECIES

A number of species known to occur in the vicinity of the Park are protected pursuant to federal and/or State endangered species laws, or have been designated species of special concern by CDFW. There are additional provisions within CEQA to protection of rare, endangered, or threatened species that are not currently included in an agency listing. A list of species with the potential to be found at the Park is below. Appendix D, presents the special-status species, their status, their habitat requirements, and plant blooming periods, and considers the potential for each species to occur within the Park.

There are nine special-status plants which were determined to have at least a moderate potential to occur within the Park or surrounding vicinity, including blasdale's bent grass, coastal marsh milk-vetch, sand-loving wallflowe , stinkbells, coast iris, perennial goldfie ds, marsh microseris, Choris' popcornflowe , San Francisco popcornflowe , Santa Cruz microseris.

There are fi e special-status animals that were determined to have at least a moderate potential to occur within the Park or surrounding vicinity, including California red-legged frog, San Francisco garter snake, and monarch butterfly (California overwintering population). Several special-status birds are likely to nest within the diverse habitats of the Park, including Cooper's hawk, saltmarsh common yellowthroat, and northern harrier. Additionally, the Park contains foraging and nesting opportunities to a variety of resident and migratory birds, including red-tailed hawk, red-shouldered hawk, great horned owl,

Special Status Species

Rare, endangered, or threatened species that are not currently included in an agency listing, but whose "survival and reproduction in the wild are in immediate jeopardy" (endangered) or which are "in such small numbers throughout all or a significan portion of its range that it may become endangered if its environment worsens" or "is likely to become endangered within the foreseeable future throughout all or a significan portion of its range and may be considered 'threatened' as that term is used in the federal Endangered Species Act." Species recognized under these terms are collectively referred to as "special-status species."

- The California Environmental Quality Act (CEQA) Guidelines

and American kestrel, to Anna's hummingbird, Bewick's wren, white-crowned sparrow, American robin, American crow, Wilson's warbler, western bluebird, California towhee.

2.8.5 CRITICAL HABITAT

The USFWS can designate critical habitat for species that have been listed by the federal government as threatened or endangered. A critical habitat unit for California red-legged frog is designated east of Highway 1 in the vicinity of the Park, and includes the Easement. Two other species have designated critical habitat nearby but not within the Park. These species include tidewater goby critical habitat located within 1.5 miles north of the Park at Arroyo de los Frijoles (Bean Hollow), and marbled murrelet critical habitat located within 3.5 miles generally east of the Park.

Additionally, CDFW targeted two habitat communities found at the Park in their Statewide Plan for Wildlife Conservation including coastal dune scrub and coastal terrace prairie. CDFW additionally include California grassland and while the annual grassland found at the Park consists mostly of non-native annual grass species, it could potentially be improved to provide similar habitat value to the California grassland.

2.9 VISUAL AND AESTHETIC RESOURCES

Visual and aesthetic resources include features within the natural landscape or constructed works that are attractive for viewing. Since its construction, the Lighthouse has had a visual appeal for architecture enthusiasts and the general public alike. The nomination to the NRHP made note of this, calling it the "most beautiful and best architectural lighthouse structure on the Pacific Coast." The Lighthouse continues to serve as an attractive beacon that provides an icon for the Park set along the rocky coast.

Sightseers viewing in the Lighthouse and the ocean in a historic Photo of Pigeon Point Light Station from 1921. (source: HABS, Arthur Spaulding Co., ca. 1921, "General view from north," CA-1997-18)

The dramatic coastal vistas and captivating historic structures are extremely valuable for the visitor experience and as the setting for nature photography and painting. Limited vegetation and development provides long, clear views allowing the dramatic beacon of the Lighthouse to be visible from a distance. From the top of the bluff, it is possible to find panoramic views of the coastline and overlook the beach. Powerlines along Pigeon Point Road are the major detractor from scenic views of the Lighthouse from a distance.

Utility poles along Pigeon Point Road detract from views of the Lighthouse.

Highway 1 is a designated State Scenic Highway and a Scenic Corridor as established in the San Mateo County General Plan Open Space Element, and runs along the eastern edge of the Park. Highway 1 was designated as a Scenic Corridor because it provides sea and coastal views, which should not be limited by new development. Currently, the Lighthouse is visible from Highway 1; the view from Highway 1 of the Light Station Area is predominately clear. Views from Highway 1 of the Bolsa Point Area and the ocean beyond are partially blocked by a vegetative screen of ngaio (*Myoporum laetum*) shrubs.

Limited development and the Park's remote location additionally allow for the sounds of nature to dominate the landscape. As visitors move closer to the coast, the sounds of waves and wind are strong, even roaring during stormy weather.

2.10 OPERATIONS

In general, CDPR staff, docents, and hostel staff indicate that the Park operates effecti ely with limited issues. The few suggested considerations are outlined below.

2.10.1 SAFETY

In recent years, car break-ins have increased in the parking lot at the Park. The break-ins are not limited to night time as thieves are operating quickly and moving in and out of the parking lot with relative ease. Although more serious crime at the Park has not been a problem, theft has significant y impacted site visitors.

Emergency services are provided by CDPR Rangers and Lifeguards as well as the County and California Department of Forestry and Fire Protection (CALFIRE).

2.10.2 STORAGE

The hostel uses the modular shed between the Fog Signal Building and the Cottages to store tools for maintenance around the property. CDPR brings most tools for larger work from the Pescadero, Half Moon Bay, or Santa Cruz District Office as there is limited storage at the Park. Docents store supplies in the Carpenter's Shop or in the docent offic within the Fog Signal Building; however, due to limited space, most of the surplus park store materials are stored at the Año Nuevo State Park store.

The modular shed does not contribute to the historic nature of the Light Station. However, if this structure is removed, it may be diffic t to find additional storage space.

2.10.3 ACCESSIBILITY

Currently, there are accessible routes from the parking lot in the Light Station to key site features and facilities, including interpretive features in the Fog Signal Building, vista points overlooking the beach, and the restrooms. Curb ramps and accessible paving on pathways allow access between park elements. Entrances to historic structures are ADA-compliant and accessible features have been added, such as the ramp to the park store in the Carpenter's Shop and the viewing deck behind the Fog Signal Building. The trails above Whaler's Cover are paved with decomposed granite; however, the beach is not universally accessible due to the stairs required to descend to the beach.

Fresnel lens and interpretive features in the Fog Signal Building.

2.11 INTERPRETATION AND EDUCATION

The focus of interpretation at the Park is the historic Light Station and the story of its development. While the tower is the predominant historic structure, it is currently closed to the public for interpretive programming and the Fog Signal Building is the central focus area for interpretation at the Park. Interpretive features are also used within the Park to explore secondary interpretive themes including coastal habitat and story of coastal preservation and the Coastal Trail.

2.11.1 INTERPRETATIVE FACILITIES

The Fog Signal Building contains a small museum with a large display of the Fresnel lens and exhibits that interpret the story of the Light Station with images, text, and sound. Historic artifacts from the Light Station, photographs, and maps further help to interpret the story. The Fog Signal Building additionally contains an architectural model of the Lighthouse to demonstrate its construction. The Fog Signal Building is open when docents are at the Park, every Thursday to Monday, between 10:00 am and 4:00 pm.

Various other interpretive features can be found throughout the Light Station to help illustrate its history. The detached Oil House serves as a small secondary museum space with historic photos and narrative text describing life at the Light Station. At the foot of the Lighthouse, there is an educational sign about the Lighthouse and its construction, which can be viewed when the museum buildings are closed. In 2016, a hull from the Point Arena, which crashed at Pigeon Point in 1913, was installed in the picnic area to the east of the Lighthouse. The fragment is approximately 20 feet long by 10 feet high and set in a concrete footing. It is positioned so that visitors can look through a porthole in the fragment and view the Lighthouse and also look out to the rocky shore where the crash occurred.

Other interpretive features in or near the Light Station explain coastal ecology and conservation. There are interpretive signs near the viewing deck behind the Fog Signal Building to educate visitors about the habits of marine animals that they might see in the water below. Additionally, in the native plant restoration area adjacent to the viewing deck, many of the plants have identificat on markers to illustrate the native species in the area. Along the walkway to the deck, there are some large whale bones. These bones, as well as the large jaw bone that

Interpretive and Educational Services

Interpretive and educational services are programs or activities that relate significant y to the interpretive and educational themes and, where applicable, the interpretive period of the park unit where the services are offe ed. These services support the Department's mission and reflect themes and goals identified in general plans, interpretive plans and related documents. Interpretive and educational services include those activities and programs that focus on natural, cultural, and historic resources of the State Park System and individual state parks. Such services are designed to forge emotional and intellectual connections between the interests of the audience and meanings inherent in the resource (adapted from the National Association for Interpretation's defin tion of interpretation). These services may be provided by a cooperating association and include seminars, classes, tours, and events.

- Interpretation and Education Section from CDPR's Department Operations Manual (DOM)

Visitors examining Lighthouse model in Fog Signal Building

hangs from the fence adjacent to the Fog Signal Building, call the public's attention to the site's previous uses for whaling operations. They also indicate the Park as a prime location for migratory whale watching.

Additional educational signage about the Central Coast ecosystem is located along Mel's Lane and at the central kiosk across from the parking lot. These signs have a strong emphasis on the coastal conservation and tell the story of how CDPR and POST are working to protect the area. Interpretive signage about the Coastal Trail can be found along a segment of trail north of the Light Station. The formal trail does not continue north of the sign although the sign describes the process of developing a continuous trail along the Coast.

2.11.2 INTERPRETIVE PROGRAMS

Currently docents offer half-hour guided tours of the grounds within the Light Station. Before it closed in 2001, tours of the Park included a trip into the Lighthouse. Docents additionally greet guests in the Fog Signal Building and answer questions about the Park and its historic use.

2.11.3 EVENTS

CSPA organizes an annual Anniversary Event at the Park on a Saturday in early November to commemorate the first lighting of the Lighthouse. The event includes guided history walks, live music, a native plant sale and children's activities. The event typically includes the lighting of the Fresnel lens in the Fog Signal Building once the sun sets.

CSPA and Hosteling International also organize various other events throughout the year, including special walking tours with naturalists, evening trip with astronomers, or volunteer clean-up events. These events may vary from year to year depending on interest.

November 2016 Lighthouse Anniversary Event at the Park.

2.11.4 OUTDOOR EDUCATION

Exploring New Horizons uses the Park as a setting for its outdoor education program. The group leads overnight outings for youth that spend the night at the hostel at the Park. During the day, instructors from Exploring New Horizons lead environmental courses at the Park and neighboring parks. They utilize a classroom space within the hostel, Council Circle, and other informal outdoor gathering spaces for their lessons and meetings.

2.12 PARK SUPPORT

The Park receives financia support from local nonprofits and agencies, including the California State Parks Foundation, CSPA, Friends of Santa Cruz State Parks (FoSCPS), POST, and the Coastal Conservancy. Additionally, volunteer docents offer significant operational support in terms of free labor time to run the park store and provide interpretive services.

The **California State Parks Foundation** is facilitating the campaign to restore the Lighthouse, including fundraising for the renovation. There are signs throughout the Park about the campaign and information about how to become a "Keeper of the Light," or contributor to the efforts. A summary of effort is described below in Projects in Process section.

Fundraising signs for the Lighthouse renovation

Kiosk at entrance to Mel's Trail that displays supporters of the Park.

CSPA supports 15 California CDPR along the San Mateo County coast from Gray Whale Cove State Beach in the north to Año Nuevo State Park in the south, primarily by fundraising for volunteer docent programs, interpretive exhibits, educational programs, and habitat and native plant restoration projects. In 2015, CSPA began to provide funds for capital improvements and is planning to fund the new deck on the Fog Signal Building. CSPA raises funds from the following sources: park stores and donor boxes at Año Nuevo State Park, Pigeon Point Light Station State Historic Park, and Half Moon Bay State Beach; donor boxes located at state parks that CSPA supports; selling fi ewood at the campgrounds at Half Moon Bay State Beach and Butano State Park, and donor events.

POST supports the Park by helping to acquire new land and implementing development projects. POST purchased Whaler's Cove and gave the property to CDPR in 2005 to protect the views as well as to protect historic values from development. POST raised funds to pay for improvements

to the area, including Mel's Lane, the ¼-mile section of the California Coastal Trail; Council Circle; and stairs that lead down to the beach located east of the parking lot.

The **Coastal Conservancy** provides funding support for development projects at the Park through grant assistance. Coastal Conservancy grants helped fund the 2011 parking lot improvements and associated native planting.

Concessions

A private business, operating under contract in a state park unit that provides products, services and programs not normally provided by State employees. Such servicesare intended to enhance the recreational or educational experiences of park visitors.

- Interpretation and Education Section from CDPR's Department Operations Manual (DOM)

2.13CONCESSIONS

The hostel is managed by Hosteling International through a concessionaire's agreement with CDPR. The agreements are typically two years in length. The hostel pays for improvements to Cottages that are required for operational purposes and maintains the landscape around the buildings.

2.14INFRASTRUCTURE AND UTILITIES

There are no utility connections to the Bolsa Point Area. The residence that is surrounded by the Bolsa Point Area on three sides has power, water, and sewage; however, water is supplied from a well owned and managed by the agricultural landowner across Highway 1.

The Light Station is supplied with electrical power from overhead utility lines that run along Pigeon Point Road. As noted above, the poles that support the lines limit views, and local Santa Cruz District staff suggested undergrounding these lines to improve aesthetics along the road. Propane tanks in the Light Station provide gas to the kitchens located in the hostel. The hostel also offer Wi-Fi to its guests but it is not available to all visitors to the Park.

Until it was evaluated as unsafe for drinking in 2013, water was supplied to the buildings in the Light Station from a 25-foot-deep, hand-dug well. In September 2013, the California Department of Public Health issued a compliance order that the water supply for the Pigeon Point Lighthouse Hostel did not meet the California Health and Safety Code and could no longer be used for consumption. Currently, potable water is brought to the site, for both hostel and park use, in trucks and then pumped into the existing tank. The Park brings in 3,800 gallons of water three times per month. The public restroom is a vault toilet and does not use water, although there is a staff restroom and hostel restrooms that use potable water to flush. The 2014 Concept Study included a Water System Improvements Schematic for the Park that illustrates new wells, lines, and associated structures to be developed in the easement across Highway 1.

The 2014 Concept Study indicated that the existing sewer system is functioning suffi ently for the existing capacity. The system consists of gravity sewer lines that flow sewage to a lift station where it is then pumped to a leach field located under the parking lot. The Concept Study noted that locating a leach fie d under a parking lot is typically not allowed or permitted and that expanding or moving the leach field will require permits from San Mateo County.

2.15 PARK PROJECTS IN PROGRESS

While the Park does not have a General Plan to guide new development projects, day-to-day operational improvements are underway at the Park.

2.15.1 WATER SYSTEM IMPROVEMENTS

As noted above, the existing well at the Park is out of compliance to provide consistently safe drinking water for the Park. CDPR has hired a contractor, obtained permits from San Mateo County, and expects to begin work on a new well in 2017. The 2014 Concept Study included schematic drawings for three new wells, one new storage tank, new supply lines, and associated infrastructure located on the Easement Area across Highway 1.

2.15.2 NATIVE PLANT RESTORATION

Some native plant restoration has occurred in the Light Station around the detached Oil House and adjacent to the parking lot, as well as near the restrooms. There is an interest by CDPR and others to increase native plant restoration at the Park, particularly in the numerous areas currently covered by ice plant. There is an active volunteer program to remove non-native species from the Park.

Native planting in the Light Station.

2.16 PLANNING INFLUENCES

Existing planning efforts and regulations provide a planning framework for the General Plan. This section includes an overview of key plans and documents from State and regional groups. Additionally, the General Plan is influenced by recreational trends and public input. The second part of this section presents a brief trends analysis and general needs assessment, followed by a summary of public input.

2.16.1 SYSTEMWIDE PLANNING INFLUENCES

System planning efforts apply to the entire park system managed by CDPR. These efforts guide the overall vision and purpose of the agency. Additionally, CDPR developed planning tools for recreation planning, resource management,

interpretation, and operations that can be utilized in developing a General Plan. These tools ensure consistency in park planning and management throughout the park system.

Other State agencies additionally develop documents and tools for managing State resources. CDPR has a responsibility to coordinate with these agencies and adhere to their recommendations and guidelines as closely as possible when managing and planning for park units.

Systemwide planning influences from CDPR include the State Park System Plan, Meeting the Needs of All Californians: 2015 Statewide Comprehensive Outdoor Recreation Plan, CDPR Department of Operations Manual (DOM), CDPR Department Administration Manual (DAM), California State Parks Accessibility Guidelines, Strategic Action Plan "Brilliance in the Basics," and Parks Forward—A New Vision for CDPR: Recommendations of the Parks Forward Initiative. Additionally, CDFW's Wildlife Action Plan and the CCRWQCB's Central Coast Basin Plan, and Caltrans department operational manuals provide valuable planning guidance for this General Plan. A description of systemwide planning influenc can be found in Appendix E.

This General Plan was developed with consideration of these systemwide planning efforts and it is the assumption of this General Plan that all future development and operations at the Park will observe systemwide planning efforts and protocols established by CDPR and other State agencies.

See **Appendix E: List and Description of Systemwide Planning Influences**

2.16.2 REGIONAL PLANNING INFLUENCES

Regional planning efforts specific to the Central Coast and areas around the Park help to shape the local landscape. Utilizing the plans and tools from these planning efforts will ensure consistency with nearby open space and recreational efforts and ensure compatibility local guidelines. These include planning effort by San Mateo County and regional open space advocacy groups, including the Coastal Conservancy, Midpeninsula Regional Open Space District (Midpen), and the Amah Mutsun Land Trust. A summary of regional planning influences can be found in Appendix F.

See **Appendix F: List and Description of Regional Planning Influences**

2.16.3 PARK PLANNING INFLUENCES

Prior to the General Plan, various studies were carried out at the Park. These efforts inform the General Plan by providing background data on the Park or providing analysis on facilities, resources, and experiences. These plans include Concept Study: Pigeon Point Light Station State Historic Park Low Cost Lodging

and Circulation Investigation, Pigeon Point Light Station Resources Summary, Light Station Rehabilitation, and Historic Structures Report for Pigeon Point Light Station. A description of park planning influence can be found in Appendix G.

See **Appendix G: List and Description of Park Planning Influences**

2.16.4 REGULATORY INFLUENCES

There are numerous existing federal and State laws that guide management actions at the Park. CDPR will comply with these mandates at the Park and the General Plan does not have the authority to change or affect laws, codes, and policies that translate into required management actions.

Following are brief descriptions of the pertinent sections of the PRC and the San Mateo County Local Coastal Program (LCP). An expanded summary of existing federal and State laws, codes, and policies can be found in Appendix H.

2.16.5 PUBLIC RESOURCES CODE (PRC)

California law is made up of the State Constitution and Statutes and 29 codes enacted by the California State Legislature, referred to as the California Code of Regulations. The California Public Resources Code (PRC) provides guidance for management of for natural, cultural, and recreational resources of the State, as well as provides operational protocols for CDPR.

Sections of the PRC specifica ly define the purpose of park units with the CDPR system and section 5019.59 specifica ly addresses historic units, addresses historical units, their purpose for creation, and naming convention. Other sections of the PRC additionally guide the management of historic resources, such as those found within the Park. Sections 5024 and 5024.5 of the PRC provide guidance on the management of historic resources. In tandem, these sections direct CDPR to preserve and maintain historic resources that are listed or eligible for listing on the national or state registers. Plans to alter, transfer, relocate, or demolish these resources are subject to review from the State Historic Preservation Office per Section 5024.5. CDPR has a memorandum of understanding with the State Historic Preservation Office (SHPO) such that Associate State Archaeologists within CDPR are able to review projects on CDPR land for compliance with PRC 5024 and 5024.5

The PRC additionally establish protocols for the identification and treatment of archaeological resources and guides the process for Native American consultation for public projects. Section provides directives intended to prevent the willful excavation, removal, destruction, injury, or defacement, of any "historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological or historical feature." Section

5097.98, in combination Health and Safety Code Section 7050.5, subdivision (c), directs procedure if human remains are discovered on State lands and determined to be Native American.

Section 5080 of the PRC regulates concession contracts, cooperative agreements, and operating agreements between CDPR and concessionaries that provide public goods and services throughout the park system. Section 5080 of the PRC establishes the process for awarding these contracts.

2.16.6 COASTAL ACT AND SAN MATEO COUNTY LOCAL COASTAL PROGRAM

The Park is located within the California Coastal Zone, meaning that all State or Local Government agencies wishing to develop must obtain a Coastal Development Permit (CDP). The California Coastal Commission (CCC) is the State agency charged with managing natural resources and development within the State's Coastal Zone through implementation of the California Coastal Act. The agency accomplishes this primarily through delegation of authority for Coastal Act implementation to coastal local governments through certificat on of LCPs. This Park is located in San Mateo County and is under a certified LCP managed by the County.

The San Mateo County LCP prescribes management and development guidelines for the issuance of a CDP. The LCP provides special guidelines for management of

TABLE 2.1: Recommendations for Shoreline Destinations from LCP

Destination Name	Application of Policies to Site/Specific Recommendations	Special Considerations
Beaches along Pigeon Point Road	1. Consolidate bluff trails. 2. Develop interpretive educational displays discussing the fragile nature of the tide pools at Pigeon Point and prohibiting removal of species. 3. Construct short stairways to beaches. 4. Landscape parking area at Yankee Jim Gulch. 5. Include public access in all plans for the development of Pigeon Point Lighthouse.	Close Pigeon Point Road to vehicular traffic and retain existing right-of way for use by bicycles, hikers and limited traffic to the lighthouse
Beaches and Bluffs South of Pigeon Point Road	1. Close access to the beach .1 mile south of Pigeon Point Road and restore and replant vegetation or crops. 2. Eliminate roads on the bluff above the beach .4 mile south of Pigeon Point Road. 3. Re-landscape eroded areas. 4. Post signs discussing the fragile nature of tide pool environments. 5. Post signs warning of dangers of climbing on cliffs. 6. Build stairway to beach at southeastern end of shoreline destination. 7. Build fences along the trails where they are adjacent to agriculture land	

Environmentally Sensitive Habitat Areas (ESHA's), including avoidance requirements and set-back distances. The LCP additionally provides guidelines for the use of coastal bluff tops and prime agricultural land, as well as for the preservation of visual resources along the Coast. The LCP lists site specific recommendations for specific shoreline destinations. Table 2.1 describes recommendations for Pigeon Point.

The LCP additionally provides defin tion on visitor-serving and public recreation facilities and defines requirements and role of CDPR in complying with the LCP. These items can be found directly in Section 11 of the LCP and described in Appendix H.

See **Appendix H – Existing Laws, Codes, and Policies**

2.16.7 DEMOGRAPHICS AND POPULATION DENSITY

Limited data is available regarding the demographics of visitors to the Park since this information is not gathered in the Park's visitor counts. As shown on Figure 2.12, the Park is located in an area of relatively low population. According to data from the 2010 Census, approximately 2,300 people live within 10 miles of the Park; however, the Park has approximately 200,000 visitors a year. Many of these visitors are likely visiting the Park from more distant locations and census data on neighboring population may not be reflect ve of park users.

Population in California is growing. According to the U.S. Census Bureau, California grew by approximately 10 percent between 2000 and 2010 to 37.3 million residents. Additionally, there has been a growing population in the Hispanic or Latino communities throughout California, increasing 12.4 percent between 1990 and 2000 and 5.2 percent between 2000 and 2010. The Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC) track population specifica ly within the San Francisco Bay Area region, which includes San Mateo County, where the Park is located. Between 2000 and 2010, the overall population increased by 5.4 percent to 7.2 million residents. ABAG projects that by the year 2040, the Bay Area will expand to include approximately 9.3 million residents.

According to data from the 2010 Census, the Bay Area's population is approximately 42.4 percent white, 23.5 percent Hispanic or Latino, 23 percent Asian, 6.4 percent Black or African American, 3.5 percent two or more races, 0.6 percent Native Hawaiian and Other Pacific Islander, 0.3 percent American Indian and Alaska Native, and 0.3 percent some other race. Between 2000 and 2010 Hispanic or Latino and Asian populations increased, approximately 4.1 percent and 4 percent, respectively across the Bay Area. Additionally, the 2014 American Community Survey 5-Year Estimate from the US Census estimates indicates that 46 percent of residents in San Mateo County speak a language other than English. Within this group of second language speakers, 54 percent speak English "very well"

FIGURE 2.12: Population Density around the Park

and 46 percent speak English less than very well. The Visitor Use/Non-Use Study conducted by the County of San Mateo Parks Department in 2016 reported that Spanish is the primary language spoken in 20.3 percent of homes in County. Additionally 7.6 percent of homes speak Chinese and 6.5 percent speak Tagalog.

While residents of American Indian ethnicity account for approximately 0.2 percent of the population within San Mateo County, the Amah Mutsun Tribal Band is active throughout the region, including San Benito, Monterey, Santa Cruz, Santa Clara, and San Mateo. This indigenous group includes descendants of the Ohlone people who historically lived along California's Central Coast between modern day San Francisco and Monterey bays.

Within the Bay Area, 6.3 of the population is under 5 year of age, 16.0 percent is between 5 and 17 years, 65.5 percent of the population is between 18 and 64 years, and 12.3 percent of the population is over 65 years. Additionally 30.1 percent of the households in the Bay Area include children under 18 years old. These numbers are generally consistent with the overall age composition of California, with the Bay Area having a slightly higher percentage of older adults (residents over 18) and slightly lower percentage of children (residents under 18).

2.16.8 RECREATIONAL TRENDS

It is important to ensure that the Park is helping to meet the recreational needs of Central Californians. CDPR conducts research and public surveys to ensure that the park system reflects the needs and character of the California population. Additionally, County of San Mateo Parks evaluates user needs within their County as part of the 2013-2018 Strategic Plan process. These trend studies provide useful information when considering potential new uses at the Park.

CDPR Trends

As part of the process of developing the SCORP, described above in systemwide planning influences, CDPR conducted a Survey of Public Opinions and Attitude on Outdoor Recreation (SPOA). Through phone interviews and mail or online questionnaires with adults and youth, CDPR compiled information on how residents were using park facilities and what they would like to see more of in the future.

Throughout the state, respondents indicated that they would like to participate more often in picnicking (55.1%), walking (37.4%), camping (35.1%), and beach activities (34.6%). Additionally, the study found that throughout the state respondents indicated that the most important facilities included wilderness type areas with no vehicles or development, play areas for children, areas for environmental and outdoor education, large group picnic sites, recreation facilities at lakes/rivers/reservoirs, and single-use trails.[31]

31 California Department of Parks and Recreation. *Survey on Public Opinions and Attitudes on Outdoor Recreation in California 2012: Complete Findings*. (Sacramento, CA: California State Parks) 2014.

Adult responses were categorized by region. San Mateo County was grouped within the Greater San Francisco Bay Area Region, which represented 19 percent of adult responses and 16 percent of youth responses. The report notes that, "this region as well as the neighboring Sierra and Northern California regions sees use of paved and unpaved trails and scenic and wildlife viewing areas in higher frequency than other regions of California." Table 2.2 presents the following as the current regional demand for the area.

TABLE 2.2: Current Regional Demand – Greater San Francisco Bay Area Region

Top Facilities Used	Top Activities	Top Latent Demand for Activities*
Unpaved trail.	Walking.	Picnicking in picnic areas (with tables, fi e pits, or grills).
Paved trail.	Hiking on upaved trails.	Walking for fitness or pleasure on paved surfaces.
Scenic observation/ wildlife viewing area.	Eating/picnicking.	Camping in developed sites with facilities such as toilets and tables (not including backpacking).
Picnic table, picnic pavilion.	Playing.	Day hiking on upaved trails.
Open space to play.	Sedentary activities.	Shopping at a farmer's market.
Beach or water recreation area.		Beach activities (swimming, sunbathing, surf play, wading, playing on beach).

* Latent demand refers to activities that are currently unavailable or only available in limited capacity, suggesting that there is a need for this activity in the community.

Most of these activities, with the exception of shopping at a farmer's market, could be accommodated at the Park. New trails within the Park and future trail connections to other parks and open space could provide important new recreational amenities. In particular, expanding the Coastal Trail through the Park and connecting to other coastal parks would be a valuable asset for the area. Additionally, creating a trail connection inland to Butano State Park would create a new recreational experience. Greater San Francisco Bay Area Region respondents to the SPOA indicated that in general they considered trails for multiple, nonmotorized activities such as hiking, mountain biking, or horseback riding to be slightly more important than trails solely for a single activity such as hiking, mountain biking, or horseback riding, although both generally received high ratings of importance from respondents. Local staff and stakeholders indicated that hiking and biking are major priorities for the Park, while equestrian use is limited. Additionally, adjacent agricultural landowners expressed resistance to promoting equestrian use near their farms due to the potential runoff of manure into fie ds.

Additionally, the 2002 State Park System Plan included a list of priorities for the expenditure of public funds based on latent demand within the statewide system. The list, in prioritized order, includes:

1. Camping in developed sites
2. Trail hiking
3. General nature wildlife study
4. Visiting museums, historic sites
5. Walking (Recreational)
6. Picnicking in developed sites
7. Camping in primitive sites
8. Use of open grass or turf areas
9. Attending outdoor cultural events
10. Bicycling (on paved surfaces)

The State Park System Plan continues that the demand for campsites outweighs the supply within the CDPR system. The plan notes that camping in State Parks has been increasing in popularity since the 1960s, and that many campsites are full and turn people away, not only in the summer months but throughout the year. During 2015, the campground at Half Moon Bay State Beach, located approximately 20 miles north of the Park, has an approximate 70 percent annual occupancy. CDPR staff note that during weekends, this campground is typically completely full. In 2000, CDPR operated 13,500 campsites. The State Park System Plan notes that demand for camping is so high that if CDPR added 325 campsites a year, it would not keep up with requests.[32]

County of San Mateo Parks Department Trends

The Visitor Use/Non-Use Study conducted by the County of San Mateo Parks Department in 2016 included a survey of park users on their use patterns and satisfaction with their park experience. The study found that predominately park visitors visited County Parks to walk or hike (46.7 percent of respondents). The study additionally asked visitors about their preferences to pay for various park services, including purchase of land for new parks, protecting natural resources from damage by users, ensuring park resources are preserved for future generations, campgrounds, hiking trails, bike trails, picnic areas, swimming beaches, cabin rentals, and park naturalist to teach visitors about park resources. In most scenarios, respondents indicated that park services should be paid for by a combination of tax contributions and visitor fees or predominately by tax contributions. However, for some private-use services, such as campgrounds and cabin rentals, a higher rate of respondents indicated that visitor fees should pay for improvements, indicating that there may be a willingness to pay higher fees for these types of private amenities.

32 California Department of Parks and Recreation. "Part 1: A System for the Future." *The State Park System Plan 2002*. (Sacramento, CA: California State Parks) 2002. 10.

2.16.9 PUBLIC CONCERNS AND INTERESTS

Public outreach during the General Plan process included stakeholder interviews with key park partners, as well as online and on-site surveys for the general public. Full summaries of the stakeholder interviews and public responses received during the process can be found in Appendices A and B.

In general, a major priority for the public is the restoration of the Lighthouse tower and re-opening it for tours. Other priorities included amenities to enhance existing park activities, including binoculars or scopes to view the ocean, and informational exhibits. Both the online and on-site survey asked visitors "What would improve your experience at the Park?" Figures 2.13 and 2.14 display those responses and illustrate the priorities of the respondents.

Good idea, but the more facilities you have, the more people come. The fla r and atmosphere of this incredible area may be destroyed. But it is also important to expand and restore and conserve for the future.

- Public response to draft concept plan for the Park

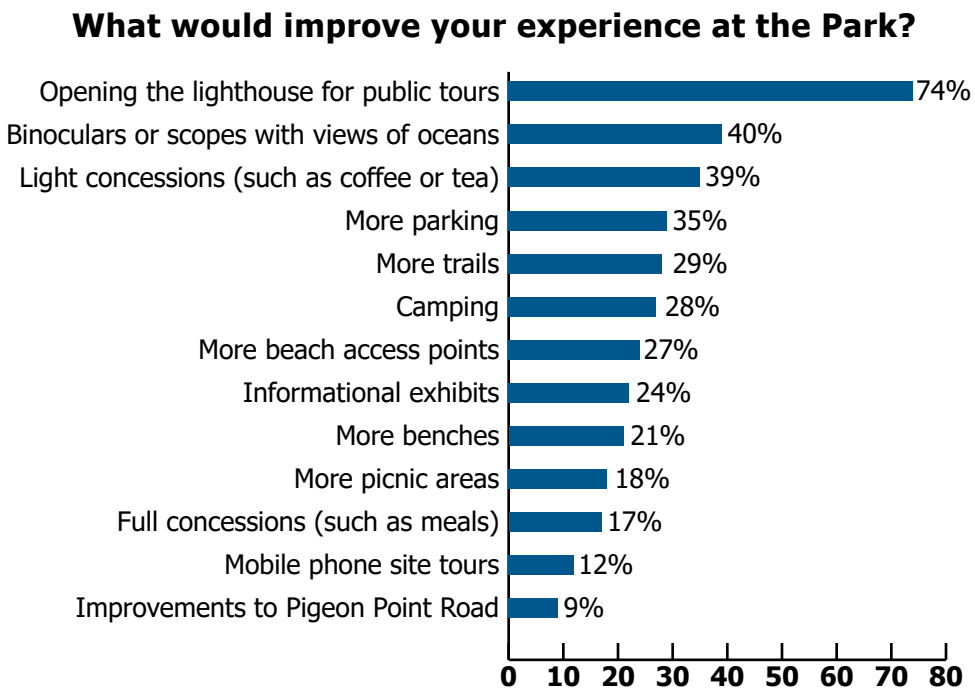
Stakeholders and the public were interested in expanding the trail network within the Park and expanding to other locations. There was some interest in camping and concessions, which would expand recreational and facility offer ng at the Park. Many respondents were interested in improving existing facilities, including upgrading the restrooms and improving the parking areas, including some interest in paving the parking lot.

Interviews with local stakeholders additionally revealed new opportunities at the Park. Members from the Amah Mutsun Land Trust are interested in a partnership with CDPR to develop areas where indigenous land management could be practiced. This partnership would potentially include tribal members practicing native agricultural techniques on site, cultivating local native plants and assisting with coastal habitat restoration utilizing traditional indigenous land management techniques, such as prescribed burning and seed saving.

Some issues expressed during the outreach process included concerns that new development would change the character of the Park. Respondents were concerned about crowding, lack of parking, and destruction of park resources if visitor levels increased. Some respondents additionally expressed concern about a parking fee, while others supported the idea as a way to build revenue for the Park.

Additionally some constituents, including staff from San Mateo County planning department, expressed interest in the use of the Bolsa Point Area for agricultural use since the land there is considered prime agricultural land per the LCP defin tion. This group is concerned about the preservation of agricultural uses in the region and would like to maintain this land use in the Bolsa Point Area. During the public review project, San Mateo County indicated that they would only support development consistent with the LCP, which does not include camping.

FIGURE 2.13: Responses to On-site survey

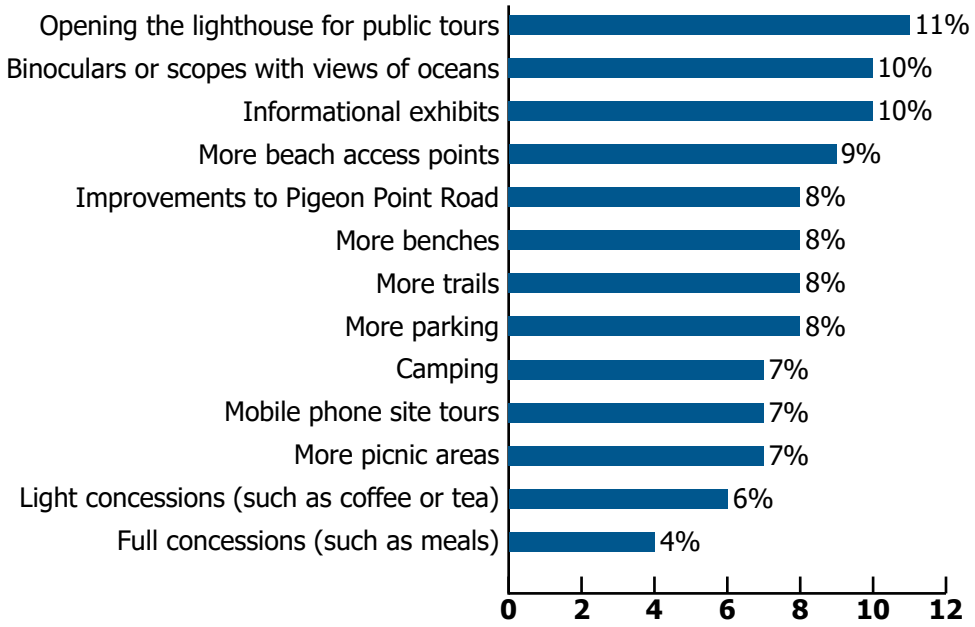


22% of respondents replied "Other"

Some comments include:

- Include more living history and hands on exhibits focused on the lighthouse and other maritime history
- Do not lose the intimate feel of the Park
- Include wind sheltered viewpoints
- Improve the restrooms
- Provide discounted specials for San Mateo County residents
- Include better marked trails

FIGURE 2.14: Responses to Online survey



2% of respondents replied "Other"

Some comments include:

- Put Fresnel lens back in lighthouse and open the Lighthouse for Public
- More staff
- More observation platforms with wind protection for seawatches away from walking path
- Someone to protect the whole area from drones.
- Bigger store

37% of "Other" responses related to the restroom

Some comments include:

- Real restrooms that don't smell
- Better bathrooms
- Improved restroom with more capacity

3 Issues and Analysis

This chapter presents planning assumptions for Pigeon Point Light Station State Historic Park (the Park) and issues that could influence future use of the Park. The analysis presented in this chapter is based on find ngs described in Chapter Two and was considered in the development of the Park Plan presented in Chapter Four.

3.1 PLANNING ASSUMPTIONS

Following are assumptions based on federal laws, regulations, and California Department of Parks and Recreation (CDPR) policy that serve as the basis for planning at the Park. Additional planning assumptions can be found in **Appendix H – Existing Laws, Codes, and Policies**.

CDPR will:

- Continue to manage the Park, which is classified as a State Historic Park per Section 5019.59 of California's Public Resources Code, to preserve places of historic significance and provide facilities such as those required for the safety, comfort, and enjoyment of the visitors, including access, parking, water, sanitation, interpretation, and picnicking. Recreational uses outside the primary historic zone may be designated as a recreation zone to provide limited recreational opportunities that will supplement the public's enjoyment of the unit.
- Preserve the Park's cultural resources, including historic structures and landscapes, following the Secretary of the Interior's *Standards for the Treatment of Historic Properties*. Management will also follow the requirements of section 5024 of California's Public Resources Code in preservation of State historic landmarks.
- Manage and protect rare, threatened, and endangered species and sensitive wildlife habitats including California grassland, coastal sage scrub, coastal dune and bluff scrub, and coastal terrace prairie, as required by federal and State laws.

- Consult with Native American groups and obtain a mutually respectful understanding of the long-term needs for protection and treatment of heritage sites, objects, or human remains; also, to determine future consultations that would be required during the subsequent planning, design, and implementation of projects.
- Maintain and increase, where appropriate, the overall level of recreational opportunities for state parks located in the Santa Cruz District.
- Consider the issues and concerns of adjacent land owners and residents during the planning and implementation process; seek input from local, regional, and statewide interests.
- Coordinate with planning efforts in adjacent state parks and with other open space providers and conservation agencies to evaluate potential connectivity and compatibility of recreational and interpretive opportunities and resource management programs.
- Continue to provide vehicle access from Highway 1 to the Park.
- Follow all applicable laws, codes, and policies (See **Appendix H – Existing Laws, Codes, and Policies**).

3.2 ISSUES

During the planning process, several issues surfaced as critical to consider. Addressing these key issues was necessary to balance the Park's resources with the needs and interests of the public. Some of these issues are addressed in the discussion of opportunities below while other are addressed through goals and guidelines presented in Chapter Four.

Visitor taking photo of the Lighthouse.

3.2.1 SENSITIVE CULTURAL RESOURCES

The Park is an important historic location, and any improvements should be respectful of this context. As a property listed on the National Register of Historic Places and as a California Historical Landmark, there are limitations to the type of development that can occur within the Light Station or in areas that could impede views of the Light Station. Any improvements must be evaluated for their potential to impact the site's historic quality and should enhance the experience of visiting a historic destination.

Additionally, although no evidence of prehistoric or historic archaeological materials were found during the initial site survey, future development of the site must consider the potential of discovering such material. Due to the general archaeological sensitivity of the Pigeon Point area, researchers have recommended archaeological and Native American monitoring during all initial ground disturbing activities at the Park.

Visitors on deck of Fog Signal Building.

3.2.2 BALANCING GROWTH WITH PARK CHARACTER

The Park is highly valued by visitors for its secluded location and wild setting, as well as the unique recreational experience of visiting the Light Station. These characteristics are important to retain in future planning efforts because they reflect the sense of place at the Park. CDPR faces growing demands for recreational facilities throughout the state. Recent surveys by CDPR indicate that in the region, there is public interest in new opportunities for recreational activities, including picnicking in picnic areas with tables, fi e pits, or grills; walking for fitness or pleasure on paved surfaces and day hiking on upaved trails; camping in developed sites with facilities; and beach activities, such as swimming, sunbathing, surf play, wading, and playing on beach. While overall park use may increase with new improvements, it is important to balance this new growth with the opportunity for an escape away from everyday life.

3.2.3 PARKING AND INFRASTRUCTURE CAPACITY AT THE PARK

Infrastructure and facilities, including parking and water systems, are key factors in defin ng site capacity. Currently, the existing parking lot is frequently full and visitors park along Pigeon Point Road. Potable water is currently trucked to the Park due to contamination issues with the existing well. A new well is planned for the Easement; however, any new uses will need to carefully consider water supply. The existing leach fie d for the Park is located under the parking lot. Future development at the Park will need to consider capacity and status of this waste disposal facility. There are currently no services in the Bolsa Point Area and the area does not currently contain a well. Park use and level of development in this area is dependent of availability of water and electricity services.

3.2.4 PROTECTING HABITAT AND LISTED SPECIES

It is important to preserve or enhance existing resources, particularly ones that are rare in the area. This includes habitat areas targeted for conservation in the Central California Coast Ecoregion by the California Department of Fish and Wildlife (CDFW), including central dune scrub, northern coastal scrub, coastal terrace prairie, and central coast riparian scrub.[1] Additionally, the riparian areas around Spring Bridge Gulch and Yankee Jim Gulch could provide high-quality habitat and need to be protected.

Coastal terrace prairie in Bolsa Point Area.

Although no sensitive resources were observed in the park, there is potential for nine special status plants and fi e special status species to occur. Vegetation communities within the Park and surrounding vicinity, contain suitable habitat that may support special-status plants including Blasdale's bent grass, coastal marsh milk-vetch, sand-loving wallflowe , stinkbells, coast iris, perennial goldfie ds, marsh microseris, Choris' popcornflowe , San Francisco popcornflowe , and Santa Cruz microseris. Areas within the Park or surrounding vicinity, contain suitable habitat that may support special-status animals including California red-legged frog, San Francisco garter snake, monarch butterfl overwintering populations, and special-status and migratory birds.

3.2.5 AGRICULTURAL INTERESTS AND ADJACENT LAND USES

There is strong support for agricultural interests in San Mateo County. While it is not currently being used for agricultural purposes and has not been actively farmed since the mid 2000's, the Bolsa Point Area contains soils that are considered prime agriculture lands. The suspension of agricultural use at Bolsa Point Area allowed for a regrowth of some important coastal habitat, including plant species in the coastal scrub and coastal terrace prairie vegetation communities. While this area is still considered "disturbed," it has the potential to provide improved habitat value. The LCP allows for conditional uses, including recreational uses, on areas containing prime agricultural land.

Nearly all of the lands surrounding the Park are actively used for agriculture. Although many of the area's farmers work with and support local open space advocates, such as POST, their needs are important to consider in planning for

1 The CDFW Wildlife Action Plan includes conservation targets in the Central California Coast Ecoregion for California grassland, vernal pools, coastal sage scrub, American southwest riparian forest and woodland, northwest coast cliff and outcrop, and north coast deciduous scrub and terrace prairie. The Wildlife Action Plan identifies the following vegetation communities as associated with the target communities: annual grassland, perennial grassland, coastal scrub, valley foothill riparian, and coastal scrub. While the classificat on differs from the vegetation communities identified in the Park, preservation of the identifie communities (central dune scrub, northern coastal scrub, coastal terrace prairie, and central coast riparian scrub) supports CDFW's conservation mission.

the Park. However, balancing local concerns about the preservation of agricultural lands are important to ensure community support for the Park. Specifica ly, it will be important to consider park uses that could interfere with agricultural production. During the planning process, some in the agricultural community expressed concern about equestrian use at the park due to the potential for food crop contamination.

3.2.6 BLUFF EROSION AND SEA LEVEL RISE

Bluff erosion is a problem on many coastal bluffs and there is evidence of erosion within the Park. Social trails to the beach and along the bluff have increased bluff erosion in many areas. Additionally, a number of the key lookouts and fences are located near the bluff edge. Ponding in areas within the Light Station also point to drainage issues and can influence bluff erosion patterns without mitigation. Any further development along the bluffs must consider the potential for increased erosion and will likely need the result of a geotechnical study to evaluate risk. Existing facilities within proximity of the bluff require an evaluation for public safety.

Although predictions vary, the studies along the coast by the Pacific Institute and Phillip Williams and Associates (PWA) estimated that this area could experience four to fi e feet of sea-level rise by 2100, which in turn could increase rates of bluff erosion and damages from storm events.[2] [3] With this reality, park facilities will need to accommodate or avoid bluff erosion hazard areas.

2 California Climate Change Center "The Impacts of Sea-Level Rise on the California Coast" by Matthew Heberger, Healthy Cooley, Pablo Herrera, Peter H. Gleick, and Eli Moore of the Pacific Institute. May 2009. Accessed November 16, 2016. http://pacinst.org/app/uploads/2014/04/sea-level-rise.pdf

3 Pacific Institute. "California Coastal Erosion Response to Sea Level Rise – Analysis and Mapping" by Phillip Williams & Associated, Ltd. March 11, 2009. Accessed November 16, 2016. http://www.energy.ca.gov/2009publications/PWAOPC-1000-2009-013/PWAOPC-1000-2009-013.PDF

Non-native ice plant provides stabilization for the eroded bluff

3.2.7 COASTAL CLIMATE

The Park, like other exposed locations on the central coast, can experience inclement weather at all times of year. Additionally, that weather can come quickly and unexpectedly. Opportunities for site visitors to get out of inclement weather and site features that offer protection from wind and rain allow for longer visits to the Park during a range of weather types.

3.2.8 VISUAL OBSTRUCTIONS

Preservation and enhancement of views of the coast along Highway 1, as well as views of other key features, such as the Pigeon Point Lighthouse (the Lighthouse), will require sensitivity, as well as an appropriate selection of materials.

Although the Lighthouse is visible from a great distance along Highway 1, arrival at the Park is somewhat less inspiring: a modular restroom and large asphalt area is the entryway into the Light Station. Creating a sense of arrival that does not limit views to the historic structures improves public perception of the Park.

3.2.9 WAYFINDING AND CIRCULATION ISSUES

Although there are various signs announcing arrival, there is limited directional information. A stronger wayfind ng program could help users navigate the site more effect vely and help visitors disperse through the site, rather than quickly towards the Fog Signal Building.

Additionally, circulation in the Light Station can be confusing for the day-use visitor, due to numerous activities by diffe ent groups. In particular, spaces reserved for overnight guests can create confusion because some spaces are off-lim ts for the general public, including the Cottages, while some are open to the public, including the northern patio, picnic area, and fi e pit.

Decomposed granite paving in front of restrooms.

Stakeholders indicated specific issues that affec circulation within the Light Station:

Entryway and Restroom Access. The accessible path of travel from the parking lot is along a decomposed granite pathway connected by curb cuts and ramps. This path of travel appears to be rarely used and diffic t to navigate, particularly to the restroom building where the path of travel is circuitous. Additionally, the terrace board used to hold the decomposed granite pathway in place is failing in some areas and plants are encroaching on the pathway.

Paving. The paving in the main pathway directly in front of the hostel check-in is uneven and significant y degraded. This is unsightly upon arrival and creates a tripping hazard.

Accessible Pathway and Drainage Ditch. Between the Cottages and the main pathway, there is a drought-tolerant garden bed, a 4-foot-wide accessible pathway, and a drainage ditch. The garden space is maintained by the hostel to keep it from encroaching on the main pathway. The accessible pathway is very narrow and unusable for patrons in wheelchairs. The drainage ditch along the edge of the pathway impedes its use by wheelchairs and creates a tripping hazard for other patrons. The drainage ditch could potentially be covered with a grate, extending the accessible pathway and reducing tripping risk.

Uneven paving along main pathway in the Light Station

4 The Plan

The Park Plan presents long-term purpose and vision for Pigeon Point Light Station State Historic Park (the Park). It presents management zone recommendations and specific goals and guidelines for achieving this purpose and vision in response to the site conditions and identified issues described in Chapters Two and Three. The Park Plan serves as a guide for future planning efforts to provide site-specific design and detailed management for the Park.

4.1 DECLARATION OF PURPOSE

A Declaration of Purpose defines the primary intent of the park unit. It provides guidance on central goals and presents the primary resources and opportunities within the Park in broad terms.

The previous Declaration of Purpose from the November 1998 Resource Summary, was updated during this General Plan process to reflect recent expansions at the Park, new interpretive themes, and recreational opportunities.

Pigeon Point Light Station State Historic Park Declaration of Purpose:

> *The purpose of Pigeon Point Light Station State Historic Park is to make available to people, for their observation, enlightenment and enjoyment, the historic Pigeon Point Light Station with its unique cultural and scenic values. The Park protects this historic landmark and commemorates the maritime heritage of the light station and the regional story of coastal navigation.*
>
> *The Park will also provide the people with an understanding of the unique and changing landscape of California's Central Coast, including the coastal terrace and marine habitats that serve as home for coastal flora and fauna. Through recreational and interpretive activities, Park visitors can learn about coastal ecosystems and processes.*

4.2 VISION STATEMENT

The vision for the Park is composed of three elements that highlight the Park's potential for the future and its capacity to become:

A Beacon on the Central Coast. The landmark Light Station and historic Pigeon Point Lighthouse (the Lighthouse) draw visitors to the Park. Restoration projects and effect ve expansion into the Bolsa Point Area expand visitor options and enhance opportunities for learning. Enriching the story of regional maritime history provides new opportunities to tell stories of the cultural resources at the site and provide context for the unique story of the Pigeon Point Light Station. Recreational features that bring visitors into the Central Coast landscape, such as trails and beach access points, help create an understanding of the coastal ecosystem and the species that live there. Educational components and interpretive site features enrich that understanding. Restoration and conservation projects ensure that these cultural and natural resources remain assets for future Californians.

Critical Linkage for Regional Open Space. The Park is located in an area that is rich in protected open space. Although the Central Coast is not entirely in public ownership, there are many areas to the north and south of the Park that are protected for recreational and ecological uses. The Coastal Trail links these protected open spaces along the coast and creates a recreational corridor for cyclists, hikers, and equestrians. Expanding and improving the Coastal Trail at the Park not only strengthens the corridor but also sets the stage for future improvements in the areas adjacent to the Park.

A Place to Get Away. The remote location of the Park provides it with a secluded and rugged quality. Park visitors appreciate that the Park has a feeling of being "away from it all." Retaining this sense of place is important to preserve as the Park improves over time. Park improvements recognize this value and maintain it through effect ve site design and management practices.

4.3 CLASSIFICATION

In addition to the Declaration of Purpose and Vision Statement, park management and development is further directed by park unit classification as specified by the California Public Resources Code Section 5019.50-5019.80.

The Park is classified as a "State Historic Park." The Public Resources Code defines historical units as follows:

> *PRC 5019.59. Historical units, to be named appropriately and individually, consist of nonmarine areas established primarily to preserve objects of historical, archaeological, and scientific interest, and archaeological sites and places commemorating important persons or historic events. The ar-*

eas should be of suffi ent size, where possible, to encompass a significan proportion of the landscape associated with the historical objects. The only facilities that may be provided are those required for the safety, comfort, and enjoyment of the visitors, such as access, parking, water, sanitation, interpretation, and picnicking. Upon approval by the commission, lands outside the primary historic zone may be selected or acquired, developed, or operated to provide camping facilities within appropriate historical units. Upon approval by the State Park and Recreation Commission, an area outside the primary historic zone may be designated as a recreation zone to provide limited recreational opportunities that will supplement the public's enjoyment of the unit. Certain agricultural, mercantile, or other commercial activities may be permitted if those activities are a part of the history of the individual unit and any developments retain or restore historical authenticity. Historical units shall be named to perpetuate the primary historical theme of the individual units.

The Public Resources Code additionally establishes sub-classificat on that can be used within a park unit boundary. There are currently no sub-classificat ons within the Park and no proposed sub-classificat ons.

4.4 MANAGEMENT ZONES

Management zones define the use and management scheme for the Park. The zones are distinctive in their environmental conditions, existing resources, and approach to recreation and visitor use. The management zones are shown in Figure 4.1 and described below. In addition, Table 4.1 provides a brief summary of the characteristics of each zone and defines expectations for resource character and management, visitor experience, visitor use, and the range of appropriate facilities. These characteristics form the basis for goals related to carrying capacity described in the Visitor Capacity section of this chapter.

Bluff verlooking Whaler's Cove.

Figure 4.1 includes potential future acquisitions of properties adjacent to the Park. While these properties are not currently owned by CDPR, expanding the Park to include these areas could expand opportunities for recreation and resource conservation. The management zones include approximately 26 acres of potential future acquisitions.

The Lighthouse is an important historic cultural resource in the Light Station.

Historic

The Historic Zone includes the Light Station and will be maintained as a historic cultural resource. The Lighthouse and attached oil house, Fog Signal Building, Carpenter's Shop, and detached Oil House, the Water Sand Filter Building, and the Cottages contribute to the historic status of the Light Station; as such, they are to be preserved as historic structures, and maintained for interpretive opportunities and park services. The Cottages will continue to be managed through a concessionaire's agreement, allowing for overnight accommodations at the Park, which provides a unique visitor experience of being at the secluded point at night. Currently, this Zone is the most active area within the Park and will continue be the most popular destination for most visitors.

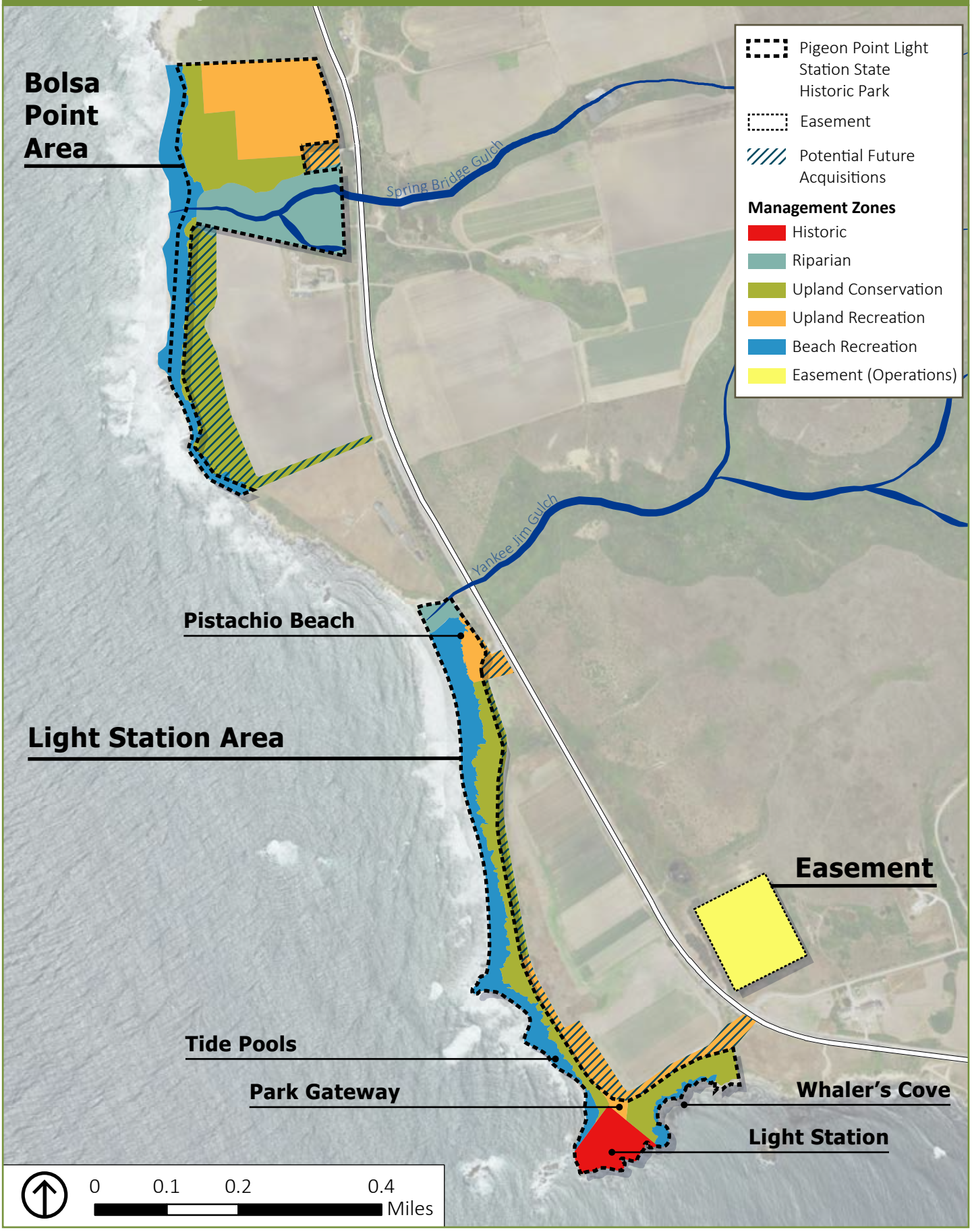
Development within the Historic Zone will be limited to improvements or modificat ons to existing structures, new or updated interpretive exhibits, and circulation or wayfind ng improvements. Crowd management and view obstruction will be major considerations for management within this Zone. New amenities should not obstruct existing views of the Lighthouse and historic elements. Similarly, gathering places and circulation within the Historic Zone should be evident to avoid crowding and restricting views of the historic structures. While the Historic Zone will likely have the highest level of visitation within the Park, it is important that park visitors do not lose the existing sense of being in a secluded and unique destination.

Typical activities within the Historic Zone will include visiting historic structures, learning about the Light Station through interpretive exhibits, touring the grounds and/or the Lighthouse, photographing the Lighthouse or ocean, painting or drawing the landscape, eating an outdoor picnic, and taking in views of the coastline. Currently, the Carpenter's Shop is used as a park store. Expanding the shop's capacity for concessions, including food and drinks, will be permitted in this Zone. Docents are an important part of the interpretive program at the Park and operate predominately in the Historic Zone. A docent lounge will be included in the Historic Zone to provide space for volunteers to prepare for activities and take breaks during their shifts.

Upland Recreation

The Upland Recreation Zone includes developed areas and primary recreational amenities, such as vehicular roads, parking areas, restrooms, picnic areas, and outdoor education gathering places. All visitors will pass through this Zone and will therefore accommodate high levels of activity.

FIGURE 4.1: Management Zones



Within the Light Station Area, there are two spaces designated as Upland Recreation Zone. The first is located at the northern edge of the Park near Pistachio Beach, and the second is located at the southwestern edge of the Park, adjacent to the Historic Zone. The area near the Historic Zone will serve as the gateway to the Park, providing visitors with key wayfind ng and park services information and a gathering place, alleviating crowding.

In the Bolsa Point Area, this Zone includes space for a indigenous agriculture and land stewardship practice area. While the design of this space will be determined through future planning efforts, it is assumed that this space will predominately include open space that is managed in a manner consistent with indigenous practices, including the restoration of native plants and harvesting for traditional uses. The practice area will include limited facilities to accommodate the needs of stewardship practitioners and visitors, such as storage structures, restrooms, and outdoor education spaces. The practice area will have trails to accommodate movement through the practice area, gathering spaces to allow for educational programs, and interpretive features to inform visitors about indigenous land stewardship and coastal habitat restoration. Day use visitors will be permitted to pass through the practice area and it will be maintained for flex ble day use for all park visitors. It is anticipated that a new well would likely be needed in the Bolsa Point Area or in a nearby property to provide potable water for day-use visitors and the indigenous agriculture and land stewardship practice area. Currently, a landscape buffer restricts views of the Upland Recreation Zone in the Bolsa Point Area from Highway 1, a California Department of Transportation (Caltrans)-designated "Scenic Highway." New facilities will be sited such that visual impacts to surrounding land uses and the adjacent Scenic Highway are minimized.

Upland Conservation

The Upland Conservation Zone includes the coastal bluff area and the upland area located inland from the bluff edge. Within the Light Station Area, the Upland Conservation Zone includes the area between the bluff edge and Pigeon Point Road. In the Bolsa Point Area, the Upland Conservation Zone includes central dune scrub and northern coastal scrub habitat areas, and a portion of the remnant coastal terrace prairie located between the bluff and Highway 1. It is anticipated that the western edge of this zone will change over time due to sea level rise and ongoing bluff erosion. Inland from the bluff s edge, this Zone is relatively flat and provides broad views of the Pacific Ocean. Within the Light Station Area, this Zone provides excellent long views of the Lighthouse, making it a popular location for photographers and visual artists.

Due to constraints from bluff erosion and as an effort to protect rare vegetation communities, development within this zone will be limited to trails, including segments of the Coastal Trail; vista points; and picnic areas. Protection and enhancement of central dune scrub, northern coastal scrub, and coastal terrace

prairie vegetation communities will be a priority within this zone, along with the removal of invasive species. Within the Bolsa Point Area, this Zone may be managed in partnership with local tribal groups taking part in the indigenous agriculture and land stewardship practice described in the Upland Recreation Zone.

Visitors will primarily pass through the Upland Conservation Zone to connect to beach access points or to hike or bike along bluff trails. Strategic planting of native shrubs may provide some wind protection in this area, allowing for protected picnic areas for visitors desiring views of the ocean without going to the beach. Trails in this area will be located some distance from parking areas; as such, visitors will have a somewhat private experience on these routes, with minimal interactions with other hikers or bikers. Boardwalks could be considered for areas that pass through sensitive habitat, and interpretive elements could demonstrate habitat conservation and indigenous land stewardship techniques.

Beach Recreation

The Beach Recreation Zone is located between the bluff edge and the Pacifi Ocean. Due to its location, this Zone fluctuates daily with the changing tide and will shift over time as a result of anticipated sea level rise. The area is characterized predominately as a broad sandy beach with large rock outcroppings. Some parts of the Beach Recreation Zone include rocky, impassable sections, which should be closed to the public. The Beach Recreation Zone additionally includes some important coastal habitat areas, such as the tide pools near the Historic Zone and the mouths of Spring Bridge Gulch and Yankee Jim Gulch. These important marine habitats are also valuable learning opportunities for visitors.

Similar to other beaches along California's Central Coast, this beach can be windy and foggy. Visitors will likely visit beaches for short trips to view the marine habitat or walk along the sand. Beach Recreation Zones within the Light Station Area will likely have more visitors than Beach Recreation Zones in the Bolsa Point Area because they are closer to parking areas. Accessing the Beach Recreation Area in Bolsa Point Area requires an approximately 10-minute walk to parking areas. Potentially, this will provide the visitor to the Beach Recreation Zone in the Bolsa Point Area with a more secluded experience. Tide pools near the Historic Zone are popular with education groups and other park visitors. These areas will be monitored for potential habitat impacts and interpreted as key coastal habitat. The Beach Recreation Zone is located between 5 and 20 feet below the bluff. As a result, visitors will be directed to stay off the bluff throughout the Park, but additional management will be necessary in areas with steep drops to ensure visitor safety.

Development within the Beach Recreation Zone will be limited to stairs and accessible trails to the beach. Interpretive and regulatory signage may be utilized to highlight key features of beach habitat and to draw attention to hazards. Existing stairs at Whaler's Cove and the trail to Pistachio Beach in the

TABLE 4.1: Management Zones

	Historic Zone	Upland Recreation Zone	Upland Conservation Zone
Size	3.76 acres	21.78 acres	32.93 acres
Area Description	This zone includes the Lighthouse and the associated buildings which make up the Light Station used to enhance visitor experience and interpretation of the site.	This zone provides most of the visitor services outside of the Historic District. It includes vehicular roads and parking areas, as well as primary recreational amenities, such as restrooms, picnic areas, outdoor education gathering places, and trails.	This zone includes the bluff and the upland area inland of the bluff edge. Most of this zone is between 5 and 20 feet above the beach and provides long views of the ocean and coastline. It is anticipated that the bluff boundary of this zone will change over time with sea level rise and bluff erosion.
Resource Character and Management (Carrying Capacity Objective)	The zone will be maintained to preserve the historical integrity and interpretive value of the light station. Visitors will be encouraged to explore the area. Management actions should accommodate frequent use while protecting natural resources, pubic safety, and sense of place.	The zone will be managed predominately for recreational uses. In the Bolsa Point Area, this zone may include an indigenous agriculture and land stewardship practice area, which may be managed in partnership with local tribal groups.	The zone will be managed primarily for natural resource protection with limited recreational use. In the Bolsa Point Area, this area could be managed in partnership with local tribal groups practicing indigenous land stewardship and assisting with coastal habitat restoration.
Visitor Experience (Carrying Capacity Objective)	Visitors will learn about the historic light station through visiting the historic structures and interpretive exhibits. They will be provided with views of the rocky coastline and marine species. Visitors may also spend the night in the Cottages. This is currently the most active area of the park and will continue to be the most popular destination. » High level of use » High frequency of contact with others	The Upland Recreation areas will serve as the gateway and gathering centers for visitors. It is anticipated that this will be the highest level of visitor activity outside of the Historic District. » Medium to high level of use » High frequency of contact with other visitors	Visitors will primarily pass through this area to connect to beach access points or to hike along bluff trails. Visitors will also interact with interpretive exhibits demonstrating the indigenous agricultural practices being used at the park. » Medium level of use » Moderate frequency of contact with others » Some opportunities for quiet and solitude
Visitor Uses	» Lighthouse tours » Interpretive walks » Ocean and marine life viewing » Park orientation » Picnicking » Environmental education » Overnight stay » Photography » Landscape painting or drawing	» Parking » Picnicking » Birdwatching » Indigenous land management practice interpretation » Day use park programming	» Hiking along trails » Biking along trails » Indigenous land stewardship practice and interpretation » Picnicking » Birdwatching » Photography » Landscape painting or drawing
Range of Appropriate Facilities	» Historic structures » Interpretive exhibits » Tour staging area » Environmental education gathering point » Staff offic » Concessions (gift shop and cafe) » Native plant restoration » Overnight accommodations » Vista points » Seating and picnic areas » Free public wi-fi	» Hiking trails » Multi-use trails (hiking, biking) » Storage facilities » Vehicular and bicycle parking » Restrooms » Outdoor stewardship center » Landscape buffer from Highway 1 (protected viewshed) » Staff and/or concessionaire housing » Electric vehicle charging station » Free public wi-fi » Interpretive exhibits and signage » Wayfind ng trail signage	» Hiking trails » Multi-use trails (hiking, biking) » Beach access (stairs and accessible trails) » Rustic picnic areas (no parking) » Indigenous agriculture/native plant cultivation area » Vista points » Seating » Picnic areas » Wayfind ng trail signage » Interpretive signage

	Beach Recreation Zone	Riparian Zone	Easement (Operations)
Size	21.65 acres	11.82 acres	9.09 acres
Area Description	This zone includes the beach area between the bluff and the Pacifi Ocean. Predominately sandy, the zone additionally includes impassable rock outcropping and important tidal habitat, such as tide pools.	This zone includes the riparian habitat within the park and includes a 100-foot buffer from the creeks. It is characterized by central coast riparian scrub plant species.	This zone is located across Highway 1 from the Light Station Area. It will serve as the location for a well for potable water serving the Light Station Area and for operational needs.
Resource Character and Management (Carrying Capacity Objective)	No formal infrastructure will be placed within this zone, with the exception of beach access points. Protection of key marine habitat, such as the tide pools, should be monitored for potential habitat impacts.	The zone will be managed primarily to preserve sensitive riparian species. Habitat restoration will be the primary management action in the area, although limited opportunities for interpretation and ecological education could be pursued. Necessary trail crossing through this area will require special consideration.	The zone will be maintained to provide water for the Light Station Area. It can also be used for storage of maintenance equipment for park staff.
Visitor Experience (Carrying Capacity Objective)	Visitors will likely visit beaches for short trips to view the marine habitat or walk along the sand The tide pools are popular with education groups and other park visitors. » Low to medium level of use » Moderate frequency of contact with others » Most opportunities for quiet and solitude	The Coastal Trail will pass through this zone but visitors will have limited interaction with the area. Scientists or students in environmental education programs may access the area on a limited basis. » Low to no use by day-to-day park visitors » Limited use by scientists or environmental education groups controlled by permitted access » Significant opportunities for quiet and solitude	This zone will not be open to the public.
Visitor Uses	» Beach hiking » Picnicking » Surfin » Tide pool exploration » Non-motorized boating	» Scientific research » Environmental education field trips » Limited access for recreational park users - hiking or biking trail users cross on bridge or elevated trail	n/a
Range of Appropriate Facilities	» Beach access (stairs and accessible trails) » Regulatory signage	» Interpretive signage » Bridge or elevated trail » Environmental education gathering point	» Storage » Well and potable water facilities * Use of this are beyond the agreed purpose of the easement agreement will require coordination with US Coast Guard

Light Station Area will be retained and maintained. New stairs to the tide pools north of the Historic Zone will help alleviate damage to the bluff caused by social trails in this area. Additionally, the Bolsa Point Area will include stairs and/or trails to access the beach.

Riparian

The Riparian Zone includes the riparian area around Yankee Jim Gulch in the Light Station Area and around Spring Bridge Gulch in the Bolsa Point Area. This Zone includes a 100-foot buffer from creeks or riparian vegetation communities, characterized by Central Coast riparian scrub plant species.

No development will be permitted within the Riparian Zone, with the exception of segments of the Coastal Trail and limited interpretive elements. Biological and hydrological resources are intended to be preserved and protected within this zone and the area should be monitored for the presence of rare or endangered plant and animal species. Trails crossing through this zone will be required to avoid sensitive habitat and dramatic grade changes. Bridges or elevated walkways may be appropriate.

Most park visitors will have minimal interaction with the Riparian Zone with the exception of passing through it on the Coastal Trail. The section of the Coastal Trail within this Zone will be characterized as generally quiet and secluded, as it is set away from the more active areas of the Park. Interpretive signage along the trail could be used to inform visitors of the riparian habitat and the habitat value of these areas. The protected nature of the Zone contributes to its desirability for ecological study or environmental education. Educational groups may access the area on a limited basis.

Easement (Operations)

The Operations Zone is located across Highway 1 from the Light Station Area. A new well and associated infrastructure will be developed to provide potable water to the Light Station Area. The California Department of Parks and Recreation (CDPR) will additionally use the Operations Zone for park maintenance storage. Public access will not be permitted in the Operations Zone.

Development within the Operations Zone will include the well and associated infrastructure, park storage buildings, and a paved service road. The Operations Zone will have a locked gate at the entry point along Highway 1.

Concept Master Plan

The Concept Master Plan, shown in Figure 4.2, provides a preliminary illustration of park uses and layout that reflect the management zones. The figu e identifie major features and considerations for site design. The Concept Master Plan is not intended to specifica ly direct the design of the Park but rather to provide conceptual parameters and a reasonable range of possibilities for future management actions. Specific actions may require subsequent data collection

FIGURE 4.2: Concept Master Plan

and environmental review, as well as partnerships and dialogues with adjacent property owners, public agencies, and non-profit groups.

Circulation Plan

The Circulation Plan for the Park guides the development of Park entrance points, vehicular roads, parking, and trails. These components are highlighted in Figure 4.3 and described below.

Park Entrances

There are a total of three entrances to the Park, located in the Bolsa Point Area, near Pistachio Beach, and near the Light Station. The entrance near the Light Station, currently considered the southern entrance to Pigeon Point Road from Highway 1, will be considered the main Park entrance, and is anticipated to experience the highest level of vehicular traffic There is an existing right-hand turn lane on Highway 1 in the southbound direction. In the northbound direction, there are two lanes for vehicular traffi however, there is not a dedicated turn lane. Consideration should be made to add a left hand turn lane going north.

Vehicular Access

From the main Park entrance in the southern portion of the Park, vehicles travel along Pigeon Point Road to a turnaround located north of the Historic Zone. Vehicular access from park entrances in Bolsa Point Area and near Pistachio Beach will be limited to the parking lot. All other areas of the Park will be closed to vehicles, with the exception of maintenance and emergency vehicles, which will be allowed use of the multi-use trails.

Parking

There are three designated parking areas at the Park, located in the Bolsa Point Area, near Pistachio Beach, and near the Light Station. Appendix C provides an estimate of the amount of parking needed to accommodate maximum Park use, and assumptions regarding vehicle patterns used to calculate these estimates. It is assumed that all parking areas will be unpaved and unstriped, which may affect total parking availability.

The public parking area at Bolsa Point will serve as a staging area day-use visitors hiking along trails, going to the beach, or visiting the indigenous agriculture and land stewardship practice area, or taking part in a program. This parking area is approximately 0.3 acres in size and could contain approximately 25 to 30 parking spaces. These spaces will allow for overnight parking.

The public parking area near Pistachio Beach will serve as a staging area for visitors accessing the beach and hiking the trails at the northern end of Pigeon Point Road. The parking area is approximately 0.12 acres and could contain approximately 8 to 12 parking spaces. These spaces will not allow for overnight parking.

FIGURE 4.3: Circulation Plan

Cyclists traveling away from the Park on Highway 1.

The public parking area near the Light Station will be considered the main parking area for the Park, and will serve the Historic Zone and surrounding amenities. The parking area is approximately 0.7 acres in size and could contain approximately 60 to 70 vehicular parking spaces and three tour or school bus spaces. It is also assumed that recreational vehicles will park in this lot and spaces should accommodate these larger vehicles. Charging parking fees would provide a new source of revenue for the park. Determining a fee structure, including the mechanism for charging fees and the potential for providing free time for short visits, will be determined during future planning efforts

Trails and Beach Access

Park visitors will have access to a network or trails and beach access points throughout the Park. In the Bolsa Point Area, visitors can access the trails from the parking area near Highway 1. The main trail through the area will allow hiking and biking and will be considered a segment of the Coastal Trail, although it currently does not connect to any other Trail segments. Hiking-only trail spurs will bring visitors to the beach and to overlook or picnic areas closer to the bluff edge. Since the Bolsa Point Area is relatively flat, all segments of the trail in this area will be designated at the same low level of diffic ty. Potential points for beach access in Bolsa Point should be investigated. Areas that would allow for accessible trails to the beach would be preferred to utilizing stairs.

In the Light Station Area, visitors will be able to access trails from the two parking areas and from the Historic Zone. If feasible, a portion of the existing Pigeon Point Road will be converted to a hiking and biking trail that runs along the coastal bluff. Hiking-only trails will lead visitors out to vista points and to beach access points. The trail system also includes the existing trails along the southern edge of the Park and connecting to Whaler's Cove. Currently, visitors informally access the beach via the bluff near the tide pools. Creating a formal access point, likely using stairs, should be investigated in future planning efforts Additionally, there are existing beach access points at Whaler's Cove (stairs) and

Pistachio Beach (trail). Both access points should be managed over time to ensure public safety. Additionally, accessibility upgrades could be considered for the Pistachio Beach access trail.

Since the Park is adjacent to active agricultural land uses, it is recommended that equestrian use not be permitted at the Park without future study of potential impact to food production.

Future Trail Connections

The existing and proposed segments of the Coastal Trail provide excellent recreational opportunities within the Park; however they would be significant y enhanced by connections beyond the Park boundaries. Partnerships with agencies and non-profits to extend the trail to existing sections of the Coastal Trail north and south of the Park could close some gaps in the Coastal Trail network, offer ng a more expansive trail experience. In particular, connecting trails south to Gazos Creek at Año Nuevo State Park and connecting the Bolsa Point Area to the Light Station Area within the Park could create nearly 5 miles of continuous Coastal Trail.

Inland connections to Cloverdale or Butano State Park could allow visitors to travel between the coast and the mountains. There is also potential to connect to the Portola Historic Trail, allowing access to another layer of cultural history within the area. Pursuing partnerships and accommodating connections will be an important element of enhancing the trail recreational experience at the Park. These efforts would face challenges related to crossing Highway 1 and coordination with Caltrans.

Visitor Use

Table 4.2 presents an estimate for park visitors resulting from the implementation of the concepts presented in the General Plan. The estimate is based on 2015-2016 visitor counts at the Park and typical use rates at other parks in the San Mateo and Santa Clara Counties. Since visitor use at the Park varies by season due to holiday schedules and coastal climate, the table presents an estimate of Park visitation by season. This estimate assumes that visitors to the Park will visit multiple areas and participate in multiple uses. Notably, the estimate assumes that that 90 percent of visitors will visit the Historic Zone to see the Light Station while also participating in other park uses. The estimate also assumes that visitors to the Bolsa Point Area will include those who are hiking the trails within this area, picnicking at the beach or along the bluff, and visiting the indigenous agriculture and land stewardship practice area. Appendix C presents the assumptions and calculations used to determine potential visitor use. These estimates only take into account the section of trails currently located within the Park. If the Coastal Trail continues beyond the Park or CDPR acquires additional land to extend the Coastal Trail, these estimates will likely increase, particularly if the trail gaps between open space areas are closed.

TABLE 4.2: Estimate of Total Visitor Use

	Annual	Spring Apr to June	Summer July to Sept	Fall Oct to Dec	Winter Jan to Mar
		29%	30%	21%	21%
Total Park Use	248,330	70,860	74,470	51,930	51,090
Historic Zone (90% of all visitors)	223,500	63,770	67,020	46,740	45,990
Bolsa Point Zones (25% of all visitors)	42,720	12,190	12,810	8,940	8,790
Pistachio Beach Area (7% of all visitors)	15,530	4,430	4,660	3,250	3,200
Individual Uses					
Trails	65,700	18,750	19,710	13,740	13,520
Picnic	14,320	4,090	4,290	2,990	2,950
Beach	62,110	17,720	18,620	12,990	12,780
Environmental Education*					
Exploring New Horizons	2,100	790	-	790	530
School Group Visits	4,210	1,580	-	1,580	1,050
Indigenous Agriculture and Land Management Practice	6,780	1,930	2,030	1,420	1,400
Overnight Accommodations	17,510	5,000	5,250	3,660	3,600

* Environmental Education typically follows the school calendar. Although young people may visit the Park during the summer, it will likely be part of summer camp program or family vacation. Additionally, most programs are not active in December due to school breaks during that month.

4.5 GOALS AND GUIDELINES

This section presents goals and guidelines for implementing the Declaration of Purpose and Vision Statement for the Park. Goals and guidelines are defined by the California Department of Parks and Recreation General Planning Handbook as follows:

"Goal" refers to a general, overall, and ultimate purpose, aim or intent towards which management will direct effort

"Guideline" refers to a general set of parameters that provide direction for accomplishing goals.

Some topics may fall within multiple goals and guidelines; for example, trails may be considered under visitor experience as well as access and circulation. Where this occurs, a note directs the reader to see the relevant section of the guidelines. Additionally, some guidelines directly relate to future planning and site design efforts

Guidelines that represent necessary studies or future coordination are noted with an **asterisk (*)** and listed collectively in **Table 4.3**. Guidelines that relate to future site design will be addressed during future project-level planning processes at the Park.

4.5.1 FUNDAMENTAL PARKWIDE GOALS

The following are overall goals for the Park. They reflect the Declaration of Purpose and primary management intent of the Park.

- Primarily, preserve and protect the historic facilities that allow visitors to experience the Light Station and learn about maritime history.
- Maintain the visitors' sense of being away through strategic park development and balancing visitor use throughout the Park.
- Support the Coastal Trail and expansion of the trail through the area. Assist in the development of other trail connections through the region.

4.5.2 VISITOR EXPERIENCE

Visitors to the Park will have the opportunity to engage with the rich cultural and natural resources of the Park. Ensuring that this experience is enjoyable for visitors will depend on the ability of the Park to offer quality recreational options that effecti ely utilize the site and meet the needs of California's growing population. The following sections include the recreational program of the Park and considerations for supporting the diversity of Park visitors.

Bluff verlooking Whaler's Cove.

Recreation

This section includes goals and guidelines to ensure that the Park provides a high quality recreational experience for all visitors.

RECREATION GOALS:

- Prioritize learning about and interacting with maritime history as the primary recreational activity.
- Expand recreational options for site visitors, such as hiking, biking, and education, while protecting resources.
- Continue to support low-cost overnight accommodations along the Central Coast.

RECREATION GUIDELINES:

EXPERIENCE.1 Plan new facilities or expand existing facilities that respond to the recreational needs of the Central Coast, including hiking, biking, picnicking, environmental education, cultural history interpretation, birdwatching, photography, coastal observation, and participation in beach activities.

EXPERIENCE.2 Locate and design recreational facilities to be compatible with adjacent uses. Integrate facilities with historical resources located within the Park.

EXPERIENCE.3 Plan development in tandem with regional planning effort and as part of a regional open space network, including efforts from San Mateo County Parks, Peninsula Open Space Trust (POST), and the Coastal Conservancy, as well as other State parks, including Año Nuevo State Park and Butano State Park.*

Maritime History and Light Station

This section includes guidelines in support of the recreational goal to create a destination for maritime historical tourism.

MARITIME HISTORY AND LIGHT STATION GUIDELINES:

EXPERIENCE.4 Restore and protect historic facilities within the Historic Zone in a manner consistent with an expanded Period of Significance of 1871-1974, beginning with the year in which construction of the Lighthouse began and ending with the year of the facility's automation. Avoid new development within the Light Station, and utilize historic buildings and structures for park purposes, such as interpretive museums, concessions, or educational space.

EXPERIENCE.5 Continue to fundraise for the restoration of the Lighthouse.

EXPERIENCE.6 Continue to allow overnight use at the Park in the Cottages through a concessionaire's agreement with a group that prioritizes low-cost accommodations.

See **Cultural Resource Management Goals and Guidelines** in the Resource Management and Protection section for additional considerations for historic structures.

See **Interpretation Goals and Guidelines** for visitor tours in the Lighthouse.

Beach Access

This section includes guidelines for the development of beach access for beach recreational activities.

BEACH ACCESS GUIDELINES:

EXPERIENCE.7 Construct beach access points at areas with lowest potential for bluff erosion. Prioritize access points that are Americans with Disabilities Act (ADA)-compliant. Include stairs where ADA-compliance cannot be achieved.

EXPERIENCE.8 Evaluate materials for stairs and ramps for longevity in coastal conditions. Monitor beach access points for erosion and changes in grade.

Picnic Areas

This section includes guidelines for picnic areas to support this recreational use within the Park.

PICNIC AREAS GUIDELINES:

EXPERIENCE.9 Expand capacity for picnics at the Park. Develop concept design for new picnic areas at the entry and along the main pathway in the Historic Zone and along the bluff in the Bolsa Point Area.

EXPERIENCE.10 Ensure that picnic areas are protected from wind, where feasible.

EXPERIENCE.11 Utilize consistent picnic table design throughout the Park. Add ADA-compliant picnic tables in areas with highest anticipated use.

EXPERIENCE.12 Allow park patrons to dedicate picnic tables through California State Parks Foundation Commemorative Picnic Table Program.

See **Technology Guidelines** in the Operations section for considerations for reservations for day use activities or tours.

See **Trails Goals and Guidelines** in the Access and Circulation section for hiking and cycling visitor uses.

See **Accessibility Guidelines** in the Access and Circulation section for accessibility considerations for park features.

Diversity

This section includes goals and guidelines to support a diverse visitor population.

DIVERSITY GOALS:

» Attract diverse and underrepresented park users to the Park.

DIVERSITY GUIDELINES:

EXPERIENCE.13 Manage the Park in a manner consistent with needs identifie in CDPR's Statewide Comprehensive Outdoor Recreation Plan to ensure that the Park reflects the need of California's changing demographics.

EXPERIENCE.14 Promote diversity in ethnicity, gender, and age in docent program and park staffin

EXPERIENCE.15 Emphasize diversity in interpretive features, wherever possible. Interpretive panels that display stories and information about diverse groups of people such as stories of indigenous practices, Spanish exploration with the De Anza expedition, or African American history in and around Pigeon Point will help engage a diverse user group by telling stories that may relate to their past.

See **Access and Circulation goals and guidelines** for alternative transit programs that might improve park access for potential visitors with limited vehicular access.

See **Visitor Services goals and guidelines** for Park services that could enhance the visitor experience.

See **Operations Support and Docent Program guidelines** in the Operations section for other considerations for the docent program.

4.5.3 ACCESS AND CIRCULATION

The Park is located in a remote location along the Central Coast and is primarily accessed by car or bus. Vehicular movement into and within the Park, as well as interaction between trail users and drivers, are important considerations for park planning. This section includes goals and guidelines to promote effi ent vehicular and non-vehicular movement throughout the Park and to nearby destinations. Additionally, this section includes considerations for accessibility. The Park currently includes accessible routes to major features within the Historic Zone. Future efforts will continue to provide ADA-compliant facilities wherever feasible.

ACCESS AND CIRCULATION GOALS:

- Adequately accommodate vehicular staging for park visitors and provide safe access for walking and biking through the Park site and to regional connections.
- Minimize conflicts between user groups, including drivers, pedestrians, and cyclists.
- Where possible, the Park facilities should be universally accessible.

ACCESS AND CIRCULATION GUIDELINES:

ACCESS.1 Coordinate and develop a parkwide Roads and Trails Management Plan that evaluates the Park's entire circulation system and guides the placement and use of future roads and trails.*

ACCESS.2 Investigate alternative transportation options to the Park. Shuttles or other smaller buses could be explored for park visits or special events.

ACCESS.3 Provide bicycle parking facilities near the entry to the historic Light Station.

Vehicular Traffic

This section includes guidelines for vehicular traffi to support access and circulation goals within the Park.

VEHICULAR TRAFFIC GUIDELINES:

ACCESS.4 Consult with San Mateo County about potential acquisition of Pigeon Point Road.

ACCESS.5 Consider providing vehicular access to the southern portion of Pigeon Point Road and developing a turnaround to restrict vehicular access along the northern section. Conduct traffi study to determine feasibility.*

ACCESS.6 Coordinate with Caltrans to develop and permit new park entrance at Bolsa Point. Ensure that design of new entrance is consistent with Caltrans' Highway Design Manual, Right of Way Manual, and Project Development Procedures Manual. Coordinate with Caltrans to add Park signs north and south of all park entrances along Highway 1 to alert drivers of the upcoming park entrance. Consider coordination with Caltrans to add a left hand turn lane south to north to enter the southern entrance to the Light Station Area.*

Vehicular Parking

This section includes guidelines for vehicular parking to support access and circulation goals at the Park.

VEHICULAR PARKING GUIDELINES:

ACCESS.7 Consult with adjacent property owners about potential acquisition of properties adjacent to the Light Station and Pistachio Beach for future parking lots.*

ACCESS.8 Provide adequate parking in designated lots in Bolsa Point, near Pisatchio Beach, and near the Historic Zone to prevent parking along Pigeon Point Road or along Highway 1. Designate space along Pigeon Point Road as overflow parking during special events or days with high visitation.

ACCESS.9 Develop plan and implement traffi calming at any point where pedestrians are likely to cross Pigeon Point Road.

ACCESS.10 Provide space for bus drop-off at the entry to the Historic Zone and designated parking for buses in the adjacent parking lot.

ACCESS.11 Provide adequate space for recreational vehicles (RV's) in all parking lots.

See **Technology Guidelines** in the Operations section for considerations for electric vehicle parking.

Trails

This section includes guidelines for trails related to the access and circulation program at the Park.

TRAILS GOALS:

» Expand the existing network of trails at the Park and create linkages to nearby open spaces.

TRAILS GUIDELINES:

ACCESS.12 Increase overall length of trail network by creating new trails. Formalize existing bluff trail along Pigeon Point Road and develop

new trails in the Bolsa Point Area that connect visitors from the staging area to the beach and along the bluff

ACCESS.13 Provide trail related amenities, such as wayfind ng signs, maps, benches, dog courtesy stations, and trash/recycling receptacles. Connect trails to existing vista points along Pigeon Point Road and evaluate the location of new vista points and locations for new benches in other areas of the Park.

ACCESS.14 Create formal trail alignments that encourage trail users to stay on established paths to reduce habitat disturbance, especially in areas of natural or restored central dune scrub and northern coastal scrub communities or in proximity to Environmentally Sensitive Habitat Areas (ESHA). Consider and evaluate the use of elevated crossing or boardwalks through ESHA. Inform the public about the benefit of using designated pathways and potential habitat damage and public safety concerns associated with utilizing unoffi al social trails.

ACCESS.15 Use the CDPR's Trails Handbook to guide trail design, construction, management, and maintenance. Utilize permeable trail surfaces and sustainable trail building techniques, where feasible.

ACCESS.16 Ensure that trails do not interfere with typical flow of water over or through the bluff edge. Regularly maintain and monitor trails for signs of increased erosion.

Provide accessible trails, access points, and facilities for all people regardless of physical abilities. See **Natural Resources Guidelines** in the Resource Management and Protection section for considerations of plant and animal species in trail development.

See **Visual Resources Guidelines** in the Resource Management and Protection section for considerations for vista points.

Multi-use (Hiking and Biking) Trails

This section includes guidelines for multi-use trails, which include trails that allow both hiking and biking.

MULTI-USE TRAILS GUIDELINES:

ACCESS.17 Allow for hiking and biking along segments of the Coastal Trail within the Park. Consider closing a segment of Pigeon Point Road for use as a segment of the multi-use Coastal Trail. Incorporate techniques described in CDPR's Best Management Practices for Road Rehabilitation: Road to Trail Conversion where applicable.

ACCESS.18 Maintain all multi-use trails for emergency and maintenance vehicle access.

Trail Connections

This section includes goals and guidelines for trail connections from the Park to other regional destinations.

TRAIL CONNECTION GOALS:

- The Park is to serve as a gateway, staging, or stopping point for longer excursions through San Mateo County and along the Coast.
- Expand connections from the Park to neighboring State parks, including Año Nuevo State Park, Butano State Park, and Bean Hollow State Beach.
- Incorporate the Park in regional trail planning efforts, such as plans for the Coastal Trail and the Portola National Historic Trail.

TRAIL CONNECTIONS GUIDELINES:

ACCESS.19 Work with San Mateo County, the Coastal Conservancy, the California Coastal Commission, POST, and other CDPR units to extend the Coastal Trail through the Park and along adjacent properties.*

ACCESS.20 Participate in trail planning for the Portola National Historic Trail to coordinate future connections to the Park.*

Wayfinding and Signage

This section includes goals and guidelines for wayfind ng and signage to support effecti e circulation within the Park.

WAYFINDING AND SIGNAGE GOALS:

- Utilize consistent aesthetic style and approach to directional and trailhead signage.

WAYFINDING AND SIGNAGE GUIDELINES:

ACCESS.21 Develop signage standards for use at trailheads and throughout the Park. Consider the unique character of the Park and appropriateness of signage related to the historic period of significance. Utilize CDPR's Brand Standards Handbook to guide signage development.*

ACCESS.22 Utilize signage to alert visitors of public safety issues and park resource conservation efforts. Provide information for park orientation, such as directional signage and maps. Provide regulatory signage, including park rules and notifications to indicate divisions between public and private land.

ACCESS.23 Utilize California Coastal Trail emblems to distinguish the trail through the Park.

Accessibility

This section includes guidelines to support universal access at the Park.

ACCESSIBILITY GUIDELINES:

ACCESS.24 Ensure that new facilities, including trails, picnic areas, and walkways, are developed in accordance with the ADA and CDPR's *Accessibility Guidelines* where feasible considering site conditions.

ACCESS.25 Develop all signage, interpretive exhibits, and park publications in accordance with the *Americans with Disabilities Act (1990)* and CDPR's *Accessibility Guidelines*.

ACCESS.26 Create alternative experience within the Fog Signal Building for visitors unable to access the Lighthouse.

4.5.4 RESOURCE MANAGEMENT AND PROTECTION

The unique cultural resources and physical setting of the Park along the coast requires careful site management and thoughtful site planning. Existing policies and programs help to guide management of park resources. As a historic landmark, the Light Station is protected by federal and State laws that dictate appropriate management policies. CDPR's Department Operations Manual (DOM) provides policies for managing coastal ecosystems, including the geological, hydrological, plant, and animal resources there. The goals and guidelines presented in these sections integrate these management policies with site conditions.

Cultural Resource Management

This section presents goals and guidelines for the preservation of cultural resources, including features relating to the Light Station and considerations for prehistoric resources if discovered at the Park.

CULTURAL RESOURCE MANAGEMENT GOALS:

» Preservation of the significant historic resources of the Light Station, including structures, artifacts, and objects.

» Park development and management will include surveying for and investigation of prehistoric and historic archaeological sites and objects. If found, significant archaeological sites will be preserved and protected at the Park.

Historic Structures and Cultural Landscapes

This section includes guidelines to support cultural resources goals at the Park.

HISTORIC STRUCTURE AND CULTURAL LANDSCAPES GUIDELINES:

CULTURAL.1 Preserve and protect buildings contributing to the historic status of the Light Station utilizing the treatment recommendations and maintenance requirements outlined in the 2013 Historic Structures Report for Pigeon Point Light Station. If feasible, renovate the Lighthouse and open it to the public. All work within the Light Station shall be carried out in accordance with

The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings.

CULTURAL.2 Extend the Period of Significance to the date of Lighthouse automation (1974). Expand the Primary Historic District to include the Cottages and the Water Sand Filter Building since they were constructed prior to automation evaluate their historic status.*

CULTURAL.3 Complete a cultural landscape analysis for the historic Light Station. The Historic Structures Report recommends rehabilitation of the landscape, including fencing and pathways, consistent with the period of significance for the Light Station.*

See **Recreation Goals and Guidelines** in the Visitor Experience section for use of historic structures to enhance the visitor experience.

See **Geology and Hydrology Goals and Guidelines** in the Physical Resources section for geotechnical considerations for the Historic Zone.

Museum Collections

The Scope of Collections Statement from May 2016 describes 21 items that comprise the Park's museum collection and identifies goals to use, expand, and improve the collection.

MUSEUM COLLECTIONS GUIDELINES:

CULTURAL.4 Regularly update the Scope of Collections Statement to provide a current museum collection management plan for the Park as outlined in the Department's Guidelines for Writing a Scope of Collections Statement.

CULTURAL.5 Maintain collections such as archaeological materials, natural history specimens, architectural elements, and historic objects to document people, events, and natural or cultural features that are central to the Park's purpose, and that support the park's interpretive themes and programs. Catalogue all museum objects using CDPR's statewide museum collections database.

CULTURAL.6 Provide safe, secure spaces for storage and display of museum collections. Maintain a regular maintenance schedule that includes monitoring the collections for conservation needs. Follow policies and procedures for collections care as outlined in the DOM Chapter 2000, Museum Collections Management. Prioritize new acquisitions that can be displayed at the Park and do not require storage.

CULTURAL.7 Establish dedicated, secure, and climate-controlled space for object curation, collections storage, museum records

management, and research for the museum collections. Any construction of new facilities (such as the regional collection facility under development at Rancho del Oso Nature Center in Big Basin Redwoods State Park), rehabilitation or reuse of existing facilities, or reconstruction of historic structures should consider including dedicated, secure, and climate-controlled space for the Park's museum collection.

Archaeological Resources

In developing the proposed project, CDPR has provided for the protection of archaeological resources with the development of guidelines for potential archaeological resources at the Park. The following guidelines would ensure that archaeological resources, if discovered, would be appropriately managed and protected.

ARCHAEOLOGICAL RESOURCES GUIDELINES:

CULTURAL.8 Conduct additional archaeological investigation prior to the implementation of any park projects. If archaeological resources are found during the survey, recommendations for management will be developed by an archaeologist, and will include but not be limited to changing project plans to avoid the resource, creating interpretive displays or other public outreach plans, or conducting data recovery efforts in consultation with the culturally affi ated Native American tribes or individuals. These will include a detailed survey of all areas where ground disturbance is proposed.

CULTURAL.9 Provide archaeological and Native American monitoring, as appropriate, during initial ground disturbance for any projects in the Park and follow appropriate protocols in the event that archaeological resources and/or human remains are found. Archaeological monitoring will be conducted under a pre-approved cultural resources monitoring plan prepared by a Secretary of the Interior-qualified archaeologist.

CULTURAL.10 Utilize inadvertent discovery protocols during park development: halt work within 100 feet of the find if archaeological resources or human remains are identified and allow for review from qualifie archaeologist or San Mateo County coroner, respectively. Follow appropriate protocols if archaeological resources are found to be significant and/or if human remains are found to be Native American (including provisions set forth by including Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5).

See **INTERPRETATION.3** in the Interpretation and Education section for considerations for an indigenous agriculture practice in the Bolsa Point Area.

Physical Resource Management

This section includes considerations for geologic and hydrologic processes, such as coastal erosion, stream flo , and soil development, which affect the physical condition of the Park. These processes can be accelerated or altered by human uses, such as the development of new facilities or the introduction of new uses. The goals and guidelines presented here are intended to accommodate these natural processes and prevent potential impacts.

Section 0307.3.2 of the DOM defines Coastlines and Coastal Erosion, and Section 0307.3.2.1 presents the CDPR Coastal Development Siting Policy. Section 0306 of the DOM presents policies for Water Resources, including watershed management, stream management, watershed and stream protection, stream restoration, floodp ain management, wetlands management, coastal lagoon and breaching, water quality and quantity, and water rights. Section 0308.1 of the DOM includes policies for soil protection within parkland managed by CDPR. The Park will observe these policies in park management plans.

Geology and Hydrology

This section presents goals and guidelines to support geologic and hydrologic process and resources.

GEOLOGY AND HYDROLOGY GOALS:

- Limit human impact on geologic and hydrologic processes and promote healthy water quality in streams, coastal waters, and groundwater.
- Protect visitors and property from harm due to natural geologic and hydrologic processes.
- Preserve natural hydrological processes within and around Spring Bridge Gulch and Yankee Jim Gulch and along the Park's coastal bluff

GEOLOGY AND HYDROLOGY GUIDELINES:

GEO/HYDRO.1 Monitor geologic and hydrologic processes and document changes as they relate to Park resources to assure preparedness for slope failure, flood, or other disaster events.

GEO/HYDRO.2 Where possible, develop Park facilities outside of the bluff setback area.

GEO/HYDRO.3 Complete geotechnical evaluation of Historic Zone, including detailed estimates of rate of bluff erosion and potential impact on historic structures. Conduct additional site-specifi geotechnical analysis prior to locating and designing roads, trails, structures, and utilities throughout the site.*

GEO/HYDRO.4 Complete a detailed and comprehensive soils report, surface and subsurface hydrology report, and drainage analysis prior to developing roads, trails, structures, and utilities. Complete a wastewater management plan and septic plan prior to

developing new restroom or facilities with potable water. Prioritize the use of vault or composting toilets at the Park to reduce need for leach fie d. Ensure that park development or activities do no increase net water flow over or through existing bluff.

GEO/HYDRO.5 Restrict access to bluff area in the Historic Zone to preserve bluff condition and protect public safety.

GEO/HYDRO.6 After a large earthquake event (i.e., magnitude 5.0 or greater within 50 miles of the project site), a structural specialist to inspect all project structures and features for damage, as soon as is possible after the event. If any structures or features have been damaged, they will be closed to visitors, volunteers, residents, contractors, and staff

GEO/HYDRO.7 Suspend all construction activities during heavy precipitation events (i.e., at least 1/2-inch of precipitation in a 24-hour period) or when heavy precipitation events are forecast.

GEO/HYDRO.8 Review Coastal Development permit history for all development prior to implementing future development at the Park.*

See **Beach Access Guidelines** in the Visitor Experience section for bluff erosion considerations at beach access points.

See **Trails Guidelines** in the Access and Circulations section for bluff erosion considerations in trail development.

Water Quality

This section includes guidelines to promote healthy water quality at the Park and to support geologic and hydrologic goals.

WATER QUALITY GUIDELINES:

GEO/HYDRO.9 The project will comply with all applicable water quality standards as specified in the Central Coast Basin Plan developed by the Regional Water Quality Control Board (RWQCB). Prevent degradation of existing surface and groundwater.

GEO/HYDRO.10 Reduce storm water run-off by minimizing the amount of impervious surfaces in the Park and incorporating pervious surface treatments where feasible. Utilize *California Stormwater Best Management Practice (BMP's) Handbook* for filtering pollutants from impervious areas. Plastic monofilament of any kind (including those labeled as biodegradable, photodegradable, or UV-degradable) shall not be used. Only natural burlap, coir, or jute wrapped fiber rolls shall be used.

Soils

This section includes guidelines to ensure soil health and to support geologic and hydrologic goals.

SOILS GUIDELINES:

GEO/HYDRO.11 Minimize soil compaction and excavation throughout the Park and reduce potentially irreversible impact to soils within the Park.

GEO/HYDRO.12 Employ sustainable agriculture practices for building soil health in areas managed for indigenous agriculture practice. Recommend the enrichment of soils with compost, compost tea, and other natural soil amendments. Avoid the use of synthetic fertilizers to the extent feasible.

GEO/HYDRO.13 Do not drive track-mounted or heavy-wheeled vehicles through the Park during the rainy season or when soils are saturated to avoid compaction or damage to soil structure.

Natural Resource Management

This section presents goals and guidelines for plants and wildlife within the Park. Section 0310 of the DOM presents policies for Plant Resources, including plant management, natural succession, genetic integrity, plant species of concern, plant protect, exotic plants and their removal, and plant material disposition. Section 0311 of the DOM presents policies for Animal Resources, including genetic diversity; habitat management; beach grooming; habitat restoration; habitat enhancement; special animals; animal feeding; injured, sick, or dead animals; animal releases; native and non-native animal control; and aquatic habitat. The Park will observe these policies in park management plans.

NATURAL RESOURCE MANAGEMENT GOAL:

» Preserve and protect natural resources within the Park as part of an interconnected coastal habitat zone that supports natural processes and integrates human recreation.

Vegetation

This section includes goals and guidelines for the management of vegetation resources.

VEGETATION GOALS:

» Establish locally native vegetation communities.

» Restore and enhance California native grassland, coastal scrub, central dune scrub, and coastal terrace prairie vegetation communities.

» Preserve riparian and wetland habitat at the Park.

VEGETATION GUIDELINES:

VEGETATION.1 Prepare a Vegetation Management Statement that identifie key vegetation types and establishes guidelines for management. Identify vegetation communities within the Park that are heavily affected from previous uses, such as agriculture, and implement restoration programs to re-establish native plant species.*

VEGETATION.2 Prioritize native vegetation restoration areas, beginning with areas which already have native plant community strongholds. Maintain or enhance areas that have been previously restored with native plants and expand outward. Exclude disturbed areas from intact native communities within the Park. Exclusion methods may include protective fencing around natural or restored native habitats to prevent foot traffi and unintended dispersal of non-native seeds into native plant areas.

VEGETATION.3 Control and/or eradicate non-native plant iceplant (*Carpobrotus edulis, Carpobrotus chilensis*) within the disturbed dune scrub vegetation community to the extent possible considering potential impacts to bluffs or underlying soils. Manage other invasive non-native species throughout the Park to prevent establishment and spreading.

VEGETATION.4 Utilize volunteers for non-native and invasive plant removal and restoration with native species per the guidelines set up in the Vegetation Management Statement. Provide monitoring and maintenance following planting to ensure the long-term health and survival of native plant communities.

VEGETATION.5 Consider the use of prescribed burns to reduce non-native annual grass populations, such as ripgut brome (*Bromus diandrus*), wild oats (*Avena fatua*), annual fescue (*Festuca perennis*) and rattlesnake grass (*Briza maxima*), among others, and promote native perennial grasses and herbaceous forb populations in coastal terrace prairie and grassland vegetation communities. Utilize prescribed burns in combination with other land use management practices that promote natural ecological practices. Prior to implementing prescribed burns, develop a Prescribed Burn Fire Plan that reflects state and federal regulations, applies the most up-to-date fi e science technologies, and includes consideration of other park resources and public safety.

VEGETATION.6 Partner with local tribal group to establish an indigenous agriculture and land management center at Bolsa Point that

emphasizes the cultivation of native plant species used in indigenous practices. Work with the group to design the center and develop a Memorandum of Understanding (MOU) to establish roles and responsibilities of CDPR and the partnering group. See **Operations Goals and Guidelines** for land management priorities for fi e protection and natural resource enhancement.

Sensitive Natural Communities and Special Status Plants

This section includes guidelines that relate to sensitive vegetation within the Park.

SENSITIVE NATURAL COMMUNITIES AND SPECIAL STATUS PLANTS GUIDELINES:

VEGETATION.7 Avoid or limit park development in proximity to environmentally significant habitat areas (ESHAs) and comply with restrictive buffers around these resources when siting new roads, trails, signs, structures, and utilities and any other future park development.

VEGETATION.8 Monitor park for special-status plants that have the potential to occur within the Park, including: blasdale's bent grass (*Agrostis blasdalei*), coastal marsh milk-vetch (*Astragalus pycnostachyus* var. *pycnostachyus*), sand-loving wallflowe (*Erysimum ammophilum*), stinkbells (*Fritillaria agrestis*), coast iris (*Iris longipetala*), perennial goldfields (*Lasthenia californica* ssp. *Macrantha*), marsh microseris (*Microseris paludosa*), Choris' popcornflower (*Plagiobothrys chorisianus* var. *chorisianus*), San Francisco popcornflower (*Plagiobothrys diffuse*), Santa Cruz microseris (*Stebbinsoseris decipiens*). If special-status plant populations within the Park cannot be avoided while implementing the proposed project, CDPR shall consult with the appropriate agencies to develop measures appropriate to the species. To the extent feasible, special-status plants that would be impacted by the project shall be relocated within local suitable habitat. This can be done either through salvage and transplanting or by collection and propagation of seeds or other vegetative material. Any plant relocation would be done under the supervision of a qualifie botanist.

VEGETATION.9 Prior to the implementation of any park projects conduct site specific biological assessment of riparian and potential wetland areas in coordination with California Department of Fish and Wildlife (CDFW), US Fish and Wildlife Services (USFWS), California Coastal Commission, and the US Army Corps of Engineers prior of all areas where ground

disturbance is proposed. A formal wetland delineation shall be performed for Yankee Jim Gulch and Spring Bridge Gulch. Should avoidance of riparian habitat or wetland and other waters under the proposed project be infeasible, CDPR shall restore temporarily impacted areas to pre-project conditions, and mitigate for any permanent impacts through onsite creation or enhancement of wetlands or riparian habitat. All wetland restoration, enhancement or creation actions would be described in a site-specific estoration plan subject to approval of the regulatory agencies. Restoration plans required to be implemented by CDPR under the proposed project for the Park may be consolidated into a single plan with agency coordination. See **Wildlife.6** and **Appendix F** for the Habitat Restoration Plan for California Red-legged Frog.

VEGETATION.10 Coordinate with CDFW on the conservation of vegetation communities targeted for conservation or associated with these targeted communities, including California grassland, coastal scrub, central dune scrub, and coastal terrace prairie to achieve goals set out in the California Statewide Action Plan.

VEGETATION.11 Employ Best Management Practices (BMPs) for erosion control to avoid runoff of project-related sediments, vehicle flu ds, and other liquids into sensitive plant communities.

See **Trails Guidelines** in the Access and Circulations section for considerations for vegetation resources in trail development.

Wildlife

This section includes guidelines for the management of animal resources to support natural resources goals.

WILDLIFE GUIDELINES:

WILDLIFE.1 Limit fragmentation of habitat within the Park by clustering development and controlling visitor use patterns. Coordinate with other agencies and non-profit groups to promote effect ve management of wildlife habitat and support the development of wildlife corridors.

WILDLIFE.2 Ensure that wildlife have limited to no access to trash. Utilize effecti e animal-proof waste containers throughout the Park. Educate site visitors about the importance of not feeding wildlife or securing food and waste.

WILDLIFE.3 Encourage and support scientific studies within the Park to survey or examine wildlife populations or habitat areas.

WILDLIFE.4 Cover project excavations, holes, and ends of pipes at night with plastic or another approved method that prevents animals from entering.

Special Status Animals

This section includes guidelines that relate to special status species within the Park.

SPECIAL STATUS ANIMALS GUIDELINES:

WILDLIFE.5 Monitor park for special-status animals that have the potential to occur within the Park, including but not limited to: California red-legged frog (*Rana draytonii*), San Francisco garter snake (*Thamnophis sirtalis tetrataenia*), monarch butterfly (*Danaus plexippus*) California overwintering population, special-status birds (Cooper's hawk (*Accipiter cooperii*), saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*), and northern harrier (*Circus cyaneus*)), other breeding and migratory birds (e.g. red-tailed hawk (Buteo jamaicensis), red-shouldered hawk (*Buteo lineatus*), great horned owl (*Bubo virginianus*), and American kestrel (*Falco sparverius*), Anna's hummingbird (*Calypte anna*), Bewick's wren (*Thryomanes bewickii*), white-crowned sparrow (*Zonotrichia leucophrys*), American robin (*Turdus migratorius*), American crow (*Corvus brachyrhynchos*), Wilson's warbler (*Cardellina pusilla*), western bluebird (*Sialia Mexicana*), California towhee (*Melozone crissalis*)).

WILDLIFE.6 Prior to the implementation of any park projects conduct site specific biological assessment to determine the presence of any special status species. Follow appropriate protocols for protecting wildlife during construction. Should special status species be identified or presumed present during such an assessment, the appropriate agencies will be consulted with and permits acquired, if applicable.

WILDLIFE.7 Implement the conservation measures found in **Appendix F: California red-legged frog and San Francisco garter snake Conservation Measures**, to minimize or eliminate potential adverse impacts on California red-legged frog and San Francisco garter snake during project-related activities.

WILDLIFE.8 Protect nesting birds and their nests during construction by using the measures found in **Appendix G: Nesting Bird and Nest Protection**.

WILDLIFE.9 Coordinate with USFWS to fulfill requirements of the federal Endangered Species Act prior to project implementation.

Visual and Scenic Resource Management

This section describes goals and guidelines to preserve important views and scenic resources within the Park. Views of the Lighthouse and historic features, as well as views of the ocean and beach are valuable views that define the Park. Additionally, the remote location and limited sources of lighting in the Park create a unique opportunity to see the night sky. Section 0312.2 of the DOM presents objectives and policies for preserving scenic values and viewshed, and Section 0312.3 presents policies for natural lightscape protection. Additionally Section 8 of the LCP provides guideline for compliance with the protection of visual resources within the Coastal Zone. The Park will observe these policies in park management plans.

VISUAL AND SCENIC RESOURCE MANAGEMENT GOALS:

» Preserve the iconic views of the Lighthouse and historic Light Station, ensure consistency with the Caltrans Corridor Protection Program for Highway 1, and develop high quality vista points within the Park.

VISUAL AND SCENIC RESOURCE MANAGEMENT GUIDELINES:

VISUAL.1 Ensure that new development does not significant y obscure the Lighthouse or the historic features. Prioritize site design that fit within the landscape and promotes the secluded "sense of place" within the Park.

VISUAL.2 Site new facilities, including restrooms and storage facilities in a manner that is sensitive to and to fits within the existing visual character of the Park. Utilize CDPR's *Guiding Principles for Quality Aesthetic Design at State Parks* to direct the design process for new facilities or features to ensure that the Park is preserved as a meaningful destination for future generations of State Parks users. These principles include respecting the Park's cultural setting without directly mimicking it, as well as thoughtful evaluation of the characteristics of the Park that set it apart from other locations.

VISUAL.3 Pursue efforts to underground utility lines along Pigeon Point Road, if feasible, considering physical and natural resources.

VISUAL.4 Redesign and replace vegetative buffer between Highway 1 and the Bolsa Point Area to utilize native shrubs or trees and to screen views of the upland recreation zone but allow views of the upland conservation and riparian zones. Coordinate with Caltrans to review plans for Park development to ensure consistency with the Highway 1 Corridor Protection Program.

VISUAL.5 Minimize nighttime light pollution and restrict use to areas where lighting is necessary for park security and safety or to preserve the cultural use of the site, such as the beaconing pattern of the Lighthouse, to allow visitors to better experience the night sky on a

clear night and limit interference with activity of nocturnal species. Equip any permanent structure with outdoor light shields that concentrate the illumination downward to reduce direct and reflecte light pollution. Ensure that the direct source of the lighting (bulb, lens, filament, tube, etc) is not be visible off site and the lighting will be installed as low as possible on poles and/or structures to minimize light pollution of the night sky. Confirm that the candle power of the illumination at ground level does not exceed what is required by any safety or security regulations of any government agency with regulatory oversight.

VISUAL.6 Manage and maintain existing vista points, including benches along Pigeon Point Road and decks within the Historic Zone, to ensure public safety. Consider locations for new vista points that offe expansive views of the coastline or clear views of the Lighthouse. Allow adequate space within a vista point to accommodate artist visitors, including space for camera tripods or painting easels.

VISUAL.7 During construction, reduce project-related materials and staging within the viewshed of the Lighthouse.

See **Trails Guidelines** in the Access and Circulation section for additional considerations for vista points.

4.5.5 INTERPRETATION AND EDUCATION

Interpretation tells the stories of the Park and expands a visitor's awareness of the place. Through interpretive services, such as historic artifacts and photographs, audio tours, or docent talks, visitors are able to connect with the past and gain a greater understanding of the Park as it exists today.

Education can take many forms at the Park, from organized class visits to individual exploration. Together, a robust approach to interpretation and education can not only improve an initial park experience but also create future park advocates with strong attachments to these parks and the memories gained during the experiences within them.

Interpretive Significance

As a State Historic Park, the Park is a destination for learning about the history of California. The Light Station represents a unique experience for lighthouse enthusiasts and everyday park visitors. The hazardous, rocky coastline define the need for a lighthouse to support maritime navigation through the region, and the distinctive geologic conditions at Pigeon Point made it an ideal location. After recent expansions, the Park today contains some unique coastal habitat areas, is located within a network of protected open space, and is located along the Coastal Trail, creating a new story of coastal protection and recreational open space. Additionally, the use of the Park for indigenous agricultural and

land management practices establishes a new interpretive story that highlights prehistoric practices for a modern audience.

Interpretation Mission

The mission for interpretation at the Park is to educate the visitor about a maritime landmark and the natural setting of the central California coast. The unique history of the Park provides an excellent framework to present the cultural history of the area, from indigenous people to maritime use and coastal park development. Through interpretation, visitors will learn about the coastal conditions that necessitated a light station and the process of constructing and operating this facility.

Interpretation Vision

Visitors to the Park will be offe ed the opportunity to engage with cultural history in-situ by visiting the Lighthouse and other historic structures and interacting with dynamic exhibits. Additionally, the viewpoints, trails, and beach access points will provide opportunities to learn about coastal habitat and connect with natural phenomena. This type of experiential learning can deepen visitors' understanding of the site, foster the relationship between people and place, and instill the values of preservation and resource protection both at the Park and beyond its borders.

Interpretation and Education Goals and Guidelines

The following are goals and guidelines for achieving the mission and vision for interpretation at the Park. Detailed strategies for interpretation at the Park, including specific content, will be established through future planning efforts

INTERPRETATION AND EDUCATION GOAL A: SETTING AND HISTORY

- Interpretation at the Park will tell the unique history of the Light Station by connecting visitors to the regional maritime story of the Central Coast.
- The coastal setting will be integrated into park interpretation by highlighting natural processes, ecological conditions, and human stories.

GUIDELINES:

INTERPRETATION.1 Continue to interpret an integrated story of the Light Station. Incorporate accounts of early maritime activities at the point and shipwrecks that necessitated the need for the Lighthouse. Explain the technical aspect of building the structures and navigational aide provided by a Lighthouse and Fog Signal Building. Depict the daily life at the Light Station and the complex routines that kept the light house shining.

INTERPRETATION.2 Identify opportunities to expand regional maritime interpretation, including the potential development of a multi-site Maritime Historic District that includes Pigeon Point Light Station, Año Nuevo Light Station Island, and Franklin Point Historic Shipwreck Cemetery. Coordinate with Año Nuevo State Park.

INTERPRETATION.3 In partnership with a local tribal group, provide interpretive features that illustrate indigenous agriculture practice and land stewardship to the public and allow for tribal members to interact with the land.

INTERPRETATION.4 Highlight coastal habitat communities and demonstrate efforts to protect and restore key coastal resources. Ensure that these messages are easily understood by audiences from a variety of backgrounds.

See **Cultural Resources Goals and Guidelines** for use of Historic Structures and Cultural Landscapes in park interpretation.

INTERPRETATION AND EDUCATION GOAL B: CONSISTENCY AND STYLE

» Interpretation at the Park will be developed with similar aesthetic convention to create consistency between historic features and interpretive features. Interpretive features will support the historic character of the Light Station.

GUIDELINES:

INTERPRETATION.5 Ensure that interpretive features and materials reflec the historic style of the Light Station.

INTERPRETATION.6 Place interpretive features in locations that have minimal impact on views of historic structures or the coastline. Where feasible and when it does not impact historic status, integrate interpretive elements into structures, such as railings on decks or bridges.

See **Wayfinding Guidelines** under Access and Circulation Goals for signage considerations.

INTERPRETATION AND EDUCATION GOAL C: TECHNIQUES

» Interpretation will engage multiple learning styles and accommodate people with disabilities by using varied interpretation techniques and media.

GUIDELINES:

INTERPRETATION.7 Offer a variety of interpretive media at the Park to appeal to a variety of visitor types. Continue to utilize a range of media, including interpretive panels, interactive exhibits, maps and site plans, historic photographs and artifacts, Fresnel lens demonstrations, and docent

tours. Consider new media, potentially including but not limited to mobile phone tours, activity books for children, evening or nighttime tours, short films or animations, and interpretive trails.

INTERPRETATION.8 Review interpretive content periodically and update as needed to increase relevancy to new audiences.

See **Accessibility Guidelines** under Access and Circulation Goals for accessibility considerations.

INTERPRETATION AND EDUCATION GOAL D: EXPERIENTIAL LEARNING

» Visitors will have a unique experience with the Park and learn about the site through personal interaction with its resources.

GUIDELINES:

INTERPRETATION.9 Continue to provide self-guided and docent-led tours to encourage visitors to explore historic structures and natural landscapes, where feasible, considering park safety, resource protection, and operational needs.

INTERPRETATION.10 When restored, resume docent-led tours into the Lighthouse, allowing visitors to experience the historic use of the structure and gain a birds-eye perspective of the Park and the surrounding area. Create a similar experience within the fog signal building for those visitors unable to take part in a lighthouse tour.

INTERPRETATION.11 Encourage facilities within the indigenous agriculture and land stewardship practice space in the Bolsa Point Area that allow for the public to engage with this agricultural techniques used there.

See **Technology Guidelines** under Operations for ticketing for the lighthouse tours.

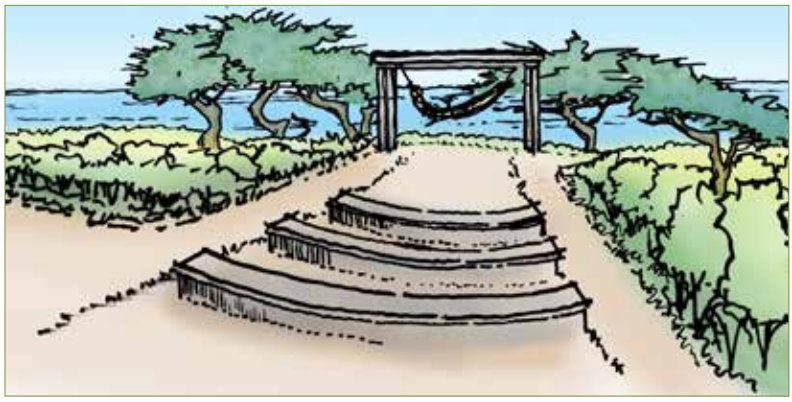
INTERPRETATION AND EDUCATION GOAL E: OUTDOOR EDUCATION

» Actively encourage environmental education at the Park as a means of developing open space stewards for the next generation.

GUIDELINES:

INTERPRETATION.12 Continue to partner with environmental education groups, such as Exploring New Horizons, to provide on-site environmental education opportunities.

INTERPRETATION.13 Provide new outdoor gathering spaces for large groups to use as outdoor classrooms. Explore the possibility of incorporating permanent interpretation features in



Conceptual rendering of an outdoor classroom.

these spaces. Site outdoor classrooms in areas protected from coastal wind and away from major centers of activity wherever possible and consider including restrooms near these spaces.

See **Vehicular Parking Guidelines** under Access and Circulation for accommodation of bus parking for school groups.

See **Natural Resources Goals and Guidelines** for use of the Park to support scientific study.

Future Interpretation Planning Efforts

INTERPRETATION AND EDUCATION GOAL F: INTERPRETATION PLANNING

Future planning efforts will help refine the planning goals set forth in this General Plan and establish a program for implementation.

GUIDELINES:

INTERPRETATION.14 Develop an Interpretation Master Plan to expand on the goals and guidelines of the General Plan. Further develop the Parks' interpretive elements at the Park, and establish a plan for implementation. Incorporate preference for exhibit style that is consistent with existing approach and historic context.*

INTERPRETATION.15 Develop specific interpretive project plans for the Maritime Historic District and Bolsa Point Area, as well as the Lighthouse if reopened for public tours.*

Interpretive Periods

The Scope of Collections Statement from May 2016 defined interpretive periods and interpretive themes for the Park. These interpretive periods are included below.

Interpretive periods designate specific periods of importance for interpreting key site elements. These periods are not inclusive of the entire site history, but rather provide guidance on the key periods of time that are significant for the cultural resources of the site. The Park includes both primary and secondary interpretive periods. Primary interpretive periods relate to the periods of greatest significance. For State Historic Parks, these correspond to the historic resource for which the Park was acquired. At the Park, the primary interpretive periods relate specifica ly to the development and operation of the Light Station. Secondary interpretive periods represent key moments in history that are significant but not as directly important to the Park as primary interpretive periods.

Primary Interpretive Periods

1850s to 1930s – Shipwrecks and the Lighthouse Period.

This period begins with the wreck of the area's namesake, the Carrier Pigeon, and includes the building and operation of the Light Station. With the advent of the California Gold Rush, ships carrying people and goods from around the world were rushing past this treacherous coastline toward San Francisco. Only after the deadly wrecks of four ships did the U.S. Lighthouse Board build a lighthouse at Pigeon Point, along with a fog signal at nearby Año Nuevo Island. Life at Pigeon Point was filled with hard work, and some fun, for the keepers and their families.

This period covers the development and operation of two important maritime industries - a Portuguese shore whaling station and a commercial wharf. Existing alongside the Lighthouse, their stories highlight the abundant marine life and rugged coastline of the area. During Prohibition, smugglers also used the wharf to bring their illegal liquor ashore

The Civil War played a dual role in the history of Pigeon Point. First, it was a major cause for delay in the building of the Lighthouse, with the full resources of the Union being directed to the war. Secondly, the firs -order Fresnel lens installed at Pigeon Point had previously served at Cape Hatteras Light, North Carolina, from 1863-1870, to guide the Union Navy along Confederate waters.

1939 to 1970s – U.S. Coast Guard and the Automation Period.

In 1939, the U.S. Coast Guard absorbed the U.S. Lighthouse Board, beginning a new era at Pigeon Point. With the attack on Pearl Harbor, it became part of the coastal defenses network during World War II. In the 1960s and 1970s, modernization washed over Pigeon Point. First, the original Victorian keepers' quarters were razed to make way for today's bungalows. Then, the light itself was replaced by the first in a series of automated beacons.

Secondary Interpretive Periods

Prehistory to 1850s – Native American and Spanish Period.

This period includes the prehistoric and post-European contact histories of the Native Americans of the Pigeon Point area. It also covers the Spanish occupation of California before the 1834 secularization of the Santa Cruz Mission and its grazing lands.

Interpretive Themes

As noted above, the Scope of Collections Statement from May 2016 define interpretive periods and themes for the Park. The following themes build on the list from the Scope of Collections to incorporate new interpretive opportunities not currently explored at the Park.

Interpretive themes support overall interpretation at the Park by establishing the general topics and tone for interpretive elements. The unifying theme provides the central interpretive message for the Park and reflects the resources and mission

of the Park. Primary themes reflect key stories that guide interpretation of the most significant park resources and history. Secondary themes offer ancillary concepts that may not relate directly the unifying and primary themes but present tangential concepts relating to contextual history of the Park or other department-wide interpretation goals.

Unifying Theme

The story of Pigeon Point is tied to its coastal location and the unique characteristics and challenges of this setting.

The Park sits at the edge of the Pacific Ocean. The natural conditions of that setting defined the character of the site throughout history and contributed to the way people have used it for centuries. This section of the coast has provided generations of people with resources for survival and trade since the earliest inhabitants first came to the area. Following the arrival of European settlers, the abundant marine life gave rise to the innovative shore whaling station at the Park site. The nearby forests and farmlands prompted the unusual dog-hole port allowing lumber, dairy products, and vegetables to be shipped to the burgeoning city of San Francisco.

Maritime navigation along the coast provided a fast and efficien way to move people and goods; however, the rocky waters in the area proved dangerous and dictated a need for a lighthouse to improve navigation. The development and operation of the Light Station was the defin ng feature of the Park site for most of recent history. Today, the Light Station serves as a beacon to draw people to the Park to learn about regional maritime history, as well as to witness the complex coastline that the Lighthouse helped navigate. With the Light Station at the heart of interpretation at the Park, visitors are able to gain a greater understanding of the coast throughout time, while incorporating messages of coastal ecology and natural processes, local flo a and fauna, and indigenous land-use practices, all of which contribute to a greater understanding of the coastal view that is seen today.

Primary Themes

Nineteenth century navigation presented significant challenges for ships passing Pigeon Point.

As more ships sailed north along the California coast, the treacherous winds, currents and especially fog often confounded nineteenth century navigators who relied on the sun and stars to guide them. The construction of Pigeon Point Light Station with its firs -order Fresnel lens, and the nearby Año Nuevo Island fog signal, were intended to warn ships of the dangerous rocky coastline. However, human navigational error played a key role as shipwrecks continued to occur.

Pigeon Point was a coveted duty station for light keepers; however, life was anything but romantic.

First and foremost, light keepers had to maintain the Fresnel lens, its oil lamp and clockwork mechanism, keeping the light burning brightly every night, which gave

them the nickname "Wickies." The daily routine of a lightkeeper also included the constant maintenance of the Lighthouse and other buildings, and fog signal equipment exposed to the harsh corrosive effects of ocean air. Families pitched in to clean and maintain the house, kitchen gardens, and livestock. When the work was done, families picnicked on the beach or embarked to nearby Pescadero.

While the Pigeon Point light has evolved with advancing technology, Fresnel's light continues to shine.

Over the years, Pigeon Point has seen diffe ent fuels and diffe ent types of beacons. From lard oil, to kerosene, to electricity, the firs -order Fresnel lens, served brightly each night until automation, which was provided by the United States Coast Guard in the mid-1970s. The automated beacons also relied on Fresnel technology to focus the light's rays, which produce the characteristic Pigeon Point flash of one white flash every ten seconds.

A wide array of marine species and shore- and waterbirds utilize the nearby coastal waters and the Park hosts unique coastal habitat within its boundary.

It is common to see Pacific harbor seals and a variety of birds in the open water marine and rocky intertidal areas off the coast of the Park, and park visitors come out to watch migrating gray whales between March and May. At low tide, tide pools reveal a broad array of intertidal creatures, including starfish crabs, mussels, and sea anemones. The scrub and coastal terrace vegetation communities are special habitat areas in need of protection due to their limited occurrence and habitat value. Sustainable management practices and public awareness will support preservation of these areas for species that depend on them and for humans to enjoy.

Secondary Themes

Shore whaling was a major industry at Pigeon Point.

Originally called Punta Ballena, or Whale Point, this area was a perfect location for the establishment of a shore whaling station. From the 1860s to 1890s, Portuguese whalers operated the station on the bluffs to the south of the Lighthouse. A lookout on the bluff, which signaled the whale boats whenever whales were spotted, provided a new approach to the centuries-old whaling industry operations.

Pigeon Point's commercial wharf was considered a "dog-hole" port.

In addition to the whaling station, a commercial wharf was built on the bluff near the Lighthouse. With the bluffs too high for a traditional wharf, and the cove small enough "for a dog to crawl in, turn around, and crawl out," it was a West Coast dog-hole ports, providing precarious access to the lumber and other agricultural products grown in the area.

Native Americans lived in the area and used coastal resources in their everyday life.

Prior to the arrival of Europeans, the area around the Park was inhabited by Quiroste and Ohlone people. These people hunted and fished in the area and managed the land to provide the resources needed for survival. Partnership with modern descendants of the Quiroste to restore some of these land management strategies celebrates this cultural heritage and focuses on long-term preservation of natural resources.

The Coastal Trail represents a large-scale movement to preserve the Pacific Coast as a recreational asset.

Once completed, the California Coastal Trail will be a 1,200-mile recreational resource that runs the length of the California Pacific coastline, including a segment through the Park. Implementing the Coastal Trail requires strong advocates and partnerships between various public and non-profit agencies. Promoting the trail and its story provides for the next generation of support for this effort and future open space projects.

4.5.6 OPERATIONS

Park operations ensure day-to-day functioning of the Park. While many of the guidelines presented above will be accompanied by operational actions, the goals and guidelines in this section address additional operational recommendations to accommodate proposed changes or provide upgrades to the Park. This includes considerations for facilities, visitor services, public safety, and emergency preparedness.

Park operations are dependent on an effect ve team of park staff who provide key security, administrative, interpretive, and maintenance services. Additionally, the Park includes support from a strong team of volunteer docents who serve to expand the visitor experience by offer ng interpretive tours and operating the park store.

State funding for park operations and park projects is limited to resources allocated to the Park from CDPR. Partnerships with agencies and non-profi groups to fund operational costs or provide operational services are important opportunities for expanding potential revenue for the Park.

Facilities

This section provides goals and guidelines for the operation of facilities to effecti ely manage the Park and provide for a positive visitor experience. Currently, most of the key facilities are located in existing structures within the Historic Zone, including the park store in the Carpenter's Shop, interpretive features and staff office in the Fog Signal Building, and historic exhibits in the detailed oil house. The Park also has a vault restroom for visitors and flush restroom for staff and docents. Outdoor facilities include picnic tables and benches located

near the Lighthouse structure and along the bluff. Additional facilities, including the Cottages used for overnight accommodations and a modular storage shed near the Fog Signal Building are managed by the existing concessionaire.

FACILITIES GOALS:

- Ensure that the Park has adequate facilities to accommodate park services, including operations functions such as administration, security, maintenance, storage, resource management, interpretation, concessions, indigenous agriculture and land stewardship practice, and docent or volunteer programs.
- Accommodate maintenance and staff servicing at new facilities.

FACILITIES GUIDELINES:

OPERATIONS.1 Determine a location for a ticket offic for lighthouse tours. Evaluate the use of existing space within the Fog Signal Building, detached oil building, or sand filter building. Develop a reuse plan by determining spatial and programmatic needs of the ticket office Consider relocation of existing uses if the ticket offic is developed in an existing space.

OPERATIONS.2 Relocate the modular shed used for storage near the Fog Signal Building to allow for views to the ocean.

OPERATIONS.3 Relocate and expand restroom in the Light Station Area to a location that does not interfere with entry to the Historic Zone. Consider new restrooms near the proposed parking lots located at Pistachio Beach and Bolsa Point.

OPERATIONS.4 Determine a location for storage facilities to facilitate the indigenous agriculture and land stewardship practice in the Bolsa Point Area.

OPERATIONS.5 Periodically evaluate the use of key facilities and consider their effect veness for desired use.

OPERATIONS.6 Consider providing housing for staff and/or concessionaires to serve park services. Consider acquisition of nearby properties with existing infrastructure to accommodate new housing facilities.

OPERATIONS.7 Ensure maintenance access to new trails and facilities. Educate the public about removing their waste from secluded areas, including the beaches, trails, and picnic areas in Bolsa Point.

OPERATIONS.8 Coordinate with US Coast Guard for use of easement for storage or other uses beyond the agreement of the existing easement.

See **Picnic Area Guidelines** under Visitor Experience for development of picnic areas.

See **Visual and Scenic Resources Management Guidelines** under Resource Management for considerations for siting new facilties.

Visitor Services

This section provides goals and guidelines to enhance the visitor experience. Utilizing new technologies and offer ng concessions are strategies to affec visitor satisfaction with the Park.

VISITOR SERVICES GOALS:

» Site conditions and operations offer a positive visitor experience. Enjoyment of the Park is not inhibited by operational limitation, such as traffic crowds, or limited visitor services.

» The Park will seek to be responsive to public demand for park services, including concessions.

Technology

Improvements in technology can support achieving goals for visitor services by improving efficienc in park operations and offer ng additional amenities to park visitors.

TECHNOLOGY GOAL:

» Maximize use of modern technology to improve efficienc within park operations and offer new amenities to park visitors.

TECHNOLOGY GUIDELINES:

OPERATIONS.9 Utilize Recreation and Reservations Sales Service (R2S2) for tour and day use reservations.

OPERATIONS.10 Utilize mobile phone technology to expand interpretive programs.

OPERATIONS.11 Consider providing free Wi-Fi access to park visitors.

OPERATIONS.12 Allow for electric vehicle charging stations in parking areas. Consider partnerships to offset cost of installing and operating the station.

OPERATIONS.13 Employ the PORTS videoconferencing technology to provide the public with distant access to the Park's assets. Consider the use of this technology or other live stream options to provide a view into the Lighthouse.

Concessions

Concessions within CDPR offer the opportunity to increase visitor services through agreements with private entities to provide products and services. Currently, the hostel and accompanying services are managed by a concessionaire, Hosteling International. Maintaining and expanding this concessionaire role for Hosteling International, or a similar group, extends visitor services at the Park to include

low-cost accommodations and reduces the need for park staff to supply and manage these services.

CONCESSIONS GOAL:

» Utilize concessionaires to offer economically viable recreational services and products that enhance the visitor experience at the Park.

CONCESSIONS GUIDELINES:

OPERATIONS.14 Evaluate financ al feasibility of new types of concessions at the Park, including food and beverage service.

See **Recreation Goals and Guidelines** under visitor experience for overnight use of the Cottages.

See **Vehicular Traffic Guidelines** under Access and Circulation for a traffic study along Pigeon Point Road and considerations for traffi management.

Park Safety

This section includes goals and guidelines for ensuring public safety for park visitors by avoiding hazards and reducing crime within the Park.

PARK SAFETY GOALS:

» Ensure that park visitors feel safe when using park facilities.

PARK SAFETY GUIDELINES:

OPERATIONS.15 Utilize signage to make park visitors aware of potential environmental hazards, including hazards associated with the ocean, such as rip currents.

OPERATIONS.16 Make upgrades to existing trails and pathways to remove hazards. Monitor trails and access points for hazards and make improvements when necessary.

OPERATIONS.17 Work with staff and concessionaires to improve security and decrease theft within parking areas. Increase visibility of public notices and expand patrols, if feasible.

See **Geology and Hydrology Guidelines** under Resource Protection and Management for bluff restrictions.

Emergency Preparedness and Response

This section includes goals and guidelines for improving preparedness and response during an emergency at the Park. CDPR staff responds to emergencies related to park resources, such as landslides or habitat destruction, and partners with California Department of Forestry and Fire Protection (CAL FIRE) and San Mateo County to provide additional emergency response services.

EMERGENCY PREPAREDNESS AND RESPONSE GUIDELINES:

OPERATIONS.18 Work with CAL FIRE to develop a Fire Management Plan for Park. The Fire Management Plan will include the emergency calling procedures for both the CAL FIRE and local fi e department(s).

OPERATIONS.19 Coordinate with San Mateo County and State agencies to maintain emergency evacuation routes. Effect vely notify park users and staff of these routes.

OPERATIONS.20 CDPR personnel with have a State Park radio at the Park, which allows direct contact with CAL FIRE and a centralized dispatch center, to facilitate the rapid dispatch of control crews and equipment in case of fi e.

OPERATIONS.21 Under dry conditions, a filled water truck and/or fi e engine crew will be onsite during activities with the potential to start a fi e, such as during a prescribed burn.

See **Vegetation Guidelines** under Resource Management for prescribed burns.

Operations Support and Docents

This section provides a goal and guidelines for promoting operations support and the docent program. Coastside State Parks Association (CSPA) is an active partner at the Park that assists in fundraising for park projects. CSPA additionally manages the park store and manages the docent program. The Friends of Santa Cruz State Parks also play a big supporting role providing funding support for interpretive staff throughout the Santa Cruz District. These partnerships are extremely effecti e and the need for additional support from CSPA, Friends of Santa Cruz State Parks, and other groups is likely in the future.

OPERATIONS SUPPORT AND DOCENTS GOAL:

» Continue to work with existing park partners and consider new partnerships to provide operational support and expand the docent program.

OPERATIONS SUPPORT AND DOCENTS GUIDELINES:

OPERATIONS.22 Continue partnership with CSPA to operate the park store, support the docent program, and develop habitat and native plant restoration projects.

OPERATIONS.23 Work with CSPA and other potential partners to develop an Operating Plan that includes operations support for future park facilities and program presented in this General Plan.

OPERATIONS.24 Consider working with local high schools to create youth docent opportunities.

See **Diversity Guidelines** under Visitor Experience for considerations regarding diversity in docent staffin

Sustainable Design

Sustainable design principles help to limit and protect resources as a means of reducing negative impacts for future generations. Sustainable design can be utilized in a variety of diffe ent practices, from utilizing energy- and water-effi ent technologies and low-impact materials in buildings and facilities, to filtering and managing storm water, promoting non-vehicular modes of transit, generating alternative sources of energy, reducing waste, and utilizing operational strategies that reduce fossil fuel use. A key feature of sustainable design is the preservation of environmental resources, which is important management practice for the Park. Following are some additional considerations for sustainable design.

SUSTAINABILITY GUIDELINES:

OPERATIONS.25 Conduct an energy audit for structures within the Historic Zone and consider an energy retrofit to reduce electricity use.*

See **Water Quality Guidelines** for approach to stormwater management.

See **Technology Guidelines** in the Operations section for considerations for electric vehicle charging stations.

See **Utilities Guidelines** for water and energy effi ency measures.

Construction

This section provides guidelines for future construction at the Park.

GUIDELINES:

OPERATIONS.26 Where possible, limit construction disturbance to areas that will be permanently disturbed as part of future park uses.

OPERATIONS.27 Lightly spray all active construction areas with dust suppressant during dry, dusty conditions, and all active construction areas to reduce dust without causing runoff

OPERATIONS.28 Equip internal combustion engines used for any purpose at the Park with a muffle of a type recommended by the manufacturer. Utilize the best available noise control techniques for Equipment and trucks used for construction (e.g. engine enclosures, acoustically-attenuating shields, or shrouds, intake silencers, ducts, etc.) whenever necessary.

See **Vegetation and Wildlife Guidelines** under Resource Management for considerations for plant and animal species during construction.

4.5.7 UTILITIES

Existing electrical service to the Park is suffi ent to meet demand within the current footprint of the Park. Expanding the Park to Bolsa Point will likely require additional electrical service. Water supply and wastewater management is limited for existing services at the Park; however, there are current efforts to provide a new source of potable water. The following are goals and guidelines to address utility needs and improvements to increase effi encies and support sustainable practices where feasible.

UTILITIES AND INFRASTRUCTURE GOALS:

- Ensure that utilities and infrastructure are operating effi ently to minimize the environmental footprint of the Park.
- Provide adequate potable water supply and wastewater infrastructure for all park uses while promoting water effi ency.
- Promote waste reduction in park services and by park visitors.

GUIDELINES:

UTILITIES.1 Develop a new well for potable water and associated facilities on the Easement Area located across Highway 1 from the Light Station Area. Use this water supply for services near the Historic Zone.

UTILITIES.2 Investigate a water source for services in Bolsa Point.

UTILITIES.3 Utilize high effi ency, low water-use devices for all water infrastructure. Continue practicing water saving strategies at the Park.

UTILITIES.4 Ensure compatibility of the existing leach field with San Mateo County Department of Health standards. Conduct suitability analysis for leach fie d expansion or relocation near the Historic Zone and a new leach fie d in Bolsa Point.

UTILITIES.5 Provide electrical services to Bolsa Point.

UTILITIES.6 Encourage recycling services and provide a means for collecting separate refuse.

UTILITIES.7 Require that concessionaires use recyclable and/or compostable materials wherever possible.

See **Visual Resources Guidelines** under Resource Management for considerations for lighting at the Park.

See **Geology and Hydrology Guidelines** under Resource Management and Protection for priorities for restroom facilities.

4.5.8 FUTURE PLANNING

The guidelines presented in this General Plan include additional studies and planning efforts that are beyond the scope of this planning process. A summary of these studies and future efforts is included in Table 4.3. Additionally, the following are the goal and guidelines related to future planning efforts

Community Involvement

Future planning efforts at the Park, including more detailed design of site features, will benefit from public feedback. This section includes a goal and guidelines to strengthen outreach efforts

COMMUNITY INVOLVEMENT GOAL:

» Ensure public participation in future planning efforts and strive for diversity in participants.

COMMUNITY INVOLVEMENT GUIDELINES:

PLANNING.1 Continue to seek feedback from groups actively using the Park and managing adjacent open spaces.

PLANNING.2 Partner with existing organizations to hold focus groups. Advocacy groups are interested in facilitating outreach events and can be important allies in communicating with community members.

PLANNING.3 Partner with local tribal group in planning efforts for an indigenous agricultural and land management center in the Bolsa Point Area.

PLANNING.4 Provide childcare at outreach events. Parents may be more likely to attend an event if they can bring their children and do not have to find alternative childcare.

PLANNING.5 Hold a family-friendly event on the site. If the event includes a recreational activity, it can help participants feel like they are making good use of their time. The Park's existing events, such as the Fresnel lens lighting events, would be excellent opportunities to gather feedback.

PLANNING.6 Provide incentives. If there is a benefit to providing feedback, participants may be more likely to contribute. Potential incentives could include free facility, restaurant vouchers, or merchandise. Partnerships with businesses or organizations could help offset the cost of these incentives.

PLANNING.7 Translate outreach materials and market events into multiple languages. Providing the ability for visitors to understand and communicate in their preferred language will support a comfortable environment at the event.

TABLE 4.3: Future Planning Efforts
EXPERIENCE.3 Plan development in tandem with regional planning efforts and as part of a regional open space network, including efforts from San Mateo County Parks, Peninsula Open Space Trust (POST), and the Coastal Conservancy, as well as other State parks, including Año Nuevo State Park and Butano State Park.
ACCESS.1 Coordinate and develop a parkwide Roads and Trails Management Plan that evaluates the Park's entire circulation system and guides the placement and use of future roads and trails.
ACCESS.5 Consider providing vehicular access to the southern portion of Pigeon Point Road and developing a turnaround to restrict vehicular access along the northern section. Conduct traffi study to determine feasibility
ACCESS.6 Coordinate with Caltrans to develop and permit new park entrance at Bolsa Point. Ensure that design of new entrance is consistent with Caltrans' Highway Design Manual, Right of Way Manual, and Project Development Procedures Manual. Coordinate with Caltrans to add Park signs north and south of all park entrances along Highway 1 to alert drivers of the upcoming park entrance. Consider coordination with Caltrans to add a left hand turn lane south to north to enter the southern entrance to the Light Station Area.
ACCESS.7 Consult with adjacent property owners about potential acquisition of properties adjacent to the Light Station and Pistachio Beach for future parking lots.
ACCESS.19 Work with San Mateo County, the Coastal Conservancy, the California Coastal Commission, POST, and other CDPR units to extend the Coastal Trail through the Park and along adjacent properties.
ACCESS.20 Participate in trail planning for the Portola National Historic Trail to coordinate future connections to the Park.
ACCESS.21 Develop signage standards for use at trailheads and throughout the Park. Consider the unique character of the Park and appropriateness of signage related to the historic period of significance. Utilize CDPR's Brand Standards Handbook to guide signage development.
CULTURAL.2 Extend the Period of Significance to the date of Lighthouse automation (1974). Expand the Primary Historic District to include the Cottages and the Water Sand Filter Building since they were constructed prior to automation evaluate their historic status.
CULTURAL.3 Complete a cultural landscape analysis for the historic Light Station. The Historic Structures Report recommends rehabilitation of the landscape, including fencing and pathways, consistent with the period of significanc for the Light Station
GEO/HYDRO.3 Complete geotechnical evaluation of Historic Zone, including detailed estimates of rate of bluff erosion and potential impact on historic structures. Conduct additional site-specific geotechnical analysis prior to locating and designing roads, trails, structures, and utilities throughout the site
GEO/HYDRO.4 Complete a detailed and comprehensive soils report, surface and subsurface hydrology report, and drainage analysis prior to developing roads, trails, structures, and utilities. Complete a wastewater management plan and septic plan prior to developing new restroom or facilities with potable water. Prioritize the use of vault or composting toilets at the Park to reduce need for leach fie d. Ensure that park development or activities do no increase net water flow over or through existing bluff
GEO/HYDRO.8 Review Coastal Development permit history for all development prior to implementing future development at the Park
VEGETATION.1 Prepare a Vegetation Management Statement that identifies key vegetation types and establishes guidelines for management. Identify vegetation communities within the Park that are heavily affected from previous uses, such as agriculture, and implement restoration programs to re-establish native plant species
INTERPRETATION.14 Develop an Interpretation Master Plan to expand on the goals and guidelines of the General Plan. Further develop the Parks' interpretive elements at the Park, and establish a plan for implementation. Incorporate preference for exhibit style that is consistent with existing approach and historic context.
INTERPRETATION.15 Develop specific interpretive project plans for the Maritime Historic District and Bolsa Point Area, as well as the Lighthouse if reopened for public tours.
OPERATIONS.25 Conduct an energy audit for structures within the Historic Zone and consider an energy retrofit to reduce electricity use.

PLANNING.8 Strive to provide facilitators at outreach events who reflect the diversity of the audience. It is important to avoid homogeneity among presenters and with attendees, whenever possible.

PLANNING.9 Use clear language, explain technical and regulatory jargon, and avoid acronyms. Although the audience may contain experts on some topics, it might also contain people with limited knowledge. It can be valuable to provide background information to clarify regulations and planning issues that may not be evident to the layperson.

PLANNING.10 Host "outings" with groups working with non-traditional park users at the Park. Introducing people to the Park through a recreational activity will provide them with knowledge of the site and allow them to provide feedback on how to make improvements.

PLANNING.11 Make effect ve use of social media.

4.6 AREA-SPECIFIC CONCEPT PLANS

During the planning process, concept plans were developed for two locations within the Park. The Concept Plan for the Gateway to the Historic Zone within the Light Station Area incorporates sections within the Historic, Upland Recreation, and Upland Conservation zones. The Concept Plan for the Bolsa Point Area incorporates sections within all zones, except the Historic Zone. A description of these concepts is provided below.

These concepts reflect the resource character and visitor experience described in the Management Zones section. Additionally, goals and guidelines for these concept areas are incorporated into the previous section. A list of relevant goals and guidelines that apply specifica ly to these concept areas is included in the description of each concept.

4.6.1 CONCEPT PLAN FOR THE GATEWAY TO THE HISTORIC ZONE

The concept plan for the Gateway to the Historic Zone is shown in Figure 4.4. This is currently the most active part of the Park. The concept plan illustrates a conceptual layout for that improves circulation, provides new park amenities, and strengthens the historic theme.

Key features include:

- Lighthouse restored and re-opened to the public.
- Preserved historic structures, including the Fog Signal Building, the Carpenter's Shop, the detached Oil House, the Cottages, and the Water Sand Filter Building.

- » Gateway at entrance to main access path with bollards to prevent vehicular access.
- » Maritime History Interpretive Area.
- » Picnic areas on either side of main access path.
- » Existing parking lot reconfigu ed to accommodate accessible parking, a new restroom, a small concessions station, and a ticket booth for lighthouse tours.
- » Opportunity sites for outdoor education.
- » Formalized beach access to tide pools.
- » Bicycle parking along main access path.
- » Expanded viewing deck adjacent to the Fog Signal Building.

While design detail will be refined during site-specific planning, these concepts serve as a guide towards development within the area in a manner consistent with the purpose and vision set forth in this General Plan.

Specific guidelines for the Gateway to the Historic Zone include the following:

EXPERIENCE.4	**CULTURAL.1**	**INTERPRETATION.2**
EXPERIENCE.5	**CULTURAL.2**	**INTERPRETATION.11**
EXPERIENCE.6	**CULTURAL.3**	**INTERPRETATION.12**
EXPERIENCE.9	**GEO/HYDRO.3**	**OPERATIONS.1**
ACCESS.3	**GEO/HYDRO. 5**	**OPERATIONS.2**
ACCESS.7	**VISUAL.1**	**OPERATIONS.3**
ACCESS.9	**VISUAL.6**	**OPERATIONS.27**
ACCESS.10	**INTERPRETATION.1**	

4.6.2 CONCEPT PLAN FOR BOLSA POINT AREA

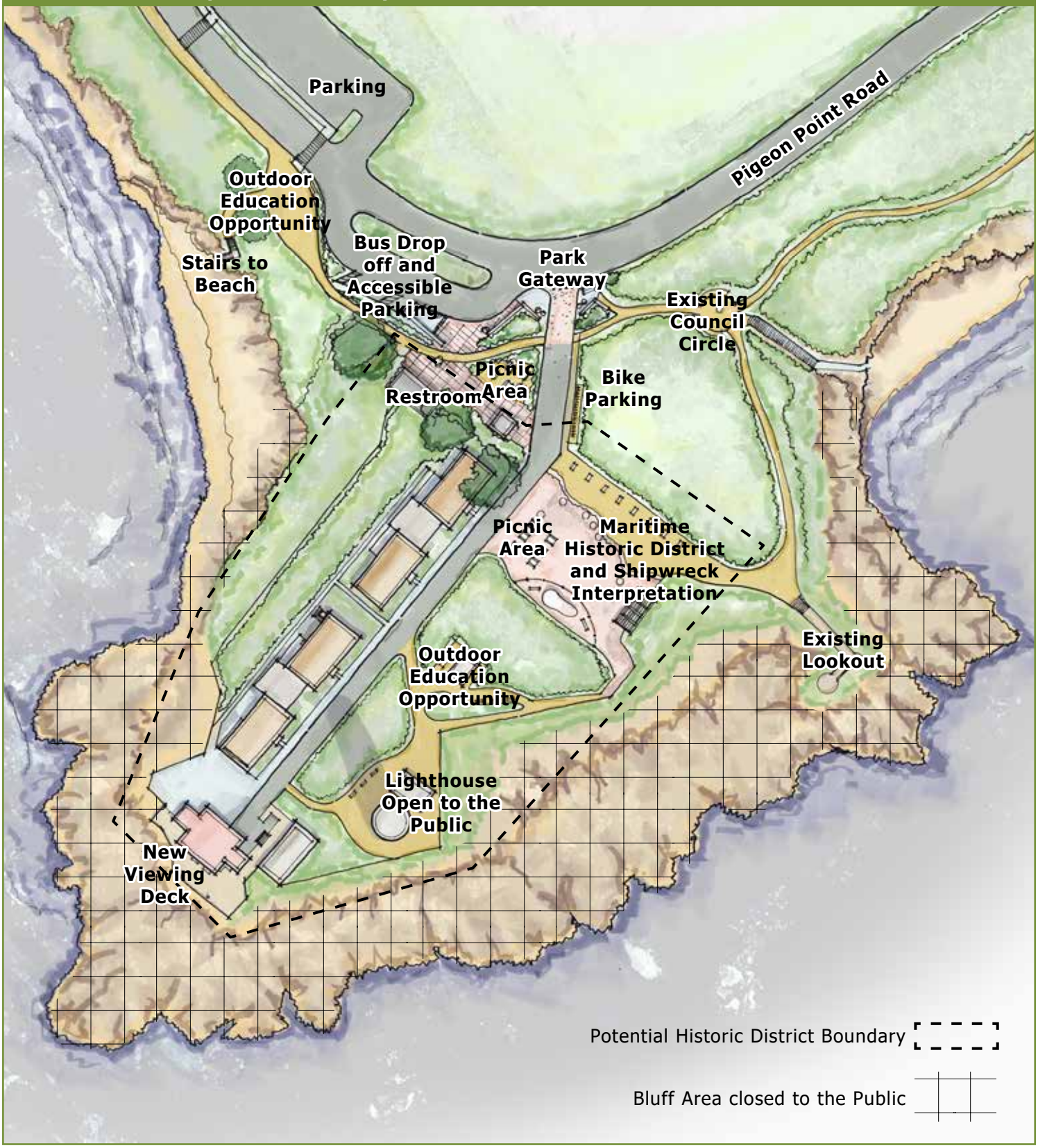
The concept plan for the Bolsa Point Area is shown in Figure 4.5. This area is currently not open to the public and includes new park features.

Key features include:

- » Indigenous agriculture and land stewardship practice area operated in partnership with local tribal group.
- » Parking area with restroom.
- » Hiking trails.
- » Flexible day use space.
- » Day use beach.
- » Minimalist picnic area along bluff with vegetated wind protection.

These concepts will be further refined to determine layout and size needs. In particular, future site planning with local tribes could further define program

FIGURE 4.4: Concept Plan of Gateway to the Historic Zone



needs and conceptual approach for the indigenous agriculture practice. This area will likely include designated planting areas, gathering space, and interpretive features. While the space provided in the concept plan is appropriate for the desired visitor levels, future planning efforts may revise or refine these areas as needed.

Specific guidelines for the Bolsa Point Area include the following:

VEGETATION.6
VISUAL.4
INTERPRETATION.3
INTERPRETATION.11
OPERATIONS.4
UTILITIES.4
UTILITIES.5
PLANNING.3

Conceptual rendering of the entrance to Bolsa Point Area

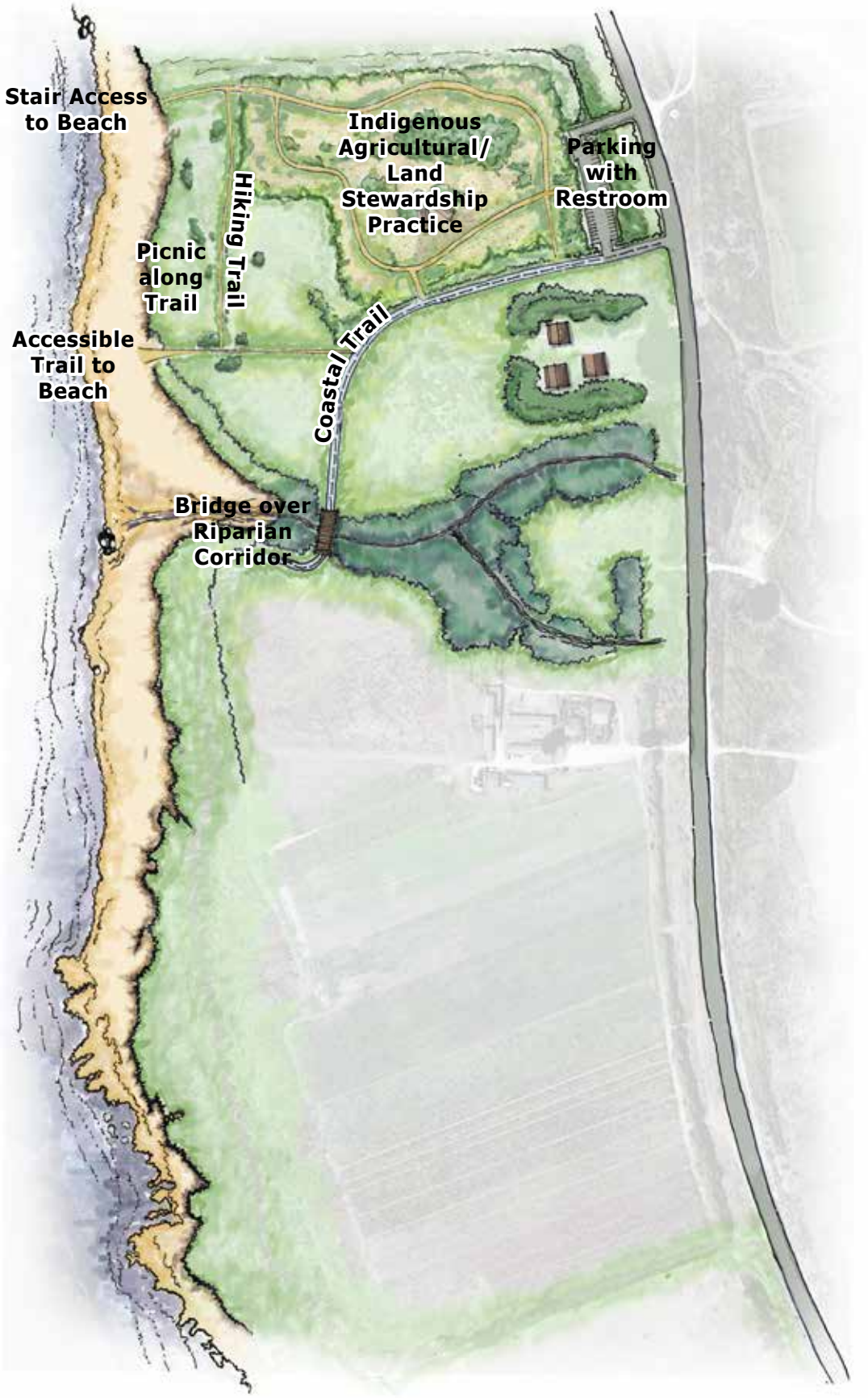
4.7 CAMPING

While expanding opportunities for camping is a priority CDPR, this General Plan does not include new campgrounds.[1] During the planning process, camping was considered for the Bolsa Point Area; however, due to the prime agricultural soils located within this area, it was determined that camping is not consistent with the San Mateo County LCP and a coastal development permit would not be issued for this use.

While the General Plan does not propose camping in the Bolsa Point Area, if guidelines regarding conditional use of agricultural land change within the County during the lifetime of the General Plan, the Upland Recreation Zone in the Bolsa Point Area could potentially include a low-impact family campground consisting of

1 California Department of Parks and Recreation. "Part 1: A System for the Future." *The State Park System Plan 2002*. (Sacramento, CA: California State Parks) 2002. 10.

FIGURE 4.5: Concept Plan of Bolsa Point Area



Conceptual rendering of low-impact family campground with movable campers

10-20 sites with self-contained, movable campers, and an environmental campground consisting of 8-12 sites for hike-in or bike-in campers. While alternative options could be explored for the family campground, self-contained, movable campers offer significant value in terms of management and visitor comfort. These types of facilities typically include water and waste storage, which would reduce the need for expanded infrastructure. The enclosed nature of a camper would provide park visitors with protection from coastal winds and/or inclement weather. The following guidelines may be used to develop camping at the Park.

CAMPING GUIDELINES:

CAMP.1 Conduct financia feasibility study to determine ideal number of campsites to provide revenue for the Park. Consider a concessionaire for management of the campgrounds in the Bolsa Point Area.

CAMP.2 Plan self-contained, low impact, family, and environmental campgrounds in the Bolsa Point Area. Evaluate the possibility of utilizing moveable, self-contained travel campers or cabins in the family campground to allow for camping during inclement weather.

CAMP.3 Design family campground to accommodate group campsites. Include sites that can be booked together to allow visitors to book multiple sites together if needed.

CAMP.4 Investigate potential for providing potable water to campgrounds in the Bolsa Point Area.

CAMP.5 Consider the creation of a camp host position to provide visitor information and enforce park rules.

CAMP.6 Ensure that emissions from campfi e rings do not exceed acceptable levels as determined by the Bay Area Air Quality Management District's (BAAQMD). Determine the appropriate number of campfi e rings based on this assessment. Conduct a regional and localized ambient air quality and health risk assessment to identify potential impacts to sensitive receptors in area surrounding the campgrounds, prior to construction. Utilize campfi e ring design strategies to minimize emissions of particulate matter. Consider the use of non-wood burning campfi e alternatives, such as propane fi e rings and or logs made from wood-alternatives. Limit wood burning in campfi e rings when BAAQMD issues a Spare the Air alert.

CAMP.7 Restrict sound levels and enforce park noise standards within campground areas.

CAMP.8 Provide animal-proof food storage containers at all campsites

See **Utilities Guidelines** for considerations for water use in the Bolsa Point Area.

See **Visual and Scenic Resources Guidelines** for considerations for siting of camping facilities to preserve views.

4.8 VISITOR CAPACITY

Overuse can degrade park resources and diminish the visitor experience at the Park. This is a particular concern for the Park because many of the current visitors highly value the secluded feeling during each visit. In order to address the potential for overuse, General Plans must assess visitor capacity, or carrying capacity, issues in compliance with Section 5019.5 of the California Public Resources Code. For the purposes of this General Plan, the term "visitor capacity" refers to the number and type of visitors that the Park can accommodate without experiencing a degradation of the existing cultural or natural resources, visitor experiences, or management program.

Visitor use of the Park will be defined by public interest and access. Development within the Park is currently focused around the historic Light Station with minimal facilities located along the bluff to the north and south of this area. The General Plan recommends some expanded development within the existing footprint of the Park and additional development to the north to Bolsa Point; however, the highest level of use is expected to remain within the historic area. Additionally, while it is expected that the General Plan will offer new uses for site visitors, overall use will likely only minimally increase due to the isolated location of the Park and the low population levels in the surrounding area. Desired outcomes from the General Plan will decrease crowding in this Historic Zone as park visitors spread throughout the Park to enjoy new recreational opportunities. Physical constraints, such as rare vegetation communities and unstable bluff conditions, as well as available parking, will limit visitor use at the Park. Additionally, social expectations of the Park, including interest in the Lighthouse, desire for a secluded experience, or attraction of available recreational amenities can impact visitor use levels. As regional demographics, recreational trends, or site conditions change, these social expectations may change and influence future desirability of visiting the site.

CDPR's approach to visitor capacity management incorporates an adaptive management approach, which defines key objectives and strategies for monitoring and modificat on. CDPR defines visitor capacity management as, "A methodology used to determine and maintain the desired resource and social conditions that fulfill the purpose and mission of a park. It includes establishing initial visitor capacities, then monitoring key indicators in order to identify appropriate management actions in response to unacceptable conditions."

4.8.1 ADAPTIVE MANAGEMENT

The proposed management actions included in this General Plan seek to balance expected visitor use with protection of park resources and visitor experience; however, it is important to incorporate measures to evaluate and assess the Park's capacity for use. Adaptive management represents a flexible planning mechanism to allow for adaptation to respond to changes in site conditions. CDPR's process for adaptive management and its application at the Park are described below.

4.8.2 ADAPTIVE MANAGEMENT PROCESS

In accordance with the methodology described by CDPR, the following tasks were or shall be carried out at the Park as part of park management plans and activities.

1. **Identify Existing Opportunities and Constraints** The Resource Inventory for the Park and accompanying technical studies describe existing resources sensitivities and related opportunities and constraints identified during the planning process. This information is summarized in Chapter Two of this General Plan.

2. **Determine Vision and Desired Conditions** The declaration of purpose and vision for the Park was refined during the planning process based on staff input, community feedback, and analysis by the planning team. Desired conditions were determined for each management zone and are presented in Table 4.1 as resource character and management and visitor experience. Park management should strive to maintain these conditions within the respective management zones.

3. **Identify Issues and Evaluate Alternatives** Key issues were analyzed for the Park and considered through a site analysis process. Site alternatives were developed to address key issues and refined based on staff feedback and public input. Issues and opportunities are summarized in Chapter Three of this General Plan.

4. **Develop Measurable Indicators and Thresholds** CDPR recommends for key indicators to be identified in order to diagnose whether the desired conditions for the Park are being met. Initial indicators for the Park are discussed below in Table 4.4. These thresholds should updated as the Park changes over time.

5. **Establish Initial Visitor Capacities** Initial visitor capacity for the Park was developed based on existing levels of visitation from CDPR's records of monthly visits and expected levels of visitation based on use. Anticipated visitor levels for the Park are shown in Table 4.2. Consistency with these estimates will need to be established once new amenities are completed.

6. **Monitor Use and Identify Changing Conditions** Guidelines are provided below for monitoring to determine the degree of impact or changing conditions that occur over a specified period of time. The indicators identified in Table 4.4 will be used to determine if an unacceptable condition exists and which management actions are necessary.

7. **Adjust Environmental or Social Conditions** Guidelines are provided below regarding actions to be taken by management in the event that monitoring efforts reveal environmental or social conditions may be approaching or exceeding thresholds.

4.8.3 RESEARCH, INVESTIGATION, AND MONITORING

Site observation, including data from research, pre-project site investigations, visitor impact assessments, post-project evaluations, and baseline resource monitoring, all contribute to the determination of whether the Park is maintaining its desired outcomes. The following are goals and guidelines for research, investigation, and monitoring to maintain appropriate visitor capacity.

VISITOR CAPACITY GOAL:

» Establish, implement, and monitor visitor capacity for fulfilling the vision of the Park, preservation of resources, and for the enjoyment of all visitors.

VISITOR CAPACITY GUIDELINES:

CAPACITY.1 Identify existing capacity opportunities and constraints using surveys and site analysis prior to any site-specific development. Use collected data to establish a baseline condition for natural, cultural, and recreational resources and develop visitor capacity thresholds.

CAPACITY.2 As monitoring efforts reveal that environmental or social conditions may be approaching or exceeding thresholds, management must consider alternatives and take appropriate action. Indicators and actions presented in the General Plan should be updated as necessary.

4.8.4 DESIRED OUTCOMES AND KEY INDICATORS

Table 4.4 lists desired outcomes for park management zones and key indicators for diagnosing whether the desired conditions for the Park are being met. This analysis can be used to determine whether management actions are necessary to address visitor capacity issues. Some of the desired outcomes may be applicable to multiple use zones; however, they have been listed only for simplicity in the table layout. Refer to Table 4.1 for detailed description of the factors affect ng carrying capacity within each management zone type.

TABLE 4.4: Desired Outcomes and Indicators for Visitor Capacity

	Desired Outcomes	Indicators (Environmental and Social)	Potential Management Actions and Monitoring Activities
Historic Zone	Retention of the integrity of the cultural resources. High quality visitor experience.	(+) Visitors understand the cultural significance of the light station. (-) Crowds discourage visitors from engaging with site features or exploring the light station. (-) Park safety issues.	Develop a program for monitoring the Park's cultural resources. Conduct periodic surveys of public safety hazards. Staff observations of use during day-to-day operations.
Upland Recreation Zone	Minimal parking and circulation issues. Inclusive approach to interpretation and park services. Peaceful hiking, biking, or day use experience. Balance indigenous agriculture/land stewardship practice with flex ble day use activities.	(-) Congestion along Pigeon Point Road or in parking areas. (+) Diversity in park visitors. (-) High levels of waste. (-) High levels of noise.	Design improvements to visitor access and circulation. Conduct periodic visitor use and satisfaction surveys. Respond to changing recreation trends and/or changing demographics. Increase patrol and citations.
Upland Conservation Zone	Establishment of locally native vegetative communities and wildlife. Restoration of coastal terrace prairie and central dune scrub habitat. Enhanced habitat diversity. Bluff e osion and hydrological systems operate naturally and do not pose a risk to human safety. Healthy soils. Natural succession of plant species. Safe beach access.	(+) Occurrence of native plants and wildflife. (+) Presence of suitable wildlife habitat. (-) Increase in non-native, invasive populations. (-) Accelerated rates of bluff erosion. (-) Large areas with compaction.	Conduct periodic fie d resource surveys. Monitor for special status species with potential to occur at the Park. Restrict use in sensitive areas.
Beach Recreation Zone	Tide pools used for visitor exploration and environmental education. Opportunities for secluded visitor experience.	(-) Obvious damage to tide pool ecosystem. (-) Crowding of beach.	Monitor tide pools and beach habitat.
Riparian Zone	Hydrological systems operate with natural flows Healthy riparian habitat established.	(-) Accelerated rates of creek incision. (+) Presence of riparian plant and animal species.	Conduct periodic surveys of riparian areas.
Easement (Operations)	n/a	n/a	n/a

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5.1 Introduction

This chapter is an Initial Study (IS) for the Pigeon Point Light Station State Historic Park General Plan ("proposed plan or plan") prepared by the California Department of Parks and Recreation (CDPR) to determine if the proposed plan may have a significant effect on the environment. Under the California Environmental Quality Act (CEQA), if a proposed project is to be carried out by a nongovernmental person or entity, a public agency shall act as the Lead Agency with responsibility for preparing a Negative Declaration, Mitigated Negative Declaration, or an EIR for the project. Pursuant to Section 15051 of the State CEQA Guidelines, CDPR is the Lead Agency for the proposed project.

5.1.1 REPORT ORGANIZATION

This Initial Study chapter is organized into the following sections:

Section 5.1: Introduction. This chapter provides an introduction and overview of the Initial Study document.

Section 5.2: Initial Study Checklist. This chapter summarizes pertinent details for the proposed project, including lead agency contact information, proposed project location, and land use designations.

Section 5.3: Project Description. This chapter describes the location and setting of the proposed project, along with its principal components, as well as a description of the policy setting and implementation process for the proposed project.

Section 5.4: Environmental Checklist and Findings. Making use of the CEQA Guidelines Appendix G, Environmental Checklist, this chapter identifies and discusses anticipated impacts from the proposed project, providing substantiation of the find ngs made. The chapter concludes with the determination, based on the analysis contained in this Initial Study, that a Mitigated Negative Declaration is appropriate for the proposed project.

Section 5.5: Mitigation Monitoring Report. This chapter identifies the recommended mitigation measures as well as the conditions set forth for project approval categorized by impact area.

Section 5.6: Organizations and Persons Consulted. This chapter presents a list of State and other agencies and consultant team members that contributed to the preparation of the Initial Study.

5.2 Initial Study Checklist

1. Project Title:	Pigeon Point Light Station State Historic Park General Plan and Environmental Document (Initial Study/Mitigated Negative Declaration)
2. Lead Agency Name and Address:	The Natural Resources Agency Department of Parks and Recreation Southern Service Center 2797 Truxtun Road San Diego, CA 92106 619.221.7060
3. Contact Person and Phone Number:	Barney Matsumoto 619.221.7060
4. Project Location:	Pigeon Point Light Station State Historic Park Pescadero, CA 94060 San Mateo County
5. San Mateo County General Plan Land Use Designation:	Agriculture/Public Recreation
6. San Mateo County Zoning Designation:	Planned Agricultural Development/Coastal Development (PAD/CD)
7. Description of Project:	See Section 5.3.3, Project Description
8. Surrounding Land Uses and Setting:	See Section 5.3.1, Project Site Location and Characteristics
9. Other Approvals:	See Section 5.3.4, Required Permits and Approvals

All documents cited in this report and used in its preparation are hereby incorporated by reference into this Initial Study.

5.2.1 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by the proposed Project, involving at least one impact that is a Potentially Significan

- ☐ Aesthetics
- ☐ Agriculture & Forestry Resources
- ☐ Air Quality
- ☐ Biological Resources
- ☐ Cultural Resources
- ☐ Geology & Soils
- ☐ Greenhouse Gas Emissions
- ☐ Hazards & Hazardous Materials
- ☐ Hydrology & Water Quality
- ☐ Land Use
- ☐ Mineral Resources
- ☐ Noise
- ☐ Population & Housing
- ☐ Public Services
- ☐ Recreation
- ☐ Transportation/Circulation
- ☐ Utilities & Service Systems
- ☐ Mandatory Findings of Significanc

5.2.2 DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed Project COULD NOT have a significant effect on the environment and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect n this case because revisions in the Project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Approved by:

California Department of Parks and Recreation Date

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5.3 Project Description

California Department of Parks and Recreation (CDPR), the Project Applicant (Applicant), is proposing Pigeon Point Light Station State Historic Park plan ("proposed plan" or "plan"), to adopt and implement a General Plan on a 75-acre site in Pescadero, California. The purpose of this General Plan is not to suggest specific projects, but rather it provides a larger framework for implementing improvements to the Pigeon Point Light Station State Historic Park (the Park).

This chapter provides a detailed description of the proposed plan, including the location, setting, and characteristics of the plan, as well as required permits and approvals. Additional descriptions of the environmental setting discussions are included in the sections of the environmental checklist by topic area in Chapter 4 of this Initial Study, as necessary.

5.3.1 PROJECT SITE LOCATION AND CHARACTERISTICS

REGIONAL AND LOCAL LOCATION

As shown on Figure 1.1 in Chapter One, the plan area is located along the coastline in San Mateo County, 28 miles north of Santa Cruz and 50 miles south of San Francisco. Regional access to the plan area is provided via Cabrillo Highway (Highway 1), just east of the plan area.

Local access to the plan area is provided via Pigeon Point Road, with access at the northern and southern ends of the project.

SURROUNDING LAND USE

The plan area is surrounded by other open space, active agricultural land, and large-lot single-family homes. Año Nuevo State Reserve is located fi e miles south, and Bean Hollow and Pescadero State Beaches are located four and six miles north, respectively, from the project site. In addition, some of the surrounding land use is protected open space, including Pigeon Point Bluffs

owned by San Mateo County Parks, located directly south of the project site. The Peninsula Open Space Trust (POST) owns the property south of Pigeon Point Bluffs to Gazos Creek State Beach, as well as Cloverdale Coastal Ranches, which is a 6,391-acre open space property located to the east of Highway 1 across from the plan area.

EXISTING SITE CONDITIONS

The plan area is comprised of three areas, totaling 75 acres. Elevations range from sea level at the beach to between 20 and 35 feet along the bluff. At most points along the bluff, the elevation change is steep and sudden, although there are some locations along the shore where the slope is gradual enough to allow access. Detailed existing conditions at each area are described below.

Light Station Area

The southern area (Light Station Area), which contains the historic Pigeon Point Lighthouse (the Lighthouse), is the only area that is currently open to the public. The Light Station Area is 29 acres, and includes a 115-foot tall lighthouse, eight buildings including the Fog Signal Building, the attached oil house, the Carpenter's Shop, the Cottages, the restroom, storage shed and Water Sand Filter building. The Lighthouse is on the National Register of Historic Places and is a California Historic Landmark. Further, the Light Station Area includes bluff and beach areas to the north and south of the peninsula, which include both formal and informal trails and access points to beach areas, rocky overlooks, and tide pools. The two formal beach access points in the Light Station Area include an unpaved trail leading to Pistachio Beach located in the northern corner of the area, and a staircase at Whaler's Cove at the southern end of the area closer to the Lighthouse. Yankee Jim Gulch meets the ocean at the northern section of the Light Station Area. The existing gravel surface parking lot is located off of Pigeon Point Road and can accommodate approximately 28 vehicles.

Bolsa Point Area

The northern area (Bolsa Point Area), located two miles north of the Light Station Area, is 37 acres. This area includes an undeveloped coastal plateau between Highway 1 and the bluff with an emerging coastal terrace plant community, a sandy beach area, and a riparian drainage corridor. A section of this area extends south along the coast, creating a thin offshoot between the bluff and the water. Spring Bridge Gulch traverses the area from east to west, lined by a willow riparian wetland community. The Bolsa Point Area does not have any roadways or utility connections and is not currently open to the public.

Easement

The Easement is 9 acres and is located east of Highway 1 from the Light Station Area, and is not open to the public. There are no existing structures on the

Easement; however, there is an existing agreement with the US Coast Guard, the owners of the property, to all for the construction of a well, water lines, and water storage tanks to serve the plan area. The easement is generally fla grassland with a stand of trees parallel to and slightly set back from Highway 1.

5.3.2 LAND USE DESIGNATIONS

According to the San Mateo County GIS website, the majority of the plan area has a General Plan Land Use designation of "Agriculture", with a small portion of the Light Station Area designated as "Public Recreation." The plan area, including the Light Station Area, Bolsa Point Area, and easement, are zoned Planned Agricultural Development/Coastal Development (PAD/CD).[1] Within the PAD zone, public recreation and shoreline trail uses are permitted with a PAD permit. In addition, the plan area is within the California Coastal Zone and is covered by the San Mateo County Local Coastal Program (LCP).

5.3.3 PROJECT DESCRIPTION

The proposed plan entails adoption and implementation of the Pigeon Point Light Station State Historic Park General Plan, which outlines goals and policies for future improvements to each of the three areas described above, as well as adjacent areas identified for future acquisition, collectively referred to as "plan area." Because the proposed plan is intended to serve as a long-range plan to lay the framework for future improvements within the plan area, specifi project components would be implemented throughout the next 20 years or so. This section describes the proposed project components. Figure 3.3 illustrates a concept of the proposed plan in its entirety, followed by Figures 3.4 and 3.5, which illustrate concepts for the Light Station Area and the Bolsa Point Area, respectively.

GENERAL PLAN IMPLEMENTATION

The proposed plan would be implemented over the next 20 years and could occur in several phases depending on the availability of funding. All future construction would be required to comply with State and local building codes, such as the California Building Code (CBC), and California Fire Code (CFC), as well as other State and local building requirements determined throughout implementation of the proposed plan. As the proposed plan components are implemented, site preparation would require some leveling to ensure flat surfaces and proper drainage in areas where the trails and proposed structures would be located, as well as trenching for utility infrastructure such as potable water.

1 County of San Mateo Planning and Building, "Find My Zoning, Parcel Map, and Other Property Info," Find My Zoning, Parcel Map, and Other Property Info, http://planning.smcgov.org/find- y-zoning-parcel-map-and-other-property-info, accessed February 8, 2016.

PLAN COMPONENTS

Trails

As shown on Figures 4.2 and 4.3 in Chapter Four, the proposed plan would include a network of approximately two miles of hiking and biking trails with permeable surfaces. The proposed plan also includes three new formalized beach access points at specific locations, which would include two staircases and one ADA trail, for a total of fi e beach access points. One of the staircases would be located north of the Lighthouse and would connect Pigeon Point Road to the tide pools below. The other staircase is located in the northern corner of the Bolsa Point Area. The ADA trail would be located in the center of the Bolsa Point Area. In addition, approximately two miles of hiking and/or multi-use trails would be included along the bluffs in the Bolsa Point Area and Light Station Area. Goals, policies, and programs relating to trail siting and construction are in Chapter Four of the General Plan.

Landscaping

The proposed plan would include targeted removal of invasive ice plant along the bluff, as well as the restoration of a riparian area around Spring Bridge Gulch, and areas of coastal prairie habitat. Restoration activities may include installation of drought tolerant native plants to enhance California grassland, coastal sage scrub, and coastal dune and bluff scrub, and terrace prairie habitat, as outlined in the natural resource management goals in Chapter Four of the General Plan.

Proposed Structures and Site Features

Light Station Area

The proposed plan includes: restoration of the Lighthouse which would be re-opened to the public; two picnic areas; a park gateway at the entrance; a viewing deck at the Fog Signal Building; a maritime historic district and shipwreck interpretation area; and beach access via stairs adjacent to the parking lot. As mentioned above, access to this area is via Pigeon Point Road. The proposed plan would enlarge and relocate the existing parking lot to include parking for approximately 70 vehicles east of Pigeon Point Road, as well as a small surface parking lot for approximately 12 vehicles near Pistachio Beach, with a separate entrance.

Bolsa Point Area

The proposed plan includes space intended for indigenous agriculture and land management practice and flexib e day use, such as educational activities and programs and recreational activities. In addition, the proposed plan would include a vault toilet located at the proposed parking area, a small ancillary storage facility for equipment that may be used for indigenous agriculture practices, a network of trails, and a small pedestrian bridge spanning the riparian corridor at Spring Bridge Gulch. Although there are no overnight campgrounds proposed as part of this plan, areas for fi e pits would be allowed within the Bolsa Point Area. The plan would include parking for approximately 30 vehicles directly adjacent to Highway 1.

Easement

The Easement is not proposed for public access and would not include any public recreation features; however, the proposed plan would include one new well, a small water treatment facility, new water pipelines connecting the easement to the Light Station Area, and water storage tanks.

INFRASTRUCTURE AND UTILITIES

The Light Station Area currently has electricity and natural gas from Pacific Ga and Electric (PG&E). The Light Station Area does have a hand-dug well at 25 feet below the surface; however, was deemed unsafe for consumption in 2013. As a result, 12,000 gallons of potable water is transported to the site for use by the hostel and park users per month. New connections for potable water would be required to service the proposed day uses facilities at the Bolsa Point Area.

5.3.4 REQUIRED PERMITS AND APPROVALS

Implementation of the proposed plan would require the following permits and/or approvals, as well as any permits or approvals identified as future development of projects are proposed:

- Adoption of the Pigeon Point Light Station State Historic Park General Plan
- Adoption of the IS/MND
- Section 404 Permit
- Coastal Development Permit
- Grading Permit
- Building Permit

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5.4 Environmental Checklist and Findings

Items identified in each section of the environmental checklist below are discussed following that section. Required mitigation measures are identifie where necessary to reduce a projected impact to a level that is determined to be *less than significan* . All impacts were found to be *less than significan* or *less than significan* with mitigation.

5.4.1 AESTHETICS

Would the plan:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Have a substantial adverse effect on a scenic vista?	❒	❒	❒	■
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	❒	❒	■	❒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	❒	❒	■	❒
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	❒	❒	■	❒

DISCUSSION

a) Would the plan have a substantial adverse effect on a scenic vista?

The San Mateo County General Plan does not offi ally designate scenic vistas within the plan area; however, defines visual resources as "those attractive visible elements of the natural and developed landscape, such as landforms,

vegetative forms, water bodies, structures and communities."[1] The plan area includes panoramic views of the Pacific Ocean and the rocky coastline, including viewing areas at the coastal bluff at the Pigeon Point Area. The Bolsa Point Area, while offer ng panoramic views of the ocean, is not currently open to the public. Components of the proposed plan would include signage, construction of trails, and beach access points as well as the restoration of the Lighthouse. In addition, the Bolsa Point Area would include space intended for indigenous agriculture and land stewardship practice area and flex ble day use, such as educational activities and programs and recreational activities, as well as a small ancillary storage facility for equipment that may be used for indigenous agriculture practices. Overall, the components of the proposed plan would primarily include features that would not be of the type to obstruct any scenic views, such as permanent structures (i.e., buildings).

Further, Chapter Four includes several policies that would protect and enhance visual resources of the plan area, including those found in **Section 4.5.4 Resource Management and Protection**. These include **Guideline VISUAL.1**, which would ensure that new development does not significant y obscure the Lighthouse or the historic features and to prioritize site design that fits within the landscape and promotes the secluded "sense of place" within the park; **Guideline VISUAL.3** calls for efforts to underground utility lines along Pigeon Point Road, if feasible considering physical and natural resources; **Guideline VISUAL.4**, which requires coordination with Caltrans to review plans for Park development to ensure consistency with the Highway 1 Corridor Protection Program; and **Guideline VISUAL.6**, which calls for management and maintenance of existing vista points, including benches along Pigeon Point Road and decks within the Historic Zone; consideration of locations for new vista points that offer expansive views of the coastline or clear views of the Lighthouse; and adequate space within a vista point to accommodate artist visitors including space for camera tripods and painting easels. Implementation of these policies as specific projects are proposed would ensure the protection and enhancement of the scenic views of the plan area.

In addition, the proposed plan itself includes components that would offer and enhance opportunities for the public to view scenic vistas, including opening up the Bolsa Point Area to the public, as well as providing a network of multi-use trails for hiking and walking along that coastline between Pigeon Point and Bolsa Point, which would also offer greater opportunities for the public to view coastal resources. Lastly, the proposed plan would include providing additional viewing platforms at various bluff locations throughout the plan area to facilitate greater access to scenic views of the ocean and its coastline.

Consequently, the proposed plan itself is to enhance recreational opportunities in the plan area and to facilitate greater access to the scenic resources in the

1 San Mateo County General Plan, Chapter 4, Visual Policies, Policy 4.8, page 10G.

plan area, thus, *no impact* to scenic vistas or other scenic resources would occur and no mitigation measures are required.

b) Would the plan substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?

Portions of the Cabrillo Highway (Highway 1) are designated as a State scenic highway, including the designated scenic portion extending 26 miles from Santa Cruz to Half Moon Bay, which runs to the east of the plan area.[2] The plan area is visible from Highway 1 looking west towards the Pacific Ocean and as a result, the proposed plan could affect scenic resources, including, but not limited to trees, rock, outcroppings, and historic buildings. However, as mentioned above in discussion **5.4.1. Aesthetics (a)**, the components of the proposed plan would primarily include features that would not be of the type to obstruct any scenic views, such as permanent structures (i.e., buildings). Further, Chapter Four includes several policies in **Section 4.5.4 Resource Management and Protection** that would serve to protect and enhance visual resources of the area, including views from Highway 1.For example, **Guideline VISUAL.1** would ensure that new development does not significant y obscure the Lighthouse or the historic features and to prioritize site design that fit within the landscape and promotes the secluded "sense of place" within the park; **Guideline VISUAL.3** calls for efforts to underground utility lines along Pigeon Point Road, if feasible considering physical and natural resources; and **Guideline VISUAL.4** requires coordination with Caltrans to review plans for Park development to ensure consistency with the Highway 1 Corridor Protection Program. These policies would ensure that implementation of the proposed plan would not substantially damage scenic resources from a State scenic highway. Therefore, with implementation of these policies, potential impacts related to the degradation of scenic resources from a State scenic highway would be *less than significan* and no mitigation measures are required.

c) Would the plan substantially degrade the existing visual character or quality of the site and its surroundings?

The proposed plan does not propose any new buildings or structures that would affect views of character. Proposed improvements in the Light Station Area include signage, parking, restrooms, and construction of trails and beach access points, all of which are existing features and part of the existing character of the plan area as recreational area. While the Bolsa Point Area would include a visitor-serving restroom, parking, and small ancillary storage structures for the indigenous agriculture and land stewardship practice area, which would represent a change from the existing condition in the Bolsa Point Area, these plan components would be sited in a manner sensitive to and to fit within the

2 California Department of Transportation, "California Scenic Highway Program," http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways, accessed on October 11, 2016.

existing visual character of the plan area per **Guideline VISUAL.2** found in **Section 4.5.4 Resource Management and Protection**. Although space for indigenous agriculture and day use activities would introduce new uses to the plan area, the visual character of the overall plan area would not alter as a result of these uses and sights and activities associated with recreation, such as picnicking, and hiking would be consistent with typical character of the overall plan area.

Further, as explained in the Project Description, the proposed plan establishes six management zones which define the use and management of those particular areas in order to preserve, maintain, or enhance the existing character appropriate to those zones and to ensure the existing character is not substantially degraded as a result of implementation of the proposed plan.

In addition to the management zones which would, among other things, serve to maintain the existing character of the plan area, the Chapter Four includes several policies that would ensure implementation of the proposed plan is compatible with the existing character of the area, including those found in **Section 4.5.2 Visitor Experience** and in **Section 4.5.3 Access and Circulation**. For example, **Guideline EXPERIENCE.2** calls for the location and design of recreational facilities to be compatible with adjacent uses and to integrate facilities with the historical resources located within the Park; and **Guideline ACCESS.21** calls for the development of signage standards for the use at trailheads and throughout the plan area that consider the unique quality of Pigeon Point Light Station State Historic Park, which includes utilizing the Park's Brand Standards Handbook.

Overall, the establishment of management zones under the proposed plan serve to protect and maintain the existing character of the plan area, in addition to the above policies, would ensure that implementation of the proposed plan would not substantially degrade the existing visual character of the plan area, and in many cases would enhance or rehabilitate some of the historical character of the area. As a result, a *less-than-significan* impact would occur and no mitigation measures are required.

d) Would the plan, create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

With the exception of the light house and lighting at the existing hostel, the existing plan area has limited sources of light as a result of its remote location. As such, the plan area generally provides opportunities to view the night sky with minimal interference from light sources. Although implementation of the proposed plan could introduce new sources of light, such as from the proposed restrooms and/or storage buildings at Bolsa Point Area for safety. Chapter Four includes guidelines in **Section 4.5.4 Resource Management and Protection** that would ensure that additional sources of light not substantially interfere with

nighttime views. For example, **Guideline VISUAL.5** requires the minimization of nighttime light pollution and restricted use to areas where lighting is necessary for park security and safety or to preserve the cultural use of the site, such as the beaconing pattern of the Lighthouse, to allow visitors to better experience the night sky on a clear night and limit interference with night patterns of nocturnal species. Further, Section 0312.2 of the CDPR Department Operations Manual (DOM) includes policies to minimize lighting interference to the nighttime views. Specifica ly, Policy 0312.3.1, Lightscape Protection Policy, of the DOM prescribes measures for protection of natural darkness and to prevent the loss of dark conditions, such as restricting the use of artific al lighting in parks to areas where security or safety must be met; utilizing minimal impact lighting techniques; shielding the use of artific al lighting where necessary to prevent the disruption of the night sky, and to participate in the development review process for developments adjacent to parks that may create impacts from lighting.

Regarding glare, the proposed plan would expand the existing parking lot which could result in additional sources of glare from windshields of vehicles, however, this would not represent a substantial increase to the existing parking lot such that a substantial adverse effect regarding glare would occur.

Overall, with implementation of the policies of the proposed plan, along with compliance with DOM Policy 0312.3.1, the proposed plan would result in a *less-than-significan* impact with regards to creating a new source of light or glare that would adversely affect day or nighttime views in the area and no mitigation measures are required.

5.4.2 AGRICULTURE AND FORESTRY RESOURCES

Would the plan:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	❒	❒	❒	■
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	❒	❒	❒	■
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	❒	❒	❒	■
d) Result in the loss of forest land or conversion of forest land to non-forest use?	❒	❒	❒	■
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to non-agricultural use or of conversion of forest land to non-forest use?	❒	❒	■	❒

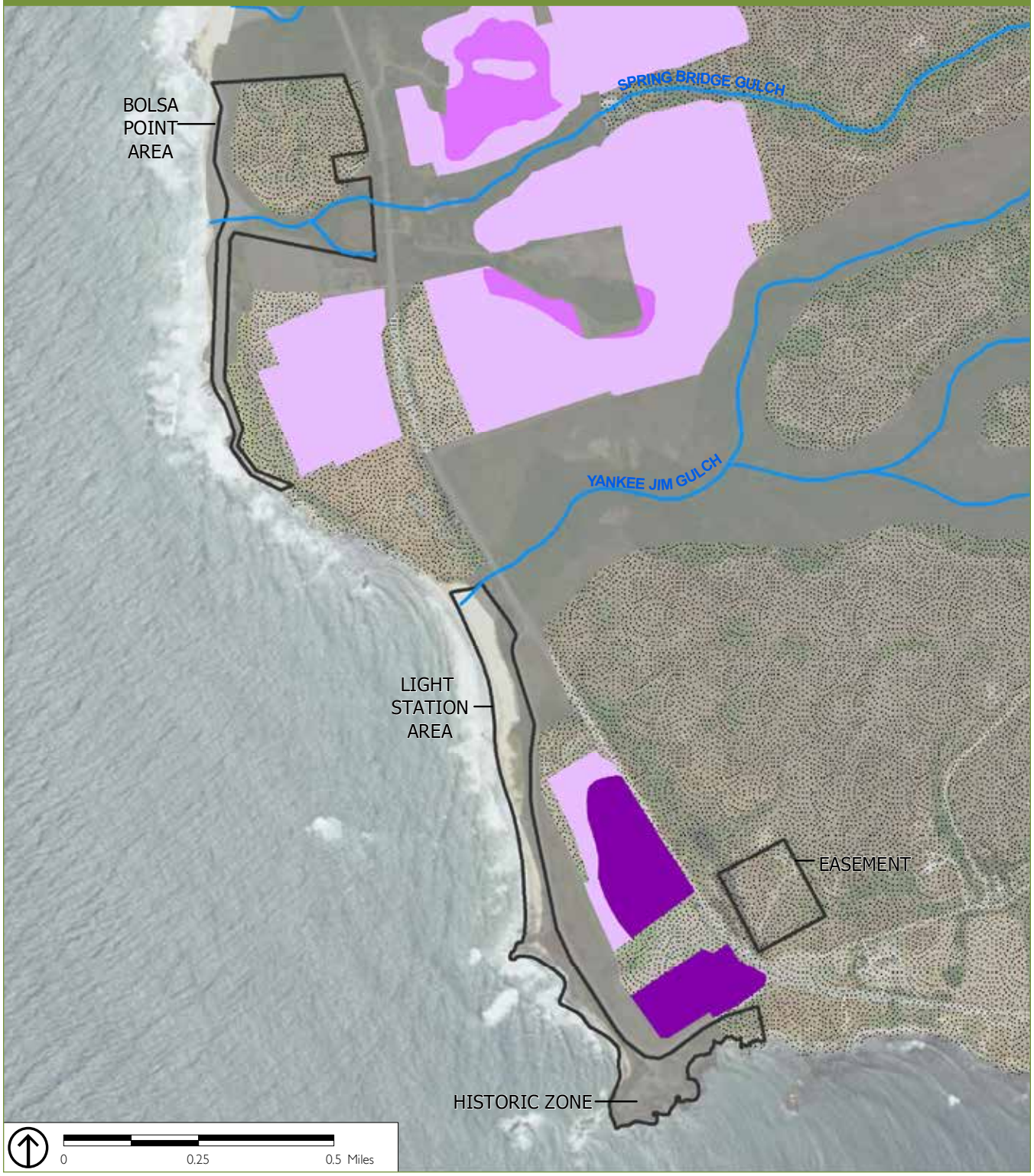
DISCUSSION

a) Would the plan convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

As shown in Figure 5.1, the plan area, including the Bolsa Point Area, Light Station Area, and Easement does not include Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.[3] However, the plan area does contain areas of farmland considered to be "Prime Farmland," as addressed below in **5.4.2 Agriculture and Forestry Resource (e)**. Because the proposed plan does not include any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance per the Farmland Mapping and Monitoring Program of the California Resources Agency, there would be *no impact* and no mitigation measures are necessary.

3 California Department of Conservation, 2014, San Mateo County Farmland Mapping and Monitoring Program, 2014, San Mateo County Important Farmland 2014 Map, reviewed on October 11, 2016.

FIGURE 5.1: Important Farmland



b) Would the plan conflict with existing zoning for agricultural use, or a Williamson Act contract?

The plan area, including the Light Station Area, Bolsa Point Area, and Easement, are zoned Planned Agricultural Development/Coastal Development (PAD/CD).[4] Per Section 6353 of the San Mateo Zoning Regulations, permitted uses subject to the issue of a planned agriculture permit include single-family residences, and public recreation/shoreline access trail among others.[5] Per Section 6351, public recreation is defined as lands and facilities serving primarily a recreation function which are operated by public agencies or other non-profit organizations. Public recreation facilities include, but are not limited to public beaches, parks, recreation areas, natural preserves, wild areas and trails.[6] Therefore, the plan would not conflict with existing zoning for agricultural use. According to the San Mateo County GIS web viewer, the plan area does not contain any Williamson Act contract lands.[7] Therefore, there would *no impact*, and no mitigation measures are required.

c, d) Would the plan Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))? Would the plan result in the loss of forest land or conversion of forest land to non-forest use?

According to 2003 mapping data from the California Department of Forestry and Fire Protection, the project study area does not contain woodland or forest land cover;[8] thus the proposed plan contains no land zoned for Timberland Production. Therefore, there would *no impact*, and no mitigation measures are required.

e) Would the plan involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to non-agricultural use or of conversion of forest land to non-forest use?

As mentioned above, the majority of the project area has a General Plan Land Use designation of "Agriculture" within San Mateo County, with a small portion of the Light Station Area designated as "Public Recreation." The plan area,

4 County of San Mateo Planning and Building, "Find My Zoning, Parcel Map, and Other Property Info," Find My Zoning, Parcel Map, and Other Property Info., http://planning.smcgov.org/find- y-zoning-parcel-map-and-other-property-info, accessed October 11, 2016

5 County of San Mateo Planning and Building, San Mateo County, Zoning Regulations, December 2012, page 21A.5, http://planning.smcgov.org/sites/planning.smcgov.org/files/documents/files/Jkeq0697_wfr.pdf, accessed October 18, 2016.

6 County of San Mateo Planning and Building, San Mateo County, Zoning Regulations, December 2012, page 21A.3, http://planning.smcgov.org/sites/planning.smcgov.org/files/documents/files/Jkeq0697_wfr.pdf, accessed October 18, 2016.

7 County of San Mateo Planning and Building, San Mateo County GIS web Viewer., http://maps.smcgov.org/planning/, accessed October 11, 2016.

8 California Department of Forestry and Fire Protection Fire and Resource Assessment Program, Land Cover map, http://frap.cdf.ca.gov/webdata/maps/statewide/fvegwhr13_map.pdf, accessed on October 18, 2016.

including the Light Station Area, Bolsa Point Area, and Easement, are zoned Planned Agricultural Development/Coastal Development (PAD/CD).[9] Within the PAD zone, public recreation and shoreline trail uses are permitted with a PAD permit. In addition, the plan area is within the California Coastal Zone and is covered by the San Mateo County Local Coastal Program (LCP). The LCP define farmland diffe ently than the Farmland Mitigation and Monitoring Program described in **II.a** above.

According to LCP Policy 5.1, "Prime Agricultural Land" is defined as all Class I, II, and III lands (capable of growing artichokes or Brussel sprouts) within the USDA Soil Conservation Service Land Use Capability Classificat on; and all lands with a Storie Index rating of 80-100. As shown in Figure 5.2, portions of the Bolsa Point Area, and portions of the Light Station Area are classified as Class II, and Class III soils, respectively.[10] Class codes are used to represent both irrigated and nonirrigated land capability classes. Class II soils have moderate limitations that reduce the choice of plants or require moderate conservation practices, Class III soils have severe limitations that reduce the choice of plants or require special conservation practices or both.[11] Because the proposed plan would result in the formalization of existing trails and creation of new multi-use trails, recreational features (i.e., picnic areas, roadway improvements, and public beach access), there is a potential to convert the Class II, and Class III agricultural land to non-farmland uses. However, as mentioned above, lands within the plan area have not been actively farmed in nearly 14 years. Thus, the implementation of the proposed plan would not alter the existing environment or convert farmland to non-agricultural use given that the area has not been farmed in over a decade.

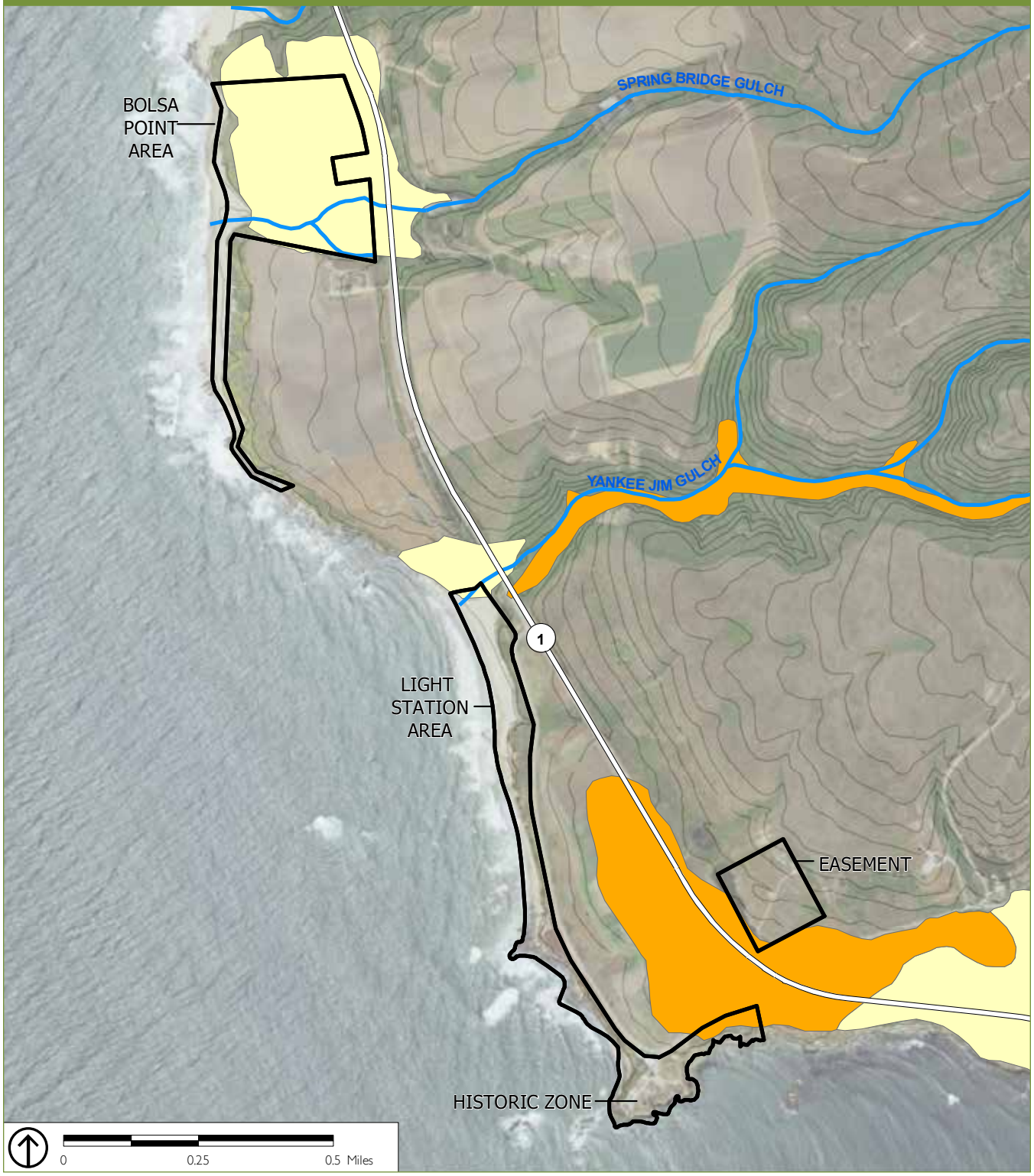
Although LCP Policy 5.8 prohibits conversion of prime agriculture land to a conditional use unless (1) no alternative site exists for the use; (2) a buffe area is provided between agricultural and non-agricultural uses; (3) productivity of adjacent agricultural land will not diminish; and (4) use(s) will not impair agricultural viability (through higher assessed value or degraded air/water quality). While implementation of the proposed plan would convert prime agricultural land to a non-agricultural use, the project area itself has not been actively farmed in nearly 14 years. Further, while there is active farming at adjacent properties, the proposed uses at the Bolsa Point Area would not interfere or otherwise obstruct those activities. In addition, proposed uses within the Bolsa Point Area would include indigenous agriculture and land stewardship, among other low-impact uses such as providing for educational programs and activities, and hiking.

9 County of San Mateo Planning and Building, "Find My Zoning, Parcel Map, and Other Property Info," Find My Zoning, Parcel Map, and Other Property Info., http://planning.smcgov.org/find- y-zoning-parcel-map-and-other-property-info, accessed October 11, 2016.

10 San Mateo County GIS Web Viewer, http://maps.smcgov.org/planning/, accessed on October 11, 2016.

11 United States Department of Agriculture, Natural Resources Conservation Service Soils, http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/ref/?cid=nrcs142p2_054226, accessed on October 19, 2016.

FIGURE 5.2: Prime Soils



Pigeon Point Light Station State Historic Park

Prime Soils

Class II

Class III

Additionally, LCP Policy 5.5 (b) does allow conditionally permitted uses on Prime Agricultural Land, including: (1) single-family residences, (2) farm labor housing, (3) public recreation and shoreline access trails, (4) non-soil-dependent greenhouses and nurseries, (5) onshore oil and gas exploration, production, and minimum necessary related storage, (6) uses ancillary to agriculture, (7) permanent roadstands for the sale of produce, provided the amount of prime agricultural land converted does not exceed one-quarter (1/4) acre, (8) facilities for the processing, storing, packaging and shipping of agricultural products, and (9) commercial wood lots and temporary storage of logs. Although the Agriculture chapter of the LCP does not explicitly define what "public recreation" includes, Chapter 11 of the LCP (LCP Policy 11.3) defines public recreation as lands and facilities serving primarily a recreation function which are operated by public agencies or other non-profit organizations. Public recreation facilities include, but are not limited to, public beaches, parks, recreation areas, natural preserves, wild areas, and trails.

Therefore, because the proposed plan would include components to allow for public recreation and shoreline access, future projects under implementation of the proposed plan would be consistent with LCP Policy 5.5(b).

LCP Policy 5.9 also prohibits the division of lands suitable for agriculture unless it can be demonstrated that existing or potential agricultural productivity of any resulting parcel determined to be feasible for agriculture would not be reduced. As mentioned above, lands within the project area have not been actively farmed in almost 14 years; therefore, demonstrating that implementation of the proposed plan would not impact agricultural productivity within the plan area.

In addition, Chapter Four includes policies that recognize the importance of the farmland in the project area and ensure that the agricultural history is maintained, and some cases enhanced. For example, **Guideline VEGETATION.6** in **Section 4.5.4 Resource Management and Protection** requires a partnership with local tribal groups to establish an indigenous and land management center in the Bolsa Point Area that emphasizes the cultivation of native plant species used in indigenous practices. Additionally, **Guideline INTERPRETATION.3** in **Section 4.5.5 Interpretation and Education** requires interpretation of the indigenous agriculture practice and land stewardship program for the general public.

Overall, while the proposed plan would include components on land the LCP identifies as Prime Agricultural Land, the reasons stated above would ensure that the proposed plan result in a *less-than-significant* impact to the conversion of farmland to non-agricultural uses and no mitigation measures are required.

5.4.3 AIR QUALITY

Would the proposed Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	❒	❒	■	❒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	❒	■	❒	❒
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project area is in non-attainment under applicable federal or State ambient air quality standards (including releasing emissions which exceed quantitative Standards for ozone precursors or other pollutants)?	❒	■	❒	❒
d) Expose sensitive receptors to substantial pollutant concentrations?	❒	■	❒	❒
e) Create objectionable odors affecting a substantial number of people?	❒	❒	■	❒

EXISTING CONDITIONS

A discussion of the management of air resources throughout the State and existing laws and policies to regulate them can be found in **Appendix H: Existing Laws, Codes, and Policies**.

California is divided geographically into air basins for the purpose of managing the air resources of the State on a regional basis. An air basin generally has similar meteorological and geographic conditions throughout. The plan area is in the San Francisco Bay Area Air Basin (SFBAAB or Air Basin), which comprises all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties; the southern portion of Sonoma County; and the southwestern portion of Solano County. The Bay Area Air Quality Management District (BAAQMD) is the regional air quality agency for the SFBAAB. Air quality in this area is determined by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions.[12] Federal, State, and local air districts have adopted laws and regulations intended to control and improve air quality, described in **Appendix H**. Air pollutants of concern are criteria air pollutants and toxic air contaminants (TACs).

This section analyzes the types and quantities of air pollutant emissions that would be generated by construction and operation of the proposed plan. Where available, the significance criteria established by BAAQMD may be relied upon to make the following determinations.

12 Bay Area Air Quality Management District, 2014, California Environmental Quality Act Air Quality Guidelines, Appendix C: Sample Air Quality Setting.

DISCUSSION

a) Would the plan conflict with or obstruct implementation of the applicable air quality plan?

A consistency determination plays an important role in local agency project review by linking local planning and individual projects to the clean air plan. It fulfills the CEQA goal of informing decision makers of the environmental effort of the project under consideration at an early enough stage to ensure that air quality concerns are fully addressed. It also provides the local agency with ongoing information as to whether they are contributing to clean air goals in the Bay Area. The most recently adopted comprehensive plan is the Bay Area 2010 Clean Air Plan, adopted in September 2010, which is being updated in 2016.

Regional growth projections are used by BAAQMD to forecast future emission levels in the Air Basin. For the Bay Area, these regional growth projections are provided by the Association of Bay Area Governments (ABAG) and transportation projections are provided by the Metropolitan Transportation Commission (MTC) and are partially based on land use designations in city/county general plans. Typically, only large, regionally significant projects have the potential to affec the regional growth projections.

Development of the proposed plan would include a network of approximately two miles of trails, three new formalized beach access points, lighthouse restoration, as well as restoration of a riparian and coastal prairie habitats. In addition, the proposed plan would not have the potential to substantially affect housing, employment, and population projections within the region, which is the basis of the Bay Area Clean Air Plan projections. Therefore, the proposed plan is not considered a regionally significant project under CEQA Guidelines Section 15206 that would affect regional vehicle miles traveled (VMT) and warrant intergovernmental review by the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC). With implementation of Mitigation Measure AIR-1, the areas within potential fi e pits located within the Bolsa Point Area for use in recreational programs would be designed to minimize emissions from potential fi e pits that would be allowed for day or evening activities. While the proposed plan would not exceed BAAQMD's screening criteria during project operations, this impact is potentially significant because fi e pits associated with the proposed project could generate significant emissions. With implementation of Mitigation Measure AIR-1, emissions generated by the project would not exceed the BAAQMD regional thresholds; and therefore, would not obstruct the 2010 Bay Area Clean Air Plan. Therefore, the proposed plan would not conflict with or obstruct implementation of the 2010 Bay Area Clean Air Plan and impacts would be considered *less than significan* .

b) Would the plan violate any air quality standard or contribute substantially to an existing or projected air quality violation?

BAAQMD has identified thresholds of significance for criteria pollutant emissions and criteria air pollutant precursors including, ROG, NOx, PM10 and PM2.5. Development projects below the significance thresholds are not expected to generate suffi ent criteria pollutant emissions to violate any air quality standard or contribute substantially to an existing or projected air quality violation. The following describes changes in regional impacts from short-term construction activities and long-term operation of the proposed plan.

Construction Emissions

Construction activities produce combustion emissions from various sources, such as on-site heavy-duty construction vehicles, vehicles hauling materials to and from the plan area, and motor vehicles transporting the construction crew. Site preparation activities produce fugitive dust emissions (PM10 and PM2.5) and from soil-disturbing activities, such as grading and excavation. Air pollutant emissions from construction activities on site would vary daily as construction activity levels change. The proposed plan involves the construction of a network of trails, parking lot expansion/new parking lot, space for indigenous agriculture and land stewardship, and Lighthouse restoration. BAAQMD's CEQA Guidelines identifies screening criteria for construction-related criteria air pollutant emissions. Since BAAQMD's CEQA Guidelines does not have specific screening criteria for recreational trails, the screening criteria for city parks were used as the best fit. Based on BAAQMD's screening criteria, city parks of 67 acres or larger have the potential to generate a substantial increase in criteria air pollutant emissions and would need further analysis. Because most of the plan area will be left in its natural state, the disturbed area will be substantially below the BAAQMD screening threshold and construction would generate nominal criteria air pollutant emissions. Furthermore, the proposed plan does not have any unusual circumstances, such as the potential to result in overlapping construction activities. Construction activities associated with installation of trails, parking lot expansion/new parking lot, and lighthouse restoration would not require substantial use of heavy equipment; and therefore, would generate nominal emissions. A quantified analysis of the proposed plan's construction emissions is not warranted by BAAQMD in this scenario; and due to the limited construction activities needed, the impact is *less than significan* .

Operational Emissions

The existing Light Station Area includes the Lighthouse and other structures that are open to the public and accommodate up to 28 vehicles. Existing emissions generated at the 75-acre plan area include on-road mobile source emissions from visitors and employees, energy use associated with the existing structures, and landscape and other area sources emissions generated at the Light Station Area. The proposed plan identifies improvements to the plan area that would be implemented in the next 20 years, depending on the availability of funding. The majority of plan components would not generate emissions

(e.g., trails, invasive plant removal, interpretive areas, etc.). The proposed plan does not propose any new buildings that would generate an increase in energy use onsite. However, the well and small waste treatment facility at the Easement would generate nominal electricity demand. The proposed plan would increase visitor use but would not result in a substantial increase in vehicle miles traveled and associated emissions (see **Section 5.14.17 Transportation and Circulation**). The proposed plan also includes space for indigenous agriculture and land stewardship activities, as well as educational programs and activities in the Bolsa Point Area with parking for up to 30 vehicles and vault toilets. Further, areas within Bolsa Point may include fi e pits. Based on the Air Quality Impacts of Recreational Beach Fires: Preliminary Assessment[13] study conducted by the South Coast Air Quality Management District (SCAQMD) in 2013, one fi e pit in one evening may emit as much PM2.5 as one heavy duty diesel truck driving 564 miles per day.[14] As such, this could result in a potentially significant impact.

Impact AIR-1: Emissions generated by the fi e pits would generate criteria air pollutant emissions that have the potential to exceed the BAAQMD thresholds. Because the design of the Bolsa Point Area is not final zed, it is not currently known how many fi e pits would be included.

> **Mitigation Measure AIR-1:** Prior to the installation of the fi e pits in the Bolsa Point Area, the California Department of Parks and Recreation (CDPR) will prepare an air quality study that quantifies criteria air pollutant emissions associated with the fi e pits. The study shall be prepared in accordance with the Bay Area Air Quality Management District's (BAAQMD)' CEQA Guidelines and consider emissions associated with the fi e pits. If criteria air pollutants are determined to have the potential to exceed the daily or annual BAAQMD thresholds of significance, the CDPR shall incorporate mitigation measures to reduce air pollutant emissions to below these thresholds. Measures to reduce and/or eliminate emissions from fi e pits include, but are not limited to:
>
> - Limiting the number of fi e pit rings,
> - Requiring that the nearest fi e pit be set back from the residence,
> - Consider the use of non-wood burning fi e pit alternatives, such as propane fi e rings and or logs made from wood-alternatives, and
> - Utilize fi e ring design strategies to minimize emissions of particulate matter.

Mitigation Measure AIR-1 would reduce the project's regional operation emissions below the BAAQMD thresholds. Therefore, impacts would be *less than significan* with mitigation.

13 South Coast Air Quality Management District, "Beach Fire Monitroing Results", http://www.aqmd.gov/home/library/air-quality-data-studies/special-monitoring/beach-fi e-monitoring-results, accessed October 13, 2016.

14 South Coast Air Quality Management District , Air Quality Impacts of Recreational Beach Fires: Preliminary Assessment. Staff presentation to the SCAQMD Board, www.aqmd.gov, accessed May 15 2013.

c) Would the plan result in a cumulatively considerable net increase of any criteria pollutant for which the project area is in non-attainment under applicable federal or State ambient air quality standards (including releasing emissions which exceed quantitative Standards for ozone precursors or other pollutants)?

The San Francisco Bay Area Air Basin (SFBAAB) is currently designated as a nonattainment area for California and National ambient air quality standards (AAQS) for ozone (O3) and for PM2.5, and a nonattainment area under the California AAQS for PM10. Any project that does not exceed or can be mitigated to less than the BAAQMD significance levels, used as the threshold for determining major projects, does not add significant y to a cumulative impact.

The proposed plan would have *less than significan* construction impacts, operational impacts (Bay Area Clean Air Plan consistency, odors, and CO hotspots), and would have *less than significan* impacts with mitigation during operation (regional air pollutant emissions) and on-site community risk and hazards. Consequently, the proposed plan's contribution to cumulative air quality impacts would be *less than significan* with mitigation.

Impact AIR-2: The proposed plan would contribute to cumulative air impacts.

Mitigation Measure AIR-2: Implementation of Mitigation Measure AIR-1(regional air quality impacts) and Mitigation Measure AIR-3 (community risk and hazards).

d) Would the project expose sensitive receptors to substantial pollutant concentrations?

Construction Off-Site Community Risk and Hazards

The construction associated with the proposed plan would temporarily elevate concentrations of toxic air contaminants (TACs) and diesel- PM2.5 in the vicinity of sensitive land uses during construction activities. The proposed plan involves siting recreational land uses proximate to existing residential units in the vicinity of the plan area. BAAQMD has developed screening thresholds for assessing potential health risks from construction activities. The closest sensitive receptors to the plan-related construction activities would be the residence proximate to the Light Station Area, which is approximately 180 feet to the north of the plan area along Highway 1. Additionally, there is a residence approximately 150 feet to the south of the Bolsa Point Area. Because most of the plan area will be left in its natural state and the disturbed area will be relatively small, construction would generate nominal emissions. Development of the proposed plan would not generate an intensive construction schedule or a substantial off- oad equipment fleet that would result in significant construction impacts to off-s te sensitive receptors. BAAQMD does not require construction health risk assessment in these circumstances. Overall, construction emissions associated

with the proposed plan would not exceed BAAQMD's project level and cumulative significance thresholds for community risk and hazards, and the impact is *less than significan* .

Operation On-Site Community Risk and Hazards

Evaluation of impacts of the environment on the proposed plan is not a CEQA issue unless it would exacerbate an environmental hazard or such analysis is identified in the Public Resources Code (i.e., exception). The project involves the construction of recreational space and trails on an existing State Park. Although no overnight campgrounds area being proposed as part of this plan, fi e pits are planned within the Bolsa Point Area. Fire pits at the Bolsa Point Area could exacerbate potential off-s te environmental hazards at nearby residences as a source of PM2.5. Because the design of the Bolsa Point Area is not final zed, it is not currently known how many fi e pits would be constructed. However, fi e pits could generate substantial concentrations of TACs and PM2.5 at the adjacent residence. Because the annual PM2.5 concentrations from the fi e pits could exceed BAAQMD's significance thresholds, the following mitigation measure is necessary to ensure that the fi e pits are designed to minimize localized air quality impacts:

Impact AIR-3: Fire pits could generate substantial concentrations of TAC's and PM2.5.

> **Mitigation Measure AIR-3:** Prior to the installation of the fi e pits in the Bolsa Point Area, CDPR will prepare a Health Risk Assessment (HRA) that quantifies toxic air contaminants (TACs) and PM2.5 associated with the fi e pit use. The study shall be prepared in accordance with the Bay Area Air Quality Management District's (BAAQMD)' CEQA Guidelines and procedures of the state Offic of Environmental Health Hazard Assessment (OEHHA) and consider localized emissions associated with the fi e pits. If emissions are determined to have the potential to exceed the BAAQMD thresholds of significance (i.e., 10 in one million cancer risk, non-cancer index of one, or 0.3 µg/m3), the CDPR shall incorporate mitigation measures specified in AIR-1 to reduce air pollutant emissions to below these thresholds.

Mitigation Measure AIR-3 would reduce the project's localized operation emissions below the BAAQMD thresholds. Therefore, the plan would not expose off-s te sensitive receptors to substantial concentrations of air pollutant emissions during operation and impacts would be *less than significan* with mitigation.

CO Hotspot Analysis

Areas of vehicle congestion have the potential to create pockets of carbon monoxide (CO) called hotspots. These pockets have the potential to exceed the State one-hour standard of 20 ppm or the eight-hour standard of 9 ppm. The plan would not conflict with the San Mateo County Transportation Authority (SMCTA)

Congestion Management Program (CMP) because it would not hinder the capital improvements outlined in the CMP or alter regional travel patterns. SMCTA's CMP must be consistent with the Metropolitan Transportation Commissions' (MTC) and the Association of Bay Area Government's (ABAG) Plan Bay Area. An overarching goal of the regional plan is to concentrate development in areas where there are existing services and infrastructure rather than allocate new growth in outlying areas where substantial transportation investments would be necessary to achieve the per capita passenger vehicle, vehicle miles traveled, and associated GHG emissions reductions. The plan area is not within an area that has traffic congestion that has the potential to exceed the ambient air quality standards. Furthermore, the proposed plan would increase visitor use, but would not increase traffi volumes at affected intersections by more than 44,000 vehicles per hour or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (i.e., bridges and tunnels) (see **5.14.17 Transportation and Circulation**). The proposed plan would not exceed the screening criteria of the BAAQMD. Therefore, impacts associated with CO hotspots for the proposed plan would be *less than significan* .

e) Would the plan create objectionable odors affecting a substantial number of people?

The proposed plan is a state park development project with trails, habitat restoration, and recreational uses. Construction and operation of these types of projects would not generate substantial odors or be subject to odors that would affect a substantial number of people. The type of facilities that are considered to have objectionable odors include wastewater treatments plants, compost facilities, landfills, solid waste transfer stations, fibe glass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries asphalt batch plants, chemical manufacturing, and food manufacturing facilities. Parks and recreational uses are not associated with foul odors that constitute a public nuisance. During operation, all public toilets will be pit toilets. While pit toilets can be a source of odors, they will be out of the main path of travel, and are not expected to affect a substantial number of people. Additionally, fi e pits could generate odors. With compliance with Mitigation Measure AIR-3 odors from the fi e pits would not be substantial enough to be considered nuisance odors that would affect a substantial number of people. During construction activities, construction equipment exhaust and application of asphalt and architectural coatings would temporarily generate odors. Any construction-related odor emissions would be temporary and intermittent. Additionally, noxious odors would be confined to the immediate vicinity of the construction equipment. By the time such emissions reach any sensitive receptor sites, they would be diluted to well below any level of air quality concern. Impacts would be *less than significan* and no mitigation measures are required.

5.4.4 BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, of special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	❒	❒	■	❒
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	❒	❒	■	❒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.), through direct removal, filling, hydrological interruption, or other means?	❒	❒	■	❒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife sites?	❒	❒	■	❒
e) Conflict with any local ordinances or policies protecting biological resources?	❒	❒	❒	■
f) Conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or State habitat conservation plan?	❒	❒	❒	■

EXISTING CONDITIONS

This section describes the existing conditions for biological resources present within the plan area, which includes the Light Station Area, Bolsa Point Area, and the Easement. The biological resources project study area referenced throughout this discussion is defined as the Park and relevant areas of similar habitat composition in the surrounding vicinity. The resources described include vegetation communities and associated wildlife, wetlands and other water bodies, and special-status plants and wildlife (federally- or state-listed as endangered, threatened, proposed, and candidate species, and state or local species of concern).

The information on natural communities, plant and animal species, and sensitive biological resources used in the preparation of this discussion was obtained from: the California Department of Fish and Wildlife's (CDFW) Special Animals List,[15] Special Vascular Plants, Bryophytes, and Lichens List,[16] California Natural Diversity Database (CNDDB)[17], the California Native Plant Society (CNPS) Electronic Inventory,[18] the U.S. Fish and Wildlife Service (USFWS),[19] standard biological literature, and birding community observations.[20] In addition, on October 14, 2015, ESA staff conducted reconnaissance botanical and wildlife surveys of the Park in order to characterize existing conditions, assess habitat quality, and assess the potential presence of special-status species and sensitive natural communities.

Environmentally Sensitive Habitat Areas

The San Mateo County LCP defines several environmentally sensitive habitat areas (ESHA) that are affo ded special protection. These ESHA are defined in the LCP as "…as any area in which plant or animal life or their habitats are either rare or especially valuable and any area which meets one of the following criteria: (1) habitats containing or supporting 'rare and endangered' species as defined by the State Fish and Game Commission, (2) all perennial and intermittent streams and their tributaries, (3) coastal tide lands and marshes, (4) coastal and offsho e areas containing breeding or nesting sites and coastal areas used by migratory and resident water-associated birds for resting areas and feeding, (5) areas

15 California Department of Fish and Wildlife, Natural Diversity Database. Special Animals List. Periodic publication. January 2016.

16 California Department of Fish and Wildlife, Natural Diversity Database, Special Vascular Plants, Bryophytes, and Lichens List. Quarterly publication, January 2016.

17 California Department of Fish and Wildlife, California Natural Diversity Database Rarefind version 5 query of the Pigeon Point, San Gregorio, Davenport, Año Nuevo, Franklin Point, and La Honda USGS 7.5-minute topographic quadrangles, Commercial Version, accessed January 7, 2016.

18 California Native Plant Society, Inventory of Rare and Endangered Plants for Pigeon Point, San Gregorio, Año Nuevo, Franklin Point, and La Honda USGS 7.5-minute topographic quadrangles, http://www.rareplants.cnps.org/, accessed January 13, 2016.

19 U.S Fish and Wildlife Service, My Project, IPaC Trust Resource Report and Offi al Species List of Federally Endangered and Threatened Species in the Pigeon Point Light Station State Historic Park General Plan and IS/MND Project Area [08ESMF00-2016SLI0607], accessed January 7, 2016.

20 eBird. "Pigeon Pt. Hotspot.," http://ebird.org/ebird/hotspot/L271476, accessed November 16, 2016.

used for scientific study and research concerning fish and wildlife, (6) lakes and ponds and adjacent shore habitat, (7) existing game and wildlife refuges and reserves, and (8) sand dunes."

These sensitive habitat areas include, but are not limited to, riparian corridors, wetlands, marine habitats, sand dunes, sea cliffs, and habitats supporting rare, endangered, and unique species. Many of these resources occur within the Park, however, the designation of these habitats as ESHA are made by County staff on a case-by-case basis at the time a project is proposed. The LCP limits development in ESHA to resource dependent uses and prescribes minimum set-back, or buffer distances from ESHA for other development.

Special-Status Species

A number of species known to occur in the vicinity of the Park are protected pursuant to federal and/or State endangered species laws, or have been designated species of special concern by the CDFW. In addition, Section 15380(b) of the CEQA Guidelines provides a defin tion of rare, endangered, or threatened species that are not currently included in an agency listing, but whose "survival and reproduction in the wild are in immediate jeopardy" (endangered) or which are "in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens" or "is likely to become endangered within the foreseeable future throughout all or a significan portion of its range and may be considered 'threatened' as that term is used in the federal Endangered Species Act."[21] Species recognized under these terms are collectively referred to as "special-status species." For the purpose of this report, special-status species include:

» Species listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (50 CFR 17.12 [listed plants], 17.11 [listed animals], and various notices in the Federal Register [FR] [proposed species]);

» Species that are candidates for possible future listing as threatened or endangered under the federal Endangered Species Act (61 FR 40, February 28, 1996);

» Species listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (14 Cal. Code Regs. 670.5);

» Species formerly designated by the USFWS as species of concern or species designated by the CDFW as species of special concern;[22]

21 For example, the CDFW interprets Ranks 1A, 1B, 2A, and 2B of the California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California to consist of plants that, in a majority of cases, would qualify for listing as rare, threatened, or endangered. However, the determination as to whether an impact is significant is made by the lead agency, absent the protection of other laws.

22 A California species of special concern is one that: has been extirpated from the state; meets the state defin tion of threatened or endangered but has not been formally listed; is undergoing or has experienced serious population declines or range restrictions that put it at risk of becoming threatened or endangered; and/or has naturally small populations susceptible to high risk from any factor that could lead to declines that would qualify it for threatened or endangered status.

- Species designated as "special animals" by the state;[23]
- Species designated as "fully protected" by the state (there are about 35, most of which are also listed as either endangered or threatened);[24]
- Raptors (birds of prey), which are specifica ly protected by California Fish and Game Code Section 3503.5, thus prohibiting the take, possession, or killing of raptors and owls, their nests, and their eggs;[25]
- Plants listed as rare or endangered under the California Native Plant Protection Act (California Fish and Game Code, Section 1900 et seq.);
- Species that meet the defin tions of rare and endangered under CEQA. CEQA Section 15380 provides that a plant or animal species may be treated as "rare or endangered" even if not on one of the offi al lists (CEQA Guidelines, Section 15380); and
- Plants considered by the CNPS to be "rare, threatened or endangered in California" under the California Rare Plant Ranking system (CRPR) which include Rank 1A, 1B, 2A, and 2B as well as Rank 3 and 4[26] plant species.

Lists of special-status plant and animal species that have the potential to occur within the Park and surrounding vicinity, or the study area, for biological resources were compiled based on data contained in the CNDDB[27] and the CNPS Inventory of Rare and Endangered Plants[28] for the Pigeon Point, San Gregorio, Davenport, Año Nuevo, Franklin Point, and La Honda U.S. Geological Survey 7.5 minute topographical quadrangles, in addition to those included on the offi al USFWS list of federal endangered and threatened species that occur in the

23 Species listed on the current CDFW "special animals" list (January 2016) which includes 906 species. This list includes species that CDFW considers "those of greatest conservation need." California Department of Fish and Wildlife, Natural Diversity Database. Special Animals List. Periodic publication. January 2016.

24 The "fully protected" classificat on was California's initial effort n the 1960s to identify and provide additional protection to those animals that were rare or faced possible extinction. The designation can be found in the Fish and Game Code.

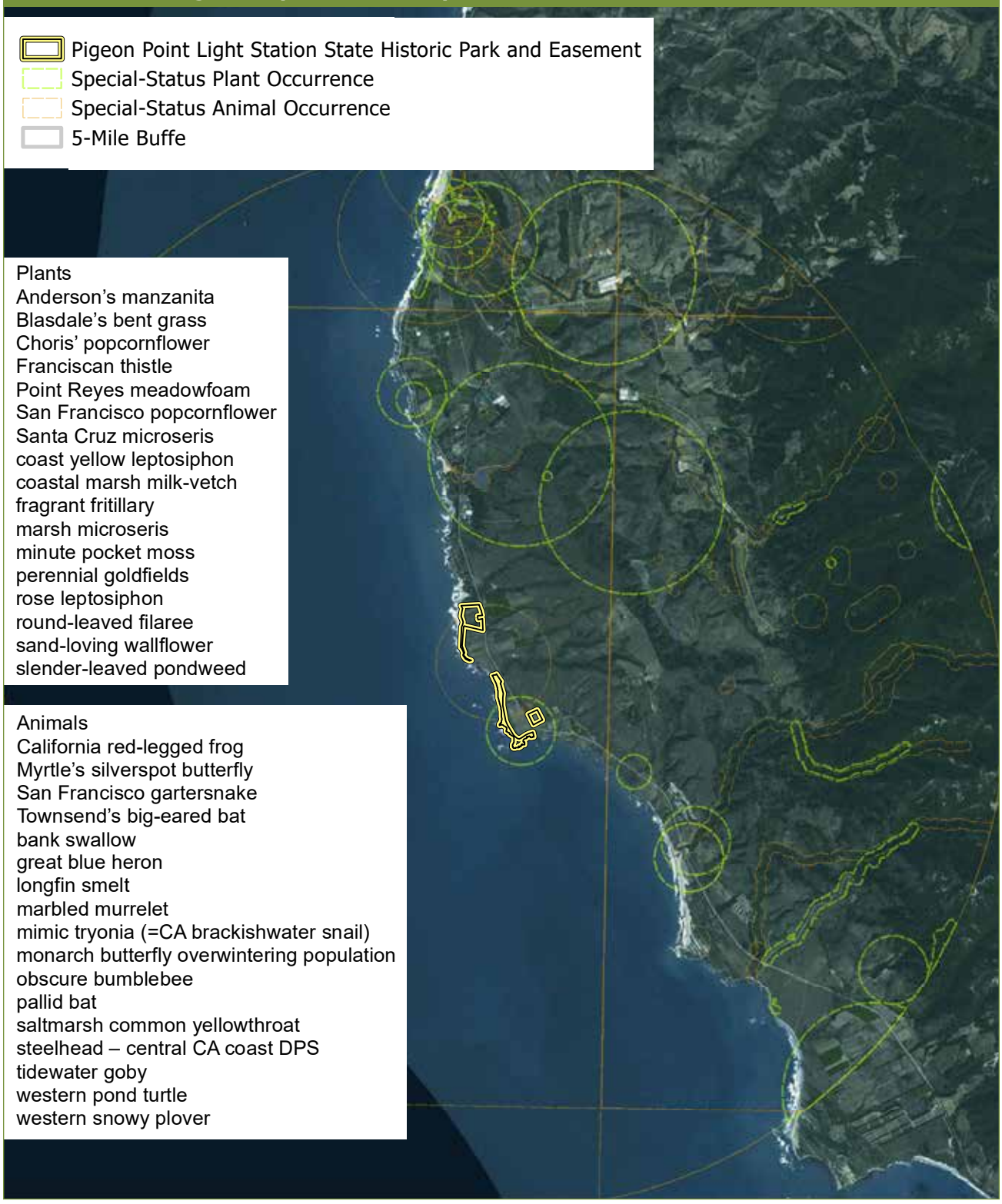
25 The inclusion of birds protected by Fish and Game Code Section 3503.5 is in recognition of the fact that these birds are substantially less common in California than most other birds, having lost much of their habitat to development, and that the populations of these species are therefore substantially more vulnerable to further loss of habitat and to interference with nesting and breeding than most other birds. It is noted that a number of raptors and owls are already specifica ly listed as threatened or endangered by State and federal wildlife authorities.

26 Rank 3 plants may be analyzed under CEQA Guidelines Section 15380 if suffi ent information is available to assess potential impacts to such plants. Factors such as regional rarity vs. statewide rarity should be considered in determining whether cumulative impacts to a Rank 4 plant are significant even if individual project impacts are not. CRPR Rank 3 and 4 may be considered regionally significant if, e.g., the occurrence is located at the periphery of the species' range, or exhibits unusual morphology, or occurs in an unusual habitat/substrate. For these reasons, CRPR Rank 3 and 4 plants should be included in the special-status species analysis. Rank 3 and 4 plants are also included in the CNDDB Special Vascular Plants, Bryophytes, and Lichens List. The current online published list is available at: http://www.dfg.ca.gov/biogeodata, California Department of Fish and Wildlife, Natural Diversity Database, Special Vascular Plants, Bryophytes, and Lichens List. Quarterly publication, January 2016.

27 California Department of Fish and Wildlife, California Natural Diversity Database Rarefind version 5 query of the Pigeon Point, San Gregorio, Davenport, Año Nuevo, Franklin Point, and La Honda USGS 7.5-minute topographic quadrangles, Commercial Version.

28 California Native Plant Society, Inventory of Rare and Endangered Plants for Pigeon Point, San Gregorio, Año Nuevo, Franklin Point, and La Honda USGS 7.5-minute topographic quadrangles, http://www.rareplants.cnps.org/, accessed January 13, 2016.

FIGURE 5.3: Regional Special-Status Species Occurrences



SOURCE: ESRI, 2016; CDFW, 2016d; ESA, 2016

The occurrences shown on this map represent the known locations of the species listed here as of the date this version of the CNDDB (01/2016). There may be additional occurrences or additional species within this area which have not yuet been surveyed or mapped. Details on documented locations of special-status species is withheld according to CNDDB guidelines due to the sensitivity of the information.

Park.[29] Several species not included on these lists are also discussed based on documentation of their presence in the Park and surrounding vicinity presented in prior reports or environmental literature. Table D.1, Special-Status Species, in **Appendix D**, present the special-status species, their status, their habitat requirements, and plant blooming periods, and considers the potential for each species to occur within the Park. Figure 5.3 identifies the locations of regional special-status species occurrences as reported in CNDDB.

Based on review of the biological literature of the region, information presented in previous environmental documentation, and an evaluation of the habitat conditions of the study area, a species was designated as "absent" if: (1) the species' specific habitat requirements (e.g., serpentine grasslands, as opposed to grasslands occurring on other soils) are not present, or (2) the species is presumed, based on the best scientific information available, to be extirpated from the study area or region. A species was designated as having a "low potential" for occurrence if: (1) its known current distribution or range is outside of the study area or (2) only limited or marginally suitable habitat is present within the study area. A species was designated as having a "moderate potential" for occurrence if: (1) there is low to moderate quality habitat present within the study area or immediately adjacent areas or (2) the study area is within the known range of the species, even though the species was not observed during biological surveys. A species was designated as having a "high potential" for occurrence if: (1) moderate to high quality habitat is present within the study area, and (2) the study area is within the known range of the species. Many of the species listed in Table D.1 in **Appendix D** have only a low potential for occurrence or are absent from the study area and were eliminated from further evaluation, primarily because the study area does not provide suitable habitat for them or the Park is outside of their understood range.

Special-Status Plants

The following special-status plants were determined to have at least a moderate potential to occur within the Park or surrounding vicinity:

» **Blasdale's bent grass** (*Agrostis blasdalei*) is a CRPR 1B.2 perennial rhizomatous herb in the grass family (Poaceae) that blooms from May through July. This species occurs in dune, prairie, and bluff scrub communities along the coast from Rockport (Mendocino County) to Point Reyes and between Pescadero and Davenport. An extant occurrence of Blasdale's bent grass is documented approximately one mile south of the Park near Columbia Beach on exposed coastal bluffs [30] Suitable habitat for Blasdale's bent grass is present in the Park's Light Station Area along the coastal bluffs and in the Bolsa Point Area.

29 U.S Fish and Wildlife Service, My Project, IPaC Trust Resource Report and Offi al Species List of Federally Endangered and Threatened Species in the Pigeon Point Light Station State Historic Park General Plan and IS/MND Project Area [08ESMF00-2016SLI0607], accessed January 7, 2016.

30 California Department of Fish and Wildlife, CNDDB GIS Database, Biogeographic Data Branch, December 2016.

» **Coastal marsh milk-vetch** (*Astragalus pycnostachyus var. pycnostachyus*) is a CRPR 1B.2 perennial herb in the pea family (Fabacea) that blooms from April to October. This species is another associate of dunes and scrub along the coast that also occurs in marshes, swamps, and coastal brackish streamsides, primarily between Pacifica and Año Nuevo State Reserve with some records documented in Point Reyes and south of the Eel River. Documented at several locations within the Park vicinity, extant populations occur to the north of the Park in Pescadero Marsh Natural Preserve at the mouth of Butano Creek.[31] Suitable habitat for coastal marsh milk-vetch is found in the Bolsa Point Area near Spring Bridge Gulch.

» **Sand-loving wallflower** (*Erysimum ammophilum*) is a CRPR 1B.2 annual yellow-flowe ed herb in the mustard family (Brassicaceae) that blooms February through June. This species is a rare associate of the maritime chaparral community, growing on loose sandy soils of coastal and inland dunes. An extant occurrence is documented approximately four miles south of the Park in Año Nuevo State Reserve.[32] Suitable habitat for sand-loving wallflower is present in the Park's Light Station and Bolsa Point Area in areas of dune scrub.

» **Stinkbells** (*Fritillaria agrestis*) is a CRPR 4.2 perennial bulbiferous herb in the lily family (Liliaceae) that blooms between March and June. This species is found in a variety of chaparral, cismontane woodland, pinyon and juniper woodland, and valley and foothill grassland communities in clay but sometimes serpentine soils. An extant population of stinkbells is documented at Año Nuevo Point approximately fi e miles south of the Park.[33] Suitable habitat for stinkbells is present in areas of scrub in the Light Station Area, in grassland of the Easement, and in coastal terrace prairie and scrub communities of the Bolsa Point Area.

» **Coast iris** (*Iris longipetala*) is a CRPR 4.2 perennial rhizomatous herb in the iris family (*Iridaceae*) that blooms March through May. This species is associated with mesic sites in coastal prairie, meadows and seeps, and lower montane coniferous forest communities. Extant populations of coast iris are known to the Pescadero and Año Nuevo vicinities and suitable habitat for this species is found within Park grasslands of the Easement and Bolsa Point Area.

» **Perennial goldfields** (*Lasthenia californica ssp. macrantha*) is a CRPR 1B.2 perennial herb in the sunflower family (Asteraceae) that blooms from January to November. This species is found in dunes, scrub, and bluff scrub communities along the coast from Fort Bragg to Gualala, Jenner to Point Reyes, and around Pescadero. Perennial goldfields have been documented within the Park in 2006 along Pigeon Point Road north of the Light Station on the coastal bluffs and this population is presumed extant. Other nearby

31 California Department of Fish and Wildlife, CNDDB GIS Database, Biogeographic Data Branch, December 2016.

32 Ibid

33 Ibid

occurrences are documented north of the Park near Pescadero Point and Pebble Beach.[34] Suitable habitat for this species is found in all coastal scrub, dune, and bluff scrub communities within the Light Station Area and the Bolsa Point Area of the Park.

» **Marsh microseris** (*Microseris paludosa*) is a CRPR 1B.2 perennial herb in the sunflower family that typically blooms between April and June, and uncommonly through July. It occurs in vernally wet areas within closed-cone coniferous forest, woodland, coastal scrub, and valley and foothill grasslands. It is found in the San Francisco Bay Area and along the central California coast. An extant population of marsh microseris is documented at Cloverdale Ranch within approximately 1.5 miles north east of the Park in a grassy opening among coastal scrub.[35] Suitable habitat for this species is present in coastal scrub and grassland communities of the Bolsa Point Area near Spring Bridge Gulch.

» **Choris' popcornflower** (*Plagiobothrys chorisianus* var. *chorisianus*) is a CRPR 1B.2 annual herb in the forget-me-not (borage) family (Boraginaceae) that occurs in mesic sites in chaparral, coastal prairie, and coastal scrub communities and blooms from March to June. This species is historically documented at Pigeon Point and several extant populations occur in the Park vicinity at Año Nuevo State Reserve, Cascade Ranch, Cloverdale Ranch, Pebble Beach, and Pescadero Marsh.[36] Suitable habitat for Choris' popcornflower is present in coastal scrub of the Light Station Area, coastal scrub and grassland of the Bolsa Point Area, and grassland of the Easement.

» **San Francisco popcornflower** (*Plagiobothrys diffusu*) is a CRPR 1B.1 annual herb in the borage family listed as Endangered in California. This species is typically in bloom between March and June and is an associate of coastal prairie and valley and foothill grassland communities with limited distribution primarily from Pescadero to Santa Cruz. The nearest extant population of San Francisco popcornflower is documented approximately 3.5 miles southeast of the Park at Cascade Ranch in a seasonally moist, heavily grazed coastal terrace prairie.[37] Suitable habitat for this species is present in the remnant coastal terrace prairie of the Bolsa Point Area and could also occur in the annual grassland of the Easement.

» **Santa Cruz microseris** (*Stebbinsoseris decipiens*) is CRPR 1B.2 annual herb in the sunflower family. This species is found in open areas, sometimes on serpentine soils, in broadleaf upland forest, chaparral, coastal prairie and scrub, and valley and foothill grassland communities. It occurs in Monterey, Santa Cruz, and Marin counties. Santa Cruz microseris typically blooms in April and May. An extant occurrence of this specie is documented within approximately

34 Ibid

35 California Department of Fish and Wildlife, CNDDB GIS Database, Biogeographic Data Branch, December 2016.

36 Ibid

37 Ibid

fi e miles southeast of the Park on a ridge near Cascade Creek in a semi-open area of coastal scrub.[38] Suitable habitat for Santa Cruz microseris is present in coastal scrub and grassland communities of the Easement, Bolsa Point Area, and Light Station Area of the Park.

Special-Status Animals

The following special-status animals were determined to have at least a moderate potential to occur within the Park or surrounding vicinity:

» **California red-legged frog** (*Rana draytonii*; CRLF) is federally listed as a threatened species throughout its range in California and is a CDFW Species of Special Concern (SSC). This frog historically occurred over much of the State from the Sierra Nevada foothills to the coast and from Mendocino County to the Mexican border. CRLF typically inhabit ponds, slow-moving creeks, and streams with deep pools that are lined with dense emergent marsh or shrubby riparian vegetation. Submerged root masses and undercut banks are important habitat features for this species. However, this species is capable of inhabiting a wide variety of perennial aquatic habitats. CRLF is known to survive in ephemeral streams, although only if deep pools with vegetative cover persist through the dry season. Factors that have contributed to the decline of CRLF include destruction of riparian habitat from development, agriculture, floo control practices, or the introduction of exotic predators such as American bullfrog (Rana catesbeiana), crayfish, and a variety of non-native fish

  The Easement is located within USFWS Critical Habitat Unit SNM-2 for CRLF and several occurrences of this species are documented in the Park vicinity. The closest documented occurrence is for multiple adult frogs observed in a small pond adjacent to the north of the Easement in grazing lands. The pond is described to be bordered by a dense thicket of poison oak and blackberry with emergent bulrush around the perimeter.[39] Such an aquatic feature surrounded by upland grassland habitat is likely to support breeding populations that could disperse into the Easement. A similar pond surrounded by scrubland is located approximately 0.5 mile south of the Park inland of Highway 1 where a previously observed population is presumed extant.[40] Suitable habitat for this species is found in the Yankee Jim Gulch riparian wetland of the Light Station Area, and also within the Bolsa Point Area of the Park within Spring Bridge Gulch and the adjacent upland grassland, although CRLF presence at these sites is undocumented.

» **San Francisco garter snake** (*Thamnophis sirtalis tetrataenia*; SFGS) is federally and State-listed as an endangered species and is a CDFW "fully protected" species. This snake historically occurred in wetland areas on the

38 Ibid

39 California Department of Fish and Wildlife, CNDDB GIS Database, Biogeographic Data Branch, December 2016.

40 Ibid

San Francisco Peninsula from approximately the San Francisco County line south along the eastern and western bases of the Santa Cruz Mountains at least to the Upper Crystal Springs Reservoir, and along the coast south to Año Nuevo Point, San Mateo County, and Waddell Creek, Santa Cruz County, California.[41] [42] Currently, the species has been reduced to only six significan populations in San Mateo County and northern Santa Cruz County, which were described in the USFWS *San Francisco Garter Snake 5-year Review Summary and Evaluation*.[43] The preferred habitat for SFGS is a densely vegetated pond that hosts its prey base of CRLF, American bullfrog, and Sierran treefrog (*Pseudacris sierra*) near an open hillside with access to sun and rodent burrows for cover. Temporary ponds and other seasonal freshwater bodies are also used. Emergent bankside vegetation such as cattails (*Typha* spp.), bulrushes (*Schoenoplectus* spp.), and rushes (*Juncus* spp.) are preferred and used for cover. Adult garter snakes sometimes aestivate in rodent burrows during summer months when the ponds are dry. On the coast, the snakes hibernate during the winter, but further inland, if the weather is suitable, garter snakes may be active year-round.[44] [45] [46]

Exact locations of SFGS occurrences are considered sensitive by CDFW. Documented occurrences in the project vicinity (Pigeon Point USGS quadrangle) presumes this species is extant within their understood range where suitable habitat is present.[47] The pond north of the Easement, located among grasslands and with a thicket of vegetation surrounding the water, provides desirable habitat for this species and hosts a prey population of CRLF and other frogs. Yankee Spring Gulch within the Light Station Area and Spring Bridge Gulch within the Bolsa Point Area are surrounded by dense willow, rush, sedge, poison oak, and blackberry vegetation, Spring Bridge Gulch is adjacent upland grasslands with scattered shrubs; these habitats could also host SFGS. Two historical populations described in the *San Francisco Garter Snake 5-year Review Summary and Evaluation* are located in Pescadero Marsh to the north and Año Nuevo State Reserve to the south of the Park.[48] While a substantial population of SFGS is unlikely within the Park due to the limited

41 Barry, S.J. The Distribution, habitat, and evolution of the San Francisco garter snake, *Thamnophis sirtalis tetrataenia*,1994.

42 U.S. Fish and Wildlife Service, Recovery Plan for the San Francisco Garter Snake (*Thamnophis sirtalis tetrataenia*), 1985.

43 U.S Fish and Wildlife Service, San Francisco Garter Snake (*Thamnophis sirtalis tetrataenia*) 5-Year Review: Summary and Evaluation, September, 2006.

44 McGinnis, S., P. Keel, and E, Burko, The use of upland habitats by snake species at Año Nuevo State Reserve, 1987.

45 McGinnis, S, Distribution and feeding habitat requirements of the San Francisco garter snake (*Thamnophis sirtalis tetrataenia*). 1989.

46 U.S Fish and Wildlife Service. San Francisco Garter Snake (*Thamnophis sirtalis tetrataenia*) 5-Year Review: Summary and Evaluation. September, 2006.

47 California Department of Fish and Wildlife, CNDDB GIS Database, Biogeographic Data Branch, December 2016.

48 U.S Fish and Wildlife Service. San Francisco Garter Snake (*Thamnophis sirtalis tetrataenia*) 5-Year Review: Summary and Evaluation, September, 2006.

amount of suitable habitat, individuals may inhabit smaller drainages or ponds between Pescadero Marsh and Año Nuevo where prey species are present.

» **Monarch butterfly** (*Danaus plexippus*) **California Overwintering Population**. Monarch butterflies living west of the Rocky Mountains migrate to overwintering sites in California along the coast near the Santa Cruz and San Diego areas where climatic conditions allow minimal use of their energy stores. Monarch butterflies cluster together by the thousands at roost sites to stay warm along trunks, branches, and leaves of eucalyptus, Monterey pine, and Monterey cypress tree stands.[49] Monarch butterfly overwintering sites are included on CDFW's Special Animals List.[50] Several wintering sites and an autumnal site are documented in the Park's regional vicinity (Pigeon Point USGS quadrangle) in stands of eucalyptus, Monterey pine, Monterey cypress, and Douglas fir (*Pseudotsuga menziesii*).[51] A suitably mature stand of eucalyptus trees that could be used as a wintering site by Monarch butterflies is located along the western border of the Easement.

» Special-Status Birds. Several special-status birds are likely to nest within the diverse habitats of the Park. Cooper's hawk (*Accipiter cooperii*) is considered a "watch list" species by CDFW that could nest and forage within the riparian over story of Spring Bridge Gulch within the Bolsa Point Area. Saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*) is considered a Species of Special Concern by CDFW and a Bird of Conservation Concern by USFWS. Suitable nesting and foraging habitat for this species is also located in the Bolsa Point Area within the willow riparian vegetation. Northern harrier (*Circus cyaneus*), also a CDFW Species of Special Concern, could nest in more isolated areas of coastal scrub on the bluffs of the Bolsa Point Area and Light Station Area of the Park, and forage in nearby Pescadero Marsh.

» Other Breeding and Migratory Birds. The Park contains a diverse array of habitats that offer foraging and nesting opportunity to a variety of resident and migratory birds. Common raptor species which may nest in the mature eucalyptus trees of the Easement could include red-tailed hawk, red-shouldered hawk, great horned owl, and American kestrel (*Falco sparverius*). Passerine species which could nest in the area include but are not limited to Anna's hummingbird, Bewick's wren, white-crowned sparrow, American robin, American crow (*Corvus brachyrhynchos*), Wilson's warbler, western bluebird (*Sialia mexicana*), California towhee (*Melozone crissalis*) among many others. The federal Migratory Bird Treaty Act (MBTA) and California Fish and Game Code protect raptors, most native migratory birds, and breeding birds that could occur at the Park and/or nest in the surrounding vicinity.

49 U.S. Department of Agriculture, Forest Service. " Migration and Overwintering," http://www.fs.fed.us/wildflo - ers/pollinators/Monarch_Butterfly/m gration/index.shtml, accessed January 14, 2016.

50 California Department of Fish and Wildlife, Natural Diversity Database. Special Animals List. Periodic publication. January 2016

51 California Department of Fish and Wildlife, CNDDB GIS Database, Biogeographic Data Branch, December 2016.

Vegetation Communities and Wildlife Habitat

Natural communities are assemblages of plant and wildlife species that occur together in the same area, which are defined by species composition and relative abundance. The Park contains several upland plant communities which were identified during the reconnaissance survey on October 14, 2015. The vegetation communities of the Park include central dune scrub, disturbed dune scrub, northern coastal scrub, coastal terrace prairie, central coast riparian scrub, non-native grassland, and non-native forest,[52] which are described in Chapter Two. These communities generally follow the Holland[53] classificat on. Holland only describes natural communities found in California; therefore, the "non-native forest" community of introduced species is not a Holland vegetation type, but still an important community found within the Park. Similarly, the "disturbed dune scrub" community, a dominant type within the Park, is not a Holland type but describes in detail a degraded condition of Holland's "central dune scrub". Non-vegetated beach, intertidal zone, and the open waters of the Pacific Ocean abut the Park. Figure 5.4 depicts vegetation communities and wildlife habitats within the Light Station Area and the Easement. Figure 5.5 depicts vegetation communities and wildlife habitats within the Bolsa Point Area.

Critical Habitat

The USFWS can designate critical habitat for species that have been listed by the federal government as threatened or endangered. "Critical habitat" is defined in Section 3(5)(A) of the federal Endangered Species Act as those lands (or waters) within a listed species' current range that contain the physical or biological features that are considered essential to its conservation. Critical Habitat Unit SNM-2 for CRLF is designated east of Highway 1 in the vicinity of the Park, and includes the Easement. Two other species have designated critical habitat nearby but not within the Park boundaries. These species include tidewater goby critical habitat located within 1.5 miles north of the Park at Arroyo de los Frijoles (Bean Hollow), and marbled murrelet critical habitat located within 3.5 miles generally east of the Park.

DISCUSSION

a) Would the plan have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, of special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

52 Some agricultural fields that occur adjacent to the Park are labeled in Figure 5.4 and 5.5 but not described within this report as the Park does not manage active agricultural lands.

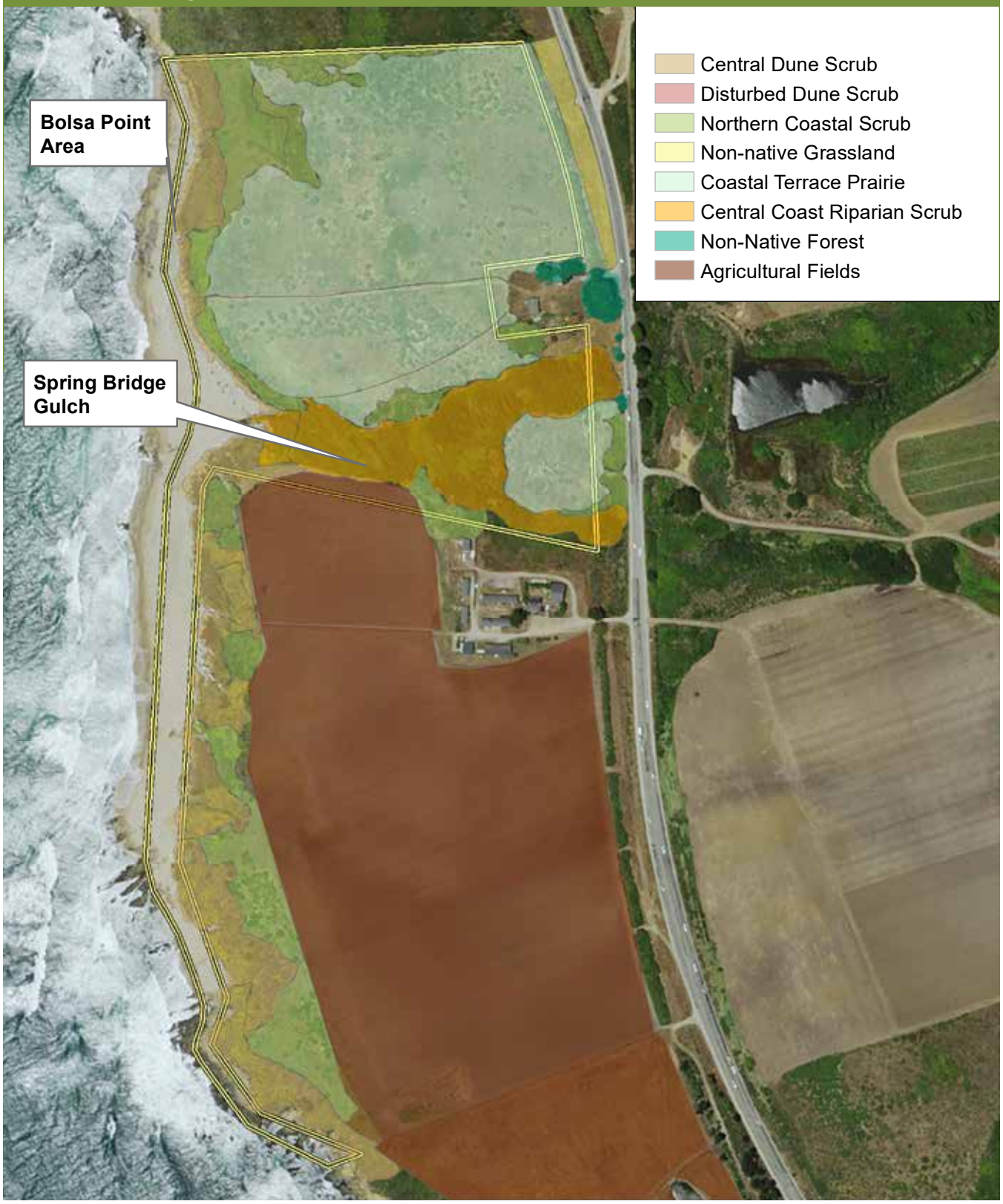
53 The Holland classificat on refers to the 1986 publication *Preliminary Descriptions of the Terrestrial Natural Communities of California* where Robert F. Holland, Ph. D., defines natural vegetation community assemblages in California for the purpose of creating an inventory of the State's biotic diversity so that ecosystem components that may support valuable or sensitive species known or yet unknown may be preserved.

FIGURE 5.4: Vegetation Communities and Wildlife Habitats – Light Station Area and Easement

SOURCE: ESRI, 2016; ESA, 2016

0 800
Scale (Feet)

FIGURE 5.5: Vegetation Communities and Wildlife Habitats- Bolsa Point Area



SOURCE: ESRI, 2016; ESA, 2016

0 600
Scale (Feet)

Special-Status Plants

The proposed plan includes the following components that could potentially impact special-status species: trails, landscaping, proposed structures and features at the Light Station Area, proposed structures and features at the Bolsa Point Area, proposed structures and features at the Easement, and infrastructure and utilities. The following includes a brief description of the components and an analysis of potential impacts to special-status plants. Where appropriate, the analysis references goals, guidelines, and CDPR management policies that have been incorporated into the plan, and whose implementation would reduce potentially significant impacts on special-status plants to a *less-than-significan* level.

Trails. Grading, ground disturbing activity and vegetation removal in support of the creation and maintenance of approximately two miles of hiking and/or multi-use bluff-top trails within the central dune scrub, disturbed dune scrub, and coastal scrub bluffs of the Light Station Area and Bolsa Point Area, three new formalized beach access points (one north of the Lighthouse and two within the Bolsa Point Area), and approximately two miles of hiking and biking trails within the Park, could impact special-status species and on intact areas of central dune scrub along the Park bluffs, or Park riparian areas through direct disturbance.

Landscaping. Targeted removal of non-native and invasive iceplant on the Park bluffs, restoration and enhancement of central dune scrub where iceplant occurs, restoration of California native grassland, coastal scrub, and coastal terrace prairie vegetation communities, and restoration and preservation of the Spring Bridge Gulch riparian habitat under the proposed plan would have benefic al effects on the vegetation communities within the Park that have potential to support special-status plants and the wildlife habitat within the Park that have potential to host special-status animals. Landscaping could result in short-term, direct, adverse effects on special-status plants during ground disturbing activity and vegetation removal, or trampling areas where intact native plant communities which support special-status plants abut areas sited for restoration, and on riparian habitat or central dune scrub. Grading and ground disturbing activity in support of landscaping and native plant community restoration could result in significant adverse effect on special-animals; however, these potential direct impacts would be temporary. Improved habitat conditions within the Park under the proposed plan would benefi animals native to the central coast including special-status species.

Proposed Structures and Site Features. Within the Light Station Area, construction of the following proposed components could adversely affect special-status plants or their habitat primarily during ground disturbance and vegetation removal: new viewing deck at the Fog Signal Building, beach access stairs from the main parking lot, expansion of the parking lot east of Pigeon Point Road, grading and ground disturbance associated with the new parking lot and beach access at Pistachio Beach.

Within the Bolsa Point Area, construction of the parking area, storage facility, vault toilet, trails, and pedestrian bridge could adversely affect special-status plants or their habitat during ground disturbance and vegetation removal as could construction of the new well, small water treatment facility, and water storage tanks within the Easement and the water pipelines connecting the Easement to the Light Station Area. Direct impacts to special-status plants from trampling could occur during construction throughout implementation of the proposed plan.

Infrastructure and Utilities. Ground disturbance and vegetation removal associated with proposed potable water pipeline connections to the Bolsa Point Area could adversely affect special-status plants or their habitat should they be present within the construction area, and could adversely affect special-status animals or their habitat should they be present during construction. Chapter Four includes goals and guidelines for vegetation management and protection of special-status plants within the Park, including those found in **Section 4.5.3 Access and Circulation** and in **Section 4.5.4 Resource Management and Protection**. Implementation of these measures would result in the avoidance or minimization of the types of impacts identified above. For example, **Guideline VEGETATION.8** would reduce the significance of potential effects related to the proposed plan's trails, landscaping, structures and site facilities, and utilities and infrastructure by providing for the monitoring of special-status plants with potential to occur within the Park and relocation of extant populations within suitable habitat if avoidance is infeasible.

Implementation of **Guideline ACCESS.14** in the Access and Circulation section of Chapter Four would reduce the significance of potential impacts that could result from new trails by requiring alignments be formalized to encourage hikers to stay on established paths and reduce habitat disturbance associated with establishing or using unoffici social trails, especially in areas of natural or restored central dune scrub and northern coastal scrub communities or in proximity to ESHA.

Implementation of **VEGETATION.1, VEGETATION.2, VEGETATION.3, VEGETATION.4, VEGETATION.5, VEGETATION.6, and VEGETATION.10** would reduce potential effects related to landscaping by providing for the preparation of a management statement that would prioritize native plant community restoration efforts, enhancement of intact native plant communities and exclusion from disturbed invasive or non-native communities requiring restoration, natural land management practices for control of non-native and invasive plant populations within the Park, engagement of volunteers and local tribal groups in restoration of native plant communities, and coordination with CDFW on conservation of local native plant communities that is consistent with the California Statewide Action Plan. In addition to the proposed guidelines listed above, the General Plan states the Park would observe the plant resources

management policies (§0310) of CDPR's DOM.[54] These policies include provisions for the identificat on (§0310.5.2), protection (§0310.5.1), and active management to avoid potential impacts to special-status plant populations within a project area (§0310.5.3). Should avoidance of a special-status plant population be infeasible, the appropriate agency coordination (e.g., CDFW, USFWS, NOAA) and permits would be sought (§0310.5.3).

With implementation of the proposed guidelines and select CDPR DOM policies related to plant resource management, potential impacts associated with the proposed plan on special-status plants which might otherwise be significant would be reduced to *less-than-significan* levels. This is because these guidelines and policies establish protocols for identifying special plant resources within the Park and avoiding or minimizing potential impacts to such resources during project implementation. In addition, they would require relocating extant populations of special-status plant species where avoidance is infeasible through salvage and transplanting or by collection and propagation of seeds or other vegetative material.

Special-Status Animals

The proposed plan could have a substantial adverse effect either directly or indirectly through habitat modificat ons on special-status animals that are known to occur or have a moderate or high potential to occur in the project study area. Areas within the Park or surrounding vicinity, contain suitable habitat that may support special-status animals including CRLF, San Francisco garter snake, monarch butterfly overwintering populations, and special-status and migratory birds. Implementation of the proposed plan could have an adverse effect on these special-status species during project construction and operation. The effects could be direct (e.g., harassment or take of an individual) or indirect (e.g., modifying existing habitat, disrupting foraging and nesting efforts, or interfering with movement).

» **Amphibians and Reptiles**. Suitable aquatic, breeding, foraging, and upland dispersal habitat for CRLF and SFGS occurs within Yankee Jim Gulch and associated riparian scrub habitat of the Light Station Area, Spring Bridge Gulch and associated riparian scrub habitat of the Bolsa Point Area, and within a pond adjacent to the north of the Easement and associated grassland.

The Easement is located within CRLF critical habitat unit SNM-2 where the new well, water treatment facility, storage and pipelines are proposed. The critical habitat designation for California red-legged frog was final zed in 2010. As described by the USFWS (2010), the Primary Constituent Elements for CRLF (i.e., the physical and biological functions that are considered essential to species conservation and require special management considerations or protection) include habitat in the form of:

54 California Department of Parks and Recreation, "Natural Resources," Department Operations Manual, https://www.parks.ca.gov/pages/22374/files/dom%200300%20natural%20resources.pdf, accessed October 11, 2016.

- Space for individual and population growth and for normal behavior;
- Food, water, air, light, minerals, or other nutritional or physiological requirements;
- Cover or shelter;
- Sites for breeding, reproduction, and rearing (or development) of offspr ng; and
- Habitats that are protected from disturbance or are representative of the historical geographical and ecological distributions of a species.

Such conditions are present within the Easement or immediately adjacent to the north boundary. Any proposed activities within designated critical habitat that would alter these physical and biological features that are essential to the conservation of CRLF would constitute a potentially significant project effect

Ground disturbance and vegetation removal during trail creation and construction of a the vault toilet, storage facility, parking area, and pedestrian bridge spanning the Spring Bridge Gulch riparian corridor within the Bolsa Point Area and construction of a new well, water treatment facility, and new water pipelines connecting the Easement to the Light Station Area and supplying the new Bolsa Point Area could have a substantial adverse effect on CRLF and/or SFGS directly or through habitat modificat on. Consultation with USFWS would be necessary for CDPR to fulfill requirements of the federal Endangered Species Act prior to project implementation.

- **Monarch Butterfly Overwintering Population.** Construction activities associated with installation the new well, small water treatment facility, and water storage tanks within the Easement and the water pipelines connecting the Easement to the Light Station Area would occur near potential overwintering or autumnal roosts of monarch butterflies in the eucalyptus trees bordering the Easement to the west of where these facilities are sited. Disturbance to this potential roost site (i.e., tree removal) could adversely affect an overwintering population should they be present. However, no tree removal is proposed within this potential roost site.
- **Special-Status and Other Breeding and Migratory Birds**. Construction activities associated with project implementation, including grading or ground disturbance, vegetation (and tree) removal, new facilities and infrastructure, and a general increase in noise and visual disturbance within the Park, may adversely affect nesting birds species within one-quarter mile of the individual project sites during the nesting season (February 1 – August 30). Suitable foraging and nesting habitat is abundant within the diverse vegetation communities of the Park and surrounding vicinity for a variety of special-status and other migratory birds.Removal of vegetation (even in support of restoration activities) and trimming or removal of trees within the Park with implementation of the proposed plan could destroy active bird nests. In addition, adverse effects, such as an increase in noise and visual

disturbance associated with construction, could disrupt nesting efforts in the habitat surrounding the project sites. If occupied by a special-status bird species, the loss of an active nest would be considered a significant impact under CEQA. Moreover, disruption of nesting migratory or native birds is not permitted under the federal MBTA or the California Fish and Game Code, as it could constitute unauthorized take. Thus, the loss of any active nest by, for example, trimming a tree or removing a shrub containing a nest, must be avoided under federal and California law.

Chapter Four includes goals and guidelines for animal resource management and protection of special-status animals within the Park, including those found in **Section 4.5.4 Resource Management and Protection**. Implementation of these measures would result in the avoidance or minimization of the types of impacts identified above. For example, **WILDLIFE.**5 **and WILDLIFE.6** would reduce the significance of potential effects related to installation of new trails, landscaping, proposed structures and features, and infrastructure and utilities by providing for the monitoring of special-status animals with potential to occur within the Park and assessment of special animal resources and their habitat within the project area prior to project implementation. Should special animal resources be identified within a proposed plan area, appropriate protection measures would be followed. Implementation of **WILDLIFE.7 and WILDLIFE.8** would reduce the significance of potential effects related to the above-listed project components by respectively requiring special-status amphibian and reptile protection measures, and special-status and other breeding and migratory bird protection measures.

In addition to the proposed guidelines, the General Plan states the Park would observe the animal resources (§0311) policies of CDPR's DOM.[55] These policies include provisions for the identificat on (§0311.5.2.2), protection (§0311.5.2.1), and active management to avoid potential impacts to special-status animals and their habitat within a project area (§0311.5.2.3). Should avoidance of a special-status plant population be infeasible, the appropriate agency coordination (e.g., CDFW, USFWS, NOAA) and permits would be sought (§0310.5.2.3).

With implementation of the proposed guidelines and select DOM policies related to animal management, potential impacts associated with the proposed plan on special-status animals which might otherwise be significant would be reduced to *less-than-significan* levels. This is because these guidelines and policies establish protocols for identifying special animal resources within the Park and avoiding or minimizing potential impacts to such resources during project implementation.

55 California Department of Parks and Recreation, "Natural Resources," Department Operations Manual, https://www.parks.ca.gov/pages/22374/files/dom%200300%20natural%20resources.pdf, accessed October 11, 2016.

b) Would the plan have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Sensitive Natural Communities

A sensitive natural community is a biological community that is regionally rare, provides important habitat opportunities for wildlife, is structurally complex, or is in other ways of special concern to local, state, or federal agencies. Most sensitive natural communities are given special consideration because they perform important ecological functions, such as maintaining water quality and providing essential habitat for plants and wildlife. Some plant communities support a unique or diverse assemblage of plant species and therefore are considered sensitive from a botanical standpoint. The most current version of the CDFW's List of California Terrestrial Natural Communities[56] indicates which natural communities are of special status given the current state of the California classificat on. The CDFW formerly tracked sensitive natural communities in the CNDDB. Due to funding cuts no new occurrences of sensitive natural communities have been added to the CNDDB since the mid-1990s, although the database continues to include those occurrences recorded prior to the program getting defunded.

The CNDDB reports several sensitive natural community occurrences for the six-quadrangle area containing and surrounding the Park.[57] However, upon review of the CNDDB data for the Park and considering observations during the October 14, 2015 reconnaissance survey, none of these sensitive natural communities occurs within the Park.[58] While most native grassland alliances that would occur within intact or undisturbed coastal terrace prairies are considered sensitive by CDFW, the current condition of the Bolsa Point Area, dominated by non-native and invasive species, does not qualify as such. Central dune scrub, however, found at several locations within the Park, is considered to be a sensitive natural community due to its limited distribution in the state and the diversity of special-status plant species that often occur there.

For the purpose of this analysis, Yankee Jim Gulch riparian corridor within the north tip of the Light Station Area, Spring Bridge Gulch riparian corridor within the Bolsa Point Area, and central dune scrub constitute the sensitive natural communities within the Park. These habitats are also likely to be considered ESHA under the LCP. As ESHA within a project area are determined by County staff on a case-by-case basis, additional vegetation communities or habitat types within the Park may also be considered ESHA (e.g., bluffs, marine habitats).

56 California Department of Fish and Game, List of Vegetation Alliances and Associations, Vegetation Classificat on and Mapping Program, September 2010.

57 California Department of Fish and Wildlife, California Natural Diversity Database Rarefind version 5 query of the Pigeon Point, San Gregorio, Davenport, Año Nuevo, Franklin Point, and La Honda USGS 7.5-minute topographic quadrangles, Commercial Version, accessed January 7, 2016.

58 California Department of Fish and Wildlife, CNDDB GIS Database, Biogeographic Data Branch, December 2016.

The proposed plan includes designated management zones within the Park. Both the Yankee Jim Gulch and Spring Bridge Gulch are included in the Riparian Zone where no development would be permitted, with the exception of segments of the Coastal Trail and limited interpretive elements. The Riparian Zone includes a 100-foot buffer from creeks and their surrounding central coast riparian scrub vegetation which complies with the CCC restrictive buffer distance around such features. The proposed pedestrian bridge over Spring Bridge Gulch is intended to minimize the Park's impact on this sensitive community. Central dune scrub within the Park is largely within the Upland Conservation Zone which would be managed for natural resource protection, native plant community restoration, and low-impact use in designated areas (e.g., hiking trails, interpretive areas, seating).

The following includes a brief description of the project components and an analysis of potential impacts to sensitive natural communities within the Park. Where appropriate, the analysis references goals, guidelines, and CDPR management policies that have been incorporated into the project, and whose implementation would reduce potentially significant impacts on sensitive natural communities to a *less-than-significan* level.

Trails. Grading, ground disturbing activity and vegetation removal in support of the creation and maintenance of approximately two miles of hiking and/or multi-use bluff-top trails within the central dune scrub, disturbed dune scrub, and coastal scrub bluffs of the Light Station Area and Bolsa Point Area, three new formalized beach access points (one north of the lighthouse and two within the Bolsa Point Area), and approximately two miles of hiking and biking trails within the Park, could result in a significant adverse effect on intact areas of central dune scrub along the Park bluffs, or Park riparian areas through direct disturbance.

Landscaping. Targeted removal of non-native and invasive iceplant on the Park bluffs, restoration and enhancement of central dune scrub where iceplant occurs, restoration of California native grassland, coastal scrub, and costal terrace prairie vegetation communities, and restoration and preservation of the Spring Bridge Gulch riparian habitat under the proposed project is likely to have long-term benefic al effects on the Park's sensitive natural communities. Landscaping could result in short-term, direct, adverse effects on riparian habitat or central dune scrub during ground disturbing activity and vegetation removal, or trampling areas where intact native plant communities abut areas sited for restoration. These effects would be significant

Proposed Structures and Site Features at the Light Station Area. Within the Light Station Area, management of Yankee Jim Gulch riparian habitat and areas of central dune scrub are within the Riparian Zone and Upland Conservation Zone, respectively. These management zones intentionally avoid or minimize development and prioritize preservation, restoration, and low-impact use under the proposed plan.

The proposed structures and site features within the Light Station Area are sited in areas of disturbed dune scrub within the Historic Zone and Upland Recreation Zone. The new viewing deck at the Fog Signal Building, beach access stairs from the main parking lot, and expansion of the parking lot east of Pigeon Point Road would not adversely affect the Park's riparian habitat and other sensitive natural communities. Of the proposed structures and site features within the Light Station Area, the new parking lot and beach access at Pistachio Beach would have the potential to adversely affect a small patch of central dune scrub which would be significant

Proposed Structures and Site Features at the Bolsa Point Area. Within the Bolsa Point Area, the proposed storage facility, parking area, space for indigenous agriculture, and vault toilet are sited within the Upland Recreation Zone, largely within the degraded coastal terrace prairie vegetation community which is not considered a sensitive natural community in its present state.

Spring Bridge Gulch riparian habitat is included in the Riparian Zone. Areas of central dune scrub occur within the Upland Conservation Zone. These zones are established to avoid or minimize development and prioritize preservation, restoration, and low-impact use under the proposed plan. Construction of trails and the pedestrian bridge within these management zones could result in significant adverse effects on the noted riparian habitat and coastal dune scrub sensitive natural communities.

The proposed potable water pipeline connections to the Bolsa Point Area would occur within the Upland Recreation Zone and would not adversely affect the Spring Bridge Gulch riparian habitat or central dune scrub within the Bolsa Point Area; therefore, there would be *no impact* on the Park's sensitive natural communities resulting from this project component.

Proposed Structures and Site Features at the Easement. The Easement is comprised of non-native grassland and non-native forest vegetation communities which are not considered sensitive. Proposed structures and site features within the Easement, including the construction of the new well, small water treatment facility, and water storage tanks within the Easement and the water pipelines connecting the Easement to the Light Station Area, would not adversely affec the Park's sensitive natural communities; therefore, there would be *no impact*.

Infrastructure and Utilities. The proposed potable water pipeline connections to the Bolsa Point Area would occur within the Upland Recreation Zone and would not adversely affect the Spring Bridge Gulch riparian habitat or central dune scrub within the Bolsa Point Area; therefore, there would be no impact on the Park's sensitive natural communities resulting from this project component.

Chapter Four includes goals and guidelines for animal resource management and protection of special-status animals within the Park, including those found in **Section 4.5.3 Access and Circulation** and in **Section 4.5.4 Resource**

Management and Protection. Implementation of these measures would result in the avoidance or minimization of the types of impacts identified above.

For example, **VEGETATION.7** and **VEGETATION.9** would reduce the significance of potential effects related to trails, landscaping, structures and site facilities within the Bolsa Point Area and associated with Pistachio Beach parking and access by providing for the identification and exclusion of intact native plant communities from disturbed, non-native or invasive communities requiring restoration, avoiding or minimizing development and compliance with restrictive ESHA buffers when siting project components, and assessment of sensitive habitat areas prior to project implementation in coordination with resource agencies (e.g., CDFW, USFWS, CCC, USACE). In addition, implementation of **VEGETATION.9** would further reduce these effects by requiring any impacted riparian habitat be compensated through onsite restoration. Furthermore, implementation of **ACCESS.14** would reduce the significance of potential effect related to the above-noted improvements through requiring trail alignments be formalized to encourage hikers to stay on established paths and reduce habitat disturbance associated with establishing and using unoffi al social trails, especially in areas of natural or restored central dune scrub and northern coastal scrub communities or in proximity to ESHA.

In addition to the proposed guidelines, the General Plan states the Park would observe the water resources (§0306) policies of CDPR's DOM.[59] The water resource policies include provisions for the management and protection of stream features, watersheds, and natural habitat features, such as riparian communities (§0306.3) by avoiding adverse impacts to streambank and bed morphology, floodpla n features, and riparian vegetation and protect natural processes (§0306.4).

Plant resource management policies (§0310) already described under threshold a) would also be applied where relevant. These policies include provisions for the identificat on (§0310.5.2), protection (§0310.5.1), and active management to avoid potential impacts to special-status plant populations and their supportive communities (such as native riparian habitat or central dune scrub) within a project area (§0310.5.3). Should avoidance of a special-status plant population be infeasible, the appropriate agency coordination (e.g., CDFW, USFWS, NOAA) and permits would be sought (§0310.5.3).

With implementation of the proposed guidelines and select DOM policies related to water and plant resource management, potential impacts associated with the proposed plan on riparian habitat and other sensitive natural communities which might otherwise be significant would be reduced to *less-than-significan* levels. This is because these guidelines and policies establish protocols for avoiding

59 California Department of Parks and Recreation, "Natural Resources," Department Operations Manual, https://www.parks.ca.gov/pages/22374/files/dom%200300%20natural%20resources.pdf, accessed October 11, 2016.

or minimizing potential impacts to plant and water such resources within the Park during project implementation, and compensating for any impacts through onsite restoration.

c) Would the plan have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.), through direct removal, filling, hydrological interruption, or other means?

Wetlands and Other Waters

Wetlands are ecologically productive habitats that support a rich variety of both plant and animal life. The federal government defines and regulates other waters, including wetlands, in Section 404 of the Clean Water Act (CWA). Wetlands are "areas that are inundated or saturated by surface water or groundwater at a frequency and duration suffi ent to support (and do support, under normal circumstances) a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3[b] and 40 CFR 230.3). The U.S. Army Corps of Engineers (USACE) has primary federal responsibility for administering regulations that concern waters of the U.S. and requires a permit under CWA Section 404 if a project proposes the discharge of fill and/or the placement of structures within waters of the U.S. Under normal circumstances, the federal defin tion of wetlands requires the presence of three identification parameters: wetland hydrology, hydric soils, and hydrophytic vegetation.

The USACE jurisdiction typically extends to the limit of the wetland, as define by the presence of hydrophytic vegetation, hydric soils, and wetlands hydrology. In contrast, California Coastal Commission (CCC) jurisdiction for wetlands may extend to the limit of any one of the above parameters and therefore typically is much broader than USACE jurisdiction. The CCC, and by extension the County through its LCP, has jurisdiction over wetlands and waters located within the coastal zone, as defined in the Coastal Act (§30103); the entire Park occurs within the coastal zone for San Mateo County.

Additionally, the Regional Water Quality Control Board (RWQCB) also regulates wetlands, other waters of the U.S., and waters of the State under the Porter-Cologne Water Quality Control Act (Porter-Cologne Act; Section 13260 of the California Water Code). The Porter-Cologne Act requires "any person discharging waste, or proposing to discharge waste, in any region that could affect the waters of the state to file a report of discharge (an application for waste discharge requirements)." Under the Porter-Cologne Act defin tion, the term "waters of the state" is defined as "any surface water or groundwater, including saline waters, within the boundaries of the state." Although all waters of the United States that are within the borders of California are also waters of the state, the converse is not true—in California, waters of the United States represent a subset of waters of the state. Additionally, under CWA Section 401, the RWQCB must certify that

actions receiving authorization by the USACE under CWA Section 404 also meet State water quality standards.

Two intermittent streams with associated riparian wetlands occur within the Park, referred to as Yankee Jim Gulch within the Light Station Area, and Spring Bridge Gulch within the Bolsa Point Area (see discussion of Central Coast Riparian Scrub above).

Yankee Jim Gulch within the north tip of the Light Station Area and Spring Bridge Gulch within the Bolsa Point Area are intermittent streams, each with an associated riparian corridor; although, the Spring Bridge Gulch riparian corridor is much larger. Both of these streams flow into the Pacific Ocean, a traditional navigable water under the jurisdiction of the USACE, and would therefore be considered waters of the United States. The creeks would also be considered waters of the State as regulated by the RWQCB. Wetlands associated with these streams would also be jurisdictional under the USACE and RWQCB. In addition, the bed, bank, and extent of the riparian corridor of these waterways are under the jurisdiction of the CDFW.

A formal wetland delineation has not been conducted in support of the proposed plan. It is assumed for this analysis that the extent of the riparian corridor for both the Yankee Jim Gulch and Spring Bridge Gulch is inclusive of the extent of State and federal jurisdictional wetlands and other waters within the Park. As already discussed, these features also are likely to be considered ESHA under the San Mateo County LCP and by the CCC.

Both Yankee Jim Gulch and Spring Bridge Gulch and their riparian corridors are included in Riparian Zones of the proposed plan where no development would be permitted, with the exception of segments of the Coastal Trail and limited interpretive elements. The Riparian Zone includes a 100-foot buffer from creeks and their surrounding central coast riparian scrub vegetation which complies with the CCC restrictive buffer distance around such features. The proposed pedestrian bridge over Spring Bridge Gulch is intended to minimize the Park's impact on this sensitive community. However, the bridge could cause temporary impacts to jurisdictional wetlands or waters during construction or permanent impacts associated with the bridge footprint which would be significant. Projects resulting from the implementation of the proposed plan in the vicinity of Yankee Jim Gulch are not within the Riparian Zone and are there would be *no impact* to jurisdictional wetlands or waters.

Implementation of guidelines found in **Section 4.5.3 Access and Circulation** and in **Section 4.5.4 Resource Management and Protection,** including **VEGETATION.7, VEGETATION.9, and ACCESS.14** would reduce the significance of potential effects related to bridge installation over Spring Bridge Gulch by requiring compliance with restrictive buffers around these ESHAs when siting project components, and assessment of potential wetlands in coordination

with resource agencies (e.g., CDFW, USFWS, CCC, USACE) prior to proposed development. In addition, implementation of **VEGETATION.9** would further reduce these effects by requiring impacted riparian habitat be compensated through onsite restoration. As noted previously, implementation of **ACCESS.14** would ensure trail alignments are formalized to encourage hikers to stay on established paths and reduce habitat disturbance associated with utilizing unoffi al social trails, especially in in proximity to ESHA. Implementation of **GEO/HYDRO.8** and **GEO/HYDRO.9** would reduce potentially significan effects of bridge installation on wetlands and waters through best management practices (BMPs) and other provisions for filtering pollutants, minimizing runoff and protecting water quality.

In addition to the proposed guidelines, the General Plan states the Park would observe the water resources (§0306) policies of CDPR's DOM.[60] The water resource policies include provisions for the management and protection of stream features, watersheds, and natural habitat features (§0306.3) by avoiding adverse impacts to streambank and bed morphology, floodp ain features, and riparian vegetation and protect natural processes (§0306.4). Section 0306.7, Wetlands Management Policy, specifica ly seeks to prevent the destruction, loss or degradation of wetlands through identificat on of wetland features, preservation and enhancement, and avoidance and minimization of direct and indirect impacts. Should impacts to wetlands be unavoidable, the policy provides for the adherence to the State's Wetlands Conservation Policy of no net loss of wetlands and longer-term goal of net gain across the park system through restoration of existing degraded or destroyed wetlands.

Plant (§0310) and animal (§0311) resource management policies already described under criteria a) and b) would also be applied where relevant.

The proposed guidelines and select DOM policies related to water, plant, and animal resource management establish protocols for avoiding or minimizing potential impacts to such jurisdictional features within the Park during project implementation and compensating for any impacts through onsite restoration. With implementation of the guidelines and policies, potential impacts associated with the proposed plan on jurisdictional wetlands and waters which might otherwise be significant would be reduced to *less-than-significan* levels.

d) Would the plan interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife sites?

60 California Department of Parks and Recreation, "Natural Resources," Department Operations Manual, https://www.parks.ca.gov/pages/22374/files/dom%200300%20natural%20resources.pdf, accessed October 11, 2016.

Wildlife Movement Corridors

Wildlife movement corridors are considered an important ecological resource by CDFW and the USFWS and under CEQA. Movement corridors may provide favorable locations for wildlife to travel between diffe ent habitat areas such as foraging sites, breeding sites, cover areas, and preferred summer and winter range locations. They may also function as dispersal corridors allowing animals to move between various locations within their range. Topography and other natural factors, in combination with urbanization, can fragment or separate large open-space areas. Areas of human disturbance or urban development can fragment wildlife habitats and impede wildlife movement between areas of suitable habitat. This fragmentation creates isolated "islands" of vegetation that may not provide sufficien area to accommodate sustainable populations, and can adversely affect genetic and species diversity. Movement corridors mitigate the effects of th s fragmentation by allowing animals to move between remaining habitats, which in turn allows depleted populations to be replenished and promotes genetic exchange between separate populations.

Continuous swaths of undeveloped or unobtrusively developed land along the coast, such as is the case in the Park and vicinity, provide easy access for wildlife movement between diffe ent habitat types used for foraging or cover.

The Park provides continuous swaths of undeveloped or lightly developed land along the coast which allows easy wildlife movement between diffe ent habitat types used for foraging or cover. Wildlife movement patterns are currently unobstructed within the Park on a north-south axis along the beach, dune, scrub, and grassland habitats of the Light Station Area and Bolsa Point Area, and on an east-west axis from the Park gulch and riparian corridors through culverts below Highway 1. East of Highway 1, wildlife movement within the undeveloped Easement also is unobstructed. The proposed plan would not inhibit wildlife movement within the Yankee Jim Gulch and Spring Bridge Gulch. Development of the project components within the Easement including the new well, small water treatment facility, and water storage tanks within the Easement and the water pipelines connecting the Easement to the Light Station Area and use of the Easement for Park storage would not prohibit wildlife movement through the site. Development of the project components within the Light Station Area would largely occur in areas already developed and where wildlife movement is limited, such as within the Historic Zone.

Development of the parking area, storage facility, and vault toilet within the Bolsa Point Area is proposed within a currently undeveloped portion of the Park. Future projects under implementation of the proposed plan in this area would result in some restrictions of wildlife movement throughout the Bolsa Point Area; however, these proposed structures and site features are designed to minimize the human impact on quality habitat. The Upland Conservation Zone and adjacent Beach Recreation Zone continues to allow unobstructed wildlife

movement along the north-south axis through the Bolsa Point Area of the Park under the proposed plan. Impacts of the proposed plan on wildlife movement would be *less than significan* .

Chapter Four includes goals and guidelines for animal resource management within the Park, including those found in **Section 4.5.4 Resource Management and Protection.** Implementation of these measures would result in the avoidance or minimization of the types of impacts identified above. For example, **WILDLIFE.1** would further reduce the significance of potential effects related to proposed structures and site features at Bolsa Point Area by providing for the clustering of development to limit habitat fragmentation within the Park. Similarly, implementation of **VISUAL.5** would reduce the significanc of potential effects related to proposed structures and site features throughout the Park by requiring minimization of nighttime lighting to limit interference with nocturnal species as they move throughout the Park.

In addition to the proposed guidelines, the General Plan states the Park would observe the animal resources (§0311) policies from the DOM.[61] These policies include provisions for the preservation of natural abundance, diversity, and functional linkages to habitat beyond the Park (§0311.2).

With implementation of the proposed guidelines and select DOM policies related to animal management, potential impacts associated with the proposed plan on wildlife movement which might otherwise be significant would be reduced to *less-than-significan* levels. This is because these guidelines and policies establish protocols for identifying animal resources within the Park and avoiding or minimizing potential impacts to such resources during project implementation.

e) Would the plan conflict with any local ordinances or policies protecting biological resources?

Trees within the Park are limited to a stand of eucalyptus along the western border of the Easement and a few Monterey cypress along the eastern border of the Bolsa Point Area. These species are not affo ded protection under the San Mateo County Significant Tree Ordinance or Heritage Tree Ordinance. The proposed plan does not include tree removal within the Park. The proposed plan would not conflict with the local tree ordinance. *No impact* would occur.

f) Would the plan conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or State habitat conservation plan?

There is no adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), nor other similar approved conservation plan within or in close proximity to the plan area. The closest HCPs to the plan area are

61 California Department of Parks and Recreation, "Natural Resources," Department Operations Manual, https://www.parks.ca.gov/pages/22374/files/dom%200300%20natural%20resources.pdf, accessed October 11, 2016.

the Santa Clara County Habitat Plan, located approximately 23 miles east of the Park, and San Bruno Mountain HCP, located approximately 30 miles northeast of the Park. These HCP areas would not be affected by the project; *no impact* would occur.

5.4.5 CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?	❒	❒	■	❒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	❒	❒	■	❒
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature	❒	❒	■	❒
d) Disturb any human remains, including those interred outside of formal cemeteries?	❒	❒	■	❒

DISCUSSION

a) Would the plan cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

CEQA Guidelines Section 15064.5 requires a lead agency to consider the effects of a project on historical resources. A historical resource is defined as any building, structure, site, or object listed in or determined to be eligible for listing in the California Register of Historical Resources (California Register), or determined by a lead agency to be significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, or cultural annals of California. Archaeological resources, including archaeological resources that are historical resources according to Section 15064.5, are discussed in item b), below.

The Draft Historic Structures Report: Pigeon Point Light Station, Pescadero, California (ARG, 2013) provides a comprehensive review of the historic background and the existing conditions and structures associated with the Pigeon Point Light Station. This document is on file with and available from the California Department of Parks and Recreation (CDPR).

Built in 1871, the Pigeon Point Light Station includes one of the tallest lighthouses on the West Coast. It was listed in the National Register of Historic Places (National Register) in 1976 and is an important landmark on the coast. On May 25, 2005, the announcement was made that CDPR would acquire the Pigeon Point Light Station from the federal government. Six years later, on September 9, 2011, the Public Works Board of the State of California authorized the acquisition of the property. The Pigeon Point Light Station Historic District consists of the Lighthouse and attached oil house (jointly referred to as the Lighthouse), Fog Signal Building, Carpenter's Shop, detached Oil House, and site features.

Historical Background

On May 18, 1870, the U.S. Government purchased the one-and-a-half acre tip of Pigeon Point, nine acres of additional land inland, the island at Point Año Nuevo, forty-foot right-of-ways to the areas, and permission to use timber, water, clay, sand, stone, and other necessary materials to build a light station from the adjoining Clarke and Coburn ranchos. The decision whether to build on Año Nuevo Island or Pigeon Point still had not been made as late as December 1870. But in the spring of 1871, the choice was made to erect a firs -order lighthouse and fog signal at Pigeon Point and to establish only a fog signal at Año Nuevo (a light was later erected there in 1890).[62]

The standardized design for the Lighthouse was reputedly acquired by the U.S. Government from France at the same time that six, or more, firs -order Fresnel lenses were purchased.[63] The U.S. Government frequently used standardized plans for its buildings, and following this pattern, one set of plans for a lighthouse was often reused for the construction of others, with only slight modificat ons. Consequently, the plans used for the Lighthouse were adapted from those employed on the eastern seaboard. Although similar to East Coast lighthouses, Pigeon Point is unique because it is the only lighthouse of this type constructed on the Pacific Coast and, as such, it is unusually tall.[64] At 115 feet, Pigeon Point and Point Arena share the distinction of being the tallest lighthouses on the West Coast.

Materials for the Pigeon Point Light Station came from a variety of sources. Lumber was purchased from Glen Mills at Whitehouse Creek. The ironwork, including the lighthouse stairs, platforms, and balcony, were fabricated by Nutting & Son in San Francisco. The lens was manufactured by Henry-Lepaute in Paris, France. The lantern room was constructed by the lighthouse Service General Depot in New York. The Lighthouse's rotating gear mechanism was made by Barbier and Lenard in Paris.[65]

62 Architectural Resources Group, Inc., Draft Historic Structures Report Pigeon Point Light Station, 2013.

63 Regnery, Dorothy, "CA-SMA-170H, the Pigeon Point Lighthouse," National Register of Historic Places Nomination Form, 1976.

64 Architectural Resources Group, Inc., Draft Historic Structures Report Pigeon Point Light Station, 2013.

65 Architectural Resources Group, Inc., Draft Historic Structures Report Pigeon Point Light Station, 2013.

Brick was an unusual choice for a California lighthouse in the 1870s. It had been a common material for the lighthouses in the early 1850s but was used far less often after the middle of that decade, being replaced by iron construction. Out of the 26 lighthouses constructed after 1856, only four were made of brick: Pigeon Point in 1871, Point Arena in 1870, Trinidad Head in 1875, and Piedras Blancas in 1875. Each of these lighthouses was built with double-wall construction.[66]

Some reports have suggested that the brick for the Lighthouse was brought around Cape Horn, but there is no evidence to support this claim. There was an attempt to make brick just off site, but problems with the quality of this brick led to construction delays and it was replaced with brick from another local source. Ultimately, 500,000 bricks were used in the construction of the Pigeon Point Lighthouse. Although progress on the Lighthouse was slow, the fog signal went into operation on September 10, 1871 and was manned by keeper J.W. Patterson and one assistant.[67]

In April 1872, work on the Lighthouse was halted to await the arrival of the Lantern Room. The lens arrived in July, but work was slow to resume. The lens for Pigeon Point was firs -order, the largest and most powerful lens used in lighthouses on the Pacific Coast. After its installation, it was the only one of its kind in use in California until the 1890s. The lens was a Fresnel, named for French physicist Augustin Jean Fresnel who perfected the type in 1822. Like most of the Fresnel lighthouse lenses on the Pacific Coast, Pigeon Point's was produced by Henry-Lepaute, a Paris optical company.[68]

The Lighthouse was completed in October 1872. The following month Capitan J. McDougal, the lighthouse inspector, offici ly examined the station and pronounced it ready for lighting. The complete station, including fog signal building, keepers dwelling, and other outbuildings, cost a total of $184,625.[69]

Houses for keepers and assistant keepers were an essential component of light stations and could be single-family houses, duplexes, triplexes, or fourplexes. At Pigeon Point Light Station, the keepers dwelling was constructed as a freestanding building, which was typical of larger light stations. Like the Lighthouse, work began on the keepers dwelling and the first fog signal building in June 1871. The original keepers dwelling was a Victorian duplex and included a shed outbuilding. Around 1900, a rear addition was built, creating a fourplex. Over the years, various outbuildings, such as sheds and garages, were constructed. The residence and outbuilding were demolished in 1960, and four new cottages were built and are now used as a hostel.

66 Regnery, Dorothy, "CA-SMA-170H, the Pigeon Point Lighthouse," National Register of Historic Places Nomination Form, 1976.

67 Architectural Resources Group, Inc., Draft Historic Structures Report Pigeon Point Light Station, 2013.

68 Ibid

69 Regnery, Dorothy, "CA-SMA-170H, the Pigeon Point Lighthouse," National Register of Historic Places Nomination Form, 1976.

The Lighthouse was remodeled several times between 1871 and 1908 with the lamp being upgraded as advances in technology occurred and as the Lighthouse changed ownership. In 1911–1912, the kerosene wick lamp was replaced by an incandescent oil vapor lamp. A new 375mm lantern (later removed) and associated equipment and ventilation were added to the Lighthouse in 1967. Under the U.S. Coast Guard's Lighthouse Automation Program, Pigeon Point was automated with an aero beacon in 1974. In November 2011, the Fresnel lens was removed from the Lighthouse and put on exhibit in the Fog Signal Building out of concern for the Lighthouse's structural integrity and to facilitate structural improvements.[70]

Existing Conditions

Light Station Area

The Light Station Area and includes the Lighthouse and the following eight buildings: the Fog Signal Building, the attached oil house, the Carpenters' Shop , the Cottages, the restroom, storage shed, and Water Sand Filter Building. Additional description of the structural detail and existing conditions of the contributing elements to the Pigeon Point Light Station Historic District is provided in the Historic Structures Report [71] and in Chapter Two.

Additionally Chapter Two discuss historic designation of the structures in the Light Station and the Light Station, as a whole.

Bolsa Point Area

The Bolsa Point Area is not open to the public and is undeveloped.

Easement

The Easement is 9 acres and is located east of Highway 1 from the Light Station Area, and is not open to the public. There are no existing structures on the Easement.

The proposed plan includes the following components that could potentially impact historical resources: trails; landscaping; proposed structures and features at the Light Station Area; proposed structures and features at the Bolsa Point Area; proposed structures and features at the Easement; and infrastructure and utilities. The following includes a brief description of the components and an analysis of potential impacts to historical resources. Goals and Guidelines included in the proposed plan are provided where appropriate to reduce impacts to historical resources to a *less-than-significan* level.

Chapter includes Goals and Guidelines to preserve the significant historical resources of the Park, including those found in **Section 4.5.2 Visitor Experience**, **Section 4.5.4 Resource Management and Protection**, and **Section 4.5.5 Interpretation and Education**. **Guidelines CULTURAL.1,**

70 Architectural Resources Group, Inc., Draft Historic Structures Report Pigeon Point Light Station, 2013.

71 Ibid

CULTURAL.2, CULTURAL.3, and EXPERIENCE.4 specifica ly provide for treatment recommendations and maintenance requirements outlined in the 2013 Historic Structures Report to ensure that the project would not cause a substantial adverse change in the characteristics that convey the historical significance of the Historic District. The improvements would be carried out in accordance with *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings*. Additional landscape analysis and evaluation are proposed to ensure continued preservation activities. Implementation of these guidelines would reduce impacts to historical resources to a *less-than-significan* level by ensuring appropriate treatment of historic properties.

Additionally, **INTERPRETATION.2** identifies and encourages the development of a multiple property Maritime Historic District that includes Pigeon Point Light Station, Año Nuevo Island Light Station, and Franklin Point Historic Shipwreck Cemetery. Maritime Districts can receive National Historic Landmark Status as they help to preserve and celebrate the, "maritime heritage of the United States." Development of a Maritime Historic District would involve no physical change to the Historic District and therefore *no impact* would result.

Finally, the proposed plan includes additional guidelines related to the interpretation of the Park related to the cultural history and the natural setting of the central California coast. The proposed guidelines further achieve the interpretation mission and vision of the Park and enhance historical resources protection.

With implementation of the proposed guidelines, impacts to historical resources would be *less than significan* .

b) Would the plan cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

This section discusses archaeological resources, both as historical resources according to Section 15064.5 as well as unique archaeological resources as defined in Section 21083.2(g). A significant impact would occur if the proposed plan would cause a substantial adverse change to an archaeological or paleontological resource through physical demolition, destruction, relocation, or alteration of the resource.

Cultural Background

Prehistoric and Ethnohistoric Context

A summary of prehistoric and ethnohistoric context can be found in Chapter Two. This summary provides an overview of general archaeological phases defined for the plan area. The summary additionally presents a brief summary of Native American inhabitation and culture within the plan area.

Historic Context

The Draft Historic Structures Report: Pigeon Point Light Station, Pescadero, California [72] provides a comprehensive review of the historic background, and the existing conditions and structures associated with the Light Station. This document is on file with and available from CDPR. Item a) above, provides a discussion of the historical background of the Pigeon Point area and Chapter Two describes the historic designation of structures within the Light Station.

Existing Conditions

Background Research

A records search was conducted at the Northwest Information Center (NWIC) of the California Historical Resources Information System at Sonoma State University on October 9, 2015 (File No. 15-0554). The purpose of the records search was to (1) determine whether known archaeological resources have been recorded within or within a 1/2-mile radius of the Park; (2) assess the likelihood for unrecorded archaeological resources to be present based on historical references and the distribution of nearby sites; and (3) develop a context for the identificat on and preliminary evaluation of archaeological resources.

The NWIC has record of fi e previous cultural resources investigations conducted within the vicinity of the Park. These studies have all included background research and surface surveys.

Records at the NWIC and previous survey results indicate that there are no offi ally documented prehistoric archaeological sites in the Park or within a ½-mile radius. The nearest recorded prehistoric sites are nearly three miles to the south and three miles to the north. Previous survey efforts did identify isolated prehistoric Monterey chert fla es in the Light Station Area[73] [74] and a sparse scatter of chert fla es in the Bolsa Point Area.[75] Monterey chert is a common prehistoric tool material in the region, with a source and workshop area at Año Nuevo south of the Park. No midden soil indicative of occupation or intensive use was identified or expected to be on the coastal bluff however, the sandy beach and rocky tidal areas below would have supplied numerous resources used by Native Americans.

Surface Survey

A general surface survey of the Park was conducted on October 14, 2015. All areas of the Park including the Light Station Area, the Bolsa Point Area, and the Easement were inspected. The survey did not identify prehistoric archaeological

72 Architectural Resources Group, Inc., Draft Historic Structures Report Pigeon Point Light Station, 2013.

73 Clark, Matthew R., *An Archaeological Reconnaissance of the Pigeon Point Public Access Improvement Project, San Mateo County, California*, 2003.

74 Clark, Matthew R., An Expanded and Revised Archaeological Reconnaissance of the Pigeon Point Public Access Improvement Project, San Mateo County, California, 2005.

75 Hylkema, Mark G., and Rob Q. Cuthrell, An Archaeological and Historical View of Quiroste Tribal Genesis," *California Archaeology*, Vol 5, No 2, December 2013.

materials, including midden soil, artifacts, or other evidence of past human use and occupation. However, survey results can be influenced by a variety of factors, including the existing conditions at the time of survey, weather, movement of dune sands, and changes in vegetation.

The survey also did not identify historic-era archaeological resources, such as refuse concentrations or other deposits, or features such as fence lines, ditches, or other water conveyance features. Two undiagnostic glass fragments, three white improved earthenware fragments, and one piece of oxidized metal was identified near the existing parking area; these resources do not constitute an archaeological site but indicate the general use of the area during the historic-era. Additionally, near the access walkway to the cove numerous oyster shells were observed in the cut bank of the slope. These shells may represent the use of the cove during the historic-era for whaling or other maritime activities.

Summary of Results

Based on the prehistoric and ethnohistoric context outlining the historical use of the San Francisco Peninsula coast, the previous cultural resources documentation in the Park, and the current and past survey efforts, the Park has a moderate sensitivity for prehistoric archaeological sites. There is the potential that prehistoric archaeological materials could be identified, which would illustrate the intensive use of the general coastal area during the prehistoric period. Archaeological materials in this geologic context would be on or near to the surface and could include obsidian and chert tools or toolmaking debris, groundstone milling tools, heat-affected rocks, and/or shell and faunal remains.

Based on the historic context, the previous cultural resources documentation, and the current survey effort, the Park has the potential for historic-era archaeological resources, which would confirm the intensive historic-era use of the Pigeon Point area. During the several studies conducted within the Park between 1995 and 2005, isolated artifacts consistent with Euro-American use of the project vicinity during the 19th and 20th centuries have been identified although no evidence of structural remains or intact archaeological deposits have been identified to date. Archival research has revealed a long history of use of the Park and such uses would be expected to leave evidence detectable by archaeological methods. Unrecorded deposits associated with agricultural, maritime activities, and the construction of the light station may be present in the Park.

The proposed plan includes the following components that could potentially impact archaeological resources: trails; landscaping; proposed structures and features at the Light Station Area; proposed structures and features at the Bolsa Point Area; proposed structures and features at the Easement; and infrastructure and utilities. The following includes a brief description of the components and an analysis of potential impacts to archaeological resources. Goals and Guidelines included in the proposed plan would ensure that future development of the Park

proceeds in a manner that would be protective of cultural resources, thereby reducing otherwise potentially significant impacts on archaeological resources to a *less-than-significan* level.

Trails. Based on the results of the background research and surface survey, there are no known archaeological sites are in the vicinity of the proposed trails. However, ground disturbing activities could cause a substantial adverse change in the significance of a previously undiscovered archaeological resource.

Landscaping. Based on the results of the background research and surface survey, there are no known archaeological sites in the vicinity of the proposed landscaping at the Light Station Area. Archaeological materials have been previously identified in the Bolsa Point Area. Ground disturbing activities could cause a substantial adverse change in the significance of a known or previously undiscovered archaeological resource.

Proposed Structures and Site Features at the Light Station Area. Based on the results of the background research and surface survey, there are no known archaeological sites are in the Light Station Area. However, ground disturbing activities could cause a substantial adverse change in the significanc of a previously undiscovered archaeological resource.

Proposed Structures and Site Features at the Bolsa Point Area. Based on the results of the background research and surface survey, archaeological materials have been previously identified in the Bolsa Point Area. Ground disturbing activities could cause a substantial adverse change in the significanc of a known or previously undiscovered archaeological resource.

Proposed Structures and Site Features at the Easement. Based on the results of the background research and surface survey, there are no known archaeological sites are in the vicinity at the Easement. However, ground disturbing activities could cause a substantial adverse change in the significanc of a previously undiscovered archaeological resource.

Infrastructure and Utilities. Based on the results of the background research and surface survey, archaeological materials have been previously identified in the Bolsa Point Area where new connections for potable water would be required for visitor-serving uses (i.e. restrooms). Ground disturbing activities could cause a substantial adverse change in the significance of a known or previously undiscovered archaeological resource.

Chapter Four includes Goals and Guidelines for the protection of archaeological resources at the Park including those found in **Section 4.5.4 Resource Management and Protection**. **Guideline CULTURAL.9** includes additional archaeological investigation prior to the implementation of any park projects. **Guidelines CULTURAL.10** and **CULTURAL.11** include provisions for monitoring during ground disturbing activity, and a protocol for responding in

a protective manner should an inadvertent discovery occur. Implementation of these guidelines would reduce impacts to archaeological resources from the proposed plan to a *less-than-significan* level by ensuring that archaeological resources are appropriately managed and treated if identified in the Park or during project implementation.

c) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Background

Paleontological resources are the fossilized remains of plants and animals, including vertebrates (animals with backbones), invertebrates (e.g., starfish clams, ammonites, and marine coral), and fossils of microscopic plants and animals (microfossils). The age and abundance of fossils depend on the location, topographic setting, and particular geologic formation in which they are found. Fossil discoveries not only provide a historical record of past plant and animal life but can assist geologists in dating rock formations. Fossil discoveries can expand our understanding of the time periods and the geographic range of existing and extinct flo a and fauna.

The Society of Vertebrate Paleontology (SVP) established guidelines for the identificat on, assessment, and mitigation of adverse impacts on nonrenewable paleontological resources.[76] Most practicing paleontologists in the United States adhere closely to the SVP's assessment, mitigation, and monitoring requirements as outlined in these guidelines, which were approved through a consensus of professional paleontologists. Many federal, state, county, and city agencies have either formally or informally adopted the SVP's standard guidelines for the mitigation of adverse construction-related impacts on paleontological resources. The SVP has helped define the value of paleontological resources and, in particular, indicates that geologic units of high paleontological potential are those from which vertebrate or significant invertebrate or plant fossils have been recovered in the past (i.e., are represented in institutional collections). Only invertebrate fossils that provide new information on existing flo a or fauna or on the age of a rock unit would be considered significant. Geologic units of low paleontological potential are those that are not known to have produced a substantial body of significant paleontological material. As such, the sensitivity of an area with respect to paleontological resources hinges on its geologic setting and whether significant fossils have been discovered in the area or in similar geologic units.

Geologic mapping indicates the plan area is underlain by the Cretaceous-era Great Valley complex sedimentary rocks. The bedrock is overlain by Quaternary dune sand.

76 Society of Vertebrate Paleontology, Assessment and mitigation of adverse impacts to nonrenewable paleontologic resources: standard guidelines, *Society of Vertebrate Paleontology News Bulletin*, 2010.

Most fossils in the San Francisco Peninsula areas are found along the Pacifi Coast in Tertiary-age (1.8 to 65 million years ago [ma]) marine units, such as the Purisima Formation, Monterey Formation, Butano Formation, Colma Formation, and Merced Formation, and in locations within the outcropping marine units in the Santa Cruz Mountains. Fossils found along the coast include vertebrates (e.g., extinct camels, horses, and sea mammals) and invertebrates (e.g., clams, snails, echinoderms, and crustaceans). Of the 233 vertebrate fossil discoveries in San Mateo County, all been identified in Quaternary (up to 1.8 ma) and Tertiary contexts.[77] Only 7 fossil discoveries in San Mateo County have been found in a Cretaceous-era geologic context; all of these have been invertebrate fossils, primarily Bivalvia (mollusks).

The sedimentary rocks of the Great Valley complex have paleontological potential. However, the lack of fossil discovery in this geologic context within this geographic region substantially lessens the probability of paleontological resource discovery within the plan area. Additionally, the likelihood of future projects proposed under implementation of the proposed plan disturbing such a resource would be minimal, because future projects are not expected to involve extensive ground disturbance.

Despite the low potential, the discovery of paleontological resources cannot be entirely discounted. And if such a resource were to be encountered and damaged or destroyed in the course of project implementation, the impact would be significant. The proposed project includes guidelines whose implementation would reduce the potential for impacts to paleontological resources to a *less-than-significan* level, by ensuring that the appropriate response protocols are established and implemented.

Chapter Four includes guidelines for paleontological resource management and protection during construction, including those found in **Section 4.5.4 Resource Management and Protection**. Implementation of these measures would result in the avoidance or minimization of the types of impacts identifie above. Specifica ly, CULTURAL.11 would reduce the significance of potential effects related to installation of new trails, structures, and infrastructure by prescribing protocols for handling inadvertent discovery of paleontological resources during construction. With implementation of the proposed guideline, impacts to paleontological resources would be *less than significan* .

d) Would the proposed plan disturb any human remains, including those interred outside of formal cemeteries?

There is no indication from the archival research that the Park has been used for human burial purposes in the recent or distant past. Therefore, it is unlikely that human remains would be encountered during implementation of the proposed

77 University of California Museum of Paleontology, "Collections," http://www.ucmp.berkeley.edu/science/collections.php, accessed October 21, 2016.

plan. However, the possibility of inadvertent discovery cannot be entirely discounted; were it to occur in the absence of appropriate response protocols, the impact would be significant

The proposed plan includes the following components that could potentially impact previously undiscovered human remains: trails; landscaping; proposed structures and features at the Light Station Area; proposed structures and features at the Bolsa Point Area; proposed structures and features at the Easement; and infrastructure and utilities. All of these activities include ground disturbance that could potentially uncover previously undocumented burial sites.

Chapter Four includes Guidelines whose implementation would reduce the potential for impacts to human remains to a *less-than-significan* level, by ensuring that the appropriate response protocols are established and implemented.

In developing the General Plan, CDPR has provided for the protection of human remains with **Guideline CULTURAL.11**, found in **Section 4.5.4 Resource Management and Protection**, which outlines a protocol for responding in a protective manner should an inadvertent discovery of human remains occur. This guideline requires work to halt within 100 feet of a find of human remains and for the provisions of Public Resources Code Section 5097.98 and *Health and Safety Code* Section 7050.5 to be implemented. With implementation of the proposed guideline, impacts to human remains would be *less than significan* .

5.4.6 TRIBAL CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is: i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resource Code Section 5024.1. In applying the criteria set forth in subdivision (c) of the Public Resource Code Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance to a California Native American tribe.	❒	❒	❒	■

DISCUSSION

a) Would the plan cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is(i) listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k) or (ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resource Code Section 5024.1. In applying the criteria set forth in subdivision (c) of the Public Resource Code Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance to a California Native American tribe.

CEQA Section 21074.2 requires the lead agency to consider the effects of a project on tribal cultural resources. As defined in Section 21074, tribal cultural resources are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are listed, or determined to be eligible for listing, on the national, state, or local register of historical resources.

The proposed plan describes the consultation effort completed by CDPR for the proposed plan. The CDPR Tribal Liaison notified the Native American Most Likely Descendants about the project and invited them to consult in compliance with California Assembly Bill 52 (AB52). Although no tribes responded, the Tribal Liaison noted that the Park is generally not considered to have Native American cultural resources. The Tribal Liaison concluded that there is interest in incorporating interpretive features that acknowledge Native American presence in the area and their use of the intertidal zone.

The project would not be expected to result in a substantial adverse change in the significance of a tribal cultural resource. Impacts to tribal cultural resources would be *less than significan* . Furthermore, continued partnerships with local tribal groups as called for in **Guideline INTERPRETATION.3,** found in **Section 4.5.5 Interpretation and Education**, would ensure that future development of the Park proceeds in a manner that is protective and respectful of tribal cultural resources. Therefore, *no impact* would occur with regards to a substantial adverse change in the significance of a Tribal Cultural Resource and no mitigation measures are required.

5.4.7 GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	❒	❒	■	❒
ii) Strong seismic ground shaking?	❒	❒	■	❒
iii) Seismic-related ground failure, including liquefaction?	❒	❒	■	❒
iv) Landslides, mudslides or other similar hazards?	❒	❒	■	❒
b) Result in substantial soil erosion or the loss of topsoil?	❒	❒	■	❒
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	❒	❒	■	❒
d) Be located on expansive soil, creating substantial risks to life or property?	❒	❒	■	❒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater?	❒	❒	■	❒

EXISTING CONDITIONS

The plan area is set within the Coast Ranges geomorphic province which is characterized by northwest-trending valleys and ridges. This setting is strongly influenced by a regional series of folds and faults that have resulted from the impingement of the Pacific tectonic plate on the North American craton, and resultant strike-slip faulting along the San Andreas Fault zone. The Coast Ranges can be further divided into the northern and southern ranges, which are separated by the San Francisco Bay. The Southern Coast Ranges, where the plan area is located, run north-south between San Francisco Bay to the north, the Central Valley to the east, the Transverse Ranges to the south, and the Pacifi Ocean to the west.

The plan area is located on one of several marine terraces, or wave-cut benches, that flank this stretch of the Pacific Coast. Some of the oldest terraces have been mapped on Montara Mountain, roughly 25 miles north of the plan area, where they were identified at elevations over 1,500 feet above mean sea level (amsl). The marine terrace topography is gentle in the vicinity of the plan area, with prevailing slopes to the west-southwest and typical elevations ranging from 25 to 45 feet amsl.[78]

Based on published maps from the US Geological Survey, the shallow subsurface beneath the pan area consists of thin horizons of Pleistocene-age marine terrace deposits composed of poorly consolidated sand and gravel, that are set into the interbedded sandstones, conglomerates, siltstones, and mudstones of the Upper Cretaceous Pigeon Point Formation.[79] Conglomerate clasts reflect a diverse provenance. They include felsic volcanic rocks, granitic rocks, low-grade metamorphic rocks, as well as limestones and sandstones.

The plan area, as well as the greater San Francisco Bay region in which it is located, represents one of the most seismically active areas in the continental United States. As previously discussed, active earthquake faults have been mapped in relatively close proximity. One such example is the northwest-southeast trending San Gregorio Fault, one of the more significant earthquake faults in the San Francisco Bay area, whose mapped trace lies roughly three miles northeast of the plan area. Detailed seismic investigations of this fault in the Pillar Point headlands north of the town of Half Moon Bay, revealed that it is a zone comprised of multiple strands of right-lateral strike-slip faults.[80] An earthquake of moderate to high magnitude generated on a fault such as the San Gregorio Fault could produce strong ground shaking at the plan area. The degree of shaking would be subject to a number of variables, such as the magnitude of the event, the distance to the zone of rupture, and local geologic conditions.

The 2007 Working Group on California Earthquake Probabilities, a collaborative effor involving the California Geological Survey (CGS), Southern California Earthquake Center, and USGS, estimated that the 30-year probability of a magnitude 6.7 or greater earthquake striking the San Francisco Bay area was 63 percent.[81] The corresponding probability for the San Gregorio Fault was 6 percent.

The CGS in their implementation of the statewide under the 1972 Alquist-Priolo Act, has not identified any active or potentially active earthquake faults at the Project site. A map was published of the Franklin Point 7 ½-minute quadrangle directly east of the plan area in which an Alquist-Priolo Earthquake Fault Zone

78 US Geological Survey, Pigeon Point Quadrangle, California, 7.5-Minute Series (Topographic), Scale 1:24,000, 2015

79 US Geological Survey, Geologic Map of San Mateo County, Map I-1257-A, scale 1:62,50, 1983.

80 USGS, Final Technical Report, Paleoseismic Investigation of the Northern San Gregorio Fault, Half Moon Bay, California, National Earthquake Hazards Reduction Program Award No. 04HQGR0045, 2005.

81 California Geological Survey and Southern California Earthquake Center, Working Group on California Earthquake Probabilities, The Uniform California Earthquake Rupture Forecast, Version 2 (UCERF 2), CGS Special Report 203, http://pubs.usgs.gov/of/2007/1437/, accessed October 13, 2016.

(EFZ) is depicted around the above-referenced San Gregorio Fault.[82] As noted above, this fault is well set-back from the plan area; the closest approach of this EFZ is roughly 2.85 miles east-northeast of the plan area. The CGS' Seismic Hazards Mapping Program has not mapped any (seismically induced) liquefaction hazard zones at the plan area or in its vicinity.

DISCUSSION

a) Would the plan expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving: (i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; (ii) Strong seismic ground shaking; (iii) Seismic-related ground failure, including liquefaction; (iv) Landslides, mudslides or other similar hazards?

It should be noted that exposure of people or structures to seismic hazards as a result of project implementation is no longer considered a CEQA impact. According to the California Supreme Court, CEQA applies to a project's impact on the environment, and not the environment's impact on the project, unless the project would exacerbate a particular environmental hazard.[83] From the standpoint of geology and soils, plan implementation would not cause or worsen seismic hazards. Although further evaluation of potential impacts a)(i), a)(ii), a)(iii), and a)(iv) is not strictly required under CEQA, the potential impacts are discussed below for informational purposes only.

1. The proposed plan would have a significant impact if it would expose people or structures to potential substantial adverse effects due to rupture of a known earthquake fault. The California Geological Survey (CGS) has not mapped any Alquist-Priolo Earthquake Fault Zones at or in the immediate vicinity of the plan area. As previously noted, strands of the active San Gregorio Fault have been mapped in the hills roughly three miles to the northeast, well set-back from the plan area.

2. Because no mapped earthquake faults pass through or lie adjacent to the plan area, the potential for projects implemented under the proposed plan to result in substantial adverse impacts due to fault rupture is considered *less than significan* .

3. The lack of mapped active faults at the plan area notwithstanding, the plan area could be subjected to strong ground shaking during an earthquake on a nearby fault such as the San Gregorio Fault to the northeast, or another active fault in the San Francisco Bay Area. An earthquake of large

82 California Geological Survey (CGS),Special Studies Zone, Franklin Point, Revised Offi al Map, Effect ve January 1, 1981, scale 1:24,000, 1982.

83 California Supreme Court, California Building Industry Association v Bay Area Air Quality Management District, Opinion No. S213478, date filed: December 17, 2015.

magnitude could produce violent ground shaking at the plan area (i.e., Modified Mercali Intensity [MMI] IX) according to seismic shaking forecasts developed by developed by a cooperative working group including the California Geological Survey and the US Geological Survey. This forecast notwithstanding, the actual shaking experienced at the plan area would be subject to a number of variables, such as the magnitude of the event, the distance to the zone of rupture, and local geologic conditions. Potential effects of earthquake-related ground shaking could include damage to buildings, streets, and utilities. During project implementation, compliance with the latest California Building Code (CBC) requirements would help ensure that the proposed structures are able to resist minor earthquakes without damage, resist moderate earthquakes without structural damage (but with some nonstructural damage), and resist major earthquakes without collapse, but with some structural as well as nonstructural damage. In light of these safeguards, the potential impacts of ground shaking are considered *less than significan* .

4. The California Geological Survey (CGS), through its Seismic Hazards Zonation Program, has not yet prepared maps that show seismically induced landslide or liquefaction hazard zones near the plan area. Nevertheless, regional liquefaction susceptibility mapping by the US Geological Survey has classified the liquefaction potential at the plan area as "low."[84] Compared to areas with high or even moderate liquefaction susceptibility, significantly stronger seismic shaking would be required to cause liquefaction in zones of low susceptibility. Considering these mapping results, the potential impact of plan implementation with respect to seismically induced liquefaction is considered *less than significan* .

5. As a rule, the presence of steep slopes, an overabundance of surface water (including over-irrigation), combined with soils of low shear strength can increase the likelihood of slope instability and the likelihood of landslides, mudslides, and related hazards. As previously discussed, the plan area and its immediate surroundings are typified by gentle, west-southwest slopes towards the Pacific Ocean, and topographic relief in the area is very subdued. Steep slopes are not present at or adjacent to the plan area, nor are there indications of soils with unusually low shear strength. In light of this information, the potential impact of plan implementation with respect to landslides, mudslides, or other similar hazards is considered *less than significan* .

b) Would the plan result in substantial soil erosion or the loss of topsoil?

The proposed plan could entail grading and limited excavation. These activities carry some inherent potential for soil erosion or the loss of topsoil. Existing

84 US Geological Survey, Map Showing Liquefaction Susceptibility in San Mateo County, California, Miscellaneous Investigation Series Map I-1257-G, 1987.

regulatory requirements help mitigate these potential impacts, including the San Francisco Bay Regional Water Quality Control Board's (RWQCB-SFB) requirements for the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP), whose goal is to reduce runoff- elated erosion impacts during Project grading and construction. These plans generally include erosion control Best Management Practices (BMPs) such as hydroseeding and biodegradable erosion control blankets; linear sediment barriers, fiber rolls and other measures to break up slope length or flow post-construction inspection of drains for accumulated sediment; and clearing of accumulated sediment in such drains.

Even in the absence of project-related development, the plan area is subject to naturally-occurring erosion due to its coastal bluff setting. An assessment of coast erosion hazards was recently performed for the plan area, in an effor to forecast future bluff retreat and determine appropriate setbacks.[85] The assessment recommended a dynamic approach to erosion hazard management involving periodic re-assessment of bluff setback distances following the policies of the San Mateo County LCP.

Compliance with these existing requirements and guidelines would reduce potential impacts from substantial erosion and/or the loss of topsoil to a *less-than-significant* level.

c) Would the plan be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

As previously described, the topography is gentle in the vicinity of the plan area, with prevailing slopes to the west-southwest and typical elevations ranging from 25 to 45 feet amsl, consistent with its location on a marine terrace. Furthermore, the CGS, in implementing the CA Seismic Hazards Mapping Program, has not identified any seismically induced landslide hazard zones at the plan area or in its vicinity. The susceptibility for liquefaction was judged low based on published assessments by the USGS, and the underlying geology, as mapped by the USGS, does not appear conductive to subsidence or collapse. In light of this information, the potential impact of the proposed plan with respect to unstable geologic units or soils is considered *less than significan* .

d) Would the plan be located on expansive soil, creating substantial risks to life or property?

Published soil surveys of San Mateo County classified the soils beneath the plan area as soils of the Watsonville-Elkhorn Association, generally consisting of grayish, shallow to deep soils that have developed on low, nearly level to

85 ESA, Assessment of Coastal Erosion Hazard Areas and Potential Bluff etback Requirements, Pigeon Point Lighthouse Station State Historic Park General Plan, October 2016.

sloping marine terraces.[86] Soils of this association reportedly possess a thick, dark-gray surface soil that is sandy loam, loam, or, in a few places, clay loam. Previous geotechnical investigations in nearby communities have revealed the local presence of expansive soils, whose properties have necessitated changes in foundation design to mitigate soil shrink-swell behavior. However, the Chapter Four includes guidelines found in **Section 4.5.4 Resource Management and Protection** to protect physical resources. These include **Guideline GEO/ HYDRO.3** which requires completion of geotechnical evaluations of the light station area and conduct site-specific geotechnical analysis prior to locating and designing permanent structures, or other project features; and **Guideline GEO/ HYDRO.4** which requires preparation of a complete detailed and comprehensive soils report, surface and subsurface hydrology report, and drainage analysis prior to the development of any project components. Implementation of these guidelines would ensure the impacts related to implementation of the proposed plan be *less than significan* .

e) Would the plan have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater?

Implementation of the proposed plan would likely require the construction and/ or expansion of on-site septic systems for wastewater disposal. Such systems must be permitted through the San Mateo County Department of Public Health Systems. New or altered septic systems must comply with the requirements of the current County Onsite Wastewater Treatment System (OWTS) Ordinance.[87] The ordinance also embraces the County Onsite Systems Manual, whose guidance must be followed during siting and design of new or altered septic systems. The manual's requirements include a rigorous program of soil investigation and testing that must be performed and approved by the County. In light of the safeguards in this program, and considering the geotechnical data that would arise from implementation of **Guideline GEO/HYDRO.1** described in **5.4.10 Hydrology and Water Quality (g),** the potential impact of plan implementation with respect to soils incapable of adequately supporting the use of septic tanks is considered *less than significan* .

86 U.S. Department of Agriculture, Soil Survey of the San Mateo Area, California, issued May 1961.

87 County of San Mateo, California,Ordinance No. 04754 Amending Chapter 4.84, Title 4, Sanitation and Health of the San Mateo County Ordinance Code, effecti e February 4, 2016.

5.4.8 GREENHOUSE GAS EMISSIONS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	❒	❒	■	❒
b) Conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	❒	❒	■	❒

EXISTING CONDITIONS

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as greenhouse gases (GHGs), into the atmosphere. The primary source of these GHG is fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHGs—water vapor, carbon dioxide (CO2), methane (CH4), and ozone (O3)—that are the likely cause of an increase in global average temperatures observed within the 20th and 21st centuries. Other GHG identifie by the IPCC that contribute to global warming to a lesser extent include nitrous oxide (N2O), sulfur hexafluor de (SF6), hydro fluo ocarbons, perfluo ocarbons, and chlorofluo ocarbons.

This section analyzes the project's contribution to global climate change impacts in California through an analysis of project-related GHG emissions. Information on manufacture of cement, steel, and other "life cycle" emissions that would occur as a result of the project are not applicable and are not included in the analysis. Black carbon emissions are not included because the California Air Resources Board (CARB) does not include this pollutant in the state's Assembly Bill 32 (AB 32) inventory and treats this short-lived climate pollutant separately.[88]

DISCUSSION

a) Would the plan generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

The proposed plan does not generate enough GHG emissions on its own to influenc global climate change; therefore, the GHG analysis measures the proposed plan's contribution to the cumulative environmental impact. The proposed plan would not generate a substantial long-term increase in anthropogenic sources of GHG emissions. The development contemplated by the plan would include construction of hiking trails, parking lot expansion/new parking lot, and habitat

88 Particulate matter emissions, which include black carbon, are analyzed in Section 5.2, Air Quality. Black carbon emissions have sharply declined due to efforts to reduce on-road and off- oad vehicle emissions, especially diesel particulate matter. The State's existing air quality policies will virtually eliminate black carbon emissions from on-road diesel engines within 10 years (CARB 2016c).

restoration. The proposed plan identifies improvements to the plan area that would be implemented in the next 20 years, depending on the availability of funding. The majority of plan components would not generate emissions (e.g., trails, invasive plant removal, interpretive areas, etc.). The proposed plan does not propose any new buildings that would generate an increase in energy use onsite. However, the well and small waste treatment facility at the Easement would generate nominal electricity demand. The proposed plan would slightly increase visitor use but would not result in a substantial increase in vehicle miles traveled and associated emissions (**see Section XVII, Transportation and Circulation**). The proposed plan also includes the addition of space for indigenous agriculture and land stewardship activities, fi e pits, and restrooms, as well as educational programs and recreational activities, in the Bolsa Point Area with parking for up to 30 vehicles. However, BAAQMD does not consider fi e wood to be an anthropogenic source of GHG emissions. Since BAAQMD's CEQA Guidelines does not have specific screening criteria for recreational trails, the screening criteria for city parks were used as the best fit. Based on BAAQMD's screening criteria, city parks of 600 acres or larger have the potential to generate a substantial increase in GHG emissions and would need further analysis. The proposed park improvements would not exceed 75 acres, which is below the BAAQMD screening threshold and would generate nominal GHG emissions. Therefore, GHG emissions generated by the proposed plan are a *less-than-significan* impact.

b) Would the plan conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

Applicable plans adopted for the purpose of reducing GHG emissions include CARB's Scoping Plan. In accordance with Assembly Bill (AB) 32, the CARB developed the 2008 Scoping Plan to outline the State's strategy to achieve 1990 level emissions by 2020. The CARB Scoping Plan is applicable to state agencies and is the primary tool that is used to develop performance-based and effi ency-based CEQA criteria and GHG reduction targets for climate action planning efforts

Since adoption of the 2008 Scoping Plan, state agencies have adopted programs identified in the plan, and the legislature has passed additional legislation to achieve the GHG reduction targets. Statewide strategies to reduce GHG emissions include the Low Carbon Fuel Standard, California Appliance Energy Effi ency regulations; California Building Standards (i.e., California Green Building Standards Code [CALGreen] and Building and Energy Effi ency Standards); California Renewable Energy Portfolio Standard (33 percent RPS); changes in the corporate average fuel economy standards (e.g., Pavley I and Pavley California Advanced Clean Cars); and other measures that would ensure the State is on target to achieve the GHG emissions reduction goals of AB 32. The

proposed plan would comply with these GHG emissions reduction measures as they are statewide strategies. Although statewide strategies in the Scoping Plan are not directly applicable to individual projects, these statewide GHG emissions reduction measures would reduce the proposed plan's GHG emissions. The proposed plan would include features that are consistent with GHG reduction goals, including the replacement of invasive species with drought-tolerant plants, and riparian habitat restoration. Additionally, the proposed plan is within the Southern San Mateo Coast Priority Conservation Area (PCA). PCAs are a component of Plan Bay Area, the integrated long-range transportation and land-use/housing plan for the San Francisco Bay Area approved by the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG) in 2013.The proposed plan is consistent with Plan Bay Area, as it would provide open spaces with natural, scenic, recreational, and ecological benefits The proposed plan would not conflict with statewide programs adopted for the purpose of reducing GHG emissions. The impact would be *less than significan* .

5.4.9 HAZARDS & HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?	❒	❒	■	❒
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	❒	❒	■	❒
c) Emit hazardous emissions or handle hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?	❒	❒	❒	■
d) Be located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?	❒	❒	■	❒
e) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	❒	❒	■	❒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	❒	❒	■	❒
g) For a project within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people living or working in the project area?	❒	❒	❒	■
h) For a project within the vicinity of a private airstrip, result in a safety hazard for people living or working in the project area?	❒	❒	❒	■

DISCUSSION

a) Would the plan create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?

As described in Section 3.0, the proposed plan includes several components including trails, landscaping, restoration of certain existing structures and construction of new structures and other site features. As discussed in (d) below, the Pigeon Point Light Station is listed as a State Response site with "Certifie Operation and Maintenance-Land Use Restrictions Only" status as of December 20, 2008. The California State Department of Toxic Substance Control (DTSC) EnviroStor database indicated that soil around the light station is contaminated with lead from historic use of lead-based paints. Likely similar concentrations of lead are present in soil around other onsite historical structures. The database further indicates that a DTSC-approval soil management plan would be required for any future soil disturbances. However, implementation of existing land use restricted remedy (i.e., soil management plan to be approved and overseen by DTSC) will ensure impacts from the proposed plan remain *less than significan* . In addition, there would be some on-site use of common hazardous materials, such as cleaning solutions, as part of daily operations; however, the use of these materials is regulated extensively by federal, State, regional, and local agencies and compliance with existing regulations would ensure that there are no significant risks to the public from the transport, use, or disposal of hazardous materials. Therefore, compliance with applicable federal, State, and local regulations would reduce the potential impacts to *less-than-significan* .

b) Would the plan create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Based on the age of existing buildings in the plan area, asbestos-containing materials (ACM), lead-based paint (LBP), polychlorinated biphenyls (PCBs), or other potentially hazardous building materials may be encountered during implementation of the proposed plan. As described above, the proposed plan does not offer new land uses which would require the routine transport, use, or disposal of hazardous substances. Handling of hazardous materials that could occur during implementation of the proposed plan would be done in compliance with applicable federal and State regulations.

For example, through its Hazardous Waste Management Program, DTSC works with the CalEPA to enforce and implement regulations pertaining to hazardous wastes. In addition, the US Environmental Protection Agency (EPA) provides oversight and supervision for site investigations and remediation projects, and has developed land disposal restrictions and treatment standards for the disposal

of certain hazardous wastes. Consequently, potential impacts related to upset or accident involving hazardous substances would be *less than significan* .

c) Would the plan emit hazardous emissions or handle hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?

There are no schools located on or within one-quarter mile of the plan area. Therefore, *no impact* would occur.

d) Would the plan be located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?

California Government Code Section 65962.5 requires the CalEPA to compile, maintain, and update specified lists of hazardous material release sites. CEQA (California Public Resources Code Section 21092.6) require the lead agency to consult the lists compiled pursuant to Government Code Section 65962.5 to determine whether the Project is identified on any of the following lists:

» **EPA NPL:** The EPA's National Priorities List includes all sites under the USEPA's Superfund program, which was established to fund cleanup of contaminated sites that pose risk to human health and the environment.

» **EPA CERCLIS and Archived Sites:** The EPA's Comprehensive Environmental Response, Compensation, and Liability Information System includes a list of 15,000 sites nationally identified as hazardous sites. This would also involve a review for archived sites that have been removed from CERCLIS due to No Further Remedial Action Planned (NFRAP) status.

» **EPA RCRIS (RCRA Info):** The Resource Conservation and Recovery Act Information System (RCRIS or RCRA Info) is a national inventory system about hazardous waste handlers. Generators, transporters, handlers, and disposers of hazardous waste are required to provide information for this database.

» **DTSC Cortese List:** The DTSC maintains the Hazardous Waste and Substances Sites (Cortese) list as a planning document for use by the State and local agencies to comply with the CEQA requirements in providing information about the location of hazardous materials release sites. This list includes the Site Mitigation and Brownfie ds Reuse Program Database (CalSites).

» **DTSC HazNet:** The DTSC uses this database to track hazardous waste shipments.

» **SWRCB LUSTIS:** This stands for the Leaking Underground Storage Tank Information System and the SWRCB maintains an inventory of USTs and leaking USTs, which tracks unauthorized releases.

The required lists of hazardous material release sites are commonly referred to as the "Cortese List" after the legislator who authorized the legislation. Because the statute was enacted more than 20 years ago, some of the provisions refer to agency activities that were conducted many years ago and are no longer being implemented and, in some cases, the information required in the Cortese List does not exist. Those requesting a copy of the Cortese Lists are now referred directly to the appropriate information resources contained on internet websites hosted by the boards or departments referenced in the statute, including DTSC's online EnviroStor[89] database and the SWRCB's online GeoTracker[90] database. These two databases include hazardous material release sites, along with other categories of sites or facilities specific to each agency's jurisdiction.

A search of the online databases on January 19, 2015, revealed that Pigeon Point Light Station is listed as a State Response site with "Certified Operation and Maintenance-Land Use Restrictions Only" status as of December 20, 2008. As explained above, the DTSC's EnviroStor database indicated that soil around the light station is contaminated with lead from historic use of lead-based paints. Likely similar concentrations of lead are present in soil around other onsite historical structures. The database further indicates that a DTSC-approval soil management plan would be required for any future soil disturbances. The proposed plan calls for improvements around the light station and other historical buildings that could result in soil disturbance. A soil management plan approved and overseen by DTSC will ensure impacts from the proposed plan remain *less than significan* . Therefore, the proposed plan would not create a significan hazard to the public or the environment as a result of being included on a list of hazardous material sites and impacts would be *less than significan* .

e) Would the plan expose people or structures to a significant risk of loss, injury, or death involving wildland fires?

The California Department of Forestry and Fire Protection (CAL FIRE) has mapped fi e threat potential throughout California.[91] The CAL FIRE ranks fi e threat based on the availability of fuel and the likelihood of an area burning (based on topography, fi e history, and climate). The rankings include no fi e threat, moderate, high, and very high fi e threat. The plan area and surrounding area is designated as a moderate fi e threat. Nevertheless, Chapter includes goals and guidelines for improving preparedness and response during an emergency at the Park, including those found in **4.5.6 Operations**. **Guideline OPERATIONS.19** calls for coordination with CALFIRE to develop a Fire Management Plan for

89 Department of Toxic Substance Control Envirostor, http://www.envirostor.dtsc.ca.gov/public/, accessed October 13, 2016.

90 State Water Resources Control Board GeoTracker, http://www.geotracker.waterboards.ca.gov/, accessed October 13, 2016.

91 CalFIRE, "Fire Hazard Severity Zone Development," http://www.fi e.ca.gov/fi e_prevention/fi e_prevention_wildland_zones_development.php, accessed on December 22, 2014.

the Park. Therefore, the proposed plan would not pose a significant risk of loss, injury, or death involving wildland fi es and impacts would be *less than significan* .

f) Would the plan impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The plan area currently has two vehicle entrance points in the Light Station Area. The proposed plan would increase access to the plan area by adding access to the Bolsa Point Area, thus providing additional emergency access and would not restrict access to or block any public road outside the plan area. In addition, the Chapter Four includes goals and policies for improving preparedness and response during an emergency at the Project Site, including those found in **4.5.6 Operations**. **Guideline OPERATIONS.20** calls for coordination with San Mateo County and State agencies to maintain emergency evacuation routes. Therefore, the proposed plan would not impair implementation of a physically interfere with an emergency response plan and impacts would be *less than significan* .

g) For a project within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the plan result in a safety hazard for people living or working in the project area?

There are no public airports or public use airports within 2 miles of the plan area. Therefore, *no impact* would occur.

h) For a project within the vicinity of a private airstrip, would the plan result in a safety hazard for people living or working in the project area?

There are no private airstrips within 2 miles of the plan area. Therefore, *no impact* would occur.

5.4.10 HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Violate any water quality standards or waste discharge requirements?	❒	❒	■	❒
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a significant lowering of the local groundwater table level?	❒	❒	■	❒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of runoff in a manner which would result in substantial erosion, siltation, or flooding on- or off-site?	❒	❒	■	❒
d) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems?	❒	❒	❒	■
e) Provide substantial additional sources of polluted runoff, or otherwise substantially degrade water quality?	❒	❒	■	❒
f) Place occupied development within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	❒	❒	❒	■
g) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	❒	❒	■	❒
h) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	❒	❒	❒	■
i) Potentially be inundated by seiche, tsunami, or mudflow?	❒	❒	❒	■

EXISTING CONDITIONS

The climate in the vicinity of the site is characterized by cold, wet winters and dry, warm summers. Rain typically falls between November and March, with an average annual precipitation of 29.42 inches. Fog is common year-round, especially in the mornings. Average maximum temperatures of 79°F occur during the months of July through September and average minimum temperatures of 46°F occur during the months of December through March.

The topography of the plan area consists of coastal bluffs at elevations of 30 to 70 feet above mean sea level (msl) that slopes to the west to the beach and ocean shoreline. The site is within the Yankee Jim Gulch Watershed, which encompasses approximately 3,000 acres. Pistachio Beach at the north end of Pigeon Point is the mouth of the Yankee Jim Gulch drainage. The Spring Bridge Gulch drainage runs across the Bolsa Point Area and enters the Pacific Ocean. There currently is no storm drain infrastructure in the area.

DISCUSSION

a) Would the plan violate any water quality standards or waste discharge requirements?

The Central Coast Regional Water Quality Control Board (RWQCB) regulates water quality in the region and provides water quality standards and management criteria, as presented in the Water Quality Control Plan for the Central Coastal Basin (2016). Water quality in unincorporated San Mateo County, including the plan area, is regulated by the Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) permit (MRP) issued for the San Francisco Bay Area Region (Order No. R2-2015-0049), which was recently revised and is in effect as of January 1, 2016. Stormwater quality is implemented through the San Mateo County Stormwater Pollution Prevention Program (SMCWPPP) to ensure compliance with NPDES permit requirements, and C.3 provisions, which are provisions that requires projects that create and/or replace 10,000 square-feet or more of impervious surface to control the flow of stormwater and stormwater pollutants as a result of that new impervious surface.

Yankee Jim Gulch and Spring Bridge Gulch are not listed in the Basin Plan for benefic al uses. In addition, there are no 303(d) water bodies listed by the State Water Resources Control Board (SWRCB) in or around the plan area. Therefore, there are no constraints in terms of water quality issues that would impact development at the plan area.

Construction Impacts

Clearing, grading, excavation, and construction activities associated with projects under implementation of the proposed plan have the potential to impact water quality through soil erosion and increasing the amount of silt and debris carried in runoff. Additionally, the use of construction materials such as fuels, solvents, and paints may present a risk to surface water quality. Finally, the refueling and parking of construction vehicles and other equipment on-site during construction may result in oil, grease, or related pollutant leaks and spills that may onto the soil, with eventual discharge into the Pacific Ocean.

As development of the projects proposed in the General Plan proceeds, any stage of the project that results in the disturbance of one acre or more of soil would be required to comply with the NPDES General Construction Permit (GCP) as

well as prepare a Storm Water Pollution Prevention Plan (SWPPP) that requires the incorporation of BMPs to control sedimentation, erosion, and hazardous materials contamination of runoff during construction. The GCP also requires that prior to the start of construction activities, the project applicant must file Permit Registration Documents (PRDs) with the SWRCB, which includes a Notice of Intent (NOI), risk assessment, site map, annual fee, signed certificatio statement, and SWPPP. New requirements by the SWRCB also require the SWPPP to include post-construction treatment measures aimed at minimizing stormwater runoff

Also, development projects in San Mateo County are required to submit erosion and sediment control plans for projects that disturb one or more acres or land, require a grading permit, involve work within a waterway, or involve demolition, grading, or construction during the wet season (October 1st through April 30th). The erosion and sediment control plan must show Best Management Practices (BMPs) to be used to prevent erosion of unstable or denuded areas, plans for construction staging and storage logistics, construction of stabilized access points, and proper containment measures for construction materials and wastes. Erosion and sediment control measures must be maintained throughout the duration of the grading permit.

In addition, Chapter Four includes guidelines for water quality, including **Guidelines GEO/HYDRO.8** and **GEO/HYDRO.9**, found in **Section 4.5.4 Resource Management and Protection**, which address adhering to the water quality objectives of the RWQCB and reducing stormwater runoff by minimizing impervious surfaces to prevent degradation of existing surface and groundwater quality. With development and implementation of the BMPs and the SWPPP and compliance with City, County, and State stormwater regulations, the construction impacts to water quality will be *less than significan* .

Operational Impacts

Operation and maintenance activities associated with the projects as a result of the proposed plan would result in minimal impacts on water quality. After construction is completed, disturbed areas would be restored and native vegetation would be planted to minimize the potential for future erosion. Operational activities would be similar to existing conditions with continued use of trails and Park facilities.

In the event that projects resulting from implementation of the proposed plan would result in the creation and/or replacement of 10,000 square feet or more of impervious surfaces or 5,000 or more square feet for an uncovered parking area, it would be considered a "Regulated Project" and would be required to incorporate stormwater treatment measures into the project's implemented under the proposed plan, pursuant to the SMCWPPP C.3 requirements. If the future projects create and/or replaces between 2,500 and 10,000 square feet of

impervious surfaces, it would be subject to the Stormwater Checklist for Small Projects. This requirements incorporation of at least one of the following site design measures:

- Direct roof runoff into cisterns or rain barrels.
- Direct roof runoff into vegetated areas.
- Direct runoff from sidewalks, walkways, and patios onto vegetated areas.
- Direct runoff from driveways/uncovered parking lots onto vegetated areas.
- Construct sidewalks, walkways, and/or patios with permeable surfaces.
- Construct bike lanes, driveway, and/or uncovered parking lots with permeable surfaces.

No treatment measures are required for these projects. If the Project is considered to be a "Regulated Project", the incorporation of stormwater treatment measures and low impact development (LID) techniques are required. Treatment options include infiltration, evapotranspiration, rainwater harvesting and use, and biotreatment. Agreements must also be signed that ensure that the stormwater treatment facilities are maintained in perpetuity and an operations and maintenance (O&M) plan must be prepared and submitted for approval prior to the start of construction. If stormwater treatment measures are required, runoff would likely be drained to native vegetation or soil for infiltration. Implementation of these measures and compliance with the C.3 requirements of the MRP would ensure that post-development impacts to water quality would be *less than significan* .

Chapter Four includes Geology and Hydrology goals, found in **Section 4.5.4 Resource Management and Protection**. One of these goals is to "Limit human impact on geologic and hydrologic processes and promote healthy water quality in streams, coastal waters, and groundwater." Under this goal, the proposed plan also includes **Guideline GEO/HYDRO.2**, which limits development to areas outside of the bluff setback as determined by the San Mateo County LCP; **GEO/HYDRO.3**,which advises a complete geotechnical evaluation of the Light Station Area, including detailed estimates of rate of bluff erosion, prior to locating and designing roads, trails, structures, and utilities; and **GEO/HYDRO.4**, which recommends a detailed and comprehensive soils report, surface and subsurface hydrology report, and drainage analysis prior to developing roads, trails, structures, and utilities and ensure the Park development or activities do not increase net water flow over or through the existing bluff

Adherence to applicable water quality regulations, preparation of a SWPPP, implementation of BMPs during construction, and compliance with the erosion and sediment control plan would ensure that water quality standards are not violated during construction. Implementation of stormwater site design, source control, and stormwater treatment measures and compliance with C.3

provisions of the MRP, the SMCWPPP stormwater requirements, and General Plan guidelines would result in less-than-significant impacts during operation of the project. Consequently, potential impacts associated with water quality during construction and operation would be less than significant and no mitigation measures would be required.

b) Would the plan substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a significant lowering of the local groundwater table level?

The plan area is not located within a designated groundwater basin. Currently, potable water is being imported to the Park in trucks and then pumped into an existing tank for hostel and park use. Planned water improvements include three new drilled wells on the Easement and installation of water piping and associated structures to supply overnight accommodations and park visitors. There are no groundwater cleanup or remediation sites in the vicinity of the plan area, as per the SWRCB's Geotracker database, and therefore there should be no constraints for the use of new private groundwater wells. In 2013, the State of California Department of Public Health issued a compliance order (Compliance Order No. 02-17-13R-001) indicating that the existing well was out of compliance with Section 64652(a), Chapter 17, Title 22, of the California Code of Regulations, which requires water system to provide multibarrier treatment to its surface water source to prevent contamination from pathogenic organisms. The compliance order indicates that the system was unable to provide potable water that complies with existing safe drinking water standards. Since this compliance order was issued, this well has been abandoned and potable water has been trucked to the Park.

The proposed plan does not involve activities that would significantly alter groundwater recharge or lower the existing groundwater table levels. Because the proposed plan consists mainly of restrooms, picnic areas, trails, and walking paths that require only shallow grading and excavation, construction dewatering for these activities would most likely not be necessary. If dewatering was necessary for the construction of the expanded viewing deck, the dewatering activities would be minimal, temporary, and highly localized in nature and thus would not significant y impact groundwater supplies or aquifers. In addition, construction dewatering would only intersect the shallow groundwater aquifer and there is no regional groundwater basin beneath the site.

Groundwater recharge may be reduced if areas currently available for the infiltration of rainfall runoff are reduced and permeable areas are replaced by impermeable surfaces. The proposed improvements as part of the General Plan would not result in a substantial increase in impervious surfaces and would not interfere significantly with groundwater recharge. Added impervious surfaces would be minimal; most of the improvements consist of picnic areas, restrooms, and trails. Implementation of the proposed plan would not adversely

impact groundwater recharge or groundwater supplies because the increase in impervious surfaces would be minimal and water demand for the plan area is limited.

Buildout of the proposed plan would not lead to a significant increase in water demand as compared to existing conditions. Water demand for the recreational activities proposed as part of the General Plan is minimal and potable water would be supplied by private groundwater wells installed on the Easement. The site is not within a designated groundwater basin and there are no municipal groundwater supply wells in the vicinity of the plan area. Therefore, the proposed plan would not impact groundwater supplies or groundwater recharge and the impact would be *less than significan* .

c) Would the plan substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of runoff in a manner which would result in substantial erosion, siltation, or flooding on- or off-site?

Currently, drainage for the plan area is primarily via overland (sheet) flow from the area northeast of Highway 1, the agricultural fields to the east, and the bluffs west of Pigeon Point Road, with eventual drainage to the ocean via Yankee Jim Gulch and Spring Bridge Gulch.

The proposed plan would not alter the course of a stream or river; the existing drainage areas, Yankee Jim Gulch and Spring Bridge Gulch, would remain in their current configu ation. One of the improvements in the proposed plan is to construct a bridge across Spring Bridge Gulch; however, the existing drainage would not be altered. The proposed plan would require grading or soil exposure during construction. If not controlled, the transport of these materials into local waterways could temporarily increase suspended sediment concentrations. To minimize this impact, any proposed improvements that would disturb one acre or more of soil would be required to comply with all of the requirements of the State GCP, including preparation of PRDs and submittal of a SWPPP to the SWRCB prior to the start of construction activities. The implementation of BMPs during the construction phase would include, but is not limited to, the following measures to minimize erosion and siltation:

- Minimize disturbed areas of the site
- Implement dust control measures, such as silt fences and regular watering of open areas
- Stabilize construction entrances/exits
- Install sediment control measures around the site, including gravel bag barriers
- Install onsite sediment basins to prevent off-s te migration of erodible materials, as needed

Compliance with the established permits and regulations would ensure that impacts from erosion and siltation during construction would be *less than significan* .

Once constructed, the C.3 requirements include source control measures and site design measures that address stormwater runoff and would reduce the potential for erosion or siltation. In addition, Provision C.3 of the MRP will require the project to implement stormwater treatment measures to contain site runoff, using specific numeric sizing criteria based on volume and flow rate, if the proposed improvements would create and/or replace 10,000 square feet or more of impervious surface. Also, adherence to the guidelines found in **Section 4.5.4 Resource Management and Protection**, including **Guideline GEO/HYDRO.2** to limit development within the Park to areas outside of the bluff setback; **Guideline GEO/HYDRO.**4 to complete detailed and comprehensive soils report, surface and subsurface hydrology report, and drainage analysis prior to developing roads, trails, structures, and utilities; **Guideline GEO/HYDRO.5** to restrict access to bluff area would further reduce the potential for erosion and sedimentation to occur; and **Guideline GEO/HYDRO.9** to reduce water run-off by minimizing the amount of impervious surfaces in the Park and incorporating pervious surface treatments where feasible. Utilize California Storm Water Best Management Practices (BMPs) Handbook for filtering pollutants from impervious areas.

With implementation of these erosion and sediment control measures, the proposed plan would not result in significant increases in erosion and sedimentation and impacts would be *less than significan* .

The proposed plan could allow an increase in the amount of impervious surfaces but the amount of impervious surfaces would be minimal as compared to the open space areas that will be maintained with proposed development. However, any increase in impervious surfaces could result in an increase in the amount of stormwater runoff from the site as compared to existing conditions. Most of the plan area will remain as pervious surfaces, which will allow infiltration of any additional stormwater runoff into the soil. In addition, development under the proposed plan would comply with C.3 provisions of the MRP and implement site design, source control, and stormwater treatment measures (as needed) that would minimize any increase in stormwater runoff

The proposed plan includes Geology and Hydrology goals, one of which is to "preserve natural hydrological processes within and around spring Bridge Gulch and Yankee Jim Gulch and along the Park's coastal bluff " Based on the guidelines under this goal, prior to the development of any structures, roads, trails, or utilities, a detailed and comprehensive soils report, surface and subsurface hydrology report, and drainage analysis will be completed to ensure that the proposed plan would not result in any flood ng impacts related to stormwater runoff or erosion of bluff areas, as per **Guideline GEO/HYDRO.4** found in **Section 4.5.4 Resource Management and Protection**. In addition, individual projects constructed under the proposed plan would comply with **Guideline GEO/HYDRO.8** adherence to

the water quality objectives of the Basin Plan and **Guideline GEO/HYDRO. 9** reduce water runoff by minimizing the amount of impervious surfaces in the Park and incorporating pervious surface treatments where feasible. Compliance with C.3 provisions of the MRP and implementation of the proposed plan's guidelines will ensure that stormwater runoff from the site would not result in on-site or off-s te flooding and impacts would be *less than significan* .

d) Would the plan create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems?

There is no existing stormwater infrastructure within or in the vicinity of the plan area and there are no future plans for development of a storm drain system in the area. Therefore, there is no potential for stormwater runoff generated by the proposed plan to exceed the capacity of the storm drain system. The stormwater runoff that would be generated by the new impervious surfaces with implementation of the proposed plan would be infiltrated into soil or landscaped vegetation in compliance with C.3 provisions of the MRP and would therefore have *no impact* on existing or planned storm drain systems.

e) Would the plan provide substantial additional sources of polluted runoff or otherwise substantially degrade water quality?

As required by County stormwater requirements and regulations, BMPs and LID measures will be implemented across the plan area during both construction and operation of the projects under implementation of the proposed plan. These measures will control and prevent the release of sediment, debris, and other pollutants. Implementation of BMPs during construction will be in accordance with the provisions of the SWPPP, which will minimize the release of sediment, soil, and other pollutants. Operational BMPs will be required to meet the C.3 provisions of the MRP, which include the incorporation of site design, source control, and treatment control measures to treat and control runoff. Prior to the development of new structures, roads, trails, and utilities, a comprehensive soils report, hydrology report, and drainage analysis will be completed that describes the amount of stormwater runoff that will be generated and what BMP and LID measures will be implemented to control stormwater runoff in the plan area, as per the **Guideline GEO/HYDRO.4** found in **Section 4.5.4 Resource Management and Protection**. Further, **Guideline GEO/HYDRO.11** requires sustainable agriculture practices for building soil health in areas managed for indigenous agriculture practice. Recommend the enrichment of soils with compost, compost tea, and other natural soil amendments and to avoid the use of synthetic fertilizers to the extent feasible.

Overall, with compliance with County regulatory requirements and implementation of BMPs and LID measures, and implementation of Guidelines within the proposed plan, the potential impact on water quality would be *less than significan* .

f) Would the plan place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

The Federal Emergency Management Agency (FEMA) publishes maps that show areas of flood risk throughout the United States. The Flood Insurance Rate Maps (FIRMs) for the site area[92] shows that the seaward portions of the plan area and the Spring Bridge Gulch drainage in the Bolsa Point Area are within the 100-year floodp ain. The seaward portions of the floodpla n are zoned V, which are designated as areas subject to the 1-percent-annual chance 100-year floo event with additional hazards associated with storm-induced waves. The Spring Bridge Gulch drainage is zoned A, which is an area subject to inundation from the 1-percent-annual flood event. However, there is no housing proposed as part of the plan. Therefore, implementation of the proposed plan would not place housing within a 100-year floodp ain and there would be *no impact*.

g) Would the plan place within a 100-year flood hazard area structures which would impede or redirect flood flows?

No permanent structures are planned for locations within the 100-year floodp ain in the Bolsa Point Area; the plans call for trails and a bridge over the Spring Bridge Gulch drainage in these locations. There currently are two structures within the Light Station Area that are within Zone V of the FEMA FIRM panel (i.e., within the 100-year floodp ain). No other permanent structures are proposed as part of the General Plan that would be located within the 100-year floodp ain.

The viewing deck at the Fog Signal Building is one of the two improvements planned within the 100-year floodp ain. Expansion of the viewing deck would not impede or redirect flood flows because of its elevation on a bluff at about 23 feet msl. Construction requirements for changes to existing buildings depend on when the structure was built and the nature of the improved changes. According to FEMA regulations, if the structure was constructed prior to the enactment of floodp ain development standards and if the planned improvements are less than 50 percent of the market value of the building, the building would not have to be brought into compliance with current floodp ain management standards.[93] The lighthouse is also within the 100-year floodp ain and is planned to undergo future improvements as part of a separate effort. However, historic structures are exempt from upgrading to current floodp ain standards, provided that the improvement maintains the historic status and incorporates all possible floo damage reduction measures.

Any development or improvements within the 100-year floodp ain that are scheduled as part of the proposed plan would be evaluated in further detail, as per **Guideline GEO/HYDRO.4**, found in **Section 4.5.4 Resource Management**

92 Flood Insurance Rate Map (FIRM) Map Nos. 06081C0445E and 06081C0435E, dated October 16, 2012.

93 FEMA, *Substantial Improvements and Substantial Damage, Unit 8 of FEMA 480, National Flood Insurance Program (NFIP) Floodplain Management Requirements: A Study Guide and Desk Reference for Local Offi als*, 2005.

and Protection, which requires detailed soils, hydrology, and drainage studies to ensure compliance with all applicable regulations. Further, **Guideline GEO/ HYDRO.1** would require the monitoring of geologic and hydrologic processes and document changes as they relate to Park resources to assure preparedness for slope failure, flood, or other disaster events. Compliance with FEMA and County floodp ain requirements, as applicable, for improvements within the 100-year floodp ain would ensure that potential impacts from structural improvements would be *less than significan* .

h) Would the plan expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

The plan area is not within a dam inundation zone, according to San Mateo County maps, and there are no levees in close proximity to the site. Therefore, the proposed plan would not expose people or structures to these types of flood ng and there would be *no impact*.

i) Would the plan potentially be inundated by seiche, tsunami, or mudflow?

According to the CalEMA map, the tsunami inundation zone for the plan area does not extend beyond the shoreline. Therefore, all proposed improvements and development associated with the proposed plan would be outside of the tsunami inundation zone. However, the proposed plan would be expected to increase visitorship to the Park, as well as providing improved beach access point, and therefore has the potential ton increase the number of people visiting the tsunami inundation zone. Even with this potential increase, it is unlikely that a significant number of people would be accessing the beach during a tsunami event. There are various precautions and warning systems that will be implemented by San Mateo County and in the event of a tsunami. The County maintains an Emergency Alert System on commercial television and radio as well as over the National Weather Service All Hazard Radios to notify the public of an impending tsunami threat. In addition, the County provides local warnings and instructions to tsunami hazard areas through the County's telephone emergency notificat on system (TENS) and San Mateo County (SMC) alert, which is used to contact the public via email, cell phone, and/or smartphone devices. In addition, the Chapter Four includes **Guideline OPERATIONS.20**, found in **4.5.6 Operations**, which calls for the coordination between San Mateo County and State agencies to maintain emergency evacuation routes and effecti ely notify park users and staff of these routes.

Overall, there are no reservoirs, lakes, large water storage tanks, or semi-enclosed water bodies in the vicinity of the site and therefore, there is no risk of inundation due to seiches. According to the ABAG earthquake and hazards interactive map, the plan area is not in a debris flow source area or area susceptible to landslides and would not be subject to mudflows. The proposed plan would result in *no impact* related to the risk of tsunamis, seiches, or mudflows

5.4.11 LAND USE

Would the plan:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Physically divide an established community?	❒	❒	❒	■
b) Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the plan (including, but not limited to, the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	❒	❒	■	❒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	❒	❒	❒	■

DISCUSSION

a) Would the plan physically divide an established community?

As shown above on Figure 1.2 in Chapter One, there are no established communities within the vicinity of the project area. Rather, the project area is surrounded by preserves and open space. Although there is one residential home adjacent to the south of the Bolsa Point Area, and additional scattered homes east of highway 101, implementation of the proposed plan would occur within the project area boundaries and would not divide those residences. Further, the proposed plan seeks to enhance connection along the coastline by adding a cohesive network of non-motorized multi-use trails to facilitate greater access among the Light Station and Bolsa Point areas. Consequently, the proposed plan would not physically divide an establishing community, thus *no impact* would occur, and no mitigation measures are required.

b) Would the plan conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the plan (including, but not limited to, the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

According to the San Mateo County GIS website, the majority of the project area has a General Plan Land Use designation of "Agriculture", with a small portion of the Light Station Area designated as "Public Recreation." The plan area, including the Light Station Area, Bolsa Point Area, and Easement, are zoned Planned Agricultural Development/Coastal Development (PAD/CD).[94] Within the

94 County of San Mateo Planning and Building, "Find My Zoning, Parcel Map, and Other Property Info," Find My Zoning, Parcel Map, and Other Property Info, http://planning.smcgov.org/find- y-zoning-parcel-map-and-other-property-info, accessed February 8, 2016.

PAD zone, public recreation and shoreline trail uses are permitted with approval of a PAD permit. In addition, the plan area is within the California Coastal Zone and is covered by the San Mateo County LCP. The LCP generally provides for the protection of visual resources, protection and enhancement of natural resources, and maintaining and increasing opportunities for public access along the coastline. Below is a summary of relevant LCP policies that would apply to the proposed plan, followed by the plans consistency with each policy.

- LCP Policy 1.35 requires that all new land use development and activities shall protect coastal water quality. **Guideline GEO/HYDRO.4**, found in **Section 4.5.4 Resource Management and Protection**, requires the preparation of a detailed and comprehensive soils report, surface and subsurface hydrology report, and drainage analysis prior to developing roads, trails, structures, and utilities. Further, this Guideline requires that projects or activities implemented under the General Plan do not increase net water flow over or through the existing bluff
- LCP Policy 7.2 calls for the designation of sensitive habitats, including, but not limited to, those shown on the Sensitive Habitats Map for the Coastal Zone. Chapter Four of the proposed General Plan includes several policies, found in **Section 4.5.4 Resource Management and Protection**, that require preservation and enhancement for natural resources throughout the project area and these are discussed in **Section 5.4.4 Biological Resources**. For example, **Guideline VEGETATION.1** requires preparation of a Vegetation Management Statement that identifies key vegetation types and establishes guidelines for management. **Guideline VEGETATION.7** calls for the avoidance or to limit development in proximity to ESHAs as defined in the San Mateo LCP. Further, **Guideline VEGETATION.9** requires that, prior to the implementation of any park projects, that site specific biological assessments of riparian and potential wetland areas in coordination with the CDFW, and other applicable agencies be conducted.
- LCP Policy 7.11 requires establishment of buffer zones from riparian corridors. Implementation of the proposed plan would be consistent with this policy through the implementation of **Guideline VEGETATION.7** which requires the avoidance or to limit park development near ESHAs, which includes all perennial and intermittent streams and their tributaries, and to comply with restrictive buffers around these resources when siting future projects under implementation of the proposed plan.

Although the project area would include project components such as trails, roadway and parking improvements, and other visitor enhancements for recreation, the General Plan policies proposed by the plan are such that they do not conflict with LCP policies, and in some cases provide additional protective measures or performance standards to ensure that conservation of natural resources is maintained or enhanced. Implementation of the policies identified above and included in Chapter

Four of the proposed General Plan related to natural resources management, would therefore ensure that future projects within the project area do not conflict with any local regulations adopted for the purposed of avoiding or mitigating an environmental effect. Consequently, a *less-than-significan* impact would occur and no mitigation measures are required.

c) Would the plan conflict with any applicable habitat conservation plan or natural community conservation plan?

There are no adopted habitat conservation plans or natural conservation plans that apply to the project area. Nevertheless, several of the General Plan policies require the protection and enhancement of natural communities and habitat conservation throughout the project area, and would ensure protection of those features as projects are implemented, including **Guideline VEGETATION.1, Guideline VEGETATION.2**, **Guideline VEGETATION.3**, **Guideline VEGETATION.7**, **and Guideline VEGETATION.9**, which call for the enhancement, restoration, and protection of environmentally significan habitat areas, as well as requiring preparation of specific biological assessments of riparian and wetland areas prior to implementation of any park projects. Thus, *no impact* would occur and no mitigation measures are required.

5.4.12 MINERAL RESOURCES

Would the plan:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	❒	❒	■	❒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	❒	❒	■	❒

DISCUSSION

a) Would the plan result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?

The San Mateo County General Plan Mineral Resources map indicates the presence of gemstone deposits at Pigeon Point.[95] However, the plan area is a State Park and the Pigeon Point Lighthouse itself is a designated historical resource, therefore, the site is not actively mined for gemstone, nor would it

95 County of San Mateo General Plan, 1986, Chapter 3, Mineral Resources, Mineral Resources Map, page 3.5

likely be mined for gemstone in the future given that it is within a State Park. Therefore, implementation of the proposed plan would not result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State. Further, Table 3.1 of the San Mateo County General Plan indicates that gemstone is a "small resource, or usable only at a high price," and is not considered a significant resource within the County. Therefore, a *less-than-significan* impact would occur and no mitigation measures are required.

b) Would the plan result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

See discussion **5.4.12 Mineral Resources (a)** above.

5.4.13 NOISE

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Expose people to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or other applicable standards?	❒	❒	■	❒
b) Expose people to or generate excessive groundborne vibration or ground borne noise levels?	❒	❒	■	❒
c) Create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	❒	❒	■	❒
d) Create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	❒	❒	■	❒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	❒	❒	❒	■
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	❒	❒	❒	■

EXISTING NOISE ENVIRONMENT/SENSITIVE RECEPTORS

Noise is defined as unwanted sound and is known to have several adverse effect on people, including hearing loss, speech and sleep interference, physiological responses, and annoyance. Based on these known adverse effects of noise, the federal, state, and city governments have established criteria to protect public health and safety and to prevent the disruption of certain human activities, such as classroom instruction, communication, or sleep. Additional information on noise and vibration fundamentals, existing regulations, and pertinent technical standards, project-specific background information, construction effect calculation worksheets, and project-generated traffi operations noise modeling results are contained in **Appendix M**.

The plan area is adjacent to Highway 1, which is the source of most noise that is experienced at the Park and that would be the dominant source of noise in the plan area. Other existing noise sources include surf noise, current operations from existing recreational areas, or residential operations. The plan area is surrounded by the Pacific Ocean to the south and west, and by other open space, active agricultural land, and large-lot single-family homes to the north and east. In addition, some of the surrounding land use is protected open space, including Pigeon Point Bluffs, owned by San Mateo County Parks; located directly south of the project. Since state and county regulations do not consider protected open space as a sensitive receptor, or provide criteria for open space receptors, the surrounding open space will not be included in the following analysis.

The only sensitive receptors in the vicinity of the plan area include four large-lot single-family homes (referred to herein as House #1, #2, #3, and #4). House #1 is located approximately 950 feet southeast of the Easement, House #2 is located approximately 1,250 feet east of the Easement, House #3 is located approximately 950 feet south of the northernmost proposed upland recreation area, and House #4 is located approximately 950 feet north of the Bolsa Point Area. Sensitive receptors that are beyond approximately 1,250 feet from the plan area would not be expected to be exposed to notable noise impacts from the implementation of the proposed plan.

DISCUSSION

a) Would the plan expose people to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or other applicable standards?

Applicable Standards

County of San Mateo

County of San Mateo noise regulations would apply to manage noise levels at the residences around the plan area in the unincorporated County. In general, the Noise Element of a General Plan is a comprehensive program for including noise control in the planning process. This set of policies, standards, and regulations are meant to limit excessive noise at sensitive receptors.

The County of San Mateo noise regulations are implemented and enforced through the County Code and are designed to control unnecessary, excessive, and annoying noise in the County of San Mateo. Although noise issues are covered in several portions of the Code, the bulk of noise-related regulations are contained in Title 4 Sanitation and Health, Chapter 4.88, Noise Control. The applicable portions of the code are included in **Appendix M**.

The County of San Mateo Code sets limits for exterior noise levels. Municipal code Section 4.88.330, Exterior Noise Standards, states that it is unlawful for any person at any location within the unincorporated area of the County to create any noise, or to allow the creation of any noise on property which causes the exterior noise level to exceed the noise level standards as set forth in Table 5.1.

TABLE 5.1: County of San Mateo Exterior Noise Level Limits (dBA)

Land Use	L_n	Day (7 AM – 10 PM)	Night (10 PM – 7 AM)
Residential	L_{50}	55	50
Schools	L_{25}	60	55
Hospitals	L_8	65	60
Churches	L_2	70	65
Public Libraries	L_{max}	75	70

Notes:
Ln is equal to the sound level exceeded for n percent of 1 hour
Lmax is the maximum instantaneous sound level measured over any period of time
1. In the event the measured background noise level exceeds the applicable noise level standard in any category above, the applicable standard shall be adjusted in fi e (5) dBA increments so as to encompass the background noise level.
2. Each of the noise level standards specified above shall be reduced by 5 dBA for simple tone noises, consisting primarily of speech or music, or for recurring or intermittent impulsive noises.
3. If the intruding noise source is continuous and cannot reasonably be stopped for a period of time whereby the background noise level can be measured, the noise level measured while the source is in operation shall be compared directly to the noise level standards shown above.

Source: County of San Mateo Municipal Code, Title 4, Chapter 4.88, Section 4.88.330

The County of San Mateo Code also sets limits for interior noise levels. Code Section 4.88.340, Interior Noise Standards states no person shall, at any location within the unincorporated area of the County cause, any source of sound, or create, or allow the creation of, any noise which causes the noise level when measured inside a receiving dwelling unit with windows in their normal seasonal configu ation to exceed the following noise level standards as set forth in Table 5.2. In other words, no person shall create any noise within a dwelling unit so that the interior noise at diffe ent dwelling unit does not exceed the thresholds set in Table 5.2.

TABLE 5.2: County of San Mateo Interior Noise Level Limits (dBA)

Land Use	L_n	Day (7 AM – 10 PM)	Night (10 PM – 7 AM)
Dwelling Unit	L_8	45	40
	L_2	50	45
	L_{max}	55	50

Notes:
Ln is equal to the sound level exceeded for n percent of 1 hour
Lmax is the maximum instantaneous sound level measured over any period of time
1. In the event the measured background noise level exceeds the applicable noise level standard in any category above, the applicable standard shall be adjusted in fi e (5) dBA increments so as to encompass the background noise level.
2. Each of the noise level standards specified above shall be reduced by 5 dBA for simple tone noises, consisting primarily of speech or music, or for recurring or intermittent impulsive noises.
3. If the intruding noise source is continuous and cannot reasonably be stopped for a period of time whereby the background noise level can be measured, the noise level measured while the source is in operation shall be compared directly to the noise level standards shown above.

Source: County of San Mateo Municipal Code, Title 4, Chapter 4.88, Section 4.88.340

Section 4.88.360 of the San Mateo County Code lists a number of noise generating activities that shall be exempt from the provisions in Chapter 4.88, Noise Control. Activities conducted on parks, public playgrounds, and school grounds provided such parks, playgrounds, and school grounds are owned and operated by a public entity shall be exempt from the provisions in Chapter 4.88.

To further restrict noise as it affects sensitive receivers around the park area, The California State Park System, "Rules and Regulations[96]" states that all noise due to engine driven electric generators shall only operate between the hours of 10 AM and 8 PM. "Rules and Regulations" also states that loud and disturbing noise is prohibited at all times.

County Code section 4.88.360 also includes an exemption that deals with construction noise. Details of exemption and the related impacts are discussed below in **5.4.13 Noise (d).**

96 California State Park System, "Rules and Regulations," http://www.parks.ca.gov/?page_id=21300, accessed December 2, 2016.

Impact Analysis:

Operational Noise Impacts

With respect to projected-related increases, only "audible" changes in noise levels at sensitive receptor locations (i.e., 3 dB or more) are considered potentially significant

Project-Related Roadway Noise

For potential traffic-generated noise, a fundamental principle is that a doubling of traffi flows (e.g., 10,000 vehicles per day to 20,000 per day) would be needed to create a 3 dB increase in traffic-generated noise levels. An increase of 3 dB is often used as a threshold for a substantial increase. For this project, the majority of people driving to the park will use Highway 1 and access the plan area via Pigeon Point Road. Since the proposed plan would incrementally increase the number of visitors over the next 20 years, there is also a potential increase in traffi noise due to the additional number of daily trips to the park.

Current daily traffi volume on the peak summer months on the portion of the Highway in the vicinity of the plan area is approximately 8,800 cars/day. Additional daily trips on Highway 1 generated by the project would need to meet or exceed 8,800 cars/day in order to generate an audible increase in roadway noise. The proposed plan is not anticipated to result in this amount of increase in daily trips. Based on total average visitors of 195,570, and assuming cars arrive carrying an average of 2.5 visitors, the average number of total (not new) trips per day would be about 215.

Pigeon Point Road is used by park visitors to access the park entrance (and potential future parking). All traffi flows on this road are intermittent and do not exhibit continuous traffi flows. Implementation of park improvements would increase the numbers of trips on this road, but are not expected to notably change the traffi flow conditions; that is, traffi flows will continue to be intermittent. Due to this reason, any traffi noise increases on Highway 1 or Pigeon Point Road will not be noticeable and the individual pass-bys for each vehicle will be comparable to existing conditions. Further, according to the California Park System "Rules and Regulations[97]", all vehicle travel must be confined to designated roads or areas, and no vehicle may exceed 15 mph. This rule will provide further minimization for roadway noise (since vehicle speed is the most important variable for generating flo -related noise). Therefore, no significant permanent noise increases due to project-related traffi would occur and no mitigation measures are necessary. Impacts would be *less than significan* .

Project-Related Stationary Noise

A significant stationary-source impact would occur if the activities or equipment at the plan area produce noise levels at nearby sensitive receptors in excess of local standards. This project will potentially include the construction of an expanded

97 California State Park System, "Rules and Regulations," http://www.parks.ca.gov/?page_id=21300, accessed December 2, 2016.

parking area, new trails, new beach access points, and space for indigenous agriculture and land stewardship activities. None of these improvements would include heating, ventilation, air conditioning, or any other operations-related equipment that would create new stationary noise sources.

Development associated with implementation of the proposed plan could increase numbers of park visitors in the area immediately surrounding the proposed plan, as compared to existing conditions. This increase in potential number of park visitors may result in increased, but localized, noise generation from people talking and other outdoor activities in the park area. However, the current park hours are from 8 AM to sunset, which will confine most operations-related noise to those hours. Besides day-use activities, the project description includes space for indigenous agriculture and land stewardship activities, as well as educational programs and activities, in the Bolsa Point Area. Noise due to people talking or from recreational activities or programs may at times be audible to the people residing in the nearby family homes. However, it is anticipated that these types of activities would generally occur during daytime and early evening hours. Further, these activities and uses would generally be located on the lower end of the steep bluffs, which will provide noise-barrier shielding to off-s te receptors from noise generated by such uses. Since activities expected to take place at this site will generate relatively low levels of noise and since these occurrences will be intermittent and confined to day-time periods, no significant permanent noise increases due to project-related activities would occur and no mitigation measures are necessary.

In summary, noise generated by normal operations would not be notably diffe ent than existing conditions in and around the proposed area of improvements and would not exceed the County's exterior noise standards. Therefore, no significan permanent noise increases due to project-related activities, equipment, or traffic would occur and no mitigation measures are necessary. Impacts would be *less than significan* .

b) Would the plan expose people to or generate excessive groundborne vibration or ground borne noise levels?

The total construction activities of the proposed plan would entail constructing new trails, landscaping, and parking lots. The proposed plan would have a 20-year buildout horizon, thus, individual projects are not being proposed as part of this proposed plan. However, construction activities associated with projects under implementation of the proposed plan could include construction activities such as asphalt demolition, grading, and trenching throughout the plan area. The use of high-vibration equipment, such as pile drivers, is not anticipated for any portion of the proposed plan. Construction associated with projects implemented under the proposed plan could require a minimal amount of earthwork, but some use of vibration-inducing construction equipment such as excavators, bulldozers, graders, jackhammers, and loaders/backhoes is

anticipated. Conversely, for the construction of the smaller project features such as trails and picnic areas, vibration-intensive equipment is not expected to be employed at the plan area. Regardless, for the purpose of this analysis, both land use constructions will be analyzed below.

Vibration-induced Architectural Damage

Table 5.3, Architectural Damage Vibration Levels from Construction Equipment, shows the peak particle velocities of some common construction equipment and (loaded) haul trucks. Such items would be expected to be employed at the proposed plan area. Other items – not listed in the table – would also be expected to be employed on the project's construction site; such as excavator(s) and backhoe(s). The vibration levels produced by such items are estimated to be comparable to similar items in the table (for example, excavator vibration levels are taken to comparable to those of a large bulldozer).

Since architectural damage from construction vibration sources can be a one-time event and since such damage is dependent on the soil type, ground strata, and receptor building construction, vibration damage distances are measured from the nearest likely location at the construction site to the façade of the nearest receptor building.

TABLE 5.3: Architectural Damage Vibration Levels from Construction Equipment

	Peak Particle Velocity (PPV) in inches per second; all with a limit of 0.20 PPV			
Equipment	House #1 (950 ft)	House #2 (1,250 ft)	House #3 (950 ft)	House #4 (950 ft)
Vibratory Roller	0.002	0.001	0.002	0.005
Large Bulldozer	0.001	<0.001	0.001	0.002
Loaded Trucks	0.001	<0.001	0.001	0.002
Jackhammer	<0.001	<0.001	<0.001	0.001
Small Bulldozer	<0.001	<0.001	<0.001	<0.001

Source: Federal Transit Administration: Transit Noise and Vibration Impact Assessment, 2006.
Bold numbers indicate values that exceed FTA architectural damage criteria.
Distances are from the nearest portion of potential construction activity to the nearest receptor building within each land use type.

As shown in Table 5.3, project-related construction activities would result in vibration levels at nearby structures that are generally on the order of 1/100th of the FTA's pertinent criteria for vibration-induced architectural damage (i.e., 0.20 PPV in/sec for residential land uses). As such, construction activities are not expected to result levels that would cause vibration-induced damage and these types of impacts would be *less than significan* . No mitigation measures are needed.

Vibration Annoyance

While not presenting potential impacts relative to architectural damage, some construction activities may be perceptible at the nearest off-s te receptors due to of proximity to the activities. However, vibration-related construction activities would occur in the daytime when residential land uses are least susceptible to vibration levels, since many people would be away from their residences during the day or conducting daily activities that are not vibration sensitive.

Construction activities are typically distributed throughout the plan area and would only occur for a relatively limited duration when equipment would be working in close proximity to a receiver. Therefore, to represent the average vibration level, distances to the nearest receptor buildings are measured from the center of the construction site. Table 5.4, Average Annoyance Vibration Levels from Construction Equipment, shows the vibration levels from typical earthmoving construction equipment at the nearest receptors.

TABLE 5.4: Average Annoyance Vibration Levels from Construction Equipment

	Vibration Decibel (VdB) referenced to 1 micro-inch per second (1X10-6in/sec); all with a limit of 078 VdB			
Equipment	House #1 (950 ft)	House #2 (1,250 ft)	House #3 (950 ft)	House #4 (950 ft)
Vibratory Roller	47	43	47	47
Large Bulldozer	40	36	40	40
Caisson Drilling	40	36	40	40
Loaded Trucks	39	32	28	32
Jackhammer	32	28	32	32
Small Bulldozer	11	7	11	11

Source: Federal Transit Administration (FTA), Transit Noise and Vibration Impact Assessment, May 2006.
Bold numbers indicate values that exceed the FTA annoyance criteria.
Distances are from the center of the overall construction zone to the nearest receptor building within each land use type.

Construction-generated vibration levels would not exceed (or even approach) 78 VdB at any nearby sensitive residential receptors. As such, no off-s te receptors would experience construction-generated vibration levels that would exceed the average annoyance threshold. There may be, however, brief periods[98] when heavy equipment would operate at or near the project boundary. During these brief periods, annoyance-connected groundborne vibration levels may be higher than the results shown in the above table and, thus, may be perceptible at the

98 Estimated to be approximately 10 to 20 percent of the overall construction duration.

nearest receptor locations. However, as heavy construction equipment moves around the plan area, average vibration levels at the nearest structures would diminish with increasing distance between structures. Therefore, impacts related to general construction vibration annoyance would be *less than significan* and mitigation is not necessary.

c) Would the plan create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

As presented in **5.14.13 Noise (a)** above, project-generated operational noise from traffic stationary noise sources (i.e. mechanical systems), and operational activities will not result in a substantial permanent increase in ambient noise levels. Therefore, these on-going activities would generate *less-than-significan* noise impacts. Thus, no mitigation measures are needed.

d) Would the plan create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Section 4.88.360 of the San Mateo County Code lists a number of noise generating activities that shall be exempt from the provisions in Chapter 4.88, Noise Control. Exemptions relevant to the construction of the Pigeon Point Light Station Historic Park Project are as follows:

Noise sources associated with demolition, construction, repair, remodeling, or grading of any real property, provided said activities do not take place between the hours of 6:00 PM and 7:00 AM on weekdays, 5:00 PM and 9:00 AM on Saturdays or at any time on Sundays, Thanksgiving and Christmas.

Impact Analysis:

Noise generated during construction is based on the type of equipment used, the location of the equipment relative to sensitive receptors, and the timing and duration of the noise-generating activities. Sensitivity to noise is based on the location of the equipment relative to sensitive receptors, time of day, and the duration of noise-generating activities.

Per the San Mateo County Code, noise associated with construction activities will not take place between the hours of 6:00 PM and 7:00 AM on weekdays, 5:00 PM and 9:00 AM on Saturdays or at any time on Sundays, Thanksgiving, and Christmas. Further, the construction of the parking areas, trails, landscaping, and recreational areas will not include heavy/noise intensive equipment items, will not be localized into a single area, and will be of much shorter duration than for the building construction. In addition, construction of the parking areas, trails, landscaping, and recreational areas will be located more than 500 feet from the nearest sensitive receptor. Construction-related noise levels – although expected to be higher than existing ambient noise levels in the vicinity of the

plan area – will be of relatively short duration, will be intermittent and sporadic[99], and will end once construction is completed.

At more distant receptors (as compared to these nearest receptors), noise levels from construction activities would be substantially attenuated with increasing distances away from the sources. Thus, noise at more distant receptor locations would continually decrease (with increasing propagation distances) to the point of being inconsequential and inaudible. Thus, for both the four closest receptors and for more-distant locations, noise due to construction of the parking areas, trails, landscaping, and recreational areas will be *less than significan* and no mitigation measures are needed.

The transport of workers and equipment to the construction site would incrementally increase noise levels along site access roadways. While individual construction vehicle pass-bys may create momentary noise levels of up to approximately 85 dBA Lmax at 50 feet from the vehicle, these occurrences – although potentially audible for a few seconds – would generally be infrequent. Due to the infrequency of events, their relatively short-lived durations, the distance to the nearest sensitive receptor, and their commonality with existing truck pass-bys, construction vehicle movement noise would be *less than significan* . No mitigation is needed with respect to construction mobile source noise.

Since construction activities would be limited to relatively small- to medium-sized equipment (i.e., bulldozers, grading tractors, dump trucks, loaders, back hoes, pavers, and a crane), would take place during the daytime hours when many people would be out of their houses, and would conform to the time-of-day restrictions of the County's Code, construction noise impacts would be *less than significan* and no mitigation measures are necessary.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the plan expose people residing or working in the project area to excessive noise levels?

There are no public-use airports within 10 miles of the plan area.[100] Future project's as a result of implementation of the proposed plan would not expose people onsite to excessive airport-related noise levels. Therefore, *no impact* would occur and no mitigation measures are necessary.

f) For a project within the vicinity of a private airstrip, would the plan expose people residing or working in the project area to excessive noise levels?

99 For these type of construction activities, usual operating cycles of construction equipment may involve one or two minutes of full-power operation followed by three or four minutes at lower power settings.

100 AirNav, "United States of America, California," http://www.airnav.com/airports/us/CA, accessed on October 11, 2016

There are no private heliports or other air strips within fi e miles of the plan area. The closest private airport is the Las Trancas Airport which is approximately 9 miles southeast of the plan area.[101] Future projects as a result of implementation of the proposed plan would not expose on-site people to excessive heliport- or airstrip-related noise levels and the project would not cause additional operations from these private aircraft facilities. Therefore, *no impact* would occur and no mitigation measures are necessary.

101 Ibid

5.4.14 POPULATION AND HOUSING

Would the plan:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Induce substantial unexpected population growth or growth for which inadequate planning has occurred, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	❒	❒	❒	■
b) Displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere?	❒	❒	❒	■
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	❒	❒	❒	■

DISCUSSION

a) Would the plan induce substantial unexpected population growth or growth for which inadequate planning has occurred, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

A potentially significant impact related to population and housing could result if, at buildout, development based on the proposed plan induces substantial growth in the area, either directly or indirectly; displaces substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; and/or displaces substantial numbers of people, necessitating the construction of replacement housing elsewhere.

The existing plan area, including the Light Station Area, Bolsa Point Area, and Easement, are zoned Planned Agricultural Development/Coastal Development (PAD/CD).[102] Within the PAD zone, public recreation and shoreline trail uses are permitted with a PAD permit. The purpose of the proposed plan is not to suggest specific projects, but rather it provides a larger framework for implementing future improvements to the Pigeon Point Light Station Historic Park, such as expanding the network of formalized trails, improving beach access, and expanding recreational opportunities. Further, there are no infrastructure plans, such as the extension of roadways or other infrastructure that would directly or indirectly support population growth. Although the Easement would include utility infrastructure for water service and storage, this water would be used for visitors and staff in the plan area and would not be used for or support residential growth. Therefore, *no impact* would occur and no mitigation measures are required.

b) Would the plan displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere?

The plan area currently serves as a recreational area and does not include existing permanent housing units. Although there are overnight accommodations and keeper's residence at the Light Station Area, these living quarters are not permanent. The Bolsa Point Area and the Easement currently do not contain existing housing units, thus, the proposed plan would not displace housing units in those areas. Therefore, no existing housing units would be displaced as a result of the proposed plan and *no impact* would occur. No mitigation measures are required.

c) Would the plan displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

See discussion **5.4.14, Population and Housing (b)**, above.

102 County of San Mateo Planning and Building, "Find My Zoning, Parcel Map, and Other Property Info," Find My Zoning, Parcel Map, and Other Property Info, http://planning.smcgov.org/find- y-zoning-parcel-map-and-other-property-info, accessed February 8, 2016.

5.4.15 PUBLIC SERVICES

Would the plan:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
b) Fire protection?	❒	❒	■	❒
c) Police protection?	❒	❒	■	❒
d) Schools?	❒	❒	❒	■
e) Other public facilities?	❒	❒	❒	■

DISCUSSION

a) Would the plan result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: fire protection, police protection, schools?

The primary purpose of a public services impact analysis is to examine the impacts with physical improvements to public service facilities. Public service facilities need improvements (i.e., construction of new facilities, renovation or expansion of existing facilities) as demand for service increases. As discussed above in **Section 5.4.14, Population and Housing**, the proposed plan does not propose any housing or infrastructure that would directly result in a substantial increase to the permanent population of the area nor would the plan result in indirect population growth through the construction of infrastructure (i.e., construction of major roadways or utilities infrastructure). Nevertheless, potential impacts to public service facilities could occur as a result of a potential increase to visitors to the project area. The existing project area currently serves approximately 200,000 visitors annually and is projected to increase to approximately 250,000 visitors annually at full implementation of the proposed plan. This would result in a total increase to annual visitors of 25 percent over the next 20 years, or an increase in 1.25 percent visitors annually if distributed throughout the 20-year horizon for implementation of the proposed plan.

Fire Protection Service

The California Department of Fire and Forestry Protection (CALFIRE) San Mateo-Santa Cruz Unit (CZU) provides fi e protection services to State Responsibility Areas (SRAs) of Santa Cruz and San Mateo counties covering an area of 894 square miles, which includes the project areas. In addition to providing fi e protection within the SRA, the CZU unit includes seventeen fi e stations and supports eight County-funded volunteer fi e companies that respond to over 8,700 emergency incidents per year.[103] The nearest fi e station to the project area is Station #58 (Sky Londa Station), located at 1419 Pescadero Creek Road in Pescadero, which is 6.5 miles north east of the plan area.

The proposed plan would include enhancements for public recreation to project area, including the formalization of trails, additional public beach access, and the re-opening of the Light Station Area to visitors. In addition, there would be new picnic areas throughout the project area, as well as allowing for fi e pits in within the Bolsa Point Area, thus resulting in a new source of fi e use in the plan area. However, **Guideline OPERATIONS.19**, found in **Section 4.5.6 Operations**, in addition to applicable State Parks fi e ring design guidelines and siting requirements for the safe operation of a fi epit, would ensure appropriate measures for fi e safety. For example, **Guideline OPERATIONS.19** requires State Parks to work with CALFIRE to develop a Fire Management Plan for the Park. With the exception of continued operation of the existing overnight accommodations (i.e., hostel) at the Light Station Area and keeper's quarters, no permanent structures would be constructed as part of the enhancements that would result in additional population or induce population growth that would result in additional calls for fi e protection service. Any potential impacts related to fi e and emergency services would be associated with a potential increase in visitors. However, the existing project area is already a year-round recreational area. As mentioned above, the existing project area attracts approximately 200,000 visitors annually, and anticipates an increase to approximately 250,000 visitors annually at full implementation of the proposed plan over the next 20 years. Although this is a potential increase of 50,000 visitors annually, this increase would occur over 20 years, therefore, it is unlikely that these increases would be to the extent of requiring the need for new or physically altered fi e protection facilities. Therefore, a *less-than-significan* impact would occur with respect to fi e and emergency services and no mitigation measures are required.

Police Protection Service

CDPR State Park Peace Officer (Rangers) provide police protection services to the plan area. Rangers are trained law enforcement officer and provide immediate police protection within park boundaries. Ranger duties include, but are not limited to: patrol (i.e., vehicle, boat, and foot), issuing citations, making

103 California Department of Fire and Forestry Protection, "San Mateo-Santa Cruz Unit," http://www.fi e.ca.gov/czu/, accessed on October 11, 2016.

arrests, conducting investigations, responding to medical emergencies, and performing search and rescue activities.

As indicated above, enhancements as a result of implementation of the proposed plan could result in an increase to visitors to the park area. As such, a potential increase in visitors could result in more frequent calls requiring police protection associated with park use types, such as minor disturbances and/or altercations, medical emergencies, and/or vehicle break-ins as a result of on-site parking areas. Although an increase in calls for service could occur as the number of visitors increases over the next 20 years, the increase is not expected to result in substantial changes that would trigger the need for new or expanded police protection facilities. In addition, Chapter Four includes guidelines to encourage safety awareness which would help to minimize calls for police protection services, found in **Section 4.5.6 Operations**. For example, **Guideline OPERATIONS.16** would utilize signage to make visitors aware of potential environmental ocean hazards (i.e., rip currents); **Guideline OPERATIONS.17** would make upgrades to existing trails and pathways to remove any hazards and to monitor trails and access points for hazards; and **Guideline OPERATIONS.18** would work with Park staff and concessionaires to improve security and decrease theft within parking areas and increase visibility of public notices and expand patrols, as feasible. Therefore, a *less-than-significan* impact would occur and no mitigation measures are required.

School Service

As discussed in **Section 5.4.14, Population and Housing**, the proposed plan would not result in a direct or indirect increase in permanent population; therefore, there would be *no impact* with respect to schools and no mitigation measures are required.

Other Public Facilities

For the reasons described above in this section, and given the proposed plan would not result in a direct or indirect increase in permanent population, nor does it propose the construction of public facilities, such as libraries, there would be *no impact* to other public facilities as a result of the proposed plan and no mitigation measures are required.

5.4.16 PARKS AND RECREATION

Would the plan:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?	❒	❒	❒	■
b) Result in substantial adverse physical impacts associated with the provision of new or physically altered park and recreational facilities, or result in the need for new or physically altered park and recreational facilities, the construction of which could cause significant environmental impacts?	❒	❒	■	❒

DISCUSSION

a) Would the plan increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?

The proposed plan is intended to enhance the project area as a State Park and increase its use. However, the proposed plan also includes goals and guidelines to manage the increase use such that physical deterioration does not occur. Moreover, the Park may attract some users from existing nearby parks and facilities, and thus could alleviate the physical deterioration of other existing parks and facilities or recreational areas. Additionally, the proposed plan would not require the construction or expansion of off-s te recreational facilities which might have an adverse physical effect on the environment. Lastly, the proposed plan would add to the existing amount of parkland and recreational facilities within San Mateo County by adding the Bolsa Point Area to the Park. For these reasons, the proposed plan would have a positive rather than negative impact on recreation, thus *no impact* would occur and no mitigation measures are required.

b) Would the plan result in substantial adverse physical impacts associated with the provision of new or physically altered park and recreational facilities, or result in the need for new or physically altered park and recreational facilities, the construction of which could cause significant environmental impacts?

Implementation of the proposed plan would result in new and physically altered facilities within the project area. The potential environmental impacts of that construction are analyzed in the sections of this Initial Study. All impacts are found to be *less than significan* .

5.4.17 TRANSPORTATION AND CIRCULATION

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	❒	❒	■	❒
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	❒	❒	■	❒
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	❒	❒	❒	■
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	❒	❒	■	❒
e) Result in inadequate emergency access?	❒	❒	❒	■
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	❒	❒	❒	■

DISCUSSION

a, b) Would the plan conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? Would the plan conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

The proposed plan would result in the enhancement of an existing CDPR park unit. The Park is located in a remote location within San Mateo County on California Highway 1, 20 miles south of Half Moon Bay and 27 miles north of Santa Cruz. It is primarily accessed by car or bus via Highway 1, a Caltrans facility. According to traffi data[104] from the California Department of Transportation (Caltrans), daily traffi volume on the peak summer months on the portion of the Highway in the vicinity of the plan area is approximately 8,800 cars/day.

The segment of Highway 1 adjacent to the plan area is identified as a Congestion Management Plan (CMP) roadway segment in the 2015 Congestion Management Plan of the City/County Association of Governments of San Mateo County (C/CAG). [105] The CMP Level of Service (LOS) standard for this segment is LOS D. The segment currently operates at LOS B in the AM peak hour and at LOS C in the PM peak hour.[106]

Due to its location along Highway 1, its facilities, and the distance to major population areas, a substantial portion of trips entering the park are anticipated to be pass-by trips from tourists driving on Highway 1. The number of new trips (i.e., trips that are exclusively originated by the project without pass-by trips that already are on Highway 1), would be mostly a function of the individual park features that would attract visitation as a fina destination such as beach use, trails, picnic and environmental education. With the exception of indigenous agriculture activities proposed for the Bolsa Point Area, all of these activities already occur at the Park. The General Plan includes visitation and parking estimates in **Appendix E, Parking Estimates**. Appendix E shows that the estimate for parking needs show a maximum parking space need of 108 spaces.

A substantial amount of trips are pass-by trips; the number of parking spaces

104 Traffi Data Branch, "2014 Traffi Volumes on CSHS", http://www.dot.ca.gov/trafficops/census/2014all/Route1.html, accessed December 2, 2016.

105 C/CAG, 2015 Congestion Management Plan, http://ccag.ca.gov/wp-content/uploads/2016/02/2015-CMP_Final_rev.pdf, accessed October 19, 2016, page 7-6.

106 Ibid

would create an upper limit on visitation; and future uses at the park will be substantially similar to existing uses. Therefore, the increased number of trips related to the plan would not be expected to be substantial. The proposed plan would not result in a substantial overall increase in vehicle trips within the county over the 20-year horizon of the plan such that the CMP LOS would be exceeded. As such, the proposed plan would have minimal impacts on congestion management programs for Highway 1 and San Mateo County roads.

As specific projects are proposed under implementation of the proposed plan, traffi in the immediate vicinity of the plan area could be affected by slow-moving vehicles such as haul trucks. Heavy truck traffi would be related to construction equipment that would be brought to the site and haul trucks to bring gravel and other material to the project area associated with construction of future improvements under the plan. However, none of the improvements proposed under the plan are major construction projects (i.e. construction of large roadway networks or other substantial roadway infrastructure) and the proposed improvements are expected to take place over a 20-year timeframe, so it is anticipated that the number of construction-related traffi in a given day would be negligible compared to the overall traffi on roads. Sporadic delays may occur due to oversize and slow vehicles traveling on roads during the construction period. However, all proposed improvements are located within the Light Station Area or the Bolsa Point Area, and none of the construction activity would directly affect Highway 1 or require detours on Highway 1 itself. Although specific projects are not being proposed under adoption of the proposed plan, it is anticipated that short-term construction traffi related to delivery of equipment and import of material and the daily transportation of construction workers to the site would be minimal and temporary in nature; therefore, would not cause a significant increase in traffi volume.

Vehicular movement into and within the Park are important considerations for this proposed plan. Chapter Four plan includes several guidelines that would promote effi ent vehicular and non-vehicular movement throughout the park, found in **Section 4.5.3 Access and Circulation**. **Guideline ACCESS.1**, **Guideline ACCESS.2**, and **Guideline ACCESS.3** provide access and circulation guidelines that ensure that there are minimal conflicts between user groups, including drivers, pedestrians, and cyclists. Further, these policies would ensure that future projects adequately accommodate vehicular staging for park visitors and provide safe access for walking and biking through the park site and to regional connections. Guideline Access.1 would ensure that coordination and development of a Parkwide Roads and Trails Management Plan are established that evaluates the Park's entire circulation system and guides the placement and use of future road and trials. **Guideline ACCESS.2** investigates alternative transportation options to the Park such as shuttles or other smaller buses that could be explored for Park visits or special events. **Guideline ACCESS.3** calls for bicycle parking facilities near the entry to the Light Station.

Several vehicular traffi guidelines are included in Chapter Four to support access and circulation goals within the Park. For example, **Guideline ACCESS.6** calls for coordination with Caltrans to add Park signs north and south of all Park entrances along Highway 1 to alert drivers of the upcoming park entrance. Additionally, **Guideline ACCESS.7** addresses parking which calls for consultation with adjacent property owners about potential acquisition of properties adjacent to the light station and Pistachio Beach for future parking lots; **Guideline ACCESS.8**, calls for providing adequate parking in designated lots in the Bolsa Point Area, near Pistachio Beach, and near the Historic Zone to prevent parking along Pigeon Point Road or along Highway 1 and designating space along Pigeon Point Road as overflow parking during special events or days with high visitation; **Guideline ACCESS.9**, calls for developing a plan and implement traffi calming at any point where pedestrians are likely to cross Pigeon Point Road; **Guideline ACCESS.10** calls for providing space for bus drop-off at entry to the Historic Zone and designated parking for buses in the adjacent parking lot; and **Guideline ACCESS.11** calls for providing adequate space for recreational vehicles (RV's) in all parking lots.

Overall, the establishment of the aforementioned policies related to access and circulation helps to promote the effi ent vehicular and non-vehicular movement throughout the park and to reduce and minimize operational traffi impacts as a result of implementation of the proposed plan. Consequently, traffi impacts would be *less than significan* .

c) Would the plan result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

The public use airport located nearest to the project area is Half Moon Bay Airport, located at 9850 Cabrillo Highway in Half Moon Bay, California, approximately 35 miles north of the plan area. [107] Given the distance between the plan area and the Half Moon Bay Airport, the proposed plan would not result in a change in air traffi patterns for either commercial or private aircraft, thus it would have *no impact* and no mitigation measures are required.

d) Would the plan substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The proposed plan includes a new entrance to/exit from the Bolsa Point Area to Highway 1. In addition, it proposes to work with Caltrans to add signage to alert vehicles of existing and future Park entrances. The future Bolsa Point Area entrance could have the potential to increase hazards if there were inadequate sight lines from Highway 1. However, the segment of Highway 1 from which the

107 AirNav, "United States of America, California," http://www.airnav.com/airports/us/CA, accessed on October 17, 2016

Bolsa Point Area would be accessed is relatively straight and flat. Moreover, the process of adding a new access point to/from Highway 1 is highly regulated by Caltrans' Highway Design Manual, Right of Way Manual, and Project Development Procedures Manual, and new access to/from Bolsa Point would only be allowed after careful analysis to determine that no detrimental effect will occur that would impact Highway 1. This analysis has not yet been completed since the plan calls for this potential new entrance/exit as a future improvement and the entrance/exit has not yet been planned or designed. This required analysis and procedure would ensure that safety impacts from the new entrance would be *less than significan* .

The plan would not include any hazardous design feature in the internal parking and circulation improvements, such as sharp curves or intersections with inadequate signalization, nor would it increase incompatible uses on local roads to result in hazards. The plan would decrease conflicts of incompatible uses on local roads, offer ng as an alternative coastal trail segment to no motorized traffi on local roads. In addition, future projects implemented under the proposed plan would be subject to several Guidelines included in **Section 4.5.3 Access and Circulation** that would serve to enhance and maintain safe circulation throughout the plan area. For example, **Guideline ACCESS.5** considers providing vehicular access to the southern portion of Pigeon Point Road and development a turnaround to restrict vehicular access along the northern section; **Guideline ACCESS.6** requires coordination with Caltrans to add Park signs north and south of all park entrances along Highway 1 to alert drivers of the upcoming Park entrance; **Guideline ACCESS.9** requires development and implementation of traffi calming at any point where pedestrians likely to cross Pigeon Point Road; and **Guideline ACCESS.10** calls for space for bus drop-off at the entry to the Historic Zone and designated parking for buses in the adjacent parking lot.

Because compliance with these proposed plan Guidelines would serve to increase and maintain circulation safety and because there are no major projects anticipated that would significant y alter or otherwise design a feature within the roadway network that would substantially increase hazards, a *less-than-significan* impact would occur and no mitigation measures are required.

e) Would the plan result in inadequate emergency access?

The plan area currently has two vehicle entrance points in the Light Station Area, and an informal pull off area along Highway 1 near the entrance to the Bolsa Point Area. The proposed plan will increase access to the site via both Pigeon Point Road, in the Light Station Area, as well as along Highway 1 in the Bolsa Point Area, and would include a total of three vehicular entrances to the park at full buildout. The Easement is not proposed for public access, although would provide adequate access for emergency vehicles. While the proposed plan would alter existing access to the plan area, the proposed plan would add more

vehicular access points thus providing additional emergency access; therefore, *no impact* would occur with respect to adequate emergency access and no mitigation measures are required.

f) Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

The proposed plan would include enhancements to increase connectivity and add to the existing trails, which are currently used as a walking, and jogging trail, adding to the overall network of trails in the area. The proposed plan would not conflict with policies, plans or programs regarding public transit, bicycle, or pedestrian facilities such as the San Mateo General Plan, and San Mateo County Comprehensive Bicycle and Pedestrian Plan. Rather, **Section 4.5.3 Access and Circulation** includes several guidelines that would promote effi ent vehicular and non-vehicular movement throughout the park, that would minimize conflicts between user groups, including drivers, pedestrians and cyclists. For example, **Guideline ACCESS.1** calls for coordination and development of a parkwide Roads and Trail Management Plan that evaluates the Park's entire circulation system and guides the placement and use of future roads and trails; **Guideline ACCESS.2** recommends investigating alternative transportation options to the Park. Shuttles or other smaller buses could be explored for park visits or special events; **Guideline ACCESS.3** would provide bicycle parking facilities near the entry to the light station; and **Guideline ACCESS.9** calls for a plan to implement traffi calming at any point where pedestrians are likely to cross Pigeon Point Road. Overall, these policies would serve to enhance and provide for safe and effi ent pedestrian circulation throughout the plan area by providing greater and improved pedestrian facilities. Therefore, the proposed plan would not conflict with policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, and proposes policies to promote effi ent vehicular and non-vehicular movement throughout the park, *no impact* would occur and no mitigation measures are required.

5.4.18 UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	❒	❒	■	❒
b) Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	❒	❒	■	❒
c) Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	❒	❒	■	❒
d) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	❒	❒	■	❒
e) Have insufficient water supplies available to serve the project from existing and identified entitlements and resources?	❒	❒	■	❒
f) Have insufficient wastewater treatment capacity available to serve the project's projected demand in addition to existing demand as determined by the wastewater treatment provider which serves or may serve the project?	❒	❒	■	❒
g) Not be served by a landfill with sufficient permitted capacity to accommodate the buildout of the project's solid waste disposal needs?	❒	❒	■	❒
h) Comply with federal, state, and local statutes and regulations related to solid waste?	❒	❒	■	❒
i) Result in a substantial increase in natural gas and electrical service demands requiring new energy supply facilities and distribution infrastructure or capacity enhancing alterations to existing facilities?	❒	❒	■	❒

DISCUSSION

a) Would the plan exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

The existing sewer (septic) system consists of gravity sewer lines that flo sewage to a lift station where it is then pumped to a leach fie d located under the parking lot. The 2014 Concept Study[108] indicated that the existing sewer (septic) system is functioning as is. The Concept Study notes that locating a leach fie d under a parking lot is typically not allowed or permitted and that expanding or moving the leach field will require permits from San Mateo County.

The septic system at the plan area is regulated by San Mateo County Ordinance, Chapter 4.84 - Individual Sewage Disposal Systems. This ordinance establishes standards for the siting, design, installation, and operation of Onsite Wastewater Treatment Systems (OWTS) in San Mateo County, consistent with the State Water Quality Control Board (SWRCB) Policy for Siting, Design, Operation and Maintenance of Onsite Wastewater Treatment Systems, adopted by the State Water Resources Control Board on June 19, 2012, which became effect ve May 13, 2013 (SWRCB OWTS Policy), and with San Francisco Bay Regional Water Quality Control Board (SFRWQCB) standards and basin plan. These standards are adopted to prevent the creation of health hazards and nuisance conditions and to protect surface and groundwater quality from threats of sewage. The SWRCB OWTS Policy was approved following SWRCB approval of a Substitute Environmental Document (SED) evaluating the potential environmental impacts of the policy. The SED was prepared in accordance with the requirements of the State Water Board's certified regulatory CEQA process (as set forth in California Code of Regulations, title 23, section 3775, et seq., Public Resources Code section 21159, and California Code of Regulations, title 14, section 15187) and constitutes the required environmental documentation under CEQA for adoption of the policy.

Wastewater management is limited for existing services at the Park. The proposed plan would include development of new or expanded septic sewer system infrastructure to accommodate increases in wastewater as the future projects are proposed. However, the proposed plan provides a framework for considering improvements to the wastewater management as the plan is implemented, including those found in **Section 4.5.4 Resource Management and Protection** and **Section 4.5.7 Utilities.** For example, **Guideline GEO/HYDRO.4** requires preparation of complete detailed and comprehensive soils report, surface and subsurface hydrology report, and drainage analysis prior to developing roads, trails, structures, and utilities, in addition to completing a wastewater management plan and septic plan prior to developing new restroom or facilities with potable water. Prioritize the use of pit or composting toilets

108 California Department of Parks and Recreation, Concept Study Pigeon Point Light Station State Historic Park: Low Cost Lodging & Circulation Investigation, August 2014.

at the Park to reduce need for leach field. Ensure that park development or activities do no increase net water flow over or through existing bluff. Further, **Guideline UTILITIES.4** would ensure compatibility of the existing leach fie d with San Mateo County Department of Health standards, and requires a suitability analysis for leach field expansion or relocation near the Historic Zone and a new leach fie d in the Bolsa Point Area. In addition, the guidelines identified under **Section XVIII.c**, below, would also serve to minimize potential for exceedance of treatment standards or environmental impacts from septic system facilities.

In addition, the DOM provides policies for managing coastal ecosystems, including the geological, hydrological, plant, and animal resources there. Section 0306 of the DOM presents policies for Water Resources, including watershed management, stream management, watershed and stream protection, stream restoration, floodp ain management, wetlands management, coastal lagoon and breaching, water quality and quantity, and water rights. The goals and guidelines presented in the plan integrate these management policies with site conditions.

Also, the plan area is within the California Coastal Zone and is covered by the San Mateo County Local LCP, as discussed further below under **Section 5.4.18 Utilities and Service Systems (c)**. Although the proposed plan would include project components such as improvements to the septic sewer system, the proposed guidelines do not conflict with County of San Mateo Ordinance, Chapter 4.84 (Individual Sewage Disposal Systems), or the LCP and DOM policies relevant to wastewater treatment requirements of the San Francisco Bay Regional Water Quality Control Board. Implementation of the policies identifie above and included in Chapter Four related to sewage treatment would therefore ensure that future projects within the project area, including the development of a new or expanded sewage system facilities, do not conflict with any applicable regulations adopted for the purposed of avoiding or mitigating an environmental effect. Consequently, a *less-than-significan* impact with respect to wastewater treatment requirements would occur and no mitigation measures are required.

b) Would the plan require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

The existing water supply well and treatment process at the Park provides inadequate supply and quality of potable water. Currently, potable water is trucked in to the site. As a result, the 2014 Concept Study included a Water System Improvements Schematic for Pigeon Point Light Station that illustrates new wells, lines, and associated water treatment facilities to be developed in the Easement across Highway 1. While the Concept Study illustrates three well locations, it is assumed that only one well will be needed to provide water for the Light Station Area, although multiple test wells may be drilled to determine the most effect ve location. The development of this well and associated facilities is presented in **Guideline UTILITIES.1** found in **Section 4.5.7 Utilities**.

The purpose of the proposed plan is not to suggest specific projects, but rather to provide a larger framework for implementing future improvements to the Park, including improvements to the water supply and treatment facilities. The specific design features of these planned improvements are not yet known and, thus, evaluation of specific environmental effects associated with a future water treatment system at this time would be speculative. However, any such improvements would be subject to the goals and guidelines of the proposed plan, as well as state and local policies and regulations, as discussed below.

The proposed plan includes goals and policies that would minimize environmental impacts from construction and operation of new water supply and treatment facilities as future projects are implemented. For example, Utilities and Infrastructure Goals include: ensuring that utilities and infrastructure are operating effi ently to minimize the environmental footprint of the Park, and that future projects provide adequate potable water supply and wastewater infrastructure for all park uses while promoting water effi ency. Vegetation Goals include: establishing locally native vegetative communities; restoration and enhancement of California grassland, coastal sage scrub, coastal dune and bluff scrub, and terrace prairie habitat; and preservation of riparian wetland habitat at the Park. Geology and Hydrology Goals include: limiting human impact on geologic and hydrologic processes and promote healthy water quality in streams, coastal waters, and groundwater; protecting visitors and property from harm due to natural geologic and hydrologic processes; and preserving natural hydrological processes within and around Spring Bridge Gulch and Yankee Jim Gulch and along the Park's coastal bluff

The proposed plan also identifies specific policies and guidelines to implement the above listed Goals. Further, CDPR's DOM provides policies for managing coastal ecosystems, including the geological, hydrological, plant, and animal resources there. Section 0306 of the DOM presents policies for Water Resources, including watershed management, stream management, watershed and stream protection, stream restoration, floodp ain management, wetlands management, coastal lagoon and breaching, water quality and quantity, and water rights. The goals and policies presented in the proposed plan integrate these management policies with site conditions.

In addition, the plan area is within the California Coastal Zone and is covered by the San Mateo County LCP. The LCP generally provides for protection and enhancement of natural resources. For example, LCP Policy 1.35 requires that all new land use development and activities shall protect coastal water quality. **Guideline GEO/HYDRO.4**, found in **Section 4.5.4 Resource Management and Protection**, requires the preparation of a detailed and comprehensive soils report, surface and subsurface hydrology report, and drainage analysis prior to developing roads, trails, structures, and utilities. Further, this General Plan Guideline requires that projects or activities implemented under the

General Plan do not increase net water flow over or through the existing bluff In addition, LCP Policy 7.2 calls for the designation of sensitive habitats as including, but not limited to, those shown on the Sensitive Habitats Map for the Coastal Zone. Chapter Four includes several policies that require preservation and enhancement for natural resources throughout the project area, found in **Section 4.5.4 Resource Management and Protection**. For example, **Guideline VEGETATION.1** requires preparation of a Vegetation Management Statement that identifies key vegetation types and establish guidelines for management. **Guideline VEGETATION.7** calls for the avoidance or to limit development in proximity to environmentally sensitive habitat areas (ESHAs) as defined in the San Mateo LCP. Further, **Guideline VEGETATION.9** requires that, prior to the implementation of any park projects, that site specifi biological assessments of riparian and potential wetland areas in coordination with the California Department of Fish and Wildlife (CDFW), and other applicable agencies be conducted. Further, LCP Policy 7.11 requires establishment of buffe zones from riparian corridors. Implementation of the proposed plan would be consistent with this through the implementation of **Guideline VEGETATION.7** which requires the avoidance or to limit park development near ESHAs and to comply with restrictive buffers around these resources when siting future projects under implementation of the proposed plan. Lastly, LCP Policy 2.22, New and Expanded Water Supply and Distribution Capacity, as discussed in impact statement **5.14.15 Utilities and Service Systems (e)** below, also would minimize potential environmental impacts associated with development of new water treatment facilities.

Potential environmental impacts could result from construction and operation of new groundwater wells and associated facilities; however, such impacts would be project-specific. Any new or expanded local water treatment and distribution facilities would require permitting and review in accordance with the LCP and CEQA, which would ensure environmental impacts are disclosed and mitigated to the extent feasible.

Although the plan area would include project components such as improvements to the water supply and other visitor enhancements for recreation, the General Plan policies proposed by the plan do not conflict with LCP and DOM policies, and in some cases provide additional protective measures or performance standards to ensure that conservation of natural resources is maintained or enhanced. Implementation of the policies identified above and included in Chapter Four related to natural resources management would therefore ensure that future projects within the project area, including the development of a new water supply well and associated treatment facility and distribution lines, do not conflict with any local regulations adopted for the purposed of avoiding or mitigating an environmental effect. Consequently, a *less-than-significan* impact with respect to water treatment facilities would occur and no mitigation measures are required.

c) Would the plan require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

As discussed above **5.14.15 Utilities and Service Systems (a)**, the 2014 Concept Study indicated that the existing sewer (septic) system is functioning as is. The system consists of gravity sewer lines that flow sewage to a lift station where it is then pumped to a leach fie d located under the parking lot.

The purpose of the proposed plan is not to suggest specific projects, but rather to provide a larger framework for implementing future improvements to the Park, including improvements to the septic system facilities. The specific design features of these planned improvements, if any, are not yet known and, thus, evaluation of specific environmental effects associated with a future septic system at this time would be speculative. However, any such improvements would be subject to the goals and guidelines of the Plan, as well as state and local policies and regulations, as discussed below.

Chapter Four identifies specific Goals and Guidelines that would minimize environmental impacts from construction of new or expanded septic system facilities. For example, Utilities and Infrastructure Goals found in **Section 4.5.7 Utilities** include ensuring that utilities and infrastructure are operating efficient to minimize the environmental footprint of the Park, and to provide adequate potable water supply and wastewater infrastructure for all park uses while promoting water effi ency. Further, **Guideline UTILITIES.4**, would ensure compatibility of the existing leach fie d with San Mateo County Department of Health standards. Conduct suitability analysis for leach field expansion or relocation near the Historic Zone and a new leach fie d in Bolsa Point. **Guideline GEO/HYDRO.3** found in **Section 4.5.7 Utilities** requires projects to complete geotechnical evaluations of light station area, including detailed estimates of rate of bluff erosion and potential impact on historic structures. Conduct additional site-specific geotechnical analysis prior to locating and designing roads, trails, structures, and utilities; **Guideline GEO/HYDRO.4** requires detailed and comprehensive soils report, surface and subsurface hydrology report, and drainage analysis prior to developing roads, trails, structures, and utilities. Complete a wastewater management plan and septic plan prior to developing new restroom or facilities with potable water. Prioritize the use of pit or composting toilets at the Park to reduce need for leach fie d.

In addition, the plan area is within the California Coastal Zone and is covered by the San Mateo County LCP. The LCP generally provides for protection and enhancement of natural resources. A summary of select LCP policies that would apply to the proposed plan, including improvements to the septic sewer system, are discussed in **5.14.15 Utilities and Service Systems (b) and (e)**. In addition, there are LCP policies related to sewer systems that would apply to the proposed plan. For example, LCP Policy 2.14, New and Expanded

Sewage Treatment and Distribution Capacity, would allow new or expanded sewage treatment and distribution capacity to serve new development only when existing capacity has been consumed or will be consumed within the time period required to construct additional sewage treatment capacity, and only when capacity increases would not overburden the existing and probable future capacity of other public works facilities. Further, this LCP Policy requires sewage treatment, collection, storage, and transmission projects shall be consistent with the following standards:

1. Maximum Capacity. The maximum service capacity of the project shall not induce growth inconsistent with the protection of coastal resources and public access and recreation opportunities, and will assure that untreated wastewater will not be discharged into any coastal waters including streams, wetlands and the marine environment.

2. Priority Uses. The project shall demonstrate that sewage treatment, collection, and transmission capacity is available and allocations are reserved for Coastal Act priority uses.

3. Siting. The project shall be sited and designed to minimize impacts to visual resources, prevent degradation of sensitive habitats, and shall be consistent with all applicable policies of the LCP.

4. The project shall minimize the use of energy.

Potential environmental impacts could result from construction and operation of new wastewater treatment facilities; however, such impacts would be project-specific. Any new or expanded local septic sewer facilities would require permitting and review in accordance with the County of San Mateo LCP and CEQA, which would ensure environmental impacts are disclosed and mitigated to the extent feasible.

Although the plan area would include project components such as possible improvements or expansion of the septic sewer system facilities, the General Plan guidelines proposed by the plan do not conflict with LCP and DOM policies or the San Mateo County Ordinance, Chapter 4.84, and in some cases provide additional protective measures or performance standards to ensure that environmental impacts are minimized. Implementation of the policies identifie above and included in Chapter Four related to natural resources management would therefore ensure that future projects within the project area, including the development of a new or expanded wastewater treatment septic system facilities, do not conflict with any local regulations adopted for the purposed of avoiding or mitigating an environmental effect. Consequently, a *less-than-significan* impact with respect to wastewater treatment facilities would occur and no mitigation measures are required.

d) Would the plan require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

There are no storm drains or infrastructure within or in the vicinity of the project area. The proposed plan is not expected to require the construction of new storm drain facilities. Consequently, the proposed plan would not require the expansion of existing stormwater facilities or the construction of new facilities, the construction of which could otherwise have significant impacts. Therefore, impacts would be *less than significan* .

e) Would the plan have insufficient water supplies available to serve the project from existing and identified entitlements and resources?

As discussed above in **Section 5.14.15 Utilities and Service Systems (b)**, the Park has insuffi ent potable water supplies from the existing well.

Until it was evaluated as unsafe for drinking in 2013, water was supplied to the buildings in the Light Station Area from a 25-foot deep well. In September 2013, the California Department of Public Health issued a compliance order (Compliance Order No. 02-17-13R-001) that the water supply for the Pigeon Point Lighthouse Hostel did not meet the California Health and Safety Code and could no longer be used for consumption. Currently, potable water is brought to the site, for both hostel and park use, in trucks and then pumped into the existing tank. The Park brings in 3,800 gallons of water three times a month, as needed. The public restroom is a vault toilet and does not use water, although there is a staff restroom and hostel restrooms that use water to flush. The 2013 Concept Study included a Water System Improvements Schematic for Pigeon Point Light Station that included schematic drawings for three new wells, one new storage tank, new supply lines, and associated infrastructure located on the Easement.

Thus, groundwater has been identified as a resource that can be developed to serve the potable water needs of the Park. Chapter Four identifies the Utilities and Infrastructure Guidelines regarding water supply in **Section 4.5.7 Utilities**, including **Guideline UTILITIES.1** which requires development of a new well for potable water and associated facilities on the Easement located across Highway 1 from the Light Station Area. Use this water supply for services near the Historic Zone, and **Guideline UTILITIES.2** which would require projects to investigate a water source for services in Bolsa Point.

The purpose of the proposed plan is not to suggest specific projects, but rather to provide a larger framework for implementing future improvements to the Park, including improvements to the water supply. The specific design features of these planned water supply improvements are not yet known and, thus, evaluation of specific environmental effects associated with a future water supply

system at this time would be speculative. However, any such improvements would be subject to the goals and guidelines of the plan, as well as state and local policies and regulations, as discussed below.

As noted above, the quantity of new supply needed under the plan is not specifica ly known. However, a rough estimate of future water supply needs is calculated below for purposes of proving a ballpark estimate.

The Park currently brings in by truck 3,800 gallons of water three times a month during, or about 137,000 gallons per year. This corresponds to about 375 gallons per day (gpd).

The existing plan area currently attracts approximately 200,000 visitors annually. At full implementation of the proposed plan, an increase to 250,000 visitors annually is anticipated; a 25 percent increase over current. Assuming the water use rate per visitor remains the same, the daily water supply needs would increase by 113 gpd at full implementation, based on the increase in total Park visits.

Table 4.2 in Chapter Four also identifies 17,510 overnight visitors annually at the Hostel, and a total of 11,545 Environmental education visitors annually. The total for both groups combined is about 80 visitors per day. Assuming a water demand of 10 gpd for each of these visits yields a water use rate of 800 gpd.

Combing the above components yields a roughly estimated (order of magnitude) total water demand of about 1,300 gpd (375 + 113 + 800) at full implementation. This daily rate corresponds to less than 1.4 gallons per minute, which is generally considered a small capacity well.[109]

The Plan Goals related to Utilities and Infrastructure, Natural Resource Management, and Geology and Hydrology identified in **Section 5.14.15 Utilities and Service Systems (b)** above would minimize environmental impacts associated with development of the groundwater supply. Chapter Four includes a guideline in **Section 4.5.7 Utilities** that would minimize the need for additional supply and associated environmental impacts. **Guideline UTILITIES.3** would require projects to utilize high effi ency, low water-use devices for all water infrastructure and to continue practicing water saving strategies at the Park.

As noted, the plan area is within the California Coastal Zone and is covered by the San Mateo County LCP. The LCP generally provides for protection and enhancement of natural resources. The LCP policies discussed above in **Section 5.14.15 Utilities and Service Systems (b)** also would minimize impacts from development of the groundwater resource. In addition, LCP Policy 2.22, New and Expanded Water Supply and Distribution Capacity, would allow new or

109 "Water Well Standards," http://www.water.ca.gov/groundwater/well_info_and_other/california_well_standards/b74-81chap1f.html, accessed December 2, 2016.

expanded water supply, service connections, treatment, storage and distribution capacity to serve new development only under the following circumstances: (1) when existing capacity has been consumed or will be consumed within the time required to construct additional water supply capacity; (2) after considering the availability of other public works facilities, and establishing whether capacity increases would overburden the existing and probable future capacity of other public works facilities; and (3) after considering information from, or being used to create, the Transportation Management Plan required by Policy 2.53, if available. Further, supplemental water supply projects shall be consistent with the following standards: (1) The maximum service capacity of the project will not induce growth inconsistent with the protection of coastal resources and public access and recreation opportunities.(2) The project shall assure that water withdrawals from surface streams and groundwater will be suffi ently limited to protect: (i) adequate in-stream flows necessary to support sensitive species and other riparian/wetland habitats; (ii) underlying groundwater aquifers; and (iii) agricultural resources. (3) The project shall demonstrate that water capacity is available and allocations are reserved for Coastal Act priority uses. (4) The project shall demonstrate that water storage and delivery systems will be adequate to meet the fi e safety and other public health and safety needs of new development supported by the project, consistent with the protection of other coastal resources.(5) The project shall demonstrate that it is an element (where economically and environmentally appropriate) of a balanced water supply portfolio that also includes other supply alternatives, including conservation and water recycling to the maximum extent practicable. (6) The project shall minimize the use of energy. And (7) the project shall be sited and designed to minimize impacts to visual resources and shall be consistent with all applicable policies of the LCP.

Potential environmental impacts could result from construction and operation of new water supply and distribution facilities; however, such impacts would be project-specific. Any new or expanded local water supply and distribution facilities would require permitting and review in accordance with the LCP and CEQA, which would ensure environmental impacts are disclosed and mitigated to the extent feasible.

Although the project area would include project components such as improvements to the water supply, the General Plan policies proposed by the plan are such that they do not conflict with LCP and DOM policies, and in some cases provide additional protective measures or performance standards to ensure that conservation of natural resources is maintained or enhanced and potential environmental impacts are minimized. Implementation of the policies identifie above and included in Chapter Four related to natural resources management would therefore ensure that future projects within the project area, including the development of a new water supply well(s) and associated treatment facility and distribution lines, do not conflict with, and in some ways enhance, applicable

regulations adopted for the purposed of avoiding or mitigating an environmental effect. Consequently, a *less-than-significan* impact with respect to water supply would occur and no mitigation measures are required.

f) Would CCCSD have insufficient wastewater treatment capacity available to serve the plan's projected demand in addition to existing demand as determined by the wastewater treatment provider which serves or may serve the project?

As discussed above (**Section 5.14.15 Utilities and Service Systems (a)**), the existing sewer (septic) system, which consists of gravity sewer lines that flo sewage to a lift station where it is then pumped to a leach fie d located under the parking lot, is functioning as is. The Concept Study notes that locating a leach fie d under a parking lot is typically not allowed or permitted and that expanding or moving the leach fie d will require permits from San Mateo County. There is no "wastewater treatment provider which serves or may serve the project." The potential environmental impacts associated with possible development of a new or expanded septic sewer system are evaluated in **Section 5.14.15 Utilities and Service Systems (c)** and found to be *less than significan* . Consequently, a *less-than-significan* impact would occur with respect to whether a wastewater treatment provider which serves or may serve the project would have suffi ent capacity, and no mitigation measures are required.

g) Would the plan not be served by a landfill with sufficient permitted capacity to accommodate the buildout of the project's solid waste disposal needs?

CalRecycle reports that in 2015 a total of 36,024 tons of solid waste from unincorporated San Mateo County was disposed at 8 diffe ent landfills.[110] Ninety-six percent (96 percent; 34,599 tons) of unincorporated San Mateo County's solid waste in 2015 went to the Ox Mountain Landfill (also called Corinda Los Trancos Landfill).

The Ox Mountain Landfill is a sanitary landfill located in Half Moon Bay, California. It has a permitted throughput capacity of 3,598 tons per day. Its remaining permitted capacity is 26,898,089 cubic yards. Unit 01 has an estimated "cease operation date" of January 1, 2018, according to CalRecycle[111]. As of 2011, Ox Mountain is expected to service the region until year 2034[112].

The landfill that received the second most waste in 2015 from unincorporated San Mateo County was Recology Hay Road Landfill. The Recology Hay Landfill is

110 CalRecycle, "Jurisdiction Disposal by Facility Report," http://www.calrecycle.ca.gov/LGCentral/Reports/Viewer.spx?P=ReportYear%3d2015%26ReportName%3dReportEDRSJurisDisposalByFacility%26OriginJurisdictionIDs%3d455 , accessed October 18, 2016.

111 CalRecycle, Ox Mountain "Facility Site summary Details: (41-AA-0002)," http://www.calrecycle.ca.gov/SWFacilities/Directory/41-AA-0002/Detail/, accessed December 8, 2015.

112 RethinkWaste, Hilary Gans, Operations Contracts Manager. Personal email correspondence with PlaceWorks December 11, 2012.

located in Vacaville, California. It has a permitted throughput capacity of 2,400 tons per day. Its remaining permitted capacity is 30, 433,000 cubic yards. It has an estimated "cease operation date" of January 1, 2077[113].

Chapter Four includes Goals and Guidelines, as described in **Section 5.14.15 Utilities and Service Systems (h)** below, that would minimize the amount of waste diverted to landfill. Implementation of the plan and operation of the Park would generate minimal amounts of solid waste relative to the daily throughput and capacity of landfills available to receive solid waste from the Park.

Solid waste generated from implementation and operation of the plan would not exceed the landfill capacity available to the Park. Therefore, the proposed plan would be served by a landfill with suffi ent permitted capacity to accommodate the proposed plan's solid waste disposal needs, resulting in a *less-than-significan* impact. No mitigation measures are required.

h) Would the plan comply with federal, state, and local statutes and regulations related to solid waste?

The proposed plan would have a significant environmental impact if it would lead to a breach of public standards relating to solid waste or litter control. The California Integrated Waste Management Act of 1989 (AB 939) requires that each County prepare and adopt a Countywide Integrated Waste Management Plan (CIWMP). San Mateo County government and all the cities in the county have prepared and adopted elements that comprise the CIWMP. The elements of the CIWMP are: the Source Reduction and Recycling Element (SRRE), the Household Hazardous Waste Element (HHWE), and the Non-Disposal Facility Element (NDFE). The proposed plan includes goals and policies that would minimize impacts regarding solid waste. For example, the Utilities and Infrastructure Goal found in **Section 4.5.7 Utilities** calls for waste reduction in park services and by park visitors. Further, **Guideline UTILITIES.6** encourages recycling services and provides a means for collecting separate refuse, and **Guideline UTILITIES.7** requires that concessionaires use recyclable and/or compostable materials wherever possible. Lastly, **Guideline OPERATIONS.7** ensures maintenance access to new trails and facilities. Educate the public about removing their waste from secluded areas, including the beaches, trails, and picnic areas in Bolsa Point.

Additionally, any construction and demolition debris associated with implementation of the plan would be subject to the San Mateo County Ordinance, Chapter 4.105 – Recycling and Diversion of Debris from Construction and Demolition, requiring that 100 percent of inert solids and at least 50 percent of the remaining construction and demolition debris tonnage shall be diverted from landfill. These programs are suffi ent to ensure that future implementation

113 CalRecycle, "Monterey Peninsula Landfill (27-AA-0010)," http://www.calrecycle.ca.gov/SWFacilities/Directory/27-AA-0010/Detail, accessed December 8, 2015.

of the plan would not compromise the ability to comply with federal, state, and local statutes and regulations related to solid waste and meet or perform better than the State-mandated targets. Compliance with applicable statutes and regulations would ensure that the impact would be *less than significan* .

i) Would the plan result in a substantial increase in natural gas and electrical service demands requiring new energy supply facilities and distribution infrastructure or capacity enhancing alterations to existing facilities?

The plan area is currently served by existing PG&E electrical distribution lines. Existing electrical service to the Park is suffi ent to meet demand within the current footprint of the Park. Expanding the Park to the Bolsa Point Area will likely require additional electrical service.

There are propane tanks in the Light Station Area that provide gas to the kitchens located in the Cottages.

Section 4.5.6 Operations encourages energy conservation and use of alternative (electric) vehicles through **Guideline OPERATIONS.12**, which would allow for electric vehicle charging stations in parking areas. Consider partnerships to offset cost of installing and operating the station.

Implementation of the proposed plan would include appropriate on-site infrastructure to connect to the existing PG&E systems and would not require new off-s te energy supply facilities or capacity enhancing alterations to existing facilities. Accordingly, impacts would be *less than significan* .

5.4.19 MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	❒	❒	■	❒
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	❒	❒	■	❒
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	❒	❒	■	❒

DISCUSSION

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

As described in this Initial Study, no new construction or physical changes resulting from future projects under implementation of the proposed plan would significant y degrade the quality of the environment. The Goals and Guidelines included in the proposed plan avoid and/or would minimize environmental impacts as the plan is implemented over a 20-year timeline. In addition, compliance with LCP policies and other existing federal and State regulations for the protection of wildlife and habitat and cultural resources, as described above in **Section 5.4.4 Biological Resources**, and Section 5.4.5 Cultural Resources, respectively, will serve to reduce potential impacts resulting from implementation of the proposed

plan. Overall, implementation of the Plan's Goals and Guidelines and compliance with LCP policies would ensure that impacts will be reduced to a *less-than-significan* level.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Future cumulative impacts will result in increased recreational opportunities throughout the plan area through completion of the California Coastal Trail. For example, while the general uses of the plan will remain similar to existing uses, an increased network of formalized trails and pedestrian improvements (i.e. beach access, parking lots, picnic areas, etc.) could contribute to cumulative impacts related to aesthetics, biological resources, air quality, and hydrology, to name a few. However, as described throughout the Initial Study, given that the proposed plan will involve formalization of a small network of multi-use trails that promotes non-motorized passive recreation, the formalization of trails and other minor improvements throughout the plan area will cause only minor impacts when taken into consideration cumulatively. Further, future projects implemented under the proposed plan would be subject to the existing regulations, including but not limited to LCP Policies, Guidelines of the proposed plan, CDPR's DOM, and other State and federal regulations, as identified throughout the various topic areas discussed in this Initial Study. Compliance with these regulations and policies would ensure that potential environmental impacts associated with implementation of the proposed plan would be minimal and that cumulative impacts be minimized.

As the proposed plan is implemented and specific projects are proposed, construction activities would result in slight increases in noise and impacts to air quality, but will be minor and temporary in nature. Due to their minor, temporary in nature, cumulative impacts will be considered *less than significan* .

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

The proposed plan would not create environmental effects that would cause physical changes to property that would result in adverse effects on humans, either directly or indirectly. The increased recreational opportunities, such as increased beach access, educational programs, indigenous agriculture, and an expanded network of multi-use trails, proposed by the plan and described more fully in **Section 5.3, Project Description**, of this Initial Study, would be considered a beneficia impact. Therefore, implementation of the proposed plan would have a *less-than-significan* impact on human beings.

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5.5 Mitigation Monitoring or Reporting Program

This Mitigation Monitoring or Reporting Program (MMRP) has been prepared for the Pigeon Point Light Station State Historic Park Project. The purpose of the MMRP is to ensure the implementation of mitigation measures identified as part of the environmental review for the proposed project. The MMRP includes the following information:

- The full text of the mitigation measures;
- The party responsible for implementing the mitigation measures;
- The timing for implementation of the mitigation measure;
- The agency responsible for monitoring the implementation; and
- The monitoring action and frequency.

The California Department of Parks and Recreation must adopt this MMRP, or an equally effecti e program, if it approves the proposed project with the mitigation measures that were adopted or made conditions of project approval.

TABLE 5.5: Mitigation Monitoring or Reporting Program

Mitigation Measures AIR QUALITY	Party Responsible for Implementation	Implementation Timing	Agency Responsible for Monitoring	Monitoring Action	Monitoring Frequency
AIR-1: Prior to the installation of the fire pits in the Bolsa Point Area, the California Department of Parks and Recreation (CDPR) will prepare an air quality study that quantifies criteria air pollutant emissions associated with the fire pits. The study shall be prepared in accordance with the Bay Area Air Quality Management District's (BAAQMD)' CEQA Guidelines and consider emissions associated with the fire pits. If criteria air pollutants are determined to have the potential to exceed the daily or annual BAAQMD thresholds of significance, the CDPR shall incorporate mitigation measures to reduce air pollutant emissions to below these thresholds. Measures to reduce and/or eliminate emissions from fire pits include, but are not limited to: » Limiting the number of fire pit rings, » Requiring that the nearest fire pit be set back from the residence, » Consider the use of non-wood burning fire pit alternatives, such as propane fire rings and or logs made from wood-alternatives, and » Utilize fire ring design strategies to minimize emissions of particulate matter.	CDPR	Prior to installation of fire pits	CDPR	Project approval	Once, upon completion of air quality study
AIR-2: Implementation of Mitigation Measure AIR-1(regional air quality impacts) and Mitigation Measure AIR-3 (community risk and hazards).	CDPR	Prior to installation of fire pits	CDPR	Project approval	Once, completion of air quality study/HRA
AIR-3: Prior to the installation of the fire pits in the Bolsa Point Area, CDPR will prepare a Health Risk Assessment (HRA) that quantifies toxic air contaminants (TACs) and PM2.5 associated with the fire pit use. The study shall be prepared in accordance with the Bay Area Air Quality Management District's (BAAQMD)' CEQA Guidelines and procedures of the state Office of Environmental Health Hazard Assessment (OEHHA) and consider localized emissions associated with the fire pits. If emissions are determined to have the potential to exceed the BAAQMD thresholds of significance (i.e., 10 in one million cancer risk, non-cancer index of one, or 0.3 µg/m3), the CDPR shall incorporate mitigation measures specified in AIR-1 to reduce air pollutant emissions to below these thresholds.	CDPR	Prior to installation of fire pits	CDPR	Project approval	Once, upon completion of HRA

5.6 Organizations and Persons Consulted

This Initial Study was prepared by the following consultants and individuals:

5.6.1 LEAD AGENCY

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Mike Merritt – State Park Interpreter I
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Cindy Spencer – Maintenance Chief I
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6 Public Review

This chapter provides responses to comments received on the Public Review Draft of the Pigeon Point Light Station State Historic Park General Plan and Initial Study/Mitigated Negative Declaration (IS/MND). The 46-day public comment period for the IS/MND started on Friday, December 16, 2016 and comments were accepted through Tuesday, January 31, 2017. Two comment letters were received after the public comment period. These are denoted with Late Comment (LC) before their numbering in Section 2.3, Individual Responses, below.

Although the California Environmental Quality Act (CEQA) and the CEQA State Guidelines do not require a Lead Agency to prepare written responses to comments received on an IS/MND, the following written responses are provided with the intent of conducting a comprehensive and meaningful evaluation of the General Plan and IS/MND.

2.1 COMMENT LETTERS

California Department of Parks and Recreation (CDPR) received 11 comment letters during the public review period. The comment letters are presented in their original format at the end of this chapter. Comment letters that included specific questions or requests for future analysis are summarized in Table 6.1. All comments included in this document are formally acknowledged for the record and will be forwarded to the decision-making bodies for their consideration in reviewing the project.

2.2 MASTER RESPONSE

Several comments received on the IS/MND raised topics that are expected to be reviewed during future planning efforts that will be accompanied by a separate environmental review process. The Planning Handbook from CDPR defines a General Plan in the following way:

> *The general plan is the primary management document for a unit, definin a framework for resource stewardship, interpretation, facilities, visitor use, and operations. General plans define an ultimate purpose, vision, and intent for unit management through goal statements, guidelines, and broad objectives, but stop short of defin ng specific objectives, methodologies designs, and timelines on how and when to accomplish these goals.*

Like similar CDPR general plans, the goal of this project was to identify key opportunities for the Park and provide a vision for park improvements and management in the future. The intention of the General Plan was not to direct specific projects for construction. It is assumed that prior to the implementation of any new development projects, additional design and environmental review will take place and that some of the topics presented in the comment letters will be addressed. The responses presented in Table 6.1 indicate the future planning efforts that will address the topic presented in the comment letter.

2.3 INDIVIDUAL RESPONSES

Responses to individual comments are presented in Table 6.1. Comment letters 05 to 09 are from stakeholders from the Exploring New Horizons Outdoor School. These comments are similar in nature and not repeated in Table 6.1, although they are acknowledged as unique comment letters.

TABLE 6.6: Response to Comments Matrix

#	Date	Comment	Response
01	01/10/17	California State Coastal Conservancy - Hilary Walecka, Project Manager	
01-1		The General Plan acknowledges the importance of overnight accommodations because it contributes to the sense of place at Pigeon Point and provides low cost accommodations along the Central Coast: "Spending the night at the Pigeon Point Hostel is a memorable experience for many guests as it is unusual to be able to be at such a remote and dramatic location for such a reasonable price" (General Plan 1-10).	This comment serves as background information to the following comment.

#	Date	Comment	Response
01-2		The General Plan writes in support of the hostel's continued service and expansion in the Introduction and Executive Summary: "The Pacific coastline is a popular recreational destination; however, accommodations can be costly and access can be limited", "By developing camping or expanding the hostel, there would be more opportunities for visitors to stay overnight at the Park" (General Plan I-11, E-7). However, in Section 4 "The Plan" where the long term purpose and vision of Pigeon Point are presented, there are not clear or detailed guidelines supporting the expansion of low cost overnight accommodations.	While the General Plan acknowledges that providing low cost accommodations is an important priority along the Central Coast, other factors, including coastal bluff erosion and land use restrictions must be further reviewed as part of future planning efforts before specific designs or timelines can be developed to respond to this need.
01-3		In the Recreation Section of The Plan (General Plan 4-18), a goal is to "continue to support low-cost overnight accommodations along the Central Coast"; however the only guideline included is to "continue to allow overnight use at the Park in the Cottages through a concessionaire's agreement with a group that prioritizes low-cost accommodations". Expansion of the hostel or a similar concessionaire at Pigeon Point should be included in the Plan and detailed guidelines should be included as has been done in other sections such as Camping (General Plan 4-56).	See response to Comment 01-2.
01-4		Similarly in the Operations Section of the Plan, the introduction to the Concessions section mentions: "Maintaining and expanding this concessionaire role for Hosteling International, or a similar group, extends visitor services at the Park to include low-cost accommodations and reduces the need for park staff to supply and manage these services" (General Plan 4-46), but there are no further goals or guidelines that support this. Detailed goals and guidelines should be included for the continued existence and expansion of the low cost affordable accommodations at Pigeon Point.	See response to Comment 01-2.

#	Date	Comment	Response
02	01/31/17	**County of San Mateo, Planning and Building Department - Steve Monowitz, Community Development Director**	
02-1		The existing parking lot would be reconfigured from approximately 27 spaces to 40 spaces and would also include RV parking. Since the amount of RV parking is not specified, it is unclear if the final number of car spaces would be reduced or if the size of the lot would be further expanded to accommodate RV parking; please clarify. Also, the revised Plan mentions the possibility of expanding the lot to 70 spaces and acquiring one or more adjacent properties for parking. Again, the impact of RV parking on the final number of total parking spaces is unclear. Also, since some adjacent land is characterized as prime agricultural land by the County's LCP, please consider this in choosing land to acquire for parking. Also, please describe whether RV pump-out facilities are proposed.	The General Plan assumes an increase in future use of the Park and a need for additional parking. The General Plan also assumes that visitors to the Park may include visitors traveling in RV's. While the General Plan indicates that there will be a need for approximately 60 to 70 vehicles at the parking lot near the Historic Zone, the parking lot layout will be determined as part of future planning efforts, and will take into consideration the characterization of land by the County's LCP. The General Plan does not propose RV pump-out facilities in any parking areas.
02-2		It is unclear if the new, small parking lot (10-12 spaces) would also have RV parking and, if so, what amount; please clarify.	While the General Plan indicates that there will be a need for approximately 8 to 12 vehicles at the parking lot near Pistachio Beach, the parking lot layout will be determined as part of future planning efforts.
02-3		The new, small concession station would now include a docent lounge. Since the size of neither the concession station, nor the lounge are specified, it is unclear if the station would be larger than originally Planned in order to accommodate the addition of the lounge; please clarify.	The General Plan does not provide a layout for new concession station or the docent lounge; however, it indicates that these would be permitted within the Historic Zone. Designs for these amenities would be developed in future planning efforts. Guideline **EXPERIENCE.4** includes the following guideline to reduce development in the Historic Zone: "" Avoid new development within the Light Station, and utilize historic buildings and structures for park purposes, such as interpretive museums, concessions, or educational space.
02-4		It is unclear if the existing fence is still to be removed and if the existing hot tub is still to be relocated; please confirm.	The hot tub relocation and fence removal is part of a separate design process and environmental review, which was not addressed in the General Plan.
02-5		The revised Plan mentions acquiring one or more adjacent properties for the possible construction of housing for park staff and/or park concessionaires. It is unclear how many and what type of dwelling units are envisioned, which adjacent parcel or parcels could be involved, whether any of the existing hostel accommodations might be utilized for this purpose, and how much additional parking might be provided for this purpose. Please clarify. Acquiring and developing prime agricultural lands for park employee housing in this area would likely be inconsistent with the County's LCP policies.	Housing for staff and/or concessionaires described in guideline **OPERATIONS.6** would consider existing residential properties.

#	Date	Comment	Response
02-6		The revised Plan mentions the possibility of acquiring Pigeon Point Road from the County and converting it to a one-way loop road exclusively for park use. The County's Department of Public Works has no fundamental objection lo this proposal, but reserves the right to comment further when specific traffic circulation Plans are proposed.	The comment is acknowledged for the record.
02-7		The revised General Plan mentions a prescribed burn-off of non-native grasses in this area. Please provide specific location(s).	The location of prescribed burn areas would be determined in future land management planning efforts.
02-8		The revised Plan states that the new parking lot (with restroom) would be improved for 30 (instead of 20) cars. The revised Plan also mentions that all parking lots would now include RV parking. However, the amount of RV parking in this new lot is not specified; therefore, it is unclear if the final number of car spaces would be reduced or if the size of the lot would be further expanded to accommodate RV parking. Please clarify and also note that the acquiring and/or utilizing of prime agricultural lands for visitor parking in this area is inconsistent with the County's LCP policies that govern the use of such lands.	The General Plan assumes that there will be future need for parking in the Bolsa Point Area to provide access to day-use facilities and that some of the visitors may include visitors traveling in RV's. While the General Plan indicates that there will be a need for approximately 25 to 30 vehicles at the parking lot in the Bolsa Point Area, the parking lot layout will be determined as part of future planning efforts. Visitor parking would be required to provide public access to recreational amenities within the Bolsa Point Area, which could receive a conditional use permit on Prime Agricultural Land. Section 5.4.2.e of the IS/MND finds that the proposed plan would result in a less-than-significant impact to the conversion of farmland to non-agricultural uses. Additionally, Section 5.4.11.b of the IS/MND finds that although the project area would include project components such as trails, roadway and parking improvements, and other visitor enhancements for recreation, the General Plan policies proposed by the plan are such that they do not conflict with LCP policies, and in some cases provide additional protective measures or performance standards to ensure that conservation of natural resources is maintained or enhanced. Below is a summary of relevant LCP polices that would apply to the proposed plan, followed by the plans consistency with each policy.

#	Date	Comment	Response
02-8		02-8 (cont.)	LCP Policy 1.35 requires that all new land use development and activities shall protect coastal water quality. Guideline **GEO/HYDRO.4**, found in Section 4.5.4 Resource Management and Protection, requires the preparation of a detailed and comprehensive soils report, surface and subsurface hydrology report, and drainage analysis prior to developing roads, trails, structures, and utilities. Further, this Guideline requires that projects or activities implemented under the General Plan do not increase net water flow over or through the existing bluff. LCP Policy 7.2 calls for the designation of sensitive habitats, including, but not limited to, those shown on the Sensitive Habitats Map for the Coastal Zone. Chapter Four of the proposed General Plan includes several policies, found in Section 4.5.4 Resource Management and Protection, that require preservation and enhancement for natural resources throughout the project area and these are discussed in Section 5.4.4 Biological Resources. For example, Guideline **VEGETATION.1** requires preparation of a Vegetation Management Statement that identifies key vegetation types and establishes guidelines for management. Guideline **VEGETATION.7** calls for the avoidance or to limit development in proximity to ESHAs as defined in the San Mateo LCP. Further, Guideline **VEGETATION.9** requires that, prior to the implementation of any park projects, that site specific biological assessments of riparian and potential wetland areas in coordination with the CDFW, and other applicable agencies be conducted.
02-8		02-8 (cont.)	LCP Policy 7.11 requires establishment of buffer zones from riparian corridors. Implementation of the proposed plan would be consistent with this policy through the implementation of Guideline VEGETATION.7 which requires the avoidance or to limit park development near ESHAs, which includes all perennial and intermittent streams and their tributaries, and to comply with restrictive buffers around these resources when siting future projects under implementation of the proposed plan.

#	Date	Comment	Response
02-9		The revised Plan no longer proposes overnight camping (and presumably reduces the vault toilets Planned for the new parking area from two to one). Instead, the revised Plan mentions fire pits and indigenous agriculture within a land stewardship practice area, including the installation of electrical service for storage and other support structures (storage and restrooms), and a new well as a source of potable water for day use visitors and the land stewardship area. Thank you for removing the camping from your revised Plan; however, the fire pits, vault toilet, and parking lot still Planned in this area are inconsistent with the intended use of prime lands for agriculture.	"The commenter states that the inclusion of ancillary uses on the Bolsa Point parcel would be inconsistent with the intended use of prime lands for agriculture. The fire pits, vault toilet, and parking lot included in the General Plan would be intended to support indigenous agricultural practices on the Bolsa Point parcel, consistent with LCP Policy 5.5 (b), which does allow a wide range of conditionally permitted uses on Prime Agricultural Land, including: (1) single-family residences, (2) farm labor housing, (3) public recreation and shoreline access trails, (4) non-soil-dependent greenhouses and nurseries, (5) onshore oil and gas exploration, production, and minimum necessary related storage, (6) uses ancillary to agriculture, (7) permanent roadstands for the sale of produce, provided the amount of prime agricultural land converted does not exceed one-quarter (1/4) acre, (8) facilities for the processing, storing, packaging and shipping of agricultural products, and (9) commercial wood lots and temporary storage of logs.

#	Date	Comment	Response
02-10		The County's August 2, 2016 letter on this matter cited LCP Policy 5.33 that requires the State to lease prime agricultural lands to active farm operators where legally feasible. The revised Plan classifies this area of the park as "unique farmland", rather than the "prime agricultural land" which the County maintains that it is. State Parks cites the California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) as its source on this matter. However, the County notes that the Department of Conservation's enabling legislation states that the FMMP is primarily a tool for tracking the conversion of agricultural land to non-agricultural use over time and that, by legislative intent, it is nonregulatory in nature. The County's LCP Policy 5.1 defines prime soils in part based on U.S. Department of Agriculture's Natural Resources Conservation Service Soil Survey which comprehensively maps and identifies soil by type and agricultural potential. It also defines prime soils based on their ability to support certain agricultural activities. These definitions of prime soils will be used when evaluating any Coastal Development permit applications for improvements or use changes in the park. We have studied the National Resource Conservation Service's webbased soil maps showing where prime soils are located in Pigeon Point State Park and nearby lands. From this review we learned that not only are significant portions of the existing park classified as prime soils, we also learned that several adjacent properties are as well. Also, the revised Plan states that it has been over 20 years since this land farmed. However, County aerial photos show this land in agricultural production as recently as 2001.	Section 2.7.3 notes that "Much of the Bolsa Point Areas contains soils with a Storie Index that qualifies as prime agricultural land,"" and Figure 2.9 notes the areas with Storie Index between 80-100, considered "prime agricultural land" per the LCP. Additionally, Appendix H includes Section 5.1 of the LCP, which defines "prime agricultural land." Section 5.4.2.a of the Plan includes an analysis that utilizes the Farmland Mapping and Monitoring Program of the California Resources Agency's definitions of "Prime Farmland," "Unique Farmland," and "Farmland of Statewide Importance;" however, Section 5.4.2.e acknowledges that the LCP has a separate methodology for determining "Prime Agricultural Land," and Figure 5.2 shows the Prime Soils found within the Park. Sections 3.2.5 and 5.4.2.e indicate that the Bolsa Point Area has not been farmed in approximately 20 years. This information was based on anecdotal information about the property and aerial imagery from Google earth, which shows that agricultural use of the property in 1991 but no agricultural use in 2003. It was assumed that agricultural use ended between that time. The County's aerial images were not available for review; however, the sections referenced above can be modified to indicate that the Bolsa Point Area has not been farmed in approximately 14 years. Although this results in a change in the content of the General Plan, this does not change the determination found in the IS/MND.
02-11		Your proposal to partner with local tribal groups is interesting. The County was not aware that there are active farm operators who are tribal members or that the tribes from this area participate in active agriculture. The revised Plan indicates that the indigenous agriculture and land management would be established by a memorandum of understanding (MOU). If this results in the land being under active agriculture, the County can support that. However, we need to better understand the nature and characteristics of the indigenous agricultural use and the portion(s) of the Bolsa Point parcel proposed for this management regime.	As noted in Section 2.16.9 of the General Plan, members of the Amah Mutsun Land Trust were consulted about a potential partnership for an agriculture/land stewardship practice area within the Bolsa Point Area. The General Plan proposes to pursue this use; however, it is not the intent of a General Plan to provide specific objectives, designs, or timelines for specific projects. These would be determined in future planning processes.

#	Date	Comment	Response
02-12		The revised Plan now proposes one new well (instead of three). As previously requested, please confirm whether the 2013 Concept Study for water system improvements (pages 2-30 of the Resource Inventory) describes what is Planned on the Easement Parcel.	The Water System Improvement Schematic found in Draft Concept Study includes approximate locations for three new wells. However, it is likely that only one new well will be required, although the location is not yet determined and is dependent on the results of exploratory drilling for water. The location would be determined in future planning processes.
02-13		All of the improvements contained in the revised Plan lie within the Coastal Zone and therefore must be consistent with the County's certified LCP and must be authorized by the County through a Coastal Development Permit (CDP) issued by the County. The County will evaluate the merits of any future CDP application based upon the policies contained in the County's LCP. Given the numerous and definitive protections afforded agricultural land by the LCP, it is highly unlikely that any future development not in keeping with those policies, particularly non-agricultural use of prime agricultural land, could be approved.	CDPR will apply for CDP's prior to the implementation of any development described in the General Plan and will continue to correspond with the County on all future planning efforts to utilize the Park in a manner that is consistent with CDPR's mission and the County's LCP.
03	**01/31/17**	**California Coastal Commission - Renée Ananda, Coastal Program Analyst, North Central Coast District**	
03-1		Page 1-8 discusses some of the development history at Pigeon Point Light Station, such as the Whaler's Cove cabins built in the early 2000s, the stairway to the beach at Whaler's Cove, the Council Circle, and Mel's Lane along the bluff. We suggest that the document describe the permit history or status for the existing development. This information will assist with making certain that all appropriate entitlements have been obtained for the development. Further, knowing the permit status will help with future development efforts. Pigeon Point Park may want to consider including a policy that will require documentation of the Coastal Development permit history for all development at the project site.	The comment is acknowledged for the record. Physical Resource Management in Section 4.5.4 has been updated to recommend review of Coastal Development permit history during future planning phases.

#	Date	Comment	Response
03-2		The document states that project-level environmental review may be needed as specific projects move forward at the park. Please note that specific projects may also require Coastal Development Permits (CDP's), as well, dependent upon the proposed project description. Pigeon Point Light Station is located within the Coastal Zone and development within the park must comply with the Coastal Act and certified Local Coastal Program (LCP). Although Pigeon Point Park's development areas are within the County's coastal development permit jurisdiction, the County's decision to approve a project may be appealed to the California Coastal Commission. We recommend that as CDPR pursues specific projects CDPR staff makes certain to consider the need to apply for a CDP approval of the proposed GP does not mean future approvals for development are not necessary. The Coastal Commission, as a stakeholder, would appreciate being informed of subsequent projects at Pigeon Point Park, as well.	The comment is acknowledged for the record. CDPR will maintain contact with the Coastal Commission during future planning phases.
03-3		The proposed GP's recreational goals include the continued support and provision of lower-cost accommodations along the Central Coast. It is stated that the "overnight accommodations currently offered at the Park are a unique low-cost option for travelers along California's Central Coast." The development of camping or expansion of the existing hostel would increase opportunities for overnight stays at Pigeon Point Park. The LCP provides policies for recreation/visitor-serving facilities. Proposed development at Pigeon Point Park, with respect to lower-cost, visitor-serving accommodations, will need to be evaluated for consistency with the LCP recreation and visitor serving facilities policies including, but not limited to, 11.4, 11.1, 11.5, 11.19, and 11.12. The IS/MND indicates that during public review of the proposed project, San Mateo County indicated that they would only support development consistent with the LCP, which does not include camping. We additionally recommend that CDPR work closely with the County regarding all expansion of visitor serving facilities at the proposed project site.	The comment is acknowledged for the record. The description of the LCP in Appendix H has been updated to include reference to the Recreation/ Visitor-Serving Facilities Component, and includes the policies the policies set forth in sections 11.1 (Definitions of Visitor-Serving Facilities), 11.4 (Permitted Uses and Locations, Recreation and Visitor-Serving Facilities Permitted in the Central Coast), 11.5 (Permitted Uses and Locations, Priority to Visitor-Serving and Commercial Recreation Facilities), 11.12 (Permitted Uses and Locations, Sensitive Habitats), and 11.19 (Development Standards for Recreation and Visitor-Serving Facilities, Agriculture). CDPR will maintain contact with the County during future planning efforts.

#	Date	Comment	Response
03-4		The proposed GP includes goals for the management of visual and scenic resources that include the preservation of the views of the Lighthouse and historic Light Station. Another stated goal is to also ensure consistency with the Caltrans Corridor Protection Program for Highway 1 (which is a Scenic Corridor as defined in the LCP). We recommend that consistency with the LCP policies for the protection of visual resources be a goal, as well. San Mateo County's LCP provides policies for the protection of visual resources including Policies 8.4 (Cliffs and Bluffs), 8.5 (Location of Development) and 8.10 (Vegetative Cover). Pigeon Point Park is situated in such a prominent location on the coast. Potential visual resource impacts must be identified and carefully considered when developing specific projects at Pigeon Point Park. The GP includes a Historic Zone which is the most active of the proposed management zones identified. CDPR's proposal must ensure that future improvements in this zone promote the protection of visual resources, e.g., coastal views.	The comment is acknowledged for the record. Appendix H includes a brief summary of the Visual Resources Component of the LCP. Appendix H has been updated to reference Policies 8.4 (Cliffs and Bluffs), 8.5 (Location of Development) and 8.10 (Vegetative Cover). Additionally, the summary of Visual and Scenic Resource Management found on page 4-35 has been updated to reference the Visual Resources Component of the LCP and Appendix H. Although this results in a change in the content of the General Plan, this does not change the determination found in the IS/MND.
03-5		Section 5 .1 of the LCP provides protection for prime agricultural land. LCP Policy 5.5 (b) does allow conditionally permitted uses on Prime Agricultural Land and Lands Suitable for Agriculture, including uses such as public recreation and shoreline access trails. Should future acquisition of adjacent land (that includes agricultural land) for park use be contemplated, LCP Policy 5.9 prohibits the division of lands suitable for agriculture unless it can be demonstrated that existing or potential agricultural productivity of any resulting parcel determined to be feasible for agriculture would not be reduced.	The comment is acknowledged for the record. CDPR will consider in future planning and acquisition.

#	Date	Comment	Response
03-6		The analysis in the IS/MND states that because lands within the project area have not been actively farmed over the past 20 year it is demonstrated that implementation of the proposed plan would not have an impact on agricultural productivity within the plan area. The Bolsa Point Area, located at the northernmost portion of the proposed project site, comprises predominantly agricultural soil. There is also a minor amount of agricultural soil (Class II) located within the Light Station Area, the southernmost portion of the project site. The MND analysis should include a detailed discussion and description of agriculture in the vicinity of the project and the cumulative effect of the non-agricultural use of the agricultural soils located within the proposed project site. Additionally, a discussion of what the agricultural use was prior to the past 20 years, if this information is available. Specific projects for these areas must be carefully planned and evaluated for potential impacts to agriculture land. CDPR should consider an avoidance of the conversion to a non-agricultural use, as required by the LCP.	See comment 02-10 regarding timeframe of previous agricultural use. Section 5.4.2.e of the IS/MND indicates that the proposed uses at the Bolsa Point Area, including indigenous agriculture and land stewardship, among other low-impact uses such as providing for educational programs and activities, and hiking, would not reduce agricultural productivity, and that while there is active farming at adjacent properties, the proposed uses at the Bolsa Point Area would not interfere or otherwise obstruct those activities.
03-07		The proposed GP includes five beach access points (as shown in the Concept Master Plan, Figure 4.2), additional upland trails, and two staircases. The importance of connecting proposed trails to the Coastal Trail is acknowledged in the GP and the GP specifies goals and guidelines for trails within the park. Guideline Access.19 would require that CDPR work with San Mateo County, the Coastal Conservancy, POST, and other CDPR units to extend the Coastal Trail through the Park and along adjacent properties. We suggest that Coastal Commission public access staff be included, as well.	California Coastal Commission was added to guideline **ACCESS.19**. Although this results in a change in the content of the General Plan, this does not change the determination found in the IS/MND.
03-08		A Draft IS/ND was prepared and circulated in July 2016 for public review and comment on the proposed project to rehabilitate the lighthouse and oil house. How does the requirement of having a GP in place affect proposed rehabilitation project? Are there other, near-term, specific projects pending the approval of the GP? It may be informative to reviewers to include this in the document, if possible.	The lighthouse rehabilitation was part of a separate planning process that was considered but not evaluated as part of this General Plan. Other planning processes, including the Concept Study: Pigeon Point Light Station State Historic Park Low Cost Lodging and Circulation Investigation, are described in Appendix G of the General Plan. These plans helped to inform the General Plan but the specific development elements require a separate project-specific planning and approval process. There are two projects currently underway to improve operations at the Park, described in Section 2.15 of the General Plan: 1). The development of a new well in the Easement Area and 2). Native plant restoration. These plans were considered but not evaluated as part of this General Plan.

#	Date	Comment	Response
03-09		One minor observation is that the document states that Pigeon Point Park receives 150,000 visitors annually. It also states that there are 200,000. We suggest that the document reflect consistent information regarding the number of visitors.	The General Plan and IS/MND was updated to reflect an existing visitation rate of approximately 200,00 visitors. Although this results in a change in the content of the General Plan, this does not change the determination found in the IS/MND.
03-10		Additionally, the document should be reviewed in order to correct other minor errors (grammatical and spelling), including but not limited to those we came across on pages E-5, E-8, 2-9, 2-8, 2-11 (Figure 2-3 legend), 2-46, 2-55, 4-24.	Identified errors were corrected. Although this results in a change in the content of the General Plan, this does not change the determination found in the IS/MND.
04	**12/15/16**	**Mark Berger**	
04-1		The draft version of the Pigeon Point General Plan mentions that "...visitors occasionally use the beach at Whaler's Cove to ... launch small watercraft, which they carry down the stairs." (See page 2- 13.) I occasionally launch my kayak from that beach. It is one of the few beaches that faces south and allows protected access. I would like to have continued access to that beach in the future.	The comment is acknowledged for the record. The General Plan does not recommend prohibiting the launch of non-motorized water crafts from Whaler's Cove.
05	**01/31/17**	**Exploring New Horizons - Heidi Plowe, Program Director, Pigeon Point**	
05-1		We are very enthusiastic about the Outdoor Education classroom space that is being planned for the historic zone. It will get used by a wide range of user groups and will help Outdoor Education groups as well as docents teach with a great view of the Lighthouse.	The comment expresses the opinion of the commenter and is acknowledged for the record but does not state a specific concern or question regarding the sufficiency of the analysis or mitigation measures contained in the IS/MND, nor does the comment raise a new environmental issue.
05-2		I support Pigeon Point Rd being closed to traffic.	The comment expresses the opinion of the commenter and is acknowledged for the record but does not state a specific concern or question regarding the sufficiency of the analysis or mitigation measures contained in the IS/MND, nor does the comment raise a new environmental issue.
05-3		Trail development in the Pigeon Point Historic area and Bolsa Point area will be an excellent addition to the park and will be enjoyed by many user groups. A multi use trail would be a great addition.	The comment expresses the opinion of the commenter and is acknowledged for the record but does not state a specific concern or question regarding the sufficiency of the analysis or mitigation measures contained in the IS/MND, nor does the comment raise a new environmental issue.
05-4		Developing trail connections with other parks and areas, such as Gazos Creek and Butano would also enhance visitor access.	The comment expresses the opinion of the commenter and is acknowledged for the record but does not state a specific concern or question regarding the sufficiency of the analysis or mitigation measures contained in the IS/MND, nor does the comment raise a new environmental issue.

#	Date	Comment	Response
05-5		The development of several public access points to the tide pools north of Pigeon Point Historic area is a good idea. I advocate for several access points and not limit access to one place. This would provide excellent visitor access and plenty of options for all user groups, including Outdoor Education programs.	The comment expresses the opinion of the commenter and is acknowledged for the record but does not state a specific concern or question regarding the sufficiency of the analysis or mitigation measures contained in the IS/MND, nor does the comment raise a new environmental issue.
05-06		More picnic areas and benches to all areas of the park would be a welcome addition to all user groups.	The comment expresses the opinion of the commenter and is acknowledged for the record but does not state a specific concern or question regarding the sufficiency of the analysis or mitigation measures contained in the IS/MND, nor does the comment raise a new environmental issue.
05-07		Exploring New Horizons advocates the development of Bolsa Point and Pistachio Beach parking and bathrooms.	The comment expresses the opinion of the commenter and is acknowledged for the record but does not state a specific concern or question regarding the sufficiency of the analysis or mitigation measures contained in the IS/MND, nor does the comment raise a new environmental issue.
05-08		The bathrooms in the main parking lot near the historic zone are in major need of expansion. Visitors should be provided with a place to wash hands for good hygiene and public health.	The comment expresses the opinion of the commenter and is acknowledged for the record but does not state a specific concern or question regarding the sufficiency of the analysis or mitigation measures contained in the IS/MND, nor does the comment raise a new environmental issue.
05-09		We understand the importance to charge for parking in the main parking lot in order to generate revenue. However, I support a pardon of parking fees for guests that stay at the hostel or that are visiting the Outdoor Education program. We hope for flexibility in this regard.	The comment expresses the opinion of the commenter and is acknowledged for the record but does not state a specific concern or question regarding the sufficiency of the analysis or mitigation measures contained in the IS/MND, nor does the comment raise a new environmental issue.
05-10		Adding a turning lane into the main entrance to Pigeon Point Rd going North on Highway 1 would also be great. This will greatly increase the safety of this very heavily traveled road.	The comment expresses the opinion of the commenter and is acknowledged for the record but does not state a specific concern or question regarding the sufficiency of the analysis or mitigation measures contained in the IS/MND, nor does the comment raise a new environmental issue.
06		**Exploring New Horizons - Anne E. Baker, Board Member**	
		Anne Baker's comments are similar in content to other respondents associated with the Exploring New Horizons program. The group developed a list of comments and personalized them in their comment letters.	
06-1 to 06-10		See comments 05-01 to 05-10 above	

#	Date	Comment	Response
07		**Exploring New Horizons - Jared Baker, Board Member**	
		Jared Baker's comments are similar in content to other respondents associated with the Exploring New Horizons program. The group developed a list of comments and personalized them in their comment letters.	
07-1 to 07-10		See comments 05-01 to 05-10 above	
08		**Exploring New Horizons - Allison Collins, Board Member**	
		Allison Collins's comments are similar in content to other respondents associated with the Exploring New Horizons program. The group developed a list of comments and personalized them in their comment letters.	
08-1 to 08-10		See comments 05-01 to 05-10 above	
09		**Exploring New Horizons - Uli Mueller, Board Member**	
		Uli Mueller's comments are similar in content to other respondents associated with the Exploring New Horizons program. The group developed a list of comments and personalized them in their comment letters.	
09-1 to 09-10		See comments 05-01 to 05-10 above	
LC 10	**02/01/17**	**California Department of Transportation - Patricia Maurice, District Branch Chief, Local Development - Intergovernmental Review**	
LC-10-1		We encourage the applicant to pursue these Transportation Demand Management (TDM) elements described in relevant plans such as, Chapter 8 of the Federal Highway Administration's Integrating Demand Management into the Transportation Planning Process: A Desk Reference, to promote smart mobility and reduce regional VMT and traffic impacts to the STN: • Project design to encourage walking, bicycling and convenient transit access, • Revise parking requirements from required maximum needed to maximum threshold for the preservation of the natural resource • Develop a car sharing and ridesharing program amongst employees • Dedicated parking spaces for car sharing and ridesharing employees, • Designated bicycle parking, and • Charging stations and designated parking spaces for electric vehicles.	The General Plan assumes that site design will be carried out during a future planning phase. CDPR will consider the Transportation Demand Management (TDM) elements described in the letter in future planning. Additionally, it is assumed that the creation of new trails will encourage walking and bicycling at the Park, generally, and some of the guidelines presented in the General Plan, are consistent with the direction provided, including: • **ACCESS.2** Investigate alternative transportation options to the Park. Shuttles or other smaller buses could be explored for park visits or special events. • **ACCESS.3** Provide bicycle parking facilities near the entry to the historic Light Station. • **OPERATIONS.12** Allow for electric vehicle charging stations in parking areas. Consider partnerships to offset cost of installing and operating the station."
LC-10-2		Based on the project's regional access improvements, please provide the following analysis for the project's impact on the STN:	This comment serves as background information to the following comment.

#	Date	Comment	Response
LC-10-3		For all entrances/intersections and mainlines on SR 1, within the project vicinity, provide AM and PM weekday and mid-day weekend peak hour vehicle trips generated by the project.	Site design, including vehicular entrances and exits, parking lots, and internal roads will be designed in a future planning phase. The General Plan directs future planners to coordinate with Caltrans and to conduct a traffic study. The request in this comments includes typical information that would be included in such a traffic study and it is assumed that it would be assessed during future planning efforts and environmental review.
LC-10-4		Provide Intersection analysis to evaluate the new peak hour vehicular trip impact on the SR 1 mainline. In addition, provide the same type of analysis for the following entrances/intersections: the parking areas at Bolsa Point, the Light Station Area, and the Historic Pigeon Point Light Station.	See response to 10-3.
LC-10-5		Lastly, during the construction period, project-generated truck trips along SR 1 should be avoided during AM and PM peak hours. This is to avoid impacts on SR 1 during the morning and evening commute periods.	The General Plan provides some guidelines for construction but does not designate specific projects. It is assumed that evaluation of construction traffic will be conducted as part of future planning efforts.
LC 11	**02/01/17**	**Jeffrey Daniel Parry**	
LC-11-1		Under the public review draft of the Pigeon Point Light Station State Historic Park General Plan and IS/MND on page 4-35 under the Visual and Scenic Resource Management Guidelines: Visual.5. I am in favor of minimizing the nighttime light pollution but would like to add a fifth component related to the color spectrum wavelength of the illumination source.	This comment serves as background information to the following comment.

#	Date	Comment	Response
LC-11-2		5. Ensure that any outdoor direct source of lighting reduces or eliminates the blue color spectrum wavelengths of the light source by using illumination that is 2700K color spectrum or under. (2700K-1800K). A dim amber color spectrum wavelength lighting is ideal. Here are a few reasons for adding a fifth component related to color spectrum wavelength (nm): • Research documents the disorientation of sea turtles by artificial lighting. The photoorientation response of loggerhead sea turtles shows a 10x difference between light at 450 nm versus 600 nm. • Light sources that have a strong blue and ultraviolet component are particularly attractive to insects more than yellow light. Lights without substantial short wavelength emission, from simple yellow “bug” lights to low pressure sodium, substantially reduce or eliminate this phototactic response. • Most bats are insectivores and have long been observed to feed around lights at night. • Blue-rich light disrupts circadian function in wildlife. The tendency of blue-rich light to synchronize circadian function is common in mammals and there is evidence for it in amphibians as well as plankton. • The bluest light sources produce 15-20% more radiant sky glow than HPS or low-pressure sodium (LPS). This effect is compounded for visual observation, as practiced by casual stargazers and amateur astronomers, by the shift of dark-adapted vision toward increased sensitivity to shorter wavelengths. In a relatively dark suburban or rural area, where the eyes can become completely or nearly completely dark-adapted (scotopic), the brightness of the sky glow produced by artificial lighting can appear 3–5 times brighter for blue-rich light sources as compared to HPS and up to 15 times as bright as compared to LPS.	The comment is acknowledged for the record. Further direction of lighting used at the park will be incorporated into future design and operations planning efforts at the Park. "

2.4 COMMENT LETTERS

Following are the comments letters in their original format, including:

Letter 1: California State Coastal Conservancy - Hilary Walecka, Project Manager

Letter 2: County of San Mateo, Planning and Building Department - Steve Monowitz, Community Development Director

Letter 3: California Coastal Commission - Renée Ananda, Coastal Program Analyst, North Central Coast District

Letter 4: Mark Berger

Letter 5: Exploring New Horizons - Heidi Plowe, Program Director, Pigeon Point

Letter 6: Exploring New Horizons - Anne E. Baker, Board Member

Letter 7: Exploring New Horizons - Jared Baker, Board Member

Letter 8: Exploring New Horizons - Allison Collins, Board Member

Letter 9: Exploring New Horizons - Uli Mueller, Board Member

Letter 10: California Department of Transportation - Patricia Maurice, District Branch Chief, Local Development - Intergovernmental Review

Letter 11: Jeff ey Daniel Parry

2.4.1 LETTER 1

California State Coastal Conservancy - Hilary Walecka, Project Manager

Coastal Conservancy

January 10, 2017

Pigeon Point Light Station State Historic Park General Plan Team
California Department of Parks and Recreation
Southern Service Center
2797 Truxtun Road
San Diego, CA 92106

RE: Pigeon Point General Plan

Dear Pigeon Point General Plan Team:

The Coastal Conservancy would like submit the following comments in support of the inclusion of more detailed guidelines for low cost accommodations in the draft Pigeon Point General Plan. Conservancy staff would be happy to participate if you would like any assistance in developing such guidelines. We are commenting on the online version of the General Plan, as we were informed that the hard-copy version may be different.

1. The General Plan acknowledges the importance of overnight accommodations because it contributes to the sense of place at Pigeon Point and provides low cost accommodations along the Central Coast: "Spending the night at the Pigeon Point Hostel is a memorable experience for many guests as it is unusual to be able to be at such a remote and dramatic location for such a reasonable price" (General Plan I-10).

2. The General Plan writes in support of the hostel's continued service and expansion in the Introduction and Executive Summary: "The Pacific coastline is a popular recreational destination; however, accommodations can be costly and access can be limited", "By developing camping or expanding the hostel, there would be more opportunities for visitors to stay overnight at the Park" (General Plan I-11, E-7). However, in Section 4 "The Plan" where the long term purpose and vision of Pigeon Point are presented, there are not clear or detailed guidelines supporting the expansion of low cost overnight accommodations.

3. In the Recreation Section of The Plan (General Plan 4-18), a goal is to "continue to support low-cost overnight accommodations along the Central Coast"; however the only guideline included is to "continue to allow overnight use at the Park in the Cottages through a

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California State Coastal Conservancy

concessionaire's agreement with a group that prioritizes low-cost accommodations". Expansion of the hostel or a similar concessionaire at Pigeon Point should be included in the Plan and detailed guidelines should be included as has been done in other sections such as Camping (General Plan 4-56).

4. Similarly in the Operations Section of the Plan, the introduction to the Concessions section mentions: "Maintaining and expanding this concessionaire role for Hostelling International, or a similar group, extends visitor services at the Park to include low-cost accommodations and reduces the need for park staff to supply and manage these services" (General Plan 4-46), but there are no further goals or guidelines that support this. Detailed goals and guidelines should be included for the continued existence and expansion of the low cost affordable accommodations at Pigeon Point.

5. In addition, because of the significance of the hostel to the visitor experience at Pigeon Point, the hostel should be denoted on the map of the Concept Master Plan (Figure 4.2).

Thank you for the opportunity to comment on the draft Pigeon Point General Plan and we look forward to helping support this unique Park.

Sincerely,

Hilary Walecka
Project Manager

2.4.2 LETTER 2

County of San Mateo, Planning and Building Department - Steve Monowitz, Community Development Director

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January 31, 2017

Pigeon Point Light Station State Historic Park General Plan Team
California Department of Parks and Recreation
Southern Service Center
2797 Truxtun Road
San Diego, CA 92106

SUBJECT: Pigeon Point Light Station State Historic Park General Plan and Initial Study/Mitigated Negative Declaration

Thank you for the opportunity to review the proposed General Plan (Plan) and related environmental document for the Pigeon Point Lighthouse State Park. This letter follows County Planning staff's August 2, 2016 letter (attached) to Ms. Shelia Branon, in which we commented on the first public draft of the Pigeon Point State Park General Plan.

As you know, implementation of the improvements and land use changes described in the final draft General Plan will require Coastal Development Permit authorization from San Mateo County and must be consistent with the County's certified Local Coastal Program (LCP).

San Mateo County Planning staff has reviewed the subject documents for consistency with the County's Planning and zoning policies, including the LCP. Below, we have summarized staff's understanding of the differences in proposed improvements described in the previous General Plan document with the revised General Plan, requests for additional information, and some policy issues with certain proposals:

Light Station Parcel

The existing parking lot would be reconfigured from approximately 27 spaces to 40 spaces and would also include RV parking. Since the amount of RV parking is not specified, it is unclear if the final number of car spaces would be reduced or if the size of the lot would be further expanded to accommodate RV parking; please clarify. Also, the revised Plan mentions the possibility of expanding the lot to 70 spaces and acquiring one or more adjacent properties for parking. Again, the impact of RV parking on the final number of total parking spaces is unclear. Also, since some adjacent land is characterized as prime agricultural land by the County's LCP, please consider this in choosing land to acquire for parking. Also, please describe whether RV pump-out facilities are proposed.

It is unclear if the new, small parking lot (10-12 spaces) would also have RV parking and, if so, what amount; please clarify.

The new, small concession station would now include a docent lounge. Since the size of neither the concession station, nor the lounge are specified, it is unclear if the station would be larger than originally Planned in order to accommodate the addition of the lounge; please clarify.

It is unclear if the existing fence is still to be removed and if the existing hot tub is still to be relocated; please confirm.

The revised Plan mentions acquiring one or more adjacent properties for the possible construction of housing for park staff and/or park concessionaires. It is unclear how many and what type of dwelling units are envisioned, which adjacent parcel or parcels could be involved, whether any of the existing hostel accommodations might be utilized for this purpose, and how much additional parking might be provided for this purpose. Please clarify. Acquiring and developing prime agricultural lands for park employee housing in this area would likely be inconsistent with the County's LCP policies.

The revised Plan mentions the possibility of acquiring Pigeon Point Road from the County and converting it to a one-way loop road exclusively for park use. The County's Department of Public Works has no fundamental objection to this proposal, but reserves the right to comment further when specific traffic circulation Plans are proposed.

The revised General Plan mentions a prescribed burn-off of non-native grasses in this area. Please provide specific location(s).

Planned treatment of all other existing and proposed improvements in this area of the park appears to be unchanged from the previous version of the General Plan.

Bolsa Point Parcel

The revised Plan states that the new parking lot (with restroom) would be improved for 30 (instead of 20) cars. The revised Plan also mentions that all parking lots would now include RV parking. However, the amount of RV parking in this new lot is not specified; therefore, it is unclear if the final number of car spaces would be reduced or if the size of the lot would be further expanded to accommodate RV parking. Please clarify and also note that the acquiring and/or utilizing of prime agricultural lands for visitor parking in this area is inconsistent with the County's LCP policies that govern the use of such lands.

The revised Plan no longer proposes overnight camping (and presumably reduces the vault toilets Planned for the new parking area from two to one). Instead, the revised Plan mentions fire pits and indigenous agriculture within a land stewardship practice area, including the installation of electrical service for storage and other support structures (storage and restrooms), and a new well as a source of potable water for day use visitors and the land stewardship area. Thank you for removing the camping from your revised Plan; however, the fire pits, vault toilet, and parking lot still Planned in this area are inconsistent with the intended use of prime lands for agriculture.

The County's August 2, 2016 letter on this matter cited LCP Policy 5.33 that requires the State to lease prime agricultural lands to active farm operators where legally feasible. The revised Plan classifies this area of the park as "unique farmland", rather than the "prime agricultural land" which the County maintains that it is. State Parks cites the California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) as its source on this matter. However, the County notes that the Department of Conservation's enabling legislation states that the FMMP is primarily a tool for tracking the conversion of agricultural land to non-agricultural use over time and that, by legislative intent, it is non-regulatory in nature.

The County's LCP Policy 5.1 defines prime soils in part based on U.S. Department of Agriculture's Natural Resources Conservation Service Soil Survey which comprehensively maps and identifies soil by type and agricultural potential. It also defines prime soils based on their ability to support certain agricultural activities. These definitions of prime soils will be used when evaluating any Coastal Development permit applications for improvements or use changes in the park. We have studied the National Resource Conservation Service's web-based soil maps showing where prime soils are located in Pigeon Point State Park and nearby lands. From this review we learned that not only are significant portions of the existing park classified as prime soils, we also learned that several adjacent properties are as well. Also, the revised Plan states that it has been over 20 years since this land was farmed. However, County aerial photos show this land in agricultural production as recently as 2001.

Your proposal to partner with local tribal groups is interesting. The County was not aware that there are active farm operators who are tribal members or that the tribes from this area participate in active agriculture. The revised Plan indicates that the indigenous agriculture and land management would be established by a memorandum of understanding (MOU). If this results in the land being under active agriculture, the County can support that. However, we need to better understand the nature and characteristics of the indigenous agricultural use and the portion(s) of the Bolsa Point parcel proposed for this management regime.

Planned treatment of all other existing and proposed improvements in this area of the park appears to be unchanged from the previous version of the Plan.

Easement Parcel

The revised Plan now proposes one new well (instead of three). As previously requested, please confirm whether the 2013 Concept Study for water system improvements (pages 2-30 of the Resource Inventory) describes what is Planned on the Easement Parcel.

Planned treatment of all other existing and proposed improvements in this area of the park appears to be unchanged from the previous version of the Plan.

All of the improvements contained in the revised Plan lie within the Coastal Zone and therefore must be consistent with the County's certified LCP and must be authorized by the County through a Coastal Development Permit (CDP) issued by the County. The County will evaluate the merits of any future CDP application based upon the policies contained in the County's LCP. Given the numerous and definitive protections afforded agricultural land by the LCP, it is highly unlikely that any future development not in keeping with those policies, particularly non-agricultural use of prime agricultural land, could be approved.

These additional comments are not a comprehensive review or final determination on the Pigeon Point General Plan by the County of San Mateo. We continue to be available to work with California State Parks to address our concerns. Please contact me should you have any questions or wish to meet again on this matter.

Sincerely,

for Joe Li

Steve Monowitz
Community Development Director

SAM:JEL:jlh – JELBB0026_WJN.DOCX

Attachment

2.4.3 LETTER 3

California Coastal Commission - Renée Ananda, Coastal Program Analyst, North Central Coast District

STATE OF CALIFORNIA—NATURAL RESOURCES AGENCY EDMUND G. BROWN JR., GOVERNOR

CALIFORNIA COASTAL COMMISSION

NORTH CENTRAL COAST DISTRICT OFFICE
45 FREMONT STREET, SUITE 2000
SAN FRANCISCO, CA 94105
PHONE: (415) 904-5260
FAX: (415) 904-5400
WEB: WWW.COASTAL.CA.GOV

January 31, 2017

Barney Matsumoto
California Department of Parks and Recreation
2797 Truxtun Road
San Diego, CA 92106
Via E-mail and U. S. Mail

RE: Notice of Availability (NOA) and Intent to Adopt a Mitigated Negative Declaration (MND) for the Proposed Pigeon Point Light Station Historic Park General Plan

Dear Mr. Matsumoto:

Thank you for forwarding the NOA and Intent to Adopt a MND for the proposed Pigeon Point Light Station Historic Park General Plan. We appreciate the opportunity to provide you with our comments. Pigeon Point Park does not currently have a General Plan (GP). California Department of Parks and Recreation is proposing to adopt and implement a General Plan that will set the framework for the implementation of future development at Pigeon Point Light Station Historic Park ("Pigeon Point Park"). The GP does not specify/identify specific projects to be undertaken at this point in time; however it serves to define the California Department of Parks and Recreation's (CDPR's) purpose, vision, and management of the park unit. The NOA states that CDPR's planning handbook provides for a GP but does not define specific objectives, methodologies, and timelines for GP goal statements, guidelines, and broad objectives. Accordingly, the GP must be in place before CDPR dedicates resources to development (such as park "improvements"). The proposed GP includes a Concept Master Plan that provides a schematic vision or layout for Pigeon Point Park based upon the proposed management zones. The Concept Master Plan is illustrative as it presents potential trail alignments and connections, recreational amenities, and park facilities. Our general thought is that the proposed GP addresses many key points necessary to maintain and improve Pigeon Point Park for the enjoyment and education of the public, while considering the need to protect resources unique to this part of the California coast. The comments provided below are not comprehensive and it is our hope that more opportunities are presented for us to provide comments as necessary during the development of future projects.

Page 1-8 discusses some of the development history at Pigeon Point Light Station, such as the Whaler's Cove cabins built in the early 2000s, the stairway to the beach a t Whaler's Cove, the Council Circle, and Mel's Lane along the bluff. We suggest that the document describe the permit history or status for the existing development. This information will assist with making certain that all appropriate entitlements have been obtained for the development. Further, knowing the permit status will help with future development efforts. Pigeon Point Park may want to consider including a policy

that will require documentation of the Coastal Development permit history for all development at the project site. The document states that project-level environmental review may be needed as specific projects move forward at the park. Please note that specific projects may also require Coastal Development Permits (CDPs), as well, dependent upon the proposed project description. Pigeon Point Light Station is located within the Coastal Zone and development within the park must comply with the Coastal Act and certified Local Coastal Program (LCP). Although Pigeon Point Park's development areas are within the County's coastal development permit jurisdiction, the County's decision to approve a project may be appealed to the California Coastal Commission. We recommend that as CDPR pursues specific projects CDPR staff makes certain to consider the need to apply for a CDP approval of the proposed GP does not mean future approvals for development are not necessary. The Coastal Commission, as a stakeholder, would appreciate being informed of subsequent projects at Pigeon Point Park, as well.

The proposed GP's recreational goals include the continued support and provision of lower-cost accommodations along the Central Coast. It is stated that the "overnight accommodations currently offered at the Park are a unique low-cost option for travelers along California's Central Coast." The development of camping or expansion of the existing hostel would increase opportunities for overnight stays at Pigeon Point Park. The LCP provides policies for recreation/visitor-serving facilities. Proposed development at Pigeon Point Park, with respect to lower-cost, visitor-serving accommodations, will need to be evaluated for consistency with the LCP recreation and visitor serving facilities policies including, but not limited to, 11.4, 11.1, 11.5, 11.19, and 11.12. The IS/MND indicates that during public review of the proposed project, San Mateo County indicated that they would only support development consistent with the LCP, which does not include camping. We additionally recommend that CDPR work closely with the County regarding any expansion of visitor-serving facilities at the proposed project site.

The proposed GP includes goals for the management of visual and scenic resources that include the preservation of the views of the Lighthouse and historic Light Station. Another stated goal is to also ensure consistency with the Caltrans Corridor Protection Program for Highway 1 (which is a Scenic Corridor as defined in the LCP). We recommend that consistency with the LCP policies for the protection of visual resources be a goal, as well. San Mateo County's LCP provides policies for the protection of visual resources including Policies 8.4 (Cliffs and Bluffs), 8.5 (Location of Development) and 8.10 (Vegetative Cover). Pigeon Point Park is situated in such a prominent location on the coast. Potential visual resource impacts must be identified and carefully considered when developing specific projects at Pigeon Point Park. The GP includes a Historic Zone which is the most active of the proposed management zones identified. CDPR's proposal must ensure that future improvements in this zone promote the protection of visual resources, e.g., coastal views.

Section 5.1 of the LCP provides protection for prime agricultural land. LCP Policy 5.5 (b) does allow conditionally permitted uses on Prime Agricultural Land and Lands Suitable for Agriculture, including uses such as public recreation and shoreline access trails. Should future acquisition of adjacent land (that includes agricultural land) for park use be contemplated, LCP Policy 5.9 prohibits the division of lands suitable for agriculture unless it can be demonstrated that existing or potential agricultural productivity of any resulting parcel determined to be feasible for agriculture would not be reduced. The analysis in the IS/MND states that because lands within the project area have not been actively farmed over the past 20 year it is demonstrated that implementation of the proposed plan would not

have an impact on agricultural productivity within the plan area. The Bolsa Point Area, located at the northernmost portion of the proposed project site, comprises predominantly agricultural soil. There is also a minor amount of agricultural soil (Class II) located within the Light Station Area, the southernmost portion of the project site. The MND analysis should include a detailed discussion and description of agriculture in the vicinity of the project and the cumulative effect of the non-agricultural use of the agricultural soils located within the proposed project site. Additionally, a discussion of what the agricultural use was prior to the past 20 years, if this information is available. Specific projects for these areas must be carefully planned and evaluated for potential impacts to agriculture land. CDPR should consider avoidance of the conversion to a non-agricultural use, as required by the LCP.

The proposed GP includes five beach access points (as shown in the Concept Master Plan, Figure 4.2), additional upland trails, and two staircases. The importance of connecting proposed trails to the Coastal Trail is acknowledged in the GP and the GP specifies goals and guidelines for trails within the park. Guideline Access.19 would require that CDPR work with San Mateo County, the Coastal Conservancy, POST, and other CDPR units to extend the Coastal Trail through the Park and along adjacent properties. We suggest that Coastal Commission public access staff be included, as well.

A Draft IS/ND was prepared and circulated in July 2016 for public review and comment on the proposed project to rehabilitate the lighthouse and oil house. How does the requirement of having a GP in place affect proposed rehabilitation project? Are there other, near-term, specific projects pending the approval of the GP? It may be informative to reviewers to include this in the document, if possible.

One minor observation is that the document states that Pigeon Point Park receives 150,000 visitors annually. It also states that there are 200,000. We suggest that the document reflect consistent information regarding the number of visitors. Additionally, the document should be reviewed in order to correct other minor errors (grammatical and spelling), including but not limited to those we came across on pages E-5, E-8, 2-9, 2-8, 2-11 (Figure 2-3 legend), 2-46, 2-55, 4-24.

Thank you for the opportunity to provide you with these comments. We look forward to coordinating with CDPR future proposed projects at Pigeon Point Park. Please feel free to contact me at (415) 904-5292 or by email at renee.ananda@coastal.ca.gov if you have questions regarding this proposed project.

Sincerely,

Renée Ananda

Renée Ananda, Coastal Program Analyst
North Central Coast District

2.4.4 LETTER 4

Mark Berger

Subject: Pigeon Point General Plan

From: Mark Berger [mailto:mark@markberger.net]
Sent: Thursday, December 15, 2016 6:49 PM
To: General, Plan@Parks
Subject: Pigeon Point General Plan

The draft version of the Pigeon Point General Plan mentions that "...visitors occasionally use the beach at Whaler's Cove to ... launch small watercraft, which they carry down the stairs." (See page 2-13.)

I occasionally launch my kayak from that beach. It is one of the few beaches that faces south and allows protected access. I would like to have continued access to that beach in the future.

Mark Berger

2.4.5 LETTER 5

Exploring New Horizons - Heidi Plowe, Program Director, Pigeon Point

Comments submitted by Heidi Plowe on behalf of Exploring New Horizons Outdoor Schools for Public Review Draft of PPLH General Plan:

We want to commend California State Parks for including Outdoor Education as a priority in the future of the Pigeon Point Lighthouse. Exploring New Horizons Outdoor Schools looks forward to being part of the growth and expansion of the Pigeon Point Lighthouse State Historic Park. Exploring New Horizons is committed to continuing to uphold the mission of CA State Parks in helping to educate students about the rich cultural and natural history of the area. We are very enthusiastic about the Outdoor Education classroom space that is being planned for the historic zone. It will get used by a wide range of user groups and will help Outdoor Education groups as well as docents teach with a great view of the Lighthouse. We support Pigeon Point Rd being closed to traffic. A multi use trail would be a great addition. Trail development in the Pigeon Point Historic area and Bolsa Point area will be an excellent addition to the park and will be enjoyed by many user groups. Providing trail connections with other parks and areas, such as Gazos Creek and Butano would provide excellent visitor access. The development of several public access points to the tidepools north of Pigeon Point Historic area is a good idea. We advocate for several access points and not limit access to one place. This will provide excellent visitor access and will provide plenty of options for all user groups, including Outdoor Education programs. More picnic areas and benches to all areas of the park would be a welcome addition to all user groups. Exploring New Horizons advocates the development of Bolsa Point and Pistachio Beach parking and bathrooms. The bathrooms in the main parking lot near the historic zone are in major need of expansion. Visitors should be provided with a place to wash hands for good hygiene and public health. We understand the importance to charge for parking in the main parking lot in order to generate revenue. However, we support a pardon of parking fees for guests that stay at the hostel or that are visiting for the Outdoor Education program. We hope for flexibility in this regard. Lastly, we greatly support the addtion of a turning lane into the main entrance to Pigeon Point Rd going North on Highway 1. This will greatly increase the safety of this very heavily traveled road. Thank you.

2.4.6 LETTER 6

Exploring New Horizons - Anne E. Baker, Board Member

January 31, 2017

Dear California State Parks General Plan Team:

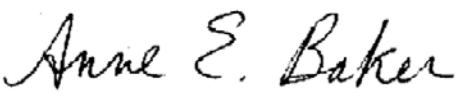
I serve on the board of the Exploring New Horizons Outdoor School. We want to commend California State Parks for making outdoor education a priority in future development plans of Pigeon Point Lighthouse State Historic Park. Exploring New Horizons Outdoor Schools looks forward to being part of the growth and expansion of the State Historic Park. Exploring New Horizons is committed to continuing to uphold and support the mission of California State Parks' by educating students about the rich cultural and natural history of the area. We greatly value our ability to offer programming at this unique, beautiful, and historic site.

As other letters from us about this issue attest, we would like to provide you with some feedback about the proposed site changes and provide a few suggestions:

- We are very enthusiastic about the outdoor education classroom space that is being planned for the historic zone. It will get used by a wide range of user groups and will help outdoor education groups as well as docents teach with a great view of the Lighthouse.
- We also support Pigeon Point Road being closed to traffic. A multi use trail would be a great addition.
- Trail development in the Pigeon Point Historic area and Bolsa Point area will be an excellent addition to the park and will be enjoyed by many user groups. Providing trail connections with other parks and areas, such as Gazos Creek and Butano, would provide excellent visitor access.
- Moreover, the development of several public access points to the tidepools north of Pigeon Point Historic area is a good idea. We advocate for several access points rather than limiting access to one place to support better visitor access in general and access that provides plenty of options for all user groups, including outdoor education programs.
- More picnic areas and benches in all areas of the park would be a welcome addition for all user groups.
- Exploring New Horizons also advocates the development of Bolsa Point and Pistachio Beach parking and bathrooms. The bathrooms in the main parking lot near the historic zone are in major need of expansion. Visitors should be provided with a place to wash hands for purpose of good hygiene and to support public health.
- While we understand the importance of charging for parking in the main parking lot in order to generate revenue, we support a pardon of parking fees for guests that stay at the hostel or that are visiting for outdoor education programs. We would appreciate your flexibility in this matter.
- Lastly, we strongly support the addition of a turning lane into the main entrance to Pigeon Point Road going North on Highway 1, as a much-needed safety improvement. I know from personal experience that a turning lane will be especially helpful when visibility is low during stormy or fog conditions.

Thank you for your time and consideration.

Best,



Dr. Anne E. Baker
Board Member, Exploring New Horizons Outdoor School

2.4.7 LETTER 7

Exploring New Horizons - Jared Baker, Board Member

January 31st, 2017

Comment submitted by Jared Baker, board member of Exploring New Horizons Outdoor Schools for Public Review Draft of PPLH General Plan:

We want to commend California State Parks for including Outdoor Education as a priority in the future of the Pigeon Point Lighthouse. Exploring New Horizons Outdoor Schools looks forward to being part of the growth and expansion of the Pigeon Point Lighthouse State Historic Park. Exploring New Horizons is committed to continuing to uphold the mission of CA State Parks in helping to educate students about the rich cultural and natural history of the area.

We'd like to highlight and comment on a few specific planned areas of enhancements and make a couple of additional suggestions

- We are very enthusiastic about the Outdoor Education classroom space that is being planned for the historic zone. It will get used by a wide range of user groups and will help Outdoor Education groups as well as docents teach with a great view of the Lighthouse.
- We support Pigeon Point Rd being closed to traffic.
- Trail development in the Pigeon Point Historic area and Bolsa Point area will be an excellent addition to the park and will be enjoyed by many user groups. A multi use trail would be a great addition.
- Providing trail connections with other parks and areas, such as Gazos Creek and Butano would also enhance visitor access.
- The development of several public access points to the tidepools north of Pigeon Point Historic area is a good idea. We advocate for several access points and not limit access to one place. This would provide excellent visitor access and plenty of options for all user groups, including Outdoor Education programs.
- More picnic areas and benches to all areas of the park would be a welcome addition to all user groups.
- Exploring New Horizons advocates the development of Bolsa Point and Pistachio Beach parking and bathrooms.
- The bathrooms in the main parking lot near the historic zone are in major need of expansion. Visitors should be provided with a place to wash hands for good hygiene and public health.
- We understand the importance to charge for parking in the main parking lot in order to generate revenue. However, we support a pardon of parking fees for guests that stay at the hostel or that are visiting the Outdoor Education program. We hope for flexibility in this regard.

- Lastly, we greatly support the addition of a turning lane into the main entrance to Pigeon Point Rd going North on Highway 1. This will greatly increase the safety of this very heavily traveled road.

Thank you for your consideration.

Jared Baker

jaredabaker@gmail.com

408.410.4460

2.4.8 LETTER 8

Exploring New Horizons - Allison Collins, Board Member

Subject: Pigeon Point General Plan

From: Allison Collins [mailto:allison.hughes711@gmail.com]
Sent: Tuesday, January 31, 2017 11:56 AM
To: General, Plan@Parks
Subject: Pigeon Point General Plan

Thank you for being open to public comments on the Pigeon Point General Plan. I worked for years as a naturalist in environmental education in the area and know how important the programs that run at Pigeon Point are to the students from all over Northern California. As a current Board Member for Exploring New Horizons Outdoor School, I would like to echo comments made by Heidi Plowe on behalf of Exploring New Horizons Outdoor Schools for Public Review Draft of PPLH General Plan:

We want to commend California State Parks for including Outdoor Education as a priority in the future of the Pigeon Point Lighthouse. Exploring New Horizons Outdoor Schools looks forward to being part of the growth and expansion of the Pigeon Point Lighthouse State Historic Park. Exploring New Horizons is committed to continuing to uphold the mission of CA State Parks in helping to educate students about the rich cultural and natural history of the area. We are very enthusiastic about the Outdoor Education classroom space that is being planned for the historic zone. It will get used by a wide range of user groups and will help Outdoor Education groups as well as docents teach with a great view of the Lighthouse. We support Pigeon Point Rd being closed to traffic. A multi use trail would be a great addition. Trail development in the Pigeon Point Historic area and Bolsa Point area will be an excellent addition to the park and will be enjoyed by many user groups. Providing trail connections with other parks and areas, such as Gazos Creek and Butano would provide excellent visitor access. The development of several public access points to the tidepools north of Pigeon Point Historic area is a good idea. We advocate for several access points and not limit access to one place. This will provide excellent visitor access and will provide plenty of options for all user groups, including Outdoor Education programs. More picnic areas and benches to all areas of the park would be a welcome addition to all user groups. Exploring New Horizons advocates the development of Bolsa Point and Pistachio Beach parking and bathrooms. The bathrooms in the main parking lot near the historic zone are in major need of expansion. Visitors should be provided with a place to wash hands for good hygiene and public health. We understand the importance to charge for parking in the main parking lot in order to generate revenue. However, we support a pardon of parking fees for guests that stay at the hostel or that are visiting for the Outdoor Education program. We hope for flexibility in this regard. Lastly, we greatly support the addition of a turning lane into the main entrance to Pigeon Point Rd going North on Highway 1. This will greatly increase the safety of this very heavily traveled road.

Thank you for your time and consideration,

Allison Collins

Board Member, Exploring New Horizons

2.4.9 LETTER 9

Exploring New Horizons - Uli Mueller, Board Member

Subject: Comments on PPLH General Plan

From: Uli Mueller [mailto:udmueller.coach@gmail.com]
Sent: Tuesday, January 31, 2017 12:57 PM
To: General, Plan@Parks
Subject: Comments on PPLH General Plan

Dear Pidgeon Point State Park planner,

As a board member of Exploring New Horizons and a frequent visitor to California's State Park System, I wanted to take a minute to comment on your plan, as well as make a few suggestions from my perspective as a visitor.

I am delighted to see that California State Parks has included Outdoor Education as a priority in the future of the Pigeon Point Lighthouse. Nurturing our children along so they become future stewards of our natural environment, including the State Parks is vital.

I'd like to highlight and comment on a few specific planned areas of enhancements and make a couple of additional suggestions:

- 1. As a board member of Exploring New Horizons, we are very enthusiastic about the Outdoor Education classroom space that is being planned for the historic zone. It will get used by a wide range of user groups and will help Outdoor Education groups as well as docents teach with a great view of the Lighthouse.

- 2. I support Pigeon Point Rd being closed to traffic.

- 3. Trail development in the Pigeon Point Historic area and Bolsa Point area will be an excellent addition to the park and will be enjoyed by many user groups. **A multi use trail would be a great addition.**

- 4. **Developing trail connections with other parks and areas, such as Gazos Creek and Butano would also enhance visitor access.**

- 5. The development of several public access points to the tidepools north of Pigeon Point Historic area is a good idea. **I advocate for several access points and not limit access to one place**. This would provide excellent visitor access and plenty of options for all user groups, including Outdoor Education programs.

- 6. **More picnic areas and benches to all areas of the park would be a welcome addition to all user groups.**

- 7. **I would also like to see the development of Bolsa Point and Pistachio Beach parking and bathrooms.**

- 8. **The bathrooms in the main parking lot near the historic zone are in major need of expansion**. **Visitors should be provided with a place to wash hands for good hygiene and public health.**

- 9. We understand the importance to charge for parking in the main parking lot in order to generate revenue. **However, I support a pardon of parking fees for guests that stay at the hostel or that are visiting the Outdoor Education program.**

- 10. **Adding a turning lane into the main entrance to Pigeon Point Rd going North on Highway 1 would also be great.** This will greatly increase the safety of this very heavily traveled road.

Thank you for your consideration.

Uli Mueller

2.4.10 LETTER 10

California Department of Transportation - Patricia Maurice, District Branch Chief, Local Development - Intergovernmental Review

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 4
OFFICE OF TRANSIT AND COMMUNITY PLANNING
P.O. BOX 23660, MS-10D
OAKLAND, CA 94623-0660
PHONE (510) 286-5528
FAX (510) 286-5559
TTY 711
www.dot.ca.gov

Serious Drought.
Help save water!

February 1, 2017

SCH # 2016122030
GTS # 04-SM-2016-00069
SM- 01 - 8.602

Mr. Matsumoto
California Department of Parks and Recreation
2797 Truxtun Road
San Diego, CA 92106

Pigeon Point Light Station State Historic Park General Plan and Environmental Document– Initial Study/Mitigated Negative Declaration

Dear Mr. Matsumoto:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the Pigeon Point Light Station State Historic Park General Plan and Environmental Document (referred as "The Plan"). In tandem with the Metropolitan Transportation Commission's (MTC) Sustainable Communities Strategy (SCS), the Caltrans' mission signals a modernization of our approach to evaluate and mitigate impacts to the State Transportation Network (STN). Caltrans' *Strategic Management Plan 2015-2020* aims to reduce Vehicle Miles Travelled (VMT) by tripling bicycle and doubling both pedestrian and transit travel by 2020. Our comments are based on the Initial Study (IS)/Mitigated Negative Declaration (MND) dated December 8, 2016.

Project Understanding

California Department of Parks and Recreation, the Project Applicant, is proposing to adopt and implement the Pigeon Point Light Station State Historic Park General Plan on a 75-acre site in Pescadero, California. The purpose of The Plan is to provide a larger framework for implementing improvements to the Pigeon Point Light Station Area, Bolsa Point Area, and an easement from the US Coast Guard (referred as "The Easement"). The 29-acre Light Station Area contains the historic Pigeon Point Lighthouse, and is the only area currently open to the public. The Bolsa Point area is located two miles north of the Light Station Area (37 acres) and includes an undeveloped coastal plateau. The Easement (9 acres) is located east of SR 1 from the Light Station Area on US Coast Guard property and will be used for the development of a new well to provide water to the Light Station Area; it will not be open to the public. The three

properties are directly accessible via State Route (SR) 1, on which bicyclists are allowed. Currently there is no direct transit service to the project site. The proposed plan would include:

- A network of two miles of hiking and biking trails with permeable surfaces;
- Three new formalized beach access point at specific locations, which would include two staircases and an ADA trail, for a total of five beach access points;
- Targeted removal of ice plant and restoration of a riparian area;
- Restoration of the Lighthouse;
- Two picnic areas;
- Parking lot expansion and potential new parking lot;
- New Bolsa Point access from SR 1;
- A park gateway at the entrance;
- A viewing deck;
- A maritime historic district and shipwreck interpretation area in the Light Station Area; and
- Space intended for indigenous agriculture and land management practice and flexible day use.

Lead Agency

As the lead agency, California Department of Parks and Recreation is responsible for all project mitigation, including any needed improvements to the STN. The project's fair share contribution, financing, scheduling, implementation responsibilities and lead agency monitoring should be fully discussed for all proposed mitigation measures. This includes any required improvements to the STN or reductions in VMT. Any required improvements should be completed prior to issuance of the Building Permit. We strongly recommend early coordination occur between Caltrans and the California Department of Parks and Recreation to address any site access issues. Time and money can be saved if this coordination occurs prior to submittal of an Encroachment Permit application. See the end of this letter for more information on the Encroachment Permit process.

Vehicle Trip Reduction

We encourage the applicant to pursue these Transportation Demand Management (TDM) elements described in relevant plans such as, Chapter 8 of the Federal Highway Administration's *Integrating Demand Management into the Transportation Planning Process: A Desk Reference*, to promote smart mobility and reduce regional VMT and traffic impacts to the STN:

- Project design to encourage walking, bicycling and convenient transit access,
- Revise parking requirements from required maximum needed to maximum threshold for the preservation of the natural resource
- Develop a car sharing and ridesharing program amongst employees,

- Dedicated parking spaces for car sharing and ridesharing employees,
- Designated bicycle parking, and
- Charging stations and designated parking spaces for electric vehicles.

For additional TDM options, please refer to *Integrating Demand Management into the Transportation Planning Process: A Desk Reference*. The reference is available online at:

http://www.ops.fhwa.dot.gov/publications/fhwahop12035/fhwahop12035.pdf.

Project Access Analysis

Based on the project's regional access improvements, please provide the following analysis for the project's impact on the STN:

- For all entrances/intersections and mainlines on SR 1, within the project vicinity, provide AM and PM weekday and mid-day weekend peak hour vehicle trips generated by the project.
- Provide Intersection analysis to evaluate the new peak hour vehicular trip impact on the SR 1 mainline. In addition, provide the same type of analysis for the following entrances/intersections: the parking areas at Bolsa Point, the Light Station Area, and the Historic Pigeon Point Light Station.

Lastly, during the construction period, project-generated truck trips along SR 1 should be avoided during AM and PM peak hours. This is to avoid impacts on SR 1 during the morning and evening commute periods.

Transportation Management Plan

Where vehicular, bicycle, and pedestrian traffic may be impacted during the construction of the proposed project requiring traffic restrictions and detours, a Caltrans-approved Transportation Management Plan (TMP) is required. Pedestrian and bicycle access through the construction zone must be maintained at all times and comply with the Americans with Disabilities Act (ADA) regulations. See Caltrans' *Temporary Pedestrian Facilities Handbook* for maintaining pedestrian access and meeting ADA requirements during construction at:

http://www.dot.ca.gov/hq/construc/safety/Temporary_Pedestrian_Facilities_Handbook.pdf.

See also Caltrans' Traffic Operations Policy Directive 11-01 "Accommodating Bicyclists in Temporary Traffic Control Zones" at: www.dot.ca.gov/trafficops/policy/11-01.pdf.

All curb ramps and pedestrian facilities located within the limits of the project are required to be brought up to current ADA standards as part of this project. The TMP must also comply with the requirements of corresponding jurisdictions. For further TMP assistance, please contact the

Caltrans District 4 Office of Traffic Management Operations at (510) 286-4579. Further traffic management information is available at the following website:

www.dot.ca.gov/hq/traffops/trafmgmt/tmp_lcs/index.htm.

Transportation Permit

Project work that requires movement of oversized or excessive load vehicles on State roadways requires a Transportation Permit that is issued by Caltrans. To apply, a completed Transportation Permit application with the determined specific route(s) for the shipper to follow from origin to destination must be submitted to:

Caltrans Transportation Permits Office
1823 14th Street
Sacramento, CA 95811-7119.

See the following website for more information about Transportation Permits:

http://www.dot.ca.gov/trafficops/permits/index.html

Encroachment Permit

Please be advised that any work or traffic control that encroaches onto the State right-of-way (ROW) requires an Encroachment Permit that is issued by Caltrans. Traffic-related mitigation measures should be incorporated into the construction plans prior to the encroachment permit process. To apply, a completed Encroachment Permit application, the adopted environmental document, and five (5) sets of plans clearly indicating State ROW must be submitted to the address below. Traffic-related mitigation measures should be incorporated into the construction plans prior to the encroachment permit process.

David Salladay, District Office Chief
Office of Permits, MS 5E
California Department of Transportation, District 4
P.O. Box 23660
Oakland, CA 94623-0660

See the following website for more information:

http://www.dot.ca.gov/trafficops/ep/index.html

Thank you again for including Caltrans in the environmental review process. We look forward to working with the California Department of Parks and Recreation to improve pedestrian, bicycle and vehicular access to the Pigeon Point Light Station State Historic Park. Please contact us for early coordination on the new site access from SR 1. Should you have any questions regarding this letter, please contact Jannette Ramirez at 510-286-5535 or jannette.ramirez@dot.ca.gov.

Sincerely,

PATRICIA MAURICE
District Branch Chief
Local Development - Intergovernmental Review

c: State Clearinghouse

2.4.11 LETTER 11

Jeff ey Daniel Parry

Subject: Pigeon Pt. GP comment

Email from Jeffrey Daniel Parry:

Dear California Department of Parks and Recreation Pigeon Point Planning Team,
Under the public review draft of the Pigeon Point Light Station State Historic Park General Plan and IS/MND on page 4-35 under the Visual and Scenic Resource Management Guidelines: Visual.5.
I am in favor of minimizing the nighttime light pollution but would like to add a fifth component related to the color spectrum wavelength of the illumination source.

1. Minimize nighttime light pollution and restrict to use to areas where lighting is necessary for park security and safety or to preserve the cultural use of the site, such as the beaconing pattern of the Lighthouse, to allow the visitors to better experience the night sky on a clear night and limit interference with activity of nocturnal species.
2. Equip any permanent structure with outdoor light shields that concentrate the the illumination downward to reduce direct and reflected light pollution.
3. Ensure that the direct source of the lighting (bulb, sens, filament, tube, etc) is not be visible off site and the lighting will be installed as low as possible on poles and /or structures to minimize light pollution of the night sky.
4. Confirm that the candle power of any safety of the illumination at ground level does not exceed what is required by any safety or security regulations of any government agency with regulatory oversight.
5. **Ensure that any outdoor direct source of lighting reduces or eliminates the blue color spectrum wavelengths of the light source by using illumination that is 2700K color spectrum or under. (2700K-1800K)**

A dim amber color spectrum wavelength lighting is ideal. Here are a few reasons for adding a fifth component related to color spectrum wavelength (nm).

- Research documents the disorientation of sea turtles by artificial lighting. The photo-orientation response of loggerhead sea turtles shows a 10x difference between light at 450 nm versus 600 nm.
- Light sources that have a strong blue and ultraviolet component are particularly attractive to insects more than yellow light. Lights without substantial short wavelength emission, from simple yellow “bug” lights to low pressure sodium, substantially reduce or eliminate this phototactic response.
- Most bats are insectivores and have long been observed to feed around lights at night.
- Blue-rich light disrupts circadian function in wildlife. The tendency of blue-rich light to synchronize circadian function is common in mammals and there is evidence for it in amphibians as well as plankton.
- The bluest light sources produce 15-20% more radiant sky glow than HPS or low-pressure sodium (LPS). This effect is compounded for visual observation, as practiced by casual stargazers and amateur astronomers, by the shift of dark-adapted vision toward increased sensitivity to shorter wavelengths. In a relatively dark suburban or rural area,where the eyes can become completely or nearly completely dark-adapted (scotopic), the brightness of the sky glow produced by artificial lighting can appear 3–5 times brighter for blue-rich light sources as compared to HPS and up to 15 times as bright as compared to LPS.

My reasons are from a publication by the International Dark-Sky Association.
http://darksky.org/lighting/model-lighting-laws-policy/

Thank you for considering this addition. Please feel free to contact me for further information.

Jeffrey Daniel Parry
jeffdparry@gmail.com
210 Pigeon Point Road
Pescadero, CA 94060
650-879-9999 home
650-879-0632 work
831-252-7279 cell

Jeff Parry Photography
HI-Pigeon Point Lighthouse Hostel
Santa Cruz Astronomy Club
International Dark Sky Association Member Santa Cruz Chapter
"Due to light pollution, the Milky Way is not visible to more than one-third nearly 80% of North Americans." The new world atlas of artificial night sky

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Appendices

A: Stakeholder Interviews

B: Summary of Public Outreach

C: Bluff Erosion and Coastal Hazards Study

D: Biological Resources - Species List

E: List and Description of Systemwide Planning Influence

F: List and Description of Regional Planning Influence

G: List and Description of Park Planning Influence

H: Existing Laws, Codes, and Policies

I: Visitor Use Assumptions

J: Parking Estimates

K: California Red-Legged Frog and San Francisco Garter Snake Conservation Measures

L: Nesting Bird and Nest Protection Measures

M: Noise Background and Modeling Data

A Stakeholder Interviews

PIGEON POINT LIGHT STATION STATE HISTORIC PARK

General Plan and IS/MND

Stakeholder Interviews

Stakeholder Interview: California Coastal Conservancy

11am, Wednesday, January 6, 2016
Conference Call

Participants

- **Janet Diehl,** Central Coast Project Manager, California Coastal Conservancy
- **Tim Duff,** Central Coast Project Manager, California Coastal Conservancy
- **Barney Matsumoto,** Supervising Landscape Architect, California State Parks
- **Isabelle Minn,** Principal, PlaceWorks
- **Jesse Jones,** Project Landscape Designer, PlaceWorks

Relationship between California Coastal Conservancy and Pigeon Point Light Station State Historic Park and California State Parks

- California Coastal Conservancy serves an important role in providing grants for acquisition and capital improvements for coastal projects. Specifically at Pigeon Point, the Coastal Conservancy provided funds to:
    - Acquire the land adjacent to the park (Bolsa Point Ranches, Lighthouse Ranch, Cloverdale Ranch, and Wilburs Watch Bluff).
        - Tim and Janet noted that California Department of Fish and Game were involved in the transfer of Bolsa Point Ranches because of the drainage channel that runs through the site.
    - Plan and construct recent improvements at Pigeon Point, including the parking lot expansion, restrooms, and bluff trail.
    - Develop construction drawings for the lighthouse restoration.

Coastal Trail

- It is important to consider the larger open space and trail context – specifically how Pigeon Point can connect to other parks and open space utilizing the Coastal Trail.
- A major priority is connecting Pigeon Point State Historic Park south to Gazos Creek/Gazos Beach at the northern end of Año Nuevo State Park.
    - Coastal Conservancy would like California State Parks to acquire the land between Pigeon Point State Historic Park and Gazos Creek State Beach. This includes the parcel directly to the south of Pigeon Point State Historic Park, called Pigeon Point Bluffs and owned by San Mateo County, as well as the bluff top corridor of the Cloverdale Ranch property owned by Peninsula Open Space Trust (POST). These two properties represent the gap in the Coastal Trail between the Pigeon Point State Historic Park and Gazos Creek park units.
- State Parks could include a "placeholder" alignment for the trail connecting the two sections of Pigeon Point State Historic Park as a long-term vision in the General Plan. State Parks could discuss potential alignment with POST.
- Best to align trail along top of bluff rather than along beach.
    - Precedent project: Cowell-Purisima Trail (located South of Half Moon Bay) occupied a very narrow corridor along the bluff top. May be helpful in determining permitting needed for trail in San Mateo County.
- Ideal to have a multi-use trail (bike/hike) whenever feasible.
    - There is a major need to accommodate cyclists along this section of the coast.
    - Potential issues with allowing dogs due to concerns by adjacent farmers about food safety and animal waste.

- Unlikely to need to accommodate equestrian use in Pigeon Point State Historic Park.

Northern area

- Camping in this area would be in line with the Coastal Conservancy mandate to support non-commercial, affordable accommodations along the coast. Further review would be necessary to investigate feasibility but initial assets include:
    - Potentially good location because of the wide terrace between Highway 1 and the bluff.
    - Could utilize tree break along Hwy 1 as a visual buffer.
- Beach access is likely feasible here and is needed to accommodate visitors.

Overnight accommodations

- RV camping along Pigeon Point Road seems problematic due to limited right-of-way width and potential conflict with adjacent farms.
- Hostel is considered an important affordable source of overnight coastal accommodations. It is a well-loved institution.

Important priorities

- Opening the lighthouse to visitors is an important goal for Coastal Conservancy as it will improve the visitor experience and generally improve the aesthetic condition at the park.
- Connecting to the nearby coastal open spaces should be addressed in General Plan.
- Extending the Coastal Trail to the south to Gazos Creek is a high priority for the Coastal Conservancy.
- Maintaining the hostel as an overnight destination is also a priority.

Potential challenges

- Parking
    - Pigeon Point Road – California State Parks could potentially take over from San Mateo County, allowing them better capacity to control circulation and expand parking along the road. California State Parks would need to contact San Mateo County.
    - Coastal Conservancy funded a parking study that showed increase parking along Pigeon Point Road, which will be provided to California State Parks for review in the General Plan.
- Funding and the need for larger vision
    - The Santa Cruz District of the Coastal Commission has approximately $500,000 of mitigation funds that could be used at Pigeon Point. In recent past, they did not want to fund water system upgrades because it was considered to be general upkeep rather than a new project. The Coastal Commission might be more willing to provide funds once the General Plan provides a vision for the park. It will be important to emphasize that a consistent and reliable water supply is and will continue to be important in expanding the hostel or addition of new uses in the park, such as a campground.

PIGEON POINT LIGHT STATION STATE HISTORIC PARK

General Plan and IS/MND

Stakeholder Interviews

Stakeholder Interview: Coastside State Parks Association (CSPA)

1:00pm, Friday, January 8, 2016

In-person at Fog Signal Building Pigeon Point Light Station State Historic Park

Participants

- **Rick Mohr,** President, Board of Directors, Coastside State Parks Association
- **Janet Oulton,** Board of Directors, Coastside State Parks Association
- **Jesse Jones,** Project Landscape Designer, PlaceWorks

Relationship between CSPA and California State Parks and Pigeon Point Light Station State Historic Park

- CSPA supports 15 California State Parks along the San Mateo County coast from Gray Whale Cove State Beach in the north to Año Nuevo State Park in the south, primarily by fundraising for:
    - Volunteer docent programs
    - Interpretive exhibits
    - Educational program
    - Habitat and native plant restoration projects
    - Capital improvements - this is relatively new for CSPA and the new deck at Pigeon Point will be one of the first construction projects at Pigeon Point that they are involved in. (Note that CSPA does not carry out the construction but helps in fundraising for improvements and identifying areas where improvements can be made).
- CSPA is entirely volunteer run by a board that manages CSPA projects and involvement and that includes Pigeon Point volunteer docents.
- Annually CSPA raises about $200,000 and is able to spend approximately $100,000 on projects. Major sources of funds come from:
    - Three park stores:
        - Año Nuevo State Park – largest and main store with a small office for CSPA.
        - Pigeon Point – limited space for storage of books and other things for sale.
        - Half Moon Bay – smaller in size to Pigeon Point.
    - Donor boxes located at CSPA parks. The donor box at Pigeon Point is the most lucrative of all the donor boxes and all funds that are donated at Pigeon Point are restricted to being spent on projects at Pigeon Point.
        - CSPA would like recommendations if there on a better placement for the Donation Box to encourage people to donate.
    - Events
        - Private trip for 8 photographers to go out with a ranger at Año Nuevo State Park to photograph elephant seals
        - 2 days a year, Año Nuevo State Park allows CSPA to take over admission to the park. On these days, visitors are charged $60 for a 3-hour long trip to visit the elephant seals without always being guided by a docent – this is much longer than the typical visit so visitors are allowed to spend more time
        - Would be interested in a fundraising event at Pigeon Point – such as one day a year all admission tickets to the lighthouse go to CSPA for longer tours of greater depth– they could advertise for this event with their members to draw attendance

PIGEON POINT LIGHT STATION STATE HISTORIC PARK

General Plan and IS/MND

Stakeholder Interviews

- CSPA assumes their role in the future will continue in a similar fashion with the potential for increased responsibility and funding for more capital projects because State Parks is significantly limited financially with what they can carry out – assumes CSPA's role will primarily continue to be to support volunteer docents and fundraising.
- Although CSPA is not involved in fundraising for the renovation of the lighthouse, they assume they will continue to be involved in the interpretive program and upkeep after the renovation is complete.

Current Projects at Pigeon Point State Historic Park

- Deck behind fog signal building – CSPA is paying for the new deck that will wrap around the fog signal building that will replace the existing deck and remove the section with the stairs that is not ADA accessible – currently waiting on hostel to relocate hot tub because both projects will be constructed using the same coastal permit (need to confirm with hostel).
- Fence and boardwalk removal – CSPA is paying for the removal of the raised boardwalk and white picket fence along the south side of the main access road in front of the hostel. The boardwalk will be retained in front of the park store to allow ADA access but will be removed along the entire length of the access road.
- Interpretive plan for oil house – the docents are developing an exhibit for the oil house likely related to the story of how the lighthouse works.

Visitor Experience

- Primary visitor uses include:
    - Viewing lighthouse and historic exhibits.
    - Whale watching.
- CSPA estimates that approximately 50 percent of visitors are just stopping on their way down Highway 1 without planning to have Pigeon Point as a destination – many people just see it as a bathroom break.

Suggested areas for improvements/considerations

- Bathrooms – they do not have water and are smelly on warm days.
- Parking – currently at capacity for current use with many people parking along Pigeon Point Road.
- Security – there has been a number of issues with cars being broken into while the owners visit the park.
- Water – people want to wash their hands or fill up water bottles without having to pay for bottled water in the store. Site needs consistent and reliable water supply.
- Access to the tower – this is a major disappointment for visitors who realize that they cannot go up in the tower. It will be important to consider capacity for trips to the tower once it is open – potentially consider selling some reservations for scheduled tickets online before and saving some for walk-up users.

Potential opportunities

- Fresnel lens – the lens in the Fog Signal Building is a substitute for being able to go up in the tower. Potentially consider getting a replica once it goes back in the tower for people who cannot go up.

PIGEON POINT LIGHT STATION STATE HISTORIC PARK

General Plan and IS/MND

Stakeholder Interviews

- Shipwreck – the side of the bow of a ship that crashed at Pigeon Point is now located at Año Nuevo State Park. It has been proposed to be relocated to the area in front of the oil house. The wreck is approximately 20' long and 10' high and would likely be best sited at the bottom of the planted hill below the oil house building (see location in the notes on preferred concept).
- Hostel – It would be ideal if the hostel could be more in line with the style of the other elements in the historic area (potentially like a recreated Victorian house but would have to decide which time period to recreate) and could be used for more interpretation of the family life of a lightkeeper. However, the hostel has been very accommodating to CSPA projects and they have a good working relationship. They would not want to create conflict and are reluctant to suggest removing low-cost accommodations. Noted that the hot tub is somewhat famous with visitors who are not even staying at the hostel asking where it is and if they can look at it.
- Concessions – a significant number of people ask where they can get a cup or coffee or snack in the area. There are limited options. A coffee shop or tea house – potentially classic English tea house - could potentially be lucrative but there is currently not space for this at the park. Seems like it could be provided by the hostel although it has not been discussed with them.
- Fog Signal Building – the docent office located on the south side of the building could potentially be used as the ticket office for the light house since it has a window that opens directly out to the main access drive. The other room (on the north side of the building) is used as the general manager of the hostel's office.
- Park store – the southwest side of the park store is used as the residence for the hostel general manager and restroom for docents. If the hostel expands it could potentially provide a residence in the expansion and the park store could be expanded to provide office space for docents or additional storage space.
- Fog Signal – the horn located on the backside of the Fog Signal Building could use more interpretation and repair.
- Historic water tank area – could be location for new exhibit space building. This could potentially be a two-story structure with museum on first floor and observation deck on top but would have to consider if this would restrict views from main area).
- Organizing the historic district into interpretive zones – there are a lot of stories to tell here:
    - Life of a Lightkeeper – story of what it is like to live at Pigeon Point and run the lighthouse – could potentially be located in water tank area if constructed as a two-story structure or in hostel if renovated to reflect the historic style.
    - Navigation – how lighthouses and fog signals were used in ocean navigation – could be located in lighthouse and oil house.
    - Whaling and shipwrecks – the story of the shipwreck that initiated the need for the lighthouse – could be located in Whaler's Cove and the area in front of the oil house if the shipwreck is relocated from Año Nuevo State Park.

Northern parcel

- If used for camping, water would be the major issue. Noted that the closest campsite was Butano (inland) and Half Moon Bay Park (coastal).
- A picnic area would be very desirable if it had bathrooms and water.

Other CSPA projects

- CSPA got a grant to investigate a hike/bike campsite at Green Valley near Montara. It would be located off the trail between Montara State Beach and Devil's Slide and would have very small capacity.

Access

- Bicycle – it would be good to include bike racks since they usually just prop bikes up against the fence. There are a lot of cyclists who stop at Pigeon Point. Many are on their way to Santa Cruz and are just looking for water.

- Equestrian – it is unlikely that the site would be used for horse riding.
- Tour buses – the General Plan should consider places for tour buses to park. They usually arrive early in the day and only stay for a very short amount of time currently.

Major challenges

- Restoring the tower will be a major financial challenge for the park.
- California State Parks staff to complete projects. Currently understaffed to complete projects that are currently funded.

PIGEON POINT LIGHT STATION STATE HISTORIC PARK

General Plan and IS/MND

Stakeholder Interviews

Stakeholder Interview: Exploring New Horizons

2:00pm, Wednesday, January 13, 2016
Conference call

Participants

- **Heidi Plowe,** Vice President, Program Director, Pigeon Point
- **Jesse Jones,** Project Landscape Designer, PlaceWorks

Environmental Education at Pigeon Point and Exploring New Horizons Program

- Exploring New Horizons has operated environmental education in the area since 1979 and has been at Pigeon Point since 1983.
- In the past 5 years, the program has expanded to offer a spring program and now operates from August to November and January to June. The program runs Monday to Friday except federal holidays.
- Typical group is 30 fifth or sixth grade students, although can include students from kindergarten to 8th grade with between 15 and 50 students at a time. Groups are also accompanied by parent/teacher chaperones.
- Staff includes four naturalists that teach marine and cultural history.
    - The curriculum is predominately focused on natural history, although Exploring New Horizons work with Pigeon Point docents to train staff to teach some of the maritime history of the site.
- On Tuesday and Thursday, the group goes to Año Nuevo State Park for the day and is back at Pigeon Point between 2:00pm and 3:30pm.
- Students are either transported by bus or by parents – need parking while at the site.

Student Experience at Pigeon Point Light Station State Historic Park

- Tidepools are important areas to teach about marine creatures and the food web.
    - Students typically access the tidepools from the eroded trail directly to the north of the parking lot. Stairs would be useful but climbing down is typically not a problem for the students. It is not accessible to students in wheelchairs.
- Major spaces for gathering or outdoor lessons include (see attached map):
    - Main access pathway in front of hostel – this is typically used to gather to transition to the next activity.
    - Deck behind fog signal building – used for whale watching and viewing other marine life.
    - Council circle along trail to Whaler's Cove.
    - Large picnic area in front of lighthouse – it would be helpful to have more tables and seating in this area.
- As a final activity, students are asked to list their favorite part of their time at Pigeon Point. Some of the common themes include:
    - Whales.
    - Tidepools.
    - Staying away from home.
    - Learning about the lighthouse.
        - Students love the fog signal building, particularly because Exploring New Horizons is allowed to use it at night when no one is at the site. They turn on the Fresnel lens to create a glowing effect as an evening activity that is very popular.
- Students are typically moving in a large group with lots of supervision, which is how they avoid safety issues.

Conflicts and Problem Areas

- Crowds – sometimes the site is overcrowded with day-use visitors and other schools doing field trips to Pigeon Point.

- Conflict with day-use visitors – there has been some issue with large tour groups spilling into the park in mass and not following the rules of the park, specifically smoking in the historic area. Heidi notes that they do not seem mindful of the site and that is would be useful to have communication with the tour companies about alerting their passengers to park rules before parking.

Suggested areas for improvements/considerations

- Trails – more opportunities to walk with the students would be very helpful. There are no real hikes at the site although sometimes they walk the short trail past Whaler's Cove or walk along Pigeon Point Road to Pistachio Beach. If there were more opportunities to walk at Pigeon Point, Exploring New Horizons would use them.
    - If there was a trail between Pigeon Point and Gazos Creek, Heidi believes that students could walk this distance.
- Indoor space – need more capacity than is available in the multipurpose room, especially on rainy days. Ideally this space could accommodate 50-75 students and would be located near the hostel.
- Interactive interpretive elements would expand the experience at the park. Heidi suggested binoculars so that people could get a better view out to the ocean.
- The deck behind the fog signal building needs improvement. Heidi suggests making the railing at a height that does not block views for young people but also does not allow people to sit on it (at its current height, students climb up onto it).
- Lighthouse – excited to see the lighthouse restored and integrated into the site by removing the chain link fence and allowing access up to the tower.
- Parking lot – already looks degraded.
- Main access road in front of hostel – very slippery in the rain and has a lot of uneven paving. Repaving the road from the parking lot to the Fog Signal Building would reduce hazards for students and visitors.
- Gathering points with bathrooms outside of the central historic area – could use if they were available. It would help alleviate some of the crowding in the central historic area and create an alternative space for the environmental education group to hold their outdoor lessons.

Northern Area

- From an environmental education perspective, features that are good for learning include: tidepools, wide open beaches, trails, and large views.
- Camping would not really be an option for the students because it is not part of their program.

Important Features

- Hostel – the hostel is great part of the recent history of the site.
- Students have a personal experience with the site – Heidi expressed some concern that if the site becomes more crowded it will lose this unique and private experience for the students. Currently around the end of the school year and the end of the summer, it starts to feel that way.

PIGEON POINT LIGHT STATION STATE HISTORIC PARK

General Plan and IS/MND

Stakeholder Interviews

Stakeholder Interview: Peninsula Open Space Trust (POST)

3:00pm, Thursday, January 14, 2016
Conference call

Participants

- **Daniel Olstein ,** Director, Land Stewardship, POST
- **Liz Westbrook,** Project Manager, Regional Trails
- **Isabelle Minn,** Principal, PlaceWorks
- **Jesse Jones,** Project Landscape Designer, PlaceWorks

POST's Projects at/near Pigeon Point Light Station State Historic Park

- Whaler's Cove and Mel's Lane
  - Late 1990's – urgent deal to connect the park to other public property.
  - Most expensive POST project to date.
  - A highlight in POST's history and used in marketing for the "Save the Endangered Coast" campaign – considered to be one of the crown jewels of the campaign.
  - Now owned by California State Parks but POST allowed to market the organization onsite.
- Cloverdale Ranches
  - Purchased in 1997.
  - Main holding: includes 5000+ acre property east of Highway 1, including Wilbur's Watch trail – some of the property was transferred to Butano State Park.
  - Coastal section: includes property on the west side of Highway 1 between the San Mateo County property (directly adjacent to Pigeon Point) to Gazos Creek – this includes approximately 1.7 miles of bluff which likely serve as the location for the Coastal Trail to connect the parks.
    - POST notes that although this concept has been unofficially considered, a concept has not been presented to the farmers who are leasing the land and they prefer to discuss it with them prior to it being discussed publicly.
- Bolsa Point
  - Acquired in 2001-2002 and then resold to the Muzzi family. POST retained a 25' foot easement along the east side of Pigeon Point Road.
  - Includes the raised agricultural land along east side of Pigeon Point Road.
  - The easements are in place but there are currently no plans to develop a trail.
  - Muzzi family has the rights to close access to the trail/easement up to 15 times a year for agricultural practices, such as spraying.

Northern Parcel (Maurer's Beach Ranch)

- POST transferred land to California State Parks with no plans to use the parcel.
- Assets of the northern parcel include: good coastal prairie habitat, nice beach with potential for beach access with or without connection to the coastal trail.
- There are two properties between the northern parcel and the main parcel of Pigeon Point Lighthouse State Historic Park.
  - The northern property is owned by the Muzzi family and POST has an easement that floats 50 feet from the bluff along the property.
  - The southern property is owned by the Cutler family. They are not interested in public access through their property at this time.

PIGEON POINT LIGHT STATION STATE HISTORIC PARK

General Plan and IS/MND

Stakeholder Interviews

Camping

- Agricultural stakeholders (specifically the Muzzi family) would likely have an issue with camping along Pigeon Point Road because of the proximity between campers and agricultural activity
    - POST notes that RV's used to park illegally along Pigeon Point Road and the Muzzi family worked with California State Parks to stop it by putting the berm along the road.
- Northern area might be more suitable for camping although potential considerations include water supply and potential sensitive habitat.
    - POST notes that they did not do a vegetation or habitat study. There may be protected species in this area because the land has not been used for agriculture in recent history.

Visitor Experience/Assets of Pigeon Point

- Whale watching – the Pigeon Point peninsula offers a unique experience to be farther out in the ocean than other places along the San Mateo coast.
- Lots of marine wildlife.
- The accessible spots are great – it would be ideal to offer an accessible experience along the coastline – potentially along the Coastal Trail.

Suggested areas for improvements/considerations

- Beach access at Pistachio Beach and tidepools.
- Invasive plant removal.

Access

- The vision for the trail connecting Pigeon Point to Gazos Creek is a well-built trail that could accommodate hikers and cruiser-style bikers (as compared to serious cyclists making a larger trip down the coast).

Agricultural Stakeholders

- POST has a good relationship with adjacent agricultural land owners or leasers and suggests that they should be made aware of any projects that might impact them. Specifically, POST would like to reach out to the Muzzi family if the General Plan shows any public access along the POST easement along the east side of Pigeon Point Road. POST offers to facilitate a conversation if needed.

PIGEON POINT LIGHT STATION STATE HISTORIC PARK

General Plan and IS/MND

Stakeholder Interviews

Stakeholder Interview: Hosteling International

11:00am, Wednesday, January 13, 2016
Conference call

Participants

- **Danielle Brumfitt,** Vice President, Northwest Region, Hosteling International
- **Danny Case,** Director of Operations, Hosteling International
- **Jeff Parry,** General Manager, Pigeon Point Lighthouse Hostel, Hosteling International
- **Jesse Jones,** Project Landscape Designer, PlaceWorks

On-site Conversation

Prior to the conference call, Jesse met Jeff briefly on site at the Pigeon Point Lighthouse Hostel and toured the site to examine existing use spaces, potential locations for new hostel facilities, and potential improvement areas, including:

- Curb between access road and bathroom is in disrepair – also difficult to use ADA ramp because it is located a long way from restroom.
- Paving behind hostel sign is in disrepair.
- ADA pathway between buildings and drainage ditch is too narrow.
- Drainage ditch is uncovered and a tripping hazard.
- In recent years, car break-ins have increased in the parking lot. The hostel would like to install a camera that could be watched from the hostel office.
- The environmental education group uses the multipurpose room between the Dolphin building and the Seal building as an indoor classroom space and as a space to eat their meals. The hostel renovated the room after the Fresnel lens was moved to the Fog Signal Building and it was no longer available for use in the environmental education program.
- The preferred location for the relocation of the hot tub is behind the Whale building near the existing fence. This placement would not restrict views of the ocean (which would occur if it is placed near the existing bench). Jeff noted that hostel guests frequently sit on the north side of the hostel to watch the ocean.
- If the hostel were to expand it would likely be to provide more "family-style" accommodations. One potential location could be a new wing at the western end where the existing fire pit is located.
- Dark Sky Park – the clarity of the night sky is spectacular at Pigeon Point. Jeff sees this as an opportunity to emphasize nighttime stargazing activities by limiting ambient light at the site.

History of the Hostel at Pigeon Point

- Hostel initially operated on year-to-year lease but now on a 2-year least that expires in mid-August but is expected to be renewed.
- Hosteling International paid for the renovation of the Coast Guard buildings as a hostel and pays for all upgrades, including the conversion of a garage to a multipurpose room for use by Exploring New Horizons (the environmental education group that operates on site) – with some financial support from the Coastal Conservancy through grants.
- Relationship to Exploring New Horizons – early hostel managers had low occupancy and established the program to increase overnight use. The hostel ran the program until it grew so large that Exploring New Horizons took over. The hostel continues to offer reduced rates and booking priority for Exploring New Horizons. It is a good partnership because the program needs to use the hostel when it is typically slow (Monday thru Thursday, September to May). Students in the environmental education program make up a quarter of all overnight guests at the hostel. The hostel and Exploring New Horizons have a good working relationship. The biggest challenge to date has been the loss of the Fog Signal Building as a meeting place for the environmental education classes and the subsequent renovation of the multipurpose room for classroom and eating space.

- Hosteling International noted that California State Parks verbally indicated that the hostel could resume use of the Fog Signal Building after the Fresnel Lens was put back in the tower, which would still be a preference for the hostel although they are not sure if that agreement is still being considered.

Future Projects and Needs

- The hostel will likely need to expand in the next 30 years – it would be ideal if the General Plan could consider an expansion. The goal of expansion would be to provide more low-cost accommodation options for families in single rooms. The ideal situation for expansion would be a partnership with California State Parks because it helps with the permitting process.
- Although they are being developed independently, the hot tub relocation and the deck renovation and expansion will be submitted together to San Mateo County for permitting. Both are currently in the planning and design phase but Hosteling International can provide more information as it moves forward. Overall cost is unknown but Hosteling International would like to include several green features, such as a solar array and saline system.

Hostel Visitor Experience

- Hostel guests tend to just hang out (indoor and outdoor), use the Wi-Fi, and cook.
- Historically, the hostel used to offer tours into the lighthouse – would like to offer this to guests after the renovation is complete – potentially after hours.
- The hostel typically sends people to Whaler's Cove if they want to get to the beach because the stairs are easier to use to get down to the beach than the eroded trails, although other people walk down to the beach north of the hostel and explore the tide pools.
- There are limited conflicts between hostel guests and day-use visitors.

Events

- It is in Hosteling International's mission to have a direct impact on their neighborhood or local community – at Pigeon Point this extends to the State Park.
- Great Hostel Give Back – exchange one night stay at the hostel in exchange for volunteering at the hostel/park.
- Events at the hostel have included stargazing, concerts, the lighthouse anniversary event, and Santa comes to the lighthouse. Would like to offer additional events, such as acoustic concerts, night hikes, and night events to turn on the Fresnel lens.
- Hosteling International is active online and through social media, which is used to market the hostel and events. Best way to know about events is through their Facebook page.

Suggested areas for improvements/considerations

- Pigeon Point Road is currently hitting its limit in terms of people driving on it and parking.
- It is important not to lose the sense of privacy and awe of the park by bringing too many people into the historic area.
- Hosteling International would like to provide more of an experience with the history of the site.

Camping/yurts

- If camping or yurts are explored at Pigeon Point, Hosteling International would like to see them managed in tandem with the hostel.
- The group was surprised by the idea but could be interesting. It is rare that hostels have camping or alternative accommodations and could only think of one example run by Hosteling International.

PIGEON POINT LIGHT STATION STATE HISTORIC PARK

General Plan and IS/MND

Stakeholder Interviews

Stakeholder Interview: California Coastal Conservancy

11am, Wednesday, January 6, 2016
Conference Call

Participants

- **Janet Diehl,** Central Coast Project Manager, California Coastal Conservancy
- **Tim Duff,** Central Coast Project Manager, California Coastal Conservancy
- **Barney Matsumoto,** Supervising Landscape Architect, California State Parks
- **Isabelle Minn,** Principal, PlaceWorks
- **Jesse Jones,** Project Landscape Designer, PlaceWorks

Relationship between California Coastal Conservancy and Pigeon Point Light Station State Historic Park and California State Parks

- California Coastal Conservancy serves an important role in providing grants for acquisition and capital improvements for coastal projects. Specifically at Pigeon Point, the Coastal Conservancy provided funds to:
    - Acquire the land adjacent to the park (Bolsa Point Ranches, Lighthouse Ranch, Cloverdale Ranch, and Wilburs Watch Bluff).
        - Tim and Janet noted that California Department of Fish and Game were involved in the transfer of Bolsa Point Ranches because of the drainage channel that runs through the site.
    - Plan and construct recent improvements at Pigeon Point, including the parking lot expansion, restrooms, and bluff trail.
    - Develop construction drawings for the lighthouse restoration.

Coastal Trail

- It is important to consider the larger open space and trail context – specifically how Pigeon Point can connect to other parks and open space utilizing the Coastal Trail.
- A major priority is connecting Pigeon Point State Historic Park to Gazos Creek/Gazos Beach at the northern end of Año Nuevo State Park.
    - Coastal Conservancy would like to see California State Parks acquire the land south of Pigeon Point State Historic Park (currently owned by San Mateo County) to create this connection. State Parks would need to contact San Mateo County.
- State Parks could include a "placeholder" alignment for for the trail connecting the two sections of Pigeon Point State Historic Park as a long-term vision in the General Plan. State Parks could discuss potential alignment with POST.
- Best to align trail along top of bluff rather than along beach.
    - Precedent project: Cowell-Purisima Trail (located South of Half Moon Bay) occupied a very narrow corridor along the bluff top. May be helpful in determining permitting needed for trail in San Mateo County.
- Ideal to have a multi-use trail (bike/hike) whenever feasible.
    - There is a major need to accommodate cyclists along this section of the coast.
    - Potential issues with allowing dogs due to concerns by adjacent farmers about food safety and animal waste.
    - Unlikely to need to accommodate equestrian use in Pigeon Point State Historic Park.

PIGEON POINT LIGHT STATION STATE HISTORIC PARK

General Plan and IS/MND

Stakeholder Interviews

Northern area

- The northern area should be addressed with a "lighter touch" – focus should be on access to trail with less emphasis on beach access due to permitting concerns.
- Could include standalone parking.
- Camping in this area would be in line with the Coastal Conservancy mandate to support non-commercial, affordable accommodations along the coast.
    - Potentially good location because of the wide terrace between Highway 1 and the bluff.
    - Could utilize tree break along Hwy 1 as a visual buffer.

Overnight accommodations

- RV camping along Pigeon Point Road seems problematic due to limited right-of-way width and potential conflict with adjacent farms.
- Hostel is considered an important affordable source of overnight coastal accommodations. It is a well-loved institution.

Important priorities

- Opening the lighthouse to visitors is an important goal for Coastal Conservancy as it will improve the visitor experience and generally improve the aesthetic condition at the park.
- Connecting to the nearby coastal open spaces should be addressed in General Plan.
- Extending the Coastal Trail to the south to Gazos Creek is a high priority for the Coastal Conservancy.

Potential challenges

- Parking
    - Pigeon Point Road – California State Parks could potentially take over from San Mateo County, allowing them better capacity to control circulation and expand parking along the road. California State Parks would need to contact San Mateo County.
    - Coastal Conservancy funded a parking study that showed increase parking along Pigeon Point Road, which will be provided to California State Parks for review in the General Plan.
- Funding and the need for larger vision
    - The Santa Cruz District of the Coastal Commission has approximately $500,000 of mitigation funds that could be used at Pigeon Point. In recent past, they did not want to fund water system upgrades because it was considered to be general upkeep rather than a new project. The Coastal Commission might be more willing to provide funds once the General Plan provides a vision for the park. It will be important to emphasize that a consistent and reliable water supply is and will continue to be important in maintaining the park and supporting any planned expansion.

B Summary of Public Outreach

PIGEON POINT LIGHT STATION STATE HISTORIC PARK

General Plan and IS/MND

Survey Results

California Department of Parks and Recreation (State Parks) collected public feedback for the Pigeon Point Light Station State Historic Park General Plan at an on-site public outreach station and through an interactive project website. The on-site survey was at the park from June 1 to July 6, 2016 and included an informational booth with two large illustrations of the draft site plan and a paper survey that visitors could fill out at the park. A total of 151 surveys were completed on-site. The online survey was available on a project website from May 23 to July 8, 2016. During that time 83 people took part in the online effort. In total, State Parks collected 234 survey responses.

Both on-site and online surveys posed the same questions:

» What do you currently do during visits to Pigeon Point SHP?

- ◻ view lighthouse and historic interpretive features
- ◻ watch whales or other sea life
- ◻ spend the night at the youth hostel
- ◻ talk to docents
- ◻ visit the beach
- ◻ hike along the bluff
- ◻ hike along the beach
- ◻ picnic
- ◻ attend an outdoor education class or field trip
- ◻ other (please describe below)

» What would improve your experience at the park?

- ◻ more trails
- ◻ more parking
- ◻ more picnic areas
- ◻ opening the lighthouse for public tours
- ◻ light concessions (such as coffee or tea)
- ◻ full concessions (such as meals)
- ◻ more benches
- ◻ more beach access points
- ◻ improvements to Pigeon Point Road
- ◻ camping
- ◻ informational exhibits
- ◻ mobile phone site tours
- ◻ binoculars or scopes with
- ◻ views of ocean
- ◻ other (please describe below)

» Share your thoughts on the Draft Site Plan.

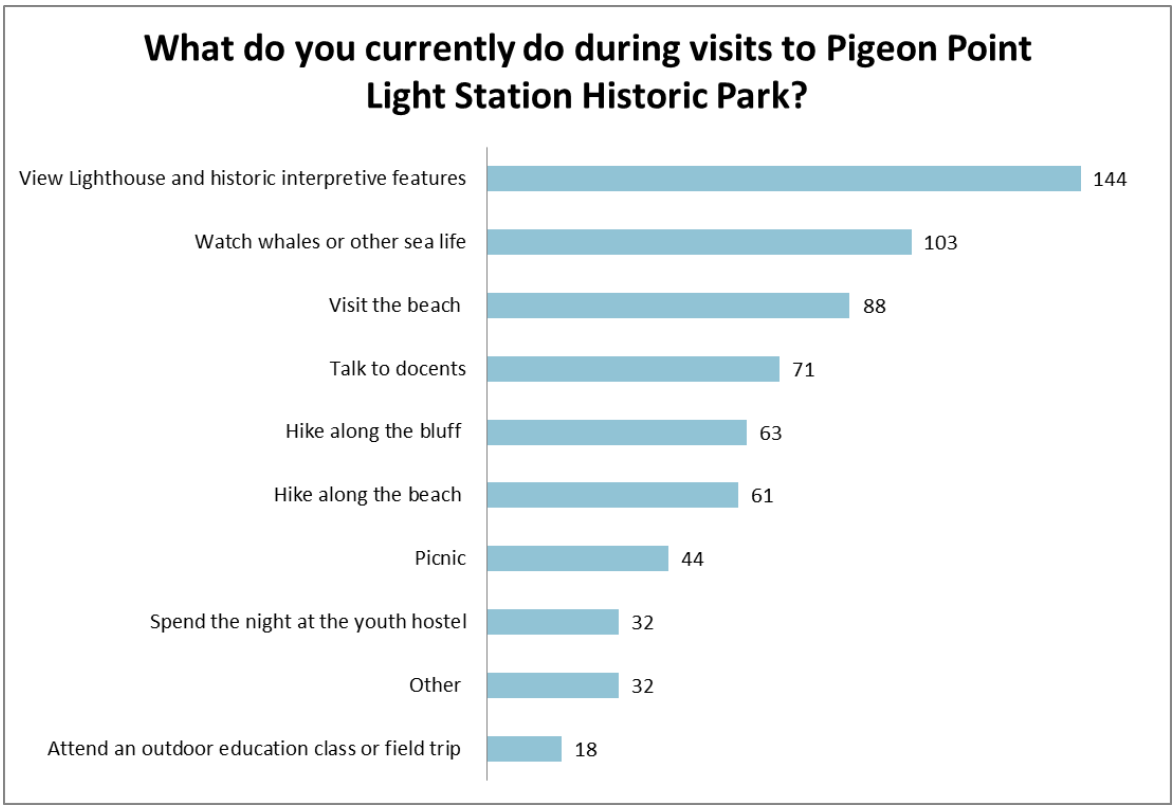
The online survey requested additional information, including name, income, race, and whether respondents had children. A summary of each question for both the on-site survey and online survey are provided below. A copy of the paper survey

and images of the project website can be found in Appendix A. Appendix B includes copies of all completed on-site surveys and Appendix C contains the results collected online.

ON-SITE SURVEY

QUESTION 1: WHAT DO YOU CURRENTLY DO DURING VISITS TO PIGEON POINT LIGHT STATION HISTORIC PARK?

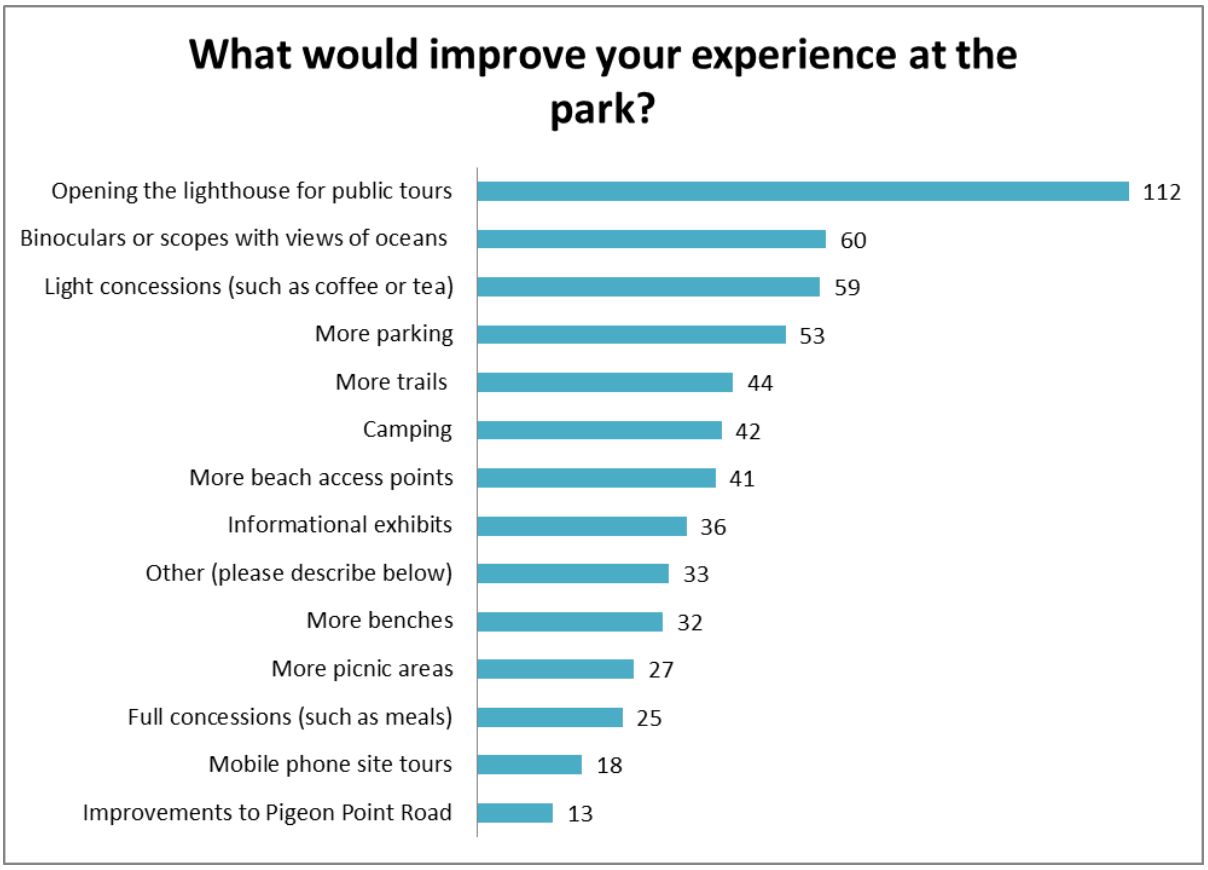
For Question 1, participants were asked to check all the boxes that applied to them. As shown in the table below, most people chose view lighthouse and historic interpretive features, followed by watch whales or other sea life, and visits to the beach. "Other" responses included birding, photography, surfing, and astronomy.



QUESTION 2: WHAT WOULD IMPROVE YOUR EXPERIENCE AT THE PARK?

For Question 2, survey responders were asked to prioritize the projects that were most important to them by placing a 1 in the box beside the item that is most important, a 2 in the box that is next important to them, and so on. Most respondents did not rank responses. Ranked responses and non-ranked responses were summarized separately. Of the non-ranked responses, opening the lighthouse for public tours was the most popular choice with (112 responses), followed by binoculars or scopes with views of oceans (60 responses) and then light concessions (59 responses).

There were 33 responses for "other." Some of the comments were: include more living history and hands on exhibits focused on the lighthouse and other maritime history, do not lose the intimate feel of the hot tub, include wind sheltered viewpoints, improve the restrooms, provide discounted specials for San Mateo County residents, and include better marked trails.



Of the ranked responses, survey respondents ranked camping as the number one option to improve their experience at the park, followed by more parking and more beach access points.

1. Camping
2. More parking
3. More beach access points
4. Improvements to Pigeon Point Road
5. Full concessions (tied)
5. Light concessions (tied)
5. Opening the lighthouse for public tours (tied)
6. Mobile phone site tours
7. Informational exhibits
8. More picnic areas
9. More trails, more benches (tied)

QUESTION 3: SHARE YOUR THOUGHTS ON THE DRAFT PLAN

Out of the 151 surveys, 64 people responded to this question. About half of the responses expressed gratitude for the continued work to improve the park and visitors' love of the park. Important themes that emerged from this question were that there are mixed feelings on parking, camping, and expansion of the park versus keeping it the way it is. As one visitor expressed,

> *Good idea, but the more facilities you have, the more people come. The flair and atmosphere of this incredible area may be destroyed. But it is also important to expand and restore and conserve for the future.*

Below are some of the other comments expressed. These are not in a ranked order.

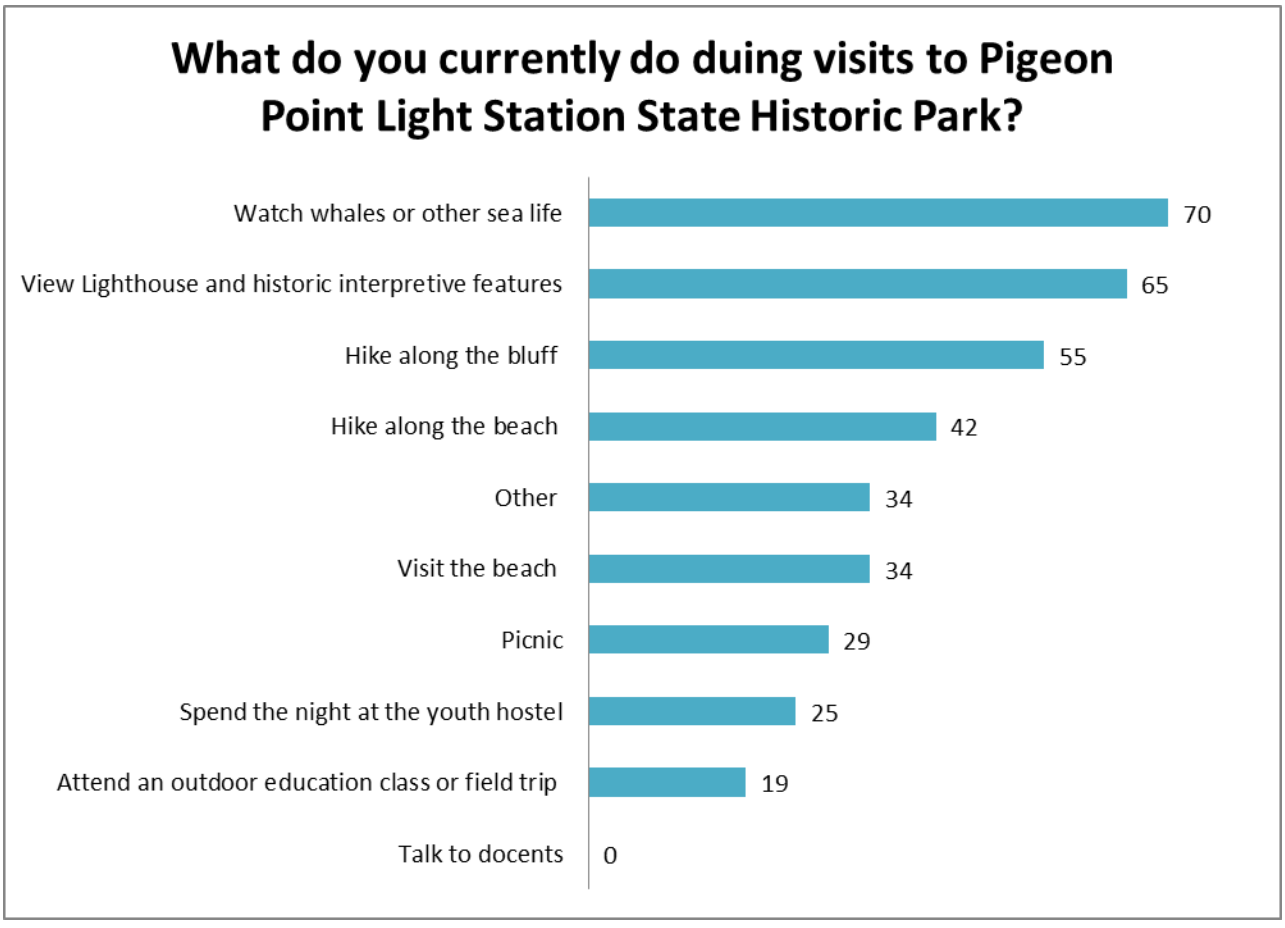
- *Boardwalk is a good addition for coastal habitat*
- *Leave the hot tub*
- *Gift shop proceeds should go to lighthouse restoration efforts*
- *Restoration of the lighthouse is a priority—expedite the process of getting this done*
- *Campground is a great idea*
- *Provide more staff with the expansion of the park*
- *Provide handicapped access*
- *The importance of having a historic district with the lighthouse as the center piece*
- *Free parking*
- *Provide seating along the coastline*
- *Interpretive elements related to shipwrecks and maritime history*
- *Expand public access with minimal impact to natural surroundings*
- *Interpretive loop too close to the hostel*
- *Add concessions*
- *Keep existing phone booth*
- *Offer "gifts" in the form of experiences*
- *Keep Pigeon Point the same, more people=more crowding, less secluded*

Responses differed in some key areas. For example, some respondents were excited about the idea of offering camping, other expressed concerns. Additionally, some like the idea of fee parking while others argued that parking should be free.

ONLINE SURVEY

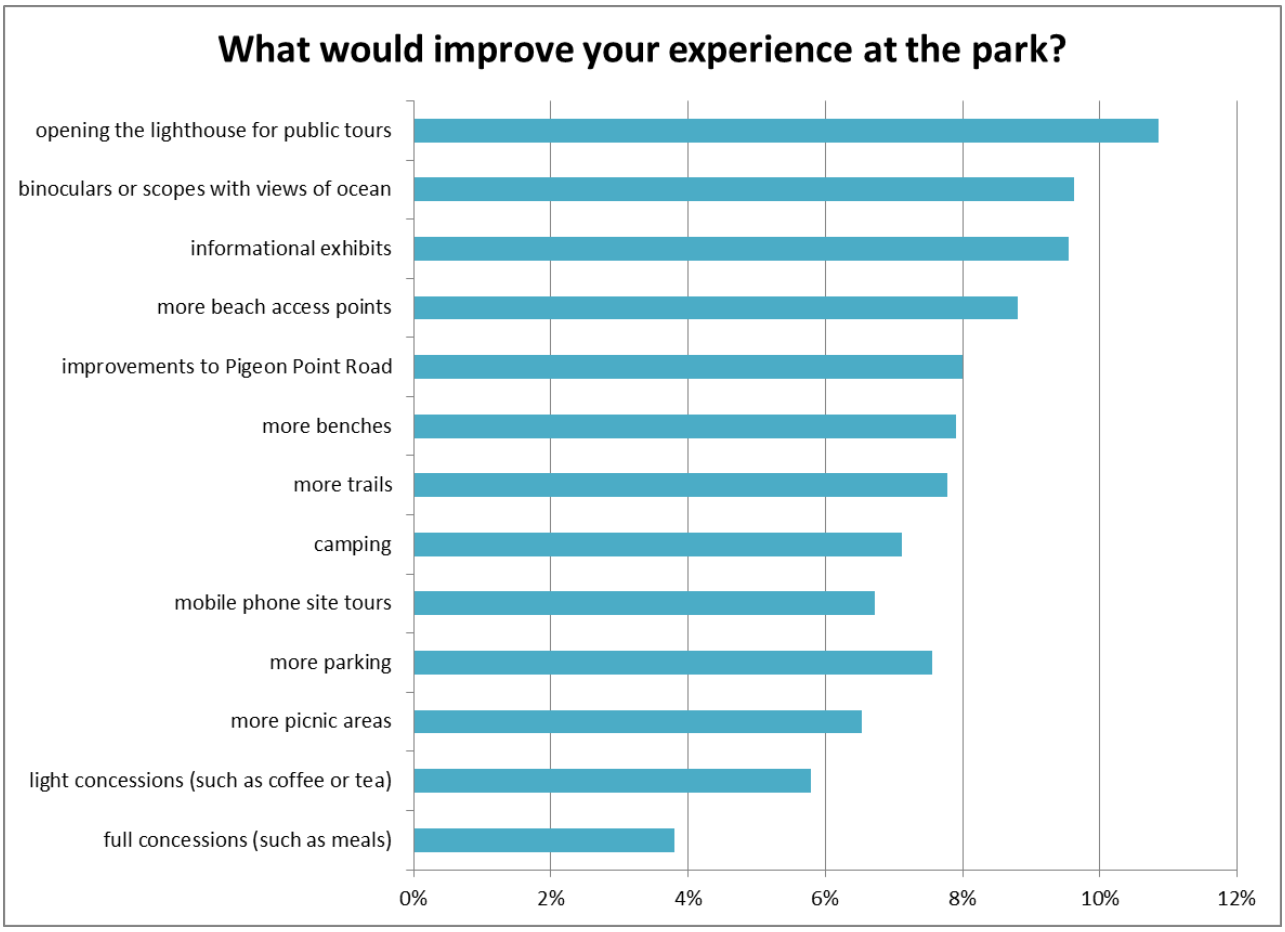
QUESTION 1: WHAT DO YOU CURRENTLY DO DURING VISITS TO PIGEON POINT LIGHT STATION HISTORIC PARK?

For Question 1, participants were asked to check all the boxes that applied to them. Out of 80 total responses for question 1 most people chose; watch whales or other sea life (70 responses), followed by view lighthouse and historic interpretive features (65 responses), and hike along the bluff (55 responses). "Other" responses included birding, photography, environmental education including in groups or individually, tide pooling, and celebrating a wedding at Pigeon Point. Four respondents identified themselves at docents at the park.



QUESTION 2: WHAT WOULD IMPROVE YOUR EXPERIENCE AT THE PARK?

For Question 2, survey responders were asked to prioritize the projects that were most important to them by reordering a list of items based on their preferences. This required that respondents include all of the items in the list. Out of 83 responses, three had not been reorganized and were removed from the total tally. Most respondents prioritized opening the lighthouse; binoculars or scope with views of the ocean and interpretive exhibits were tied for the second highest prioritization. The chart below demonstrates the preferences by applying a score to each item based on its priority.



Respondents could also add their own priority and add it to the ranking. Improvements to the existing restroom or adding additional restrooms represented 40 percent of the "other" priorities.

Following is a sample of additional comments from respondents:

- *More parking, but not at the lighthouse entrance*
- *An expanded store, closer to the parking lot selling local items and Light House Society items*
- *Better and cleaner restrooms*
- *Fund raising should be a high priority, both for restoring the tower and for general maintenance*
- *No parking fee for docents*
- *Binocular donation*
- *Too many people may create more trash and vandalism*
- *No concessions*
- *We are glad that someone has taken the initiative to save this historic site and improve it for more and better public usage!*
- *Pigeon Point Lighthouse is unique in its quiet, calm atmosphere. Adding camping, concessions, and more trails or access points will take away from its original historic character, which was an isolated outpost. Not all parks need to attract quantity. I prefer quality over quantity and the need to satisfy all visitors.*

QUESTION 3: SHARE YOUR THOUGHTS ON THE DRAFT PLAN

Out of the 82 surveys, 51 people responded to this question. As with the on-site surveys, some responses described gratitude for the continued work to improve the park, and visitors' love of the park in its current form. Similarly, online respondents expressed conflicting views on parking, as well as praise for expansion of the park versus keeping it the way it is. Many of the online survey responders were particularly concerned about the closure of beach access, and the effects that timed-fee parking would have for both local visitors and tourists traveling from afar. In addition, many were concerned about the proximity of trails to the hostel, and the potential encroachment in privacy. Below are some of the other comments expressed.

- *Add space for concessions*
- *Include paved parking lot*
- *Transportation from the lot to the lighthouse for those that have trouble walking*
- *Support for timed fee parking*
- *Concern about time fee parking*
- *Hiking trail is too close to the hostel*
- *Tiered viewing deck*
- *Consider partnership with Bureau of Land Management*
- *Concerns about partial road closure at Pigeon Point Road*
- *Charge an entry fee, but no fee to park*
- *Reconsider new deck plan to include the extension out onto the point as it is currently designed*
- *Repairing tower should be first priority*
- *Shuttle from Pescadero to Pigeon Point*
- *Better connection to Año NuevoPark*
- *Concern about closing any beach access*
- *Concern with campgrounds along riparian corridors*

ADDITIONAL INFORMATION

Additional information was asked in the online survey including name, income, race, and whether respondents had children.

Income

Respondents were asked to provide information on their income. Respondents could choose from 8 income brackets. Not everyone who participated in the on-line survey chose to report their income (66 responses out of 83). The majority of respondents had an income of $100-199k. Following are all collected responses:

- $100-199k: 27 responses (33%)
- $50k-75k: 10 responses (12%)
- $75k-10K: 8 responses (10%)
- $35k-50k: 6 responses (7%)
- >$200k: 6 responses (7%)

- $25-35k: 4 responses (5%)
- $15-25k: 4 responses (5%)
- $10-15k: 1 response (1%)

Race

Respondents were asked to provide information on their race. Seventy-two responses out of 83 chose to report their race. Following are all collected responses:

- White: 64 respondents (77%)
- White plus one or more races: 4 respondents (5%)
- Asian: 2 respondents (3%)
- Hispanic or Latino: 2 respondents (3%)

Do respondents have children living in their household?

Respondents were asked to provide information on whether they have children under 18 living in their household. Not everyone who participated in the on-line survey chose to report on this question (73 out of 83). The majority of respondents, 71%, do not have children living in their households.

C Bluff Erosion and Coastal Hazards Study

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memorandum

date October 27, 2016

to Jesse Jones
PlaceWorks
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from Louis White, PE

subject Assessment of Coastal Erosion Hazard Areas and Potential Bluff Setback Requirements
Pigeon Point Light Station State Historic Park General Plan (ESA #D150509.00)

Introduction

As part of the Pigeon Point Light Station State Historic Park (Park) General Plan development, Environmental Science Associates (ESA) is providing support to PlaceWorks on a number of technical issues related to the Park. This memorandum provides and describes initial mapping of coastal erosion hazard zones and potential setback requirements of the San Mateo County Local Coastal Program (LCP), and identifies existing areas of concern at the site and possible hazard avoidance and adaptation strategies. The coastal hazard zones are based on existing data, and do not represent additional modeling and analysis of erosion mechanisms or site-specific erosion patterns. The information presented in this memorandum is for discussion purposes and represents a summary of available existing information that can be used to support the planning process being led by PlaceWorks in coordination with California Department of Parks and Recreation (CDPR). This memorandum includes the following map products for the Bolsa Point parcel and the Light Station and East parcels:

- Projection of the USGS historic erosion rates into the future at years 2050 and 2100, which represents the minimum anticipated coastal erosion hazard areas in the future
- Accelerated erosion rates associated with sea level rise based on the Pacific Institute study, which represents the maximum anticipated coastal erosion hazard areas in the future
- Current bluff setback distances using two methods described in the San Mateo County LCP policy document (Policy 9.8.c)

Projection of USGS Historic Erosion Rates

Figures 1A and 1B show projections of the USGS historic erosion rates to years 2050 and 2100. The recent cliff edge was digitized from the best available topographic LiDAR flown in 2010 (NOAA 2012) using ArcGIS. Given the limited coverage of USGS historic erosion rate data, ESA calculated future projections of the bluff edge at

four separate reaches of the bluff edge for years 2050 and 2100 using the historic erosion rates published by the USGS (Hapke & Reid 2007). Erosion hazard zones were calculated as an offset from the bluff edge using the USGS historic rates. Site-specific erosion mechanisms and areas of concern require field reconnaissance that is beyond the scope of analysis presented herein.

Accelerated Bluff erosion from Sea Level Rise

Figures 2A and 2B show projections of bluff erosion accelerated by sea level rise (SLR) at 2050 and 2100, considering a high sea level rise scenario (1.4 m SLR by 2100; see Cayan *et al.* 2008, NRC 2012, OPC 2013, CCC 2015). These erosion projections were developed previously for the Pacific Institute by ESA (formerly Philip Williams and Associates, or PWA) (Pacific Institute 2009; PWA 2009). There is a discrepancy between the 2010 bluff edge and the projected erosion hazards due to the difference in topographic data used between the two studies. Thus, in some limited instances, the coarser statewide topographic data used in the 2009 study shows some erosion projections that appear seaward from the 2010 LiDAR based bluff edge. A reanalysis of accelerated erosion rates and projection from the current bluff edge would require additional effort that is beyond the scope of analysis presented herein.

State and Local Guidance and Development Regulations

The California Coastal Commission (CCC) is the State agency charged with managing natural resources and development within the State's Coastal Zone through implementation of the California Coastal Act. The agency accomplishes this primarily through delegation of authority for Coastal Act implementation to coastal local governments through certification of LCPs, but also through issuance of Coastal Development Permits (CDPs) for development within the CCC's retained jurisdiction (e.g., seaward of the mean high tide line). The CCC also serves as an appeals body for the CDP decisions of jurisdictions with certified LCPs. In 2015, the CCC issued guidelines for addressing sea level rise in LCPs and CDPs (CCC 2015). With respect to the latter, the guidelines outline how development proposals need to address the implications of sea level rise:

- Identify a range of potential sea level rise amounts for the proposed project site at multiple planning horizons
- Determine how sea level rise may constrain the project site
- Determine how the project may impact coastal resources with sea level rise
- Identify and evaluate alternatives that avoid and minimize resource impacts and risks to the project

In 1981, San Mateo County assumed responsibility for implementing the California Coastal Act through its certified LCP. The LCP policies, which have since been amended several times, currently apply to development at the Park. However, County decisions regarding the issuance of CDPs for development at the Park are subject to appeal to the CCC. Pursuant to the LCP, bluff-top development is allowed only if designed and set back to assure stability and structural integrity for the expected economic life of the development (at least 50 years) and if the development[1] will neither create nor contribute significantly to erosion problems or geologic instability of the site or surrounding area (Policy 9.8.a). The LCP further requires that coastal development permit (CDP) applications for development in proximity to a bluff edge include a site stability evaluation report for an "area of stability demonstration." The site stability evaluation report must consider several factors related to site suitability,

[1] Per the LCP policies, development includes indirect effects related to storm runoff, foot traffic, grading, irrigation, and septic tanks.

including historic and projected erosion rates, geography and topography, geology and landslides, wave and tidal action, and ground and surface water conditions, among others (Policy 9.8.b). Pursuant to the LCP, the area of stability demonstration includes the area between the face of the bluff and a line described on the bluff top by the intersection of a plane inclined at a 20-degree angle from the horizontal passing through the toe of the bluff or cliff, or 50 feet inland from the edge, whichever is greater.

Figures 3A and 3B show bluff setback lines for the two methods described in the LCP (Policy 9.8.c). The first bluff setback method considers a 50-foot setback from the current bluff edge (in this case 2010). This was generated by creating a 50-foot buffer from the digitized cliff edge in ArcGIS. The second LCP bluff setback method considers the extent of the bluff top area between the face of the bluff and a line on the bluff top by the intersection of a plane inclined at a 20-degree angle from horizontal passing through the toe of the bluff. This was generated by digitizing the approximate bluff toe, generating an approximate 20 degree-inclined surface in AutoCAD Civil3D that passes through the bluff toe, post processing, and digitizing the intersection with the current (2010) terrain in ArcGIS. Based on review of select toe elevations along the study area, we assumed a toe elevation of 10 feet NAVD along the study reach to initiate the 20-degree-inclined surface. Determining site-specific offsets would require additional field reconnaissance that is beyond the scope of analysis presented herein.

Areas of Specific Concern

CDPR staff familiar with the site conditions provided information to ESA regarding areas of active erosion and ponding or flooding at the Park. The information identifies areas of erosion which appear to be related to rainfall-runoff and surface treatments that influence site drainage. Other areas of erosion identified may be more closely influenced by wave uprush on the bluff and direct impacts to the bluff. ESA recommends that CDPR staff monitor all areas identified for continued degradation and erosion, and that areas with ponding and drainage issues should be addressed through regular maintenance of the site, including minor grading, repairs, and drainage improvements. Stormwater drainage and erosion management should be incorporated into project plans for future development at the Park. For example, a controlled runoff collection system with a discharge that is safely routed away from areas of potential erosion or steep embankments should be established during the design process for future development.

Hazard Avoidance and Adaptation

ESA recommends that the primary approach to managing hazards be to avoid developing areas that are seaward of the LCP setback line (see Figures 3A and 3B). Furthermore, development of the site should consider the influence of sea level rise for at least 50 years. State guidance issued by the CCC (CCC 2015) recommends assessing risk of flooding and erosion associated with sea level rise for at least two planning horizons, typically 2050 and 2100. Although a project design life of less than 100 years may be selected, if development is ultimately proposed within the CCC's retained jurisdiction, or if the County's CDP is appealed to the CCC, the CCC would draw upon the guidance document in its review of the proposed development. A key component of the CCC's CDP application review process is to evaluate the potential flooding and erosion hazards associated with sea level rise, and to conduct an analysis of alternatives that would reduce or avoid impacts to coastal resources, while also minimizing risk.

In addition, were the CCC to find the proposed development would be at risk of exposure to sea level rise and/or erosion-related hazards, the agency will likely require CDPR to prepare a sea level rise adaptation plan that describes how the development will be modified in the future once the design life is exceeded. Consideration of the asset type will influence the range of possible adaptation approaches. For example, a trail would be considered a relatively low risk asset that can be moved in the future to avoid coastal hazards, while a structure would be a higher risk asset that could require structural modifications or relocation. Figure 5 presents the primary adaptation strategies described in the CCC (2015) guidance: Protect, Accommodate, Retreat, and Hybrid.

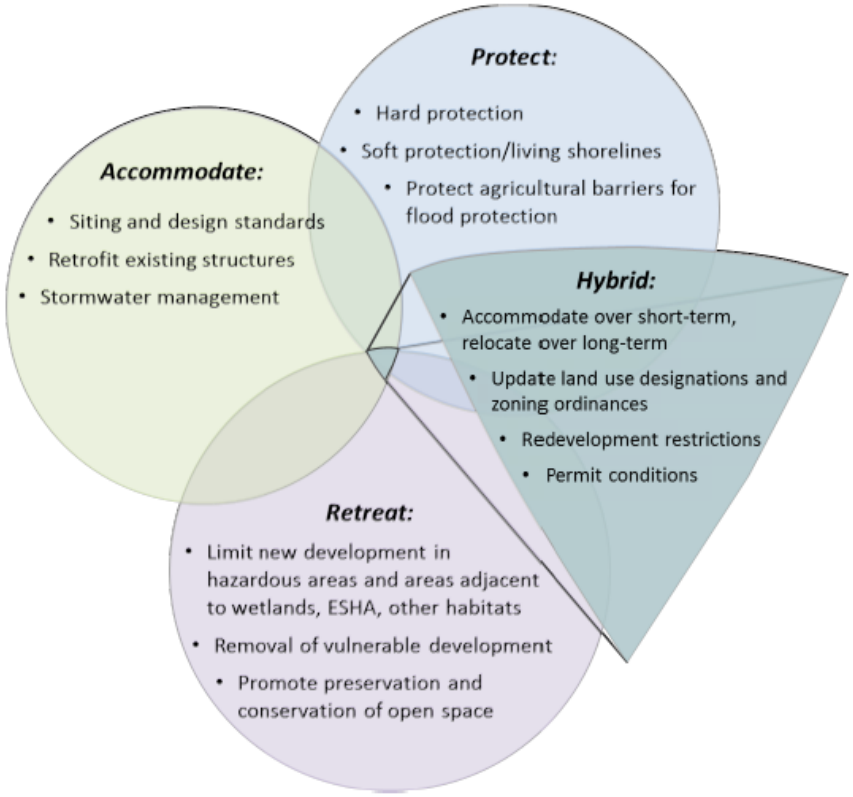

Figure 5
Sea Level Rise Adaptation Strategies (from CCC 2015)

At the Park, we recommend avoidance of the hazards as a primary approach to siting new development. If future development is proposed for an area within the projected hazard zone, then the adaptation strategy should rely on retreat, whereby the facility or feature would ultimately be removed or relocated landward to avoid the erosion hazard. This entails a fairly simple process for development such as a trail or small building, but would be increasingly complicated as the size and complexity of the structure increases.

ESA does not recommend use of the "Protect" strategy at the Park. Due to the exposure of the site to intense coastal storms, including waves, wind and tides, protection of the bluff would require a large structure. Although technically feasible, the implementation of such a structure to protect new development would conflict with the Coastal Act and CCC guidance (CCC 2015). The area is widely revered as an important coastal ecological and educational resource, and construction of such a shoreline protective structure would impact the rich intertidal zone and would be aesthetically out of place. Therefore, we recommend the avoidance and retreat strategies for future development of the site.

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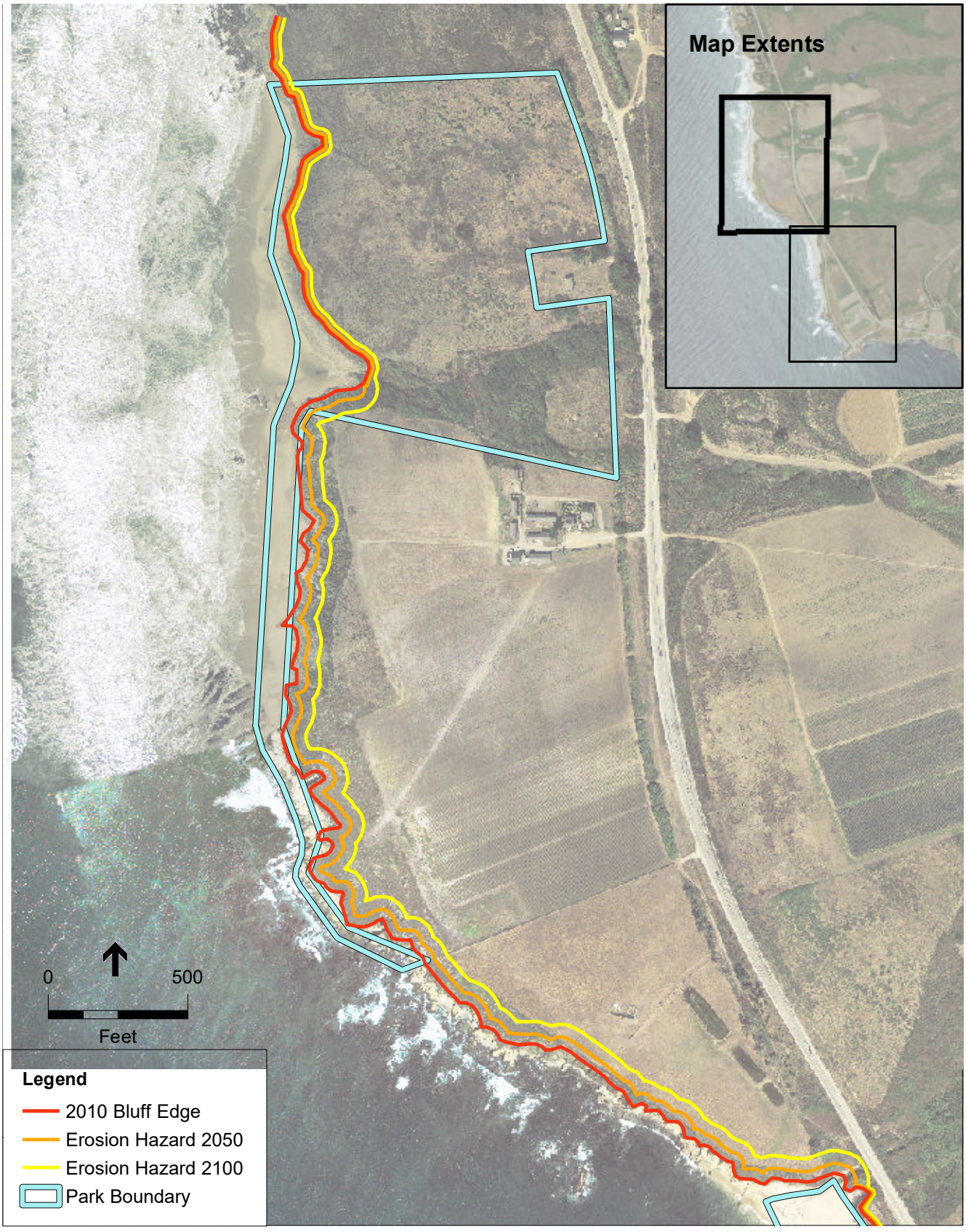
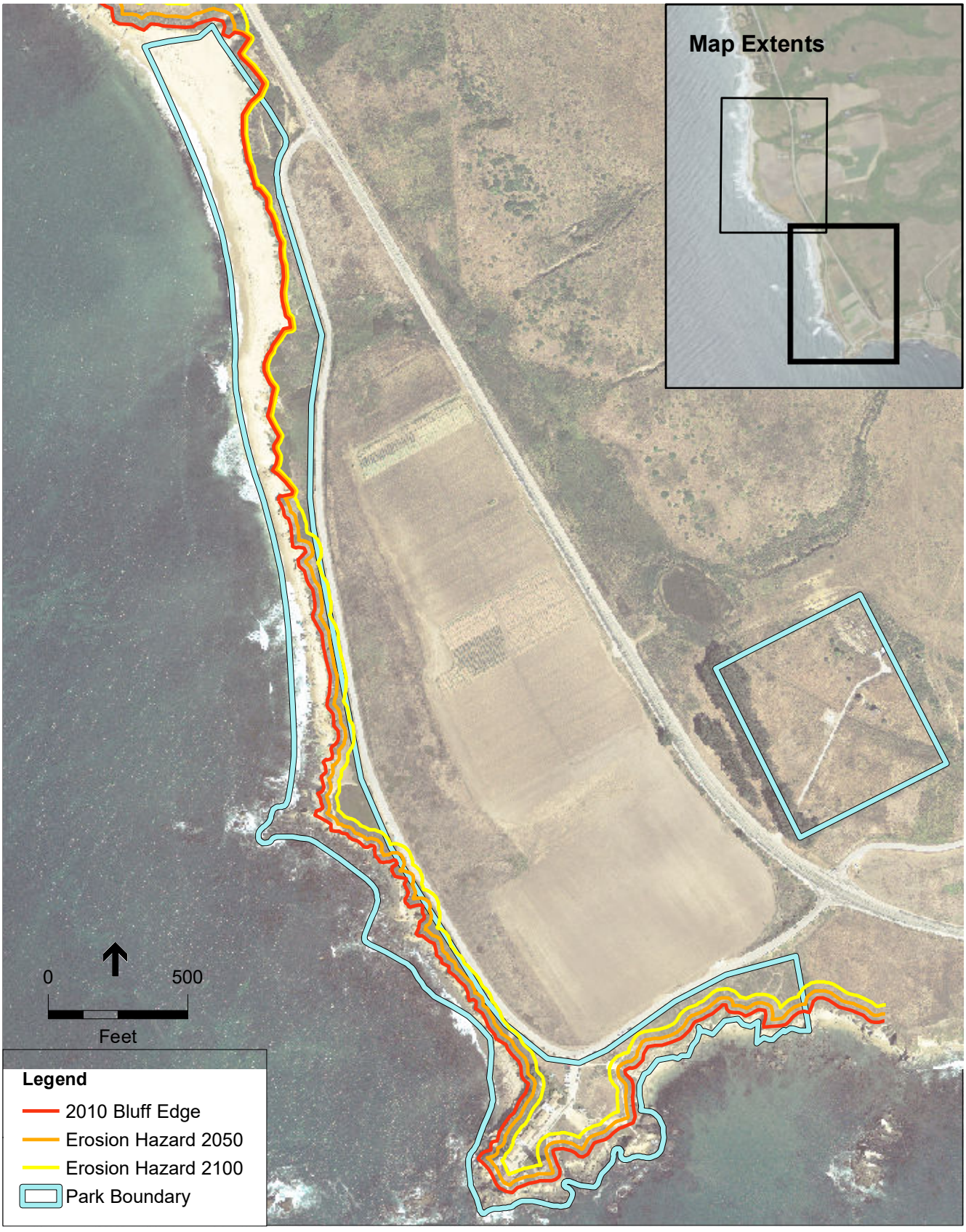


NOTE: Historic erosion based on published USGS rates

Pigeon Point Light Station State Historic Park . 150509

Figure 1A

Projected Bluff Erosion Based on USGS Historic Rates: Bolsa Point Parcel

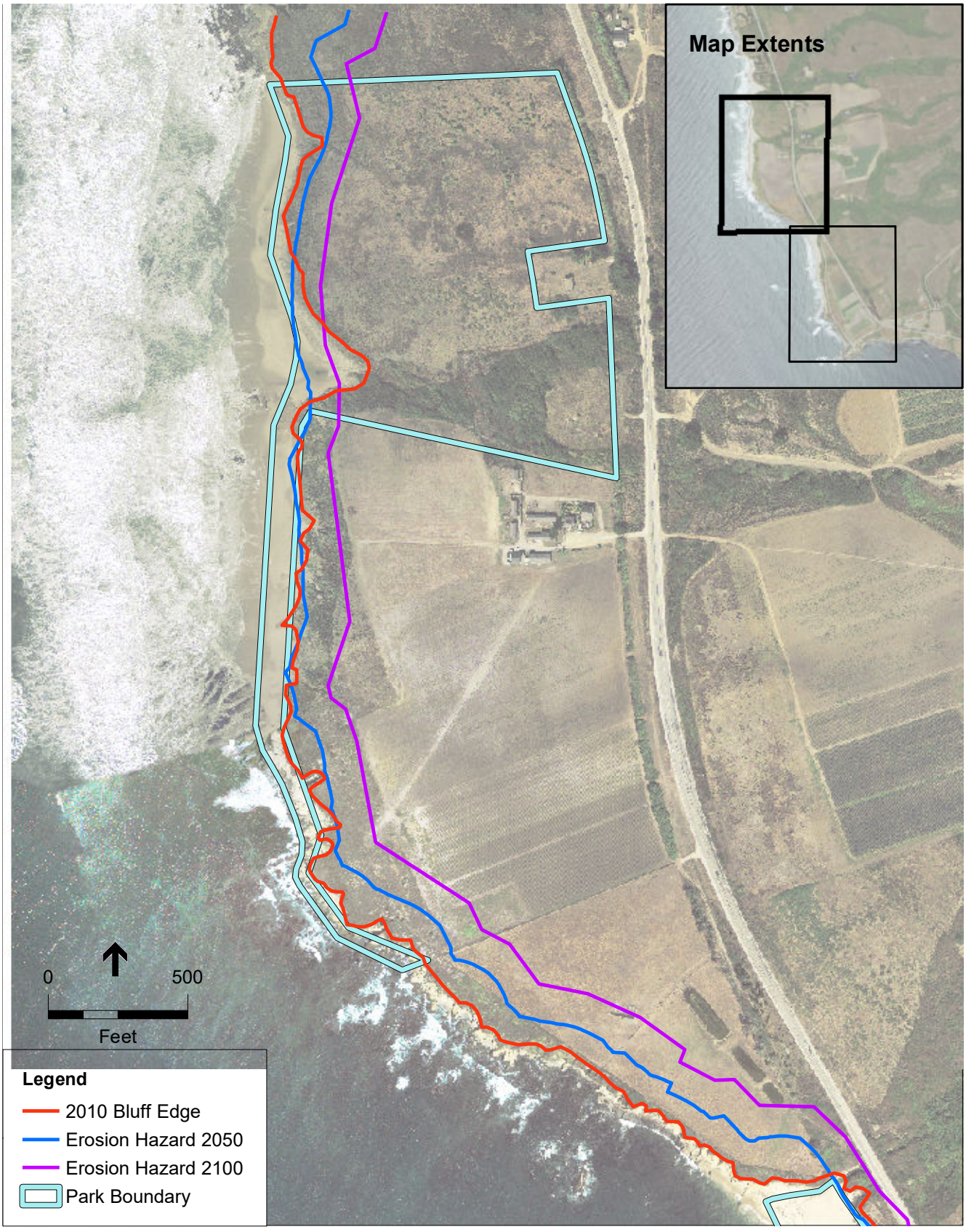


NOTE: Historic erosion based on published USGS rates

Pigeon Point Light Station State Historic Park . 150509

Figure 1B

Projected Bluff Erosion Based on
USGS Historic Rates: Light Station and East Parcels

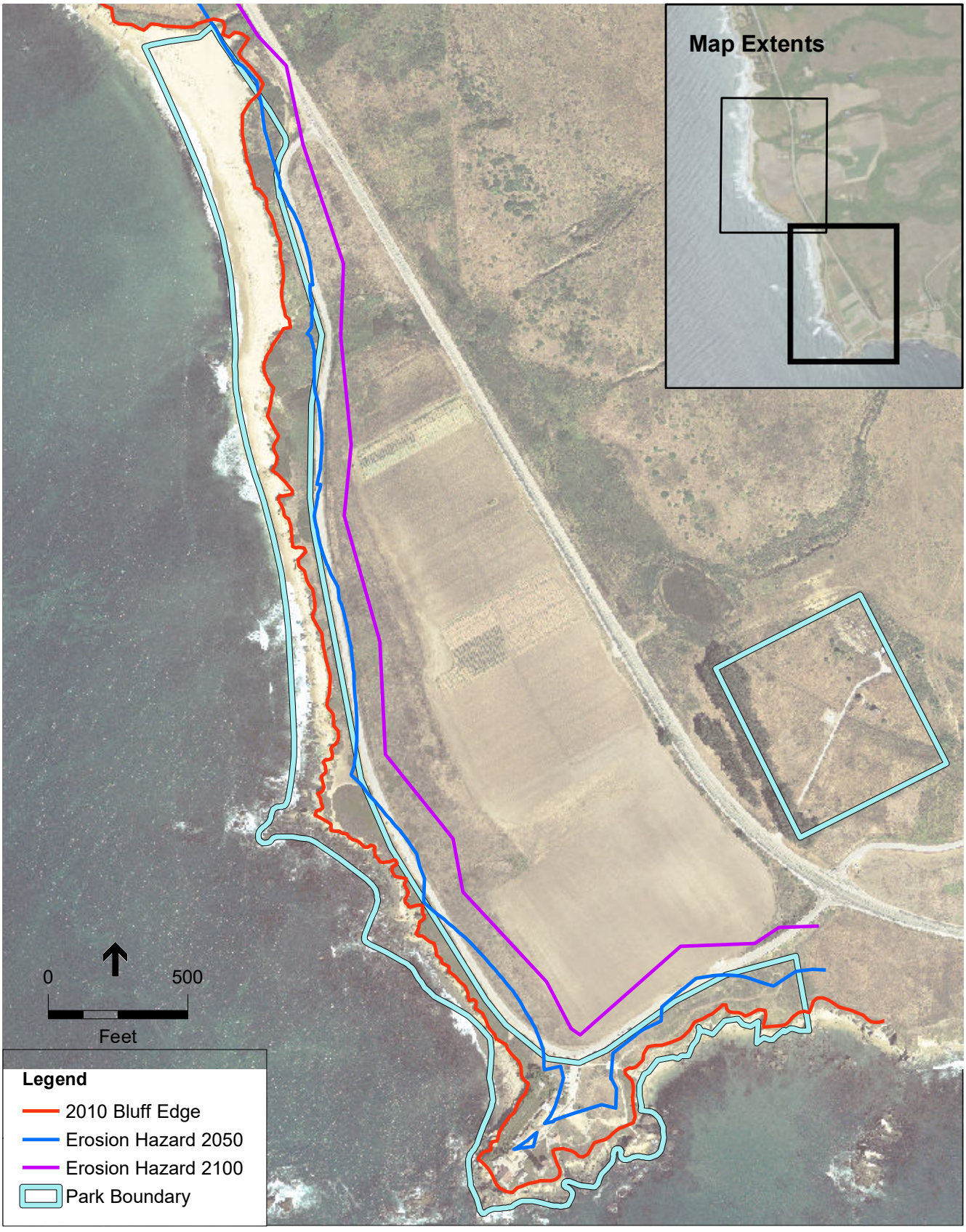


NOTE: Pacific Institute bluff erosion projections consider high SLR (1.4 m by 2100), are based on different topography and are less refined than the 2010 bluffedge which is based on CA Coastal Conservancy LiDAR

Pigeon Point Light Station State Historic Park . 150509

Figure 2A

Projected Bluff Erosion Hazards Based on Pacific Institute Data: Bolsa Point Parcel

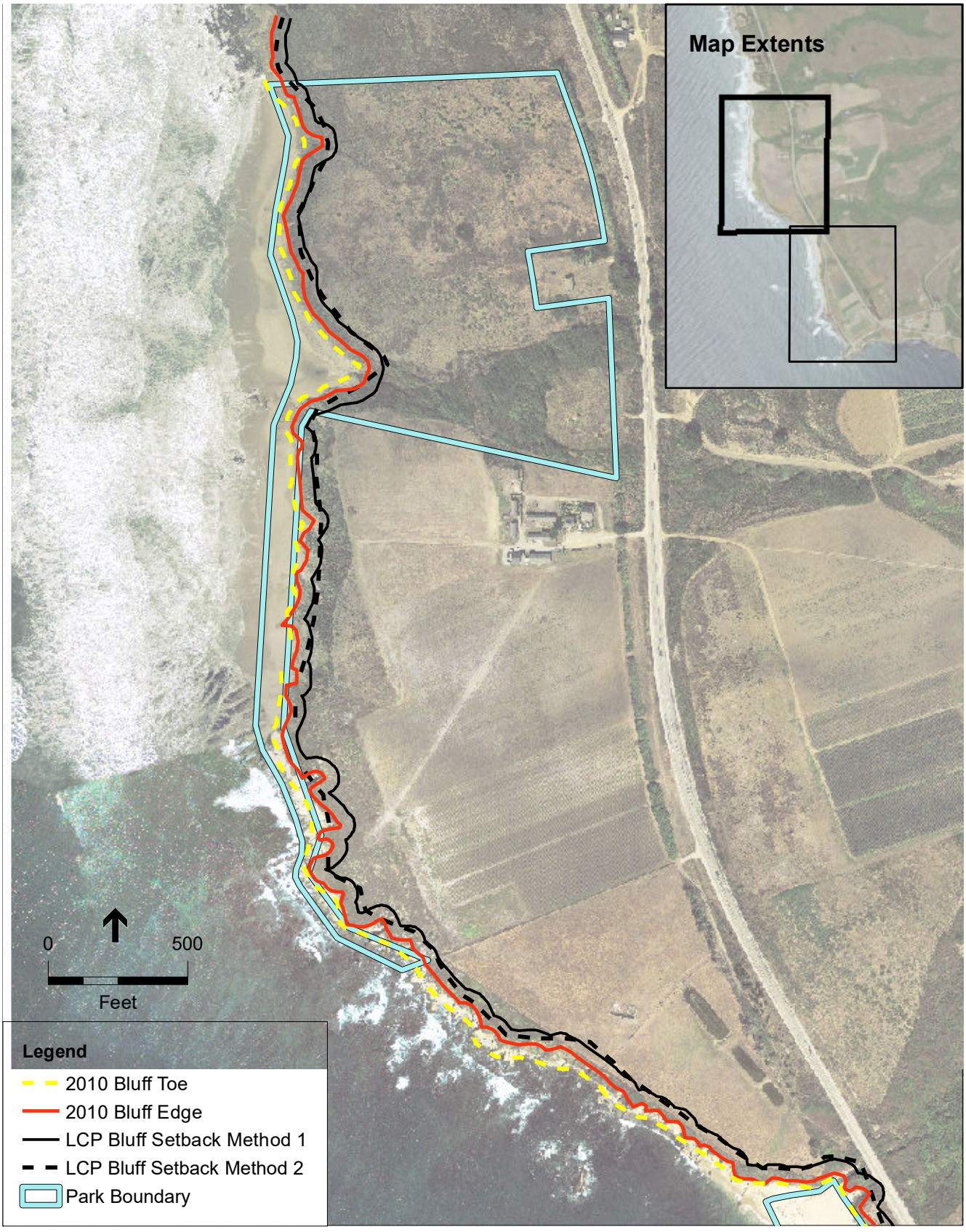


NOTE: Pacific Institute bluff erosion projections consider high SLR (1.4 m by 2100), are based on different topography and are less refined than the 2010 bluffedge which is based on CA Coastal Conservancy LiDAR

Pigeon Point Light Station State Historic Park . 150509

Figure 2B

Projected Bluff Erosion Hazards Based on Pacific Institute Data: Light Station and East Parcels

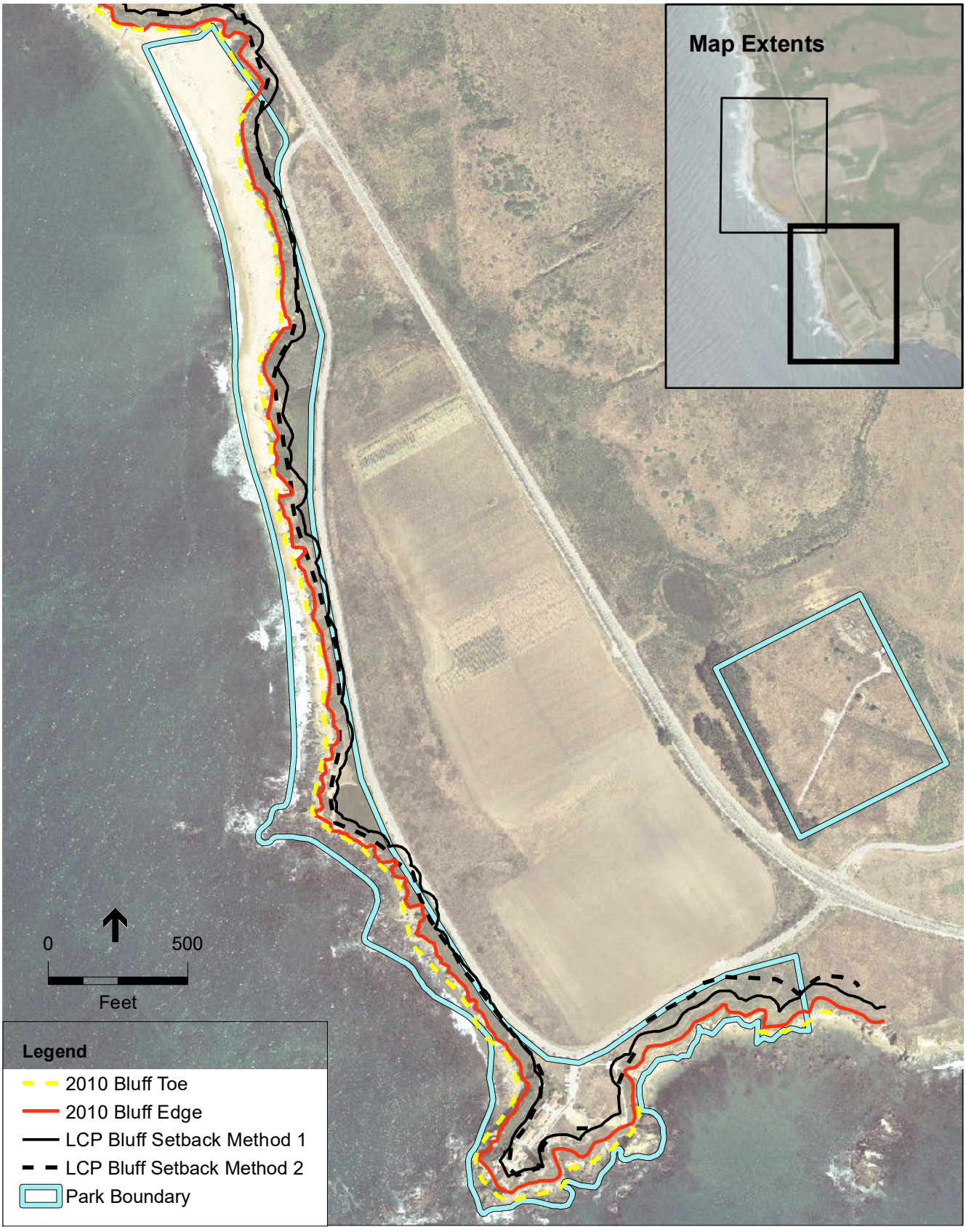


NOTE: LCP Bluff Setback Methods:
1. Setback 50 from current bluff edge.
2. Setback from incline projected at 20 degrees from horizontal through bluff toe to daylight line on bluff top.

Pigeon Point Light Station State Historic Park . 150509

Figure 3A

Current LCP Bluff Setbacks
Bolsa Point Parcel



NOTE: LCP Bluff Setback Methods:
1. Setback 50 from current bluff edge.
2.Setback from incline projected at 20 degrees from horizontal through bluff toe to daylight line on bluff top.

Pigeon Point Light Station State Historic Park . 150509

Figure 3B

Current LCP Bluff Setbacks
Light Station and East Parcels

D Biological Resources - Species List

Appendix D: Biological Resources – Species List

Based on review of the biological literature of the region, information presented in previous environmental documentation, and an evaluation of the habitat conditions of the Pigeon Point Light Station State Historic Park and surrounding vicinity with similar habitat conditions (study area), a species was designated as "absent" if: (1) the species' specific habitat requirements are not present, or (2) the species is presumed, based on the best scientific information available, to be extirpated from the study area or region. A species was designated as having a "low potential" for occurrence if: (1) its known current distribution or range is outside of the study area or (2) only limited or marginally suitable habitat is present within the study area. A species was designated as having a "moderate potential" for occurrence if: (1) there is low to moderate quality habitat present within the study area or immediately adjacent areas, or (2) the study area is within the known range of the species, even though the species was not observed during reconnaissance surveys. A species was designated as having a "high potential" for occurrence if: (1) moderate to high quality habitat is present within the study area, and (2) the study area is within the known range of the species.

TABLE D.2
SPECIAL-STATUS SPECIES CONSIDERED IN EVALUATION OF THE PIGEON POINT LIGHT STATION STATE HISTORIC PARK GENERAL PLAN STUDY AREA

Common Name *Scientific Name*	Listing Status USFWS/ CDFW/Other	Habitat Description / Blooming Period	Potential to Occur in the Study Area
SPECIES LISTED OR PROPOSED FOR LISTING			
Plants			
Ben Lomond spineflower *Chorizanthe pungens* var. *hartwegiana*	FE/--/1B.1	Yellow pine forest in disturbed areas along the coast. 90 – 350m. Blooms April - July	**Absent.** Known only from Santa Cruz sandhills in the Santa Cruz Mountains, on Zayante soils, a specialized habitat that is not present in the Park. No occurrences documented within 5 miles. Closest extant population occurs 10 miles east of the Park in Big Basin Redwoods State Park.
San Mateo woolly sunflower *Eriophyllum latilobum*	FE/CE/1B.1	Foothill woodland. Affinity to serpentine soil. 20 – 630m. Blooms March – June	**Absent.** Suitable habitat not found in the Park. No occurrences documented within 5 miles of the Park.
Santa Cruz wallflower *Erysimum teretifolium*	FE/CE/1B.1	Chaparral and yellow pine forest. 60 – 300m. Blooms March – July	**Absent.** Known only from Santa Cruz sandhills in the Santa Cruz Mountains, on Zayante soils, a specialized habitat that is not present in the Park. No occurrences documented within 5 miles of the Park.
Santa Cruz cypress *Hesperocyparis abramsiana* var. *abramsiana*	FE/CE/1B.2	Closed-cone coniferous forest, chaparral, and low montane coniferous forest with sandstone or granite substrate. 260 – 770m.	**Low.** Suitable habitat not found in the Park. No occurrences documented within 10 miles of the Park which is outside of the understood species range.
Butano Ridge cypress *Hesperocyparis abramsiana* var. *butanoensis*	FE/CE/1B.2	Closed-cone coniferous forest, chaparral, and low montane coniferous forest with sandstone or granite substrate. Only seven known stands of this cypress variety occur in the Santa Cruz Mountains. 260 – 770m.	**Low.** Suitable habitat not found in the Park. No occurrences documented within 5 miles of the Park and the Park is outside of the understood species range. The single occurrence within 10 miles is located 8.5 miles northeast of the Park on Butano Ridge in the Santa Cruz Mountains and consists of a small grove within a well-developed redwood forest.
Point Reyes meadowfoam *Limnanthes douglasii* ssp. *sulphurea*	--/CE/1B.2	Coastal prairie, freshwater wetlands and wetland-riparian areas. 40 – 110m.Blooms March – May	**Low.** Marginal habitat is present in the Park. Closest extant population is documented northeast of the Park within 3 miles in Butano Creek Canyon along Canyon Road in a moist meadow.
White-rayed pentachaeta *Pentachaeta bellidiflora*	FE/CE/1B.1	Open dry rocky slopes and grassland, often on soils derived from serpentinite. 0 – 370m. Blooms March-May	**Low.** Suitable habitat not found in the Park. No occurrences documented within 5 miles of the Park.
San Francisco popcornflower *Plagiobothrys diffusus*	--/CE/1B.1	Coastal prairie and valley grassland. 17 – 260m. Blooms March – June	**Moderate.** Suitable habitat is present in the Park. Extant population documented within 3.5 miles southeast of the Park at Cascade Ranch in a seasonally moist, heavily grazed coastal terrace prairie.
Invertebrates			
Myrtle's silverspot butterfly *Speyeria zerene myrtleae*	FE/*/--	Coastal dune and prairie communities with host plants including gumweed (*Grindelia hirsutula*), coastal sand verbena (*Abronia latifolia*), *Monardella,* bull thistle (*Cirsium vulgare*), seaside daisy (*Erigeron glaucus*) where found on the San Francisco and Marin peninsulas.	**Low.** Historical occurrence documented north of the Park in the vicinity of Pescadero. Populations south of the Golden Gate Bridge considered extirpated.

TABLE D.2
SPECIAL-STATUS SPECIES CONSIDERED IN EVALUATION OF THE PIGEON POINT LIGHT STATION STATE HISTORIC PARK GENERAL PLAN STUDY AREA

Common Name *Scientific Name*	Listing Status USFWS/ CDFW/Other	Habitat Description / Blooming Period	Potential to Occur in the Study Area
SPECIES LISTED OR PROPOSED FOR LISTING (cont.)			
Invertebrates (cont.)			
Zayante band-winged grasshopper *Trimerotropis infantilis*	FE/--/--	Restricted to the Zyante sand hills of Santa Cruz County, a unique mosaic of maritime chaparral and coastal maritime Ponderosa pine forest vegetation communities.	**Absent.** Known only from Santa Cruz sandhills in the Santa Cruz Mountains, a specialized habitat that is not present in the Park.
Fish			
tidewater goby *Eucyclogobius newberryi*	FE/CSC/--	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego Co. to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	**Absent.** Extant in Arroyo de los Frijoles (Bean Hollow), from the mouth to 0.5 mile upstream, and in Pescadero Creek/Butana Creek Lagoon from the mouth to 1 mile upstream, north of the project area. Coastal lagoon and brackish water marsh habitat not found in the Park.
coho salmon *Oncorhynchus kisutch* central California coast ESU	FE/CE/--	Ocean waters, Sacramento and San Joaquin Rivers; Migrates from ocean through San Francisco Bay-Delta to freshwater spawning grounds	**Absent.** May occur offshore of the Park in ocean waters.
steelhead *Oncorhynchus (=Salmo) mykiss irideus* central California coast DPS	FT/*/--	Spawns and rears in coastal streams between the Russian River in Sonoma County and Soquel Creek in Santa Cruz County, as well as drainages tributary to San Francisco Bay, where gravelly substrate and shaded riparian habitat occurs.	**Absent.** Presumed extant in Pescadero Creek and tributaries to upstream barriers, located north of the project area; Gazos Creek and tributaries (Old Womans Creek), and Whitehouse Creek, located south of the Park.
longfin smelt *Spirinchus thaleichthys*	FC/CT/--	Found throughout the nearshore coastal waters and open waters of San Francisco Bay-Delta including the river channels and sloughs of the Delta. Spawns in the Delta.	**Absent.** Suitable habitat not found in the Park. One occurrence documented north of the project area in Pescadero that may have strayed from the San Francisco Bay-Delta population as this area is not known as breeding grounds.
Amphibians			
California red-legged frog *Rana draytonii*	FT/CSC/--	Streams, freshwater pools, and ponds with overhanging vegetation. Also found in woods adjacent to streams. Requires permanent or ephemeral water sources such as reservoirs and slow moving streams and needs pools of >0.5 m depth for breeding.	**High.** Suitable habitat is present in the Park at both the wetland riparian drainage of Spring Bridge Gulch in the Bolsa Point Area and in the grasslands of the easement. The easement is also within designated critical habitat for this species. This species is abundant in the Park vicinity with the closest extant population documented just north of the easement in a pond among grazing lands, likely to be used for breeding.
Reptiles			
San Francisco garter snake *Thamnophis sirtalis tetrataenia*	FE/CE, FP/--	Most often observed in the vicinity of standing water; ponds, lakes, marshes, and sloughs. Temporary ponds and seasonal bodies of water are also used. Banks with emergent and bankside vegetation are preferred and used for cover.	**Moderate.** Marginal habitat is present within the Park located in the Bolsa Point Area in the riparian wetland drainage of Spring Bridge Gulch and adjacent grasslands, scattered with coyote bush. The pond north of the easement with CRLF could also host SFGS. Two historical populations located in Pescadero Marsh to the north and the Año Nuevo State Reserve to the south bookend the Park and individuals may inhabit smaller drainages or ponds between these areas where prey species CRLF and tree frog (*Pseudacris sierra*) are present.

TABLE D.2
SPECIAL-STATUS SPECIES CONSIDERED IN EVALUATION OF THE PIGEON POINT LIGHT STATION STATE HISTORIC PARK GENERAL PLAN STUDY AREA

Common Name *Scientific Name*	Listing Status USFWS/ CDFW/Other	Habitat Description / Blooming Period	Potential to Occur in the Study Area
SPECIES LISTED OR PROPOSED FOR LISTING (cont.)			
Birds			
marbled murrelet *Brachyramphus marmoratus*	FT/CE/--	Breeds in coniferous forests near the coast and prefers old growth, mature stands. Nests on large horizontal branches high in the trees. Winters at sea.	**Low (No potential to nest).** Known to nest in mature coniferous forests east of the Park in Butano State Park. Eucalyptus, willow, and Monterey cypress are the dominant tree species of the Park in which marbled murrelet are unlikely not nest. Regularly observed offshore of the Park in Whaler's Cove while foraging. May be observed in flight between nest sites and open water.
Western snowy plover *Charadrius nivosus nivosus*	FT/CSC/--	Nest on coasts and estuaries on dune-backed beaches and salt pans at lagoons/estuaries.	**Low (Unlikely to nest).** Presumed extant on Pescadero beach north of the Park though not documented as nesting within Park beaches. May occur on Park beaches on a transient basis during migration or while overwintering, though unlikely to nest.
California black rail *Laterallus jamaicensis coturniculus*	FP/CT, FP/--	Salt and freshwater marshes, grassy wet meadows.	**Absent (No potential to nest).** Suitable habitat not found in the Park. Closest occurrence is documented in Waddell Creek Lagoon located 8.5 miles southeast of the Park.
Short-tailed albatrus *Phoebastria albatrus*	FE/CSC/--	A pelagic species that spends most of its time at sea and returns to land only for breeding purposes.	**Low (No potential to nest).** Breeds only at one or two sites off the coast of Japan, occasional visitor to California coast and could appear on a transient basis offshore of the Park.
bank swallow *Riparia riparia*	--/CT/--	Vertical banks and cliffs with sandy soil, near water. Nests in holes dug in cliffs and river banks.	**Low (Unlikely to nest).** No active nesting colonies are documented within the Park bluffs though may be observed during migration or while foraging. Closest nesting colonies are documented 4 miles north of the Park in coastal bluffs north of Pescadero Marsh and 5 miles south of the Park in compacted sand dunes and bluffs of Point Año Nuevo.
California least tern *Sterna antillarum browni*	FE/CE, FP/--	Open beaches free of vegetation along the California coast.	**Low (Unlikely to nest).** No nesting sites documented in the Park vicinity. May occur within the Park on a transient basis or be observed on the wing.
Mammals			
Southern sea otter *Enhydra lutris nereis*	FT/FP/--	Nearshore environments between Santa Barbara and Half Moon Bay.	**Absent.** Unlikely to visit upland parklands. May be observed offshore of the Park.
Plants			
Blasdale's bent grass *Agrostis blasdalei*	--/--/1B.2	Coastal strand, coastal prairie, northern coastal scrub and dunes. 5 – 350m. Blooms May - July	**Moderate.** Suitable habitat is present in the Park. An extant occurrence is documented within 1.2 miles south of the Park near Columbia Beach on exposed coastal bluffs.
bent-flowered fiddleneck *Amsinckia lunaris*	--/--/1B.2	Valley grassland and foothill woodland. 30 – 680m. Blooms March - June	**Low.** Suitable habitat is present in the Park; however no occurrences are documented within 5 miles.
slender silver moss *Anomobryum julaceum*	--/--/4.2	Damp rock and soil outcrops in broadleaf upland forest, lower montane coniferous forest, and North Coast	**Low.** Suitable habitat not found in the Park. No occurrences documented within 5 miles of the Park.

TABLE D.2
SPECIAL-STATUS SPECIES CONSIDERED IN EVALUATION OF THE PIGEON POINT LIGHT STATION STATE HISTORIC PARK GENERAL PLAN STUDY AREA

Common Name *Scientific Name*	Listing Status USFWS/ CDFW/Other	Habitat Description / Blooming Period	Potential to Occur in the Study Area
		coniferous forest.	
		OTHER SPECIAL-STATUS SPECIES	
Plants (cont.)			
Anderson's manzanita *Arctostaphylos andersonii*	--/--/1B.2	Chaparral, mixed evergreen forest, and redwood forests in openings and along edges. 80 – 820m. Blooms November – March	**Low.** Suitable habitat not found in the Park. Nearest documented occurrence is located 5 miles east of the Park in the forests of Butano State Park.
Schreiber's manzanita *Arctostaphylos glutinosa*	--/--/1B.2	Chaparral and closed-cone pine forests. 210 – 770m. Blooms March – April	**Low.** Suitable habitat not found in the Park. No occurrences documented within 5 miles of the Park.
Ohlone manzanita *Arctostaphylos ohloneana*	--/--/1B.1	Siliceous shale outcrops, chaparral and knobcone-pine woodland. 400 – 500m. Blooms February - March	**Low.** Suitable habitat not found in the Park. No occurrences documented within 5 miles of the Park.
King's Mountain manzanita *Arctostaphylos regismontana*	--/--/1B.2	Chaparral, mixed evergreen forest, and north coastal coniferous forest. 200 – 660m. Blooms January – April	**Low.** Suitable habitat not found in the Park. No occurrences documented within 5 miles of the Park.
Boony Doon manzanita *Arctostaphylos silvicola*	--/--/1B.2	Chaparral, yellow pine forest and closed-cone pine forests. 100 – 890m. Blooms February – March	**Low.** Suitable habitat not found in the Park. No occurrences documented within 5 miles of the Park.
ocean bluff milk-vetch *Astragalus nuttallii* var. *nuttallii*	--/--/4.2	Coastal bluff scrub and coastal dunes. 3 – 120m. Blooms January - November	**Low.** Suitable habitat is present within the Park; however, no occurrences are documented within 5 miles.
coastal marsh milk-vetch *Astragalus pycnostachyus* var. *pycnostachyus*	--/--/1B.2	Wetlands and riparian areas primarily located in coastal regions. 0 – 330m. Blooms April – October	**Moderate.** Suitable habitat is present in the Park within the Bolsa Point Area and several occurrences of this species are documented nearby. Extant populations occur north of the Park in Pescadero Marsh Natural Preserve at the mouth of Butano Creek.
round-leaved filaree *California macrophylla*	--/--/1B.2	Valley grassland and foothill woodland. 15 – 1200m. Blooms March – May	**Low.** Suitable habitat is present within the Park; however the only occurrence documented within 5 miles is a historical record in the Pescadero vicinity.
Santa Cruz Mountains pussypaws *Calyptridium parryi* var. *hesseae*	--/--/1B.1	Chaparral and foothill woodlands. 700 – 1560m. Blooms May - August	**Low.** Suitable habitat not found in the Park. No occurrences documented within 5 miles of the Park.
Franciscan thistle *Cirsium andrewsii*	--/--/1B.2	Mixed evergreen forest, northern coastal scrub and wetland, riparian areas along the coast. Affinity to serpentine soil. 13 – 1950m. Blooms March – July	**Low.** Suitable habitat is present in the Park; however, the only occurrence documented within 5 miles is within Año Nuevo State Reserve, historical, and considered possibly extirpated.
San Francisco collinsia *Collinsia multicolor*	--/--/1B.2	Closed-cone coniferous forests, coastal scrub, sometimes on serpentinite derived soils.10 – 430m. Blooms March-May	**Low.** Suitable habitat not found in the Park. No occurrences documented within 5 miles of the Park.
branching beach aster *Corethrogyne leucophylla*	--/--/3.2	Closed cone coniferous forest and coastal dunes. 3 – 60m. Blooms May – December	**Low.** Suitable habitat is present within the Park; however, no occurrences are documented within 5 miles.
mountain lady's-slipper *Cypripedium montanum*	--/--/4.2	Yellow pine forest, mixed evergreen forest and wetland, riparian areas. 370 – 1980m. Blooms March – August	**Low.** Suitable habitat not found in the Park. No occurrences documented within 5 miles of the Park.
western leatherwood *Dirca occidentalis*	--/--/1B.2	Chaparral, foothill woodland, mixed evergreen forest, broadleaved upland forest, closed-cone pine forest, north	**Low.** Suitable habitat not found in the Park. No occurrences documented within 5 miles of the Park.

TABLE D.2
SPECIAL-STATUS SPECIES CONSIDERED IN EVALUATION OF THE PIGEON POINT LIGHT STATION STATE HISTORIC PARK GENERAL PLAN STUDY AREA

Common Name *Scientific Name*	Listing Status USFWS/ CDFW/Other	Habitat Description / Blooming Period	Potential to Occur in the Study Area
		coastal coniferous forest, and wetland-riparian areas. 12 – 560m. Blooms January – March	
OTHER SPECIAL-STATUS SPECIES (cont.)			
Plants (cont.)			
California bottle-brush grass *Elymus californicus*	--/--/4.3	Evergreen forests, foothill woodlands and riparian areas. Blooms May – August	**Low.** Suitable habitat not found in the Park. No occurrences documented within 5 miles of the Park.
sand-loving wallflower *Erysimum ammophilum*	--/--/1B.2	Coastal strand and dunes. 0 – 70m. Blooms February – June	**Moderate.** Suitable habitat is present in the Park. An extant occurrence is documented within 4.3 miles of the Park in Año Nuevo State Reserve.
minute pocket moss *Fissidens pauperculus*	--/--/1B.2	North coast coniferous forest with damp coastal soils. 10 – 1024m.	**Low.** Suitable habitat not found in the Park. Nearest documented occurrence is located 5 miles east of the Park in the forests of Butano State Park.
stinkbells *Fritillaria agrestis*	--/--/4.2	Chaparral, valley grassland, foothill woodland and wetland, riparian areas. Affinity to serpentine soils. 11 – 1640m. Blooms March – June	**Moderate.** Suitable habitat is present in the Park. An extant occurrence is documented at Año Nuevo Point within the Año Nuevo State Reserve, approximately 5.5 miles south of the Park.
fragrant fritillary *Fritillaria liliacea*	--/--/1B.2	Coastal bluff scrub, coastal scrub, valley and foothill grassland; clayey soils, often serpentinite. February-April	**Low.** Suitable habitat is present within the Park; however, no occurrences are documented within 5 miles.
San Francisco gumplant *Grindelia hirsutula* var. *maritima*	--/--/3.2	Coastal bluff scrub, coastal scrub, and valet and foothill grasslands. Affinity to sandy or serpentine soils. 15 – 400m. Blooms June - September	**Low.** Suitable habitat is present within the Park; however, no occurrences are documented within 5 miles.
Kellogg's horkelia *Horkelia cuneata* var. *sericea*	--/--/1B.1	Coastal scrub, dunes, and openings of closed-cone coniferous forests. 0 – 1690m. Blooms February – July	**Low.** Suitable habitat is present within the Park; however, no occurrences are documented within 5 miles.
Point Reyes horkelia *Horkelia marinensis*	--/--/1B.2	Coastal strand, coastal prairie, northern coastal scrub, and coastal dunes. 14 – 600m. Blooms May – September	**Low.** Suitable habitat is present within the Park; however, no occurrences are documented within 5 miles.
harlequin lotus *Hosackia gracilis*	--/--/4.2	Coastal bluff scrub, coastal prairie, coastal scrub, valley and foothill grassland, wetlands and roadsides. 0 – 700m. Blooms March - July	**Low.** Suitable habitat is present within the Park; however, no occurrences are documented within 5 miles.
coast iris *Iris longipetala*	--/--/4.2	Coastal prairie, lower montane coniferous forest, meadows and seeps, mesic sites. 5 – 430m. Blooms March – May	**Moderate.** Suitable habitat is present in the Park. Nearest extant populations are documented in the vicinity of Pescadero and Año Nuevo State Reserve.
perennial goldfields *Lasthenia californica* ssp. *macrantha*	--/--/1B.2	Northern coastal scrub. 0 – 220m. Blooms January – November	**High.** Suitable habitat is present in the Park. Documented along Pigeon Point Road north of the lighthouse in 2006 in open areas on the bluffs above the beach; population is presumed extant. Other occurrences are documented north of the Park near Pebble Beach and Pescadero Point.
coast yellow leptosiphon *Leptosiphon croceus*	--/--/1B.1	Coastal bluff scrub and coastal prairie. 8 – 240m. Blooms April - May	**Low.** Suitable habitat is present in the Park; however the only occurrence documented within 5 miles of the Park is at Pebble Beach, historical, and possibly extirpated.

TABLE D.2
SPECIAL-STATUS SPECIES CONSIDERED IN EVALUATION OF THE PIGEON POINT LIGHT STATION STATE HISTORIC PARK GENERAL PLAN STUDY AREA

Common Name *Scientific Name*	**Listing Status USFWS/ CDFW/Other**	**Habitat Description / Blooming Period**	**Potential to Occur in the Study Area**
rose leptosiphon *Leptosiphon rosaceus*	--/--/1B.1	Coastal bluff scrub. April – July	**Low.** Suitable habitat is present in the Park; however the two occurrences within 5 miles are historical and possible extirpated.
OTHER SPECIAL-STATUS SPECIES (cont.)			
Plants (cont.)			
arcuate bush-mallow *Malacothamnus arcuatus*	--/--/1B.2	Gravelly alluvium in chaparral and cismontane woodland. April – September	**Low.** Suitable habitat not found in the Park. No occurrences documented within 5 miles of the Park.
marsh microseris *Microseris paludosa*	--/--/1B.2	Closed-cone coniferous forest, cismontane woodland, coastal scrub, and valley and foothill grassland. 13 – 590m. Blooms August – June	**Moderate.** Suitable habitat is present in the Park. Extant population documented within 1.5 miles northeast of the Park at Cloverdale Ranch in a flat grassy opening in coastal scrub.
elongate copper moss *Mielichhoferia elongata*	--/--/4.3	Chaparral, coastal scrub, cismontane woodland, lower montane coniferous forest, meadows and seeps. Found in metamorphic rock, usually acidic, usually vernally mesic, sometimes carbonate, and often on roadsides.	**Low.** Marginal habitat found within the Park; however, no occurrences documented within 5 miles.
woodland woolythreads *Monolopia gracilens*	--/--/1B.2	Mixed evergreen forest, broadleaved upland forest, redwood forest, and chaparral, and valley and foothill grasslands. Affinity to serpentine soil. 60 – 1360m. Blooms March – July	**Low.** Suitable habitat is present within the Park; however, no occurrences are documented within 5 miles.
Dudley's lousewort *Pedicularis dudleyi*	--/--/1B.2	Chaparral, cismontane woodland, valley grassland, and redwood forest in coastal areas. 8 – 360m. Blooms April – June	**Low.** Suitable habitat is present within the Park; however, no occurrences are documented within 5 miles.
Santa Cruz Mountains beardtongue *Penstemon rattanii* var. *kleei*	--/--/1B.2	Chaparral, yellow pine forest and northern coastal coniferous forests. 10 – 660m. Blooms May – June	**Low.** Suitable habitat not found in the Park. No occurrences documented within 5 miles of the Park.
Monterey pine *Pinus radiata*	--/--/1B.1	Closed-cone coniferous forest and cismontane woodland.	**Low.** Native stands are limited to Año Nuevo, Cambria, and the Monterey Peninsula. No occurrences documented within 5 miles of the Park.
white-flowered rein orchid *Piperia candida*	--/--/1B.2	Yellow pine forest, north coastal coniferous forest, and broadleaved upland forest. Affinity to serpentine soil. 40 – 730m. Blooms May – September	**Low.** Suitable habitat not found in the Park. No occurrences documented within 5 miles of the Park.
Choris' popcornflower *Plagiobothrys chorisianus* var. *chorisianus*	--/--/1B.2	Mesic sites in chaparral, coastal scrub, and coastal prairie. 4 – 300m. Blooms March – June	**High.** Suitable habitat is present in the Park; historically documented at Pigeon Point. Several extant populations are documented within 5 miles of the Park at Año Nuevo State Reserve, Cascade Ranch, Cloverdale Ranch, Pebble Beach, and Pescadero Marsh.
pine rose *Rosa pinetorum*	--/--/1B.2	Yellow pine forest and red fir forest. 30 – 1980m. Blooms May - July	**Low.** Suitable habitat not found in the Park. No occurrences documented within 5 miles of the Park.
Hoffmann's sanicle *Sanicula hoffmannii*	--/--/4.3	Chaparral, mixed evergreen forest, northern coastal scrub and coastal sage scrub. Affinity to serpentine soils. 0 – 280m. Blooms March – May	**Low.** Suitable habitat is present within the Park; however, no occurrences are documented within 5 miles.

TABLE D.2
SPECIAL-STATUS SPECIES CONSIDERED IN EVALUATION OF THE PIGEON POINT LIGHT STATION STATE HISTORIC PARK GENERAL PLAN STUDY AREA

Common Name *Scientific Name*	Listing Status USFWS/ CDFW/Other	Habitat Description / Blooming Period	Potential to Occur in the Study Area
Marin checkerbloom *Sidalcea hickmanii* ssp. *viridis*	--/--/4.3	Chaparral with affinity to serpentine soils. 50 – 430m. Blooms May - June	**Low.** Suitable habitat not found in the Park. No occurrences documented within 5 miles of the Park.
OTHER SPECIAL-STATUS SPECIES (cont.)			
Plants (cont.)			
chaparral ragwort *Senecio aphanactis*	--/--/2B.2	Foothill woodland, northern costal scrub and coastal sage scrub. 15 – 1190m. Blooms January - April	**Low.** Suitable habitat is present within the Park; however, no occurrences are documented within 5 miles.
San Francisco campion *Silene verecunda* ssp. *verecunda*	--/--/1B.2	Mudstone, shale, or serpentine substrates in coastal scrub, coastal prairie, chaparral and valley and foothill grassland. March – June	**Low.** Marginal habitat found within the Park; however, no occurrences documented within 5 miles.
Santa Cruz microseris *Stebbinsoseris decipiens*	--/--/1B.2	Coastal prairie, chaparral, mixed evergreen forest, closed-cone pine forest and northern coastal scrub. 0 – 510m. Blooms April – May	**Moderate.** Suitable habitat is present within the Park. Extant occurrence is documented within 5 miles southeast on a ridge near Cascade Creek in semi-open coastal scrub.
slender-leaved pondweed *Stuckenia filiformis* ssp. *alpina*	--/--/2B.2	Marshes and swamps, in shallow, clear water of lakes and drainage channels. 15-2,310m. Blooms May – July	**Low.** Suitable habitat not found in the Park. An extant occurrence is documented within 4.3 miles of the Park in Año Nuevo State Reserve, located in a pond on a bluff.
Santa Cruz clover *Trifolium buckwestiorum*	--/--/1B.1	Coastal prairie and mixed evergreen forest. 20 – 720m. Blooms April – October	**Low.** Suitable habitat is present within the Park; however, no occurrences are documented within 5 miles.
Monarch butterfly *Danaus plexippus* (California overwintering population [pop. 1])	--/*/--	Eucalyptus groves (wintering sites). Period of identification: Winter	**Moderate.** Eucalyptus stand located along the western border of the Park's easement could host wintering monarchs. Several wintering sites are documented within the regional vicinity in stands of eucalyptus, Monterey pine, Monterey cypress, and Douglas fir.
Amphibians			
foothill yellow-legged frog *Rana boylii*	--/CSC/--	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.	**Low.** Suitable habitat not found in the Park. Closest extant population is documented 8.5 miles northeast of the Park in Pescadero Creek, inland, between Jones Gulch and Hardwood Creek.
Reptiles			
Western pond turtle *Emys marmorata*	--/CSC/--	Ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Requires basking sites and suitable upland habitat for egg-laying. Nest sites most often characterized as having gentle slopes (<15%) with little vegetation or sandy banks.	**Low.** Suitable habitat not found in the Park. Closest extant population is documented 3.5 miles southeast of the Park in a permanent pond where CRLF were also observed.
Birds			
Cooper's hawk *Accipiter cooperii*	--/WL/--	Nests in riparian areas and oak woodlands, and hunts songbirds at woodland edges.	**Moderate (Potential to nest).** Marginal foraging and nesting habitat is present in the willow riparian drainage of Spring Bridge Gulch within the Bolsa Point Area.

TABLE D.2
SPECIAL-STATUS SPECIES CONSIDERED IN EVALUATION OF THE PIGEON POINT LIGHT STATION STATE HISTORIC PARK GENERAL PLAN STUDY AREA

Common Name *Scientific Name*	Listing Status USFWS/ CDFW/Other	Habitat Description / Blooming Period	Potential to Occur in the Study Area
OTHER SPECIAL-STATUS SPECIES (cont.)			
Birds (cont.)			
Tricolored blackbird *Agelaius tricolor*	--/CSC/--	Nests in dense colonies within sloughs, swamps, and marshes where tall aquatic vegetation is present. Nests can extend into upland scrub habitat on colony fringes.	**Low (No nesting potential).** Suitable habitat is not found in the Park. The closest colony is documented 9.5 miles southeast of the Park in Laguna de las Trancas near Waddell Beach. May be observed on a transient basis on the wing.
Western burrowing owl *Athene cunicularia*	BCC/CSC/--	Open grasslands and shrublands where perches and existing rodent burrows are available	**Low (No nesting potential).** Marginal habitat is present within the Park; however, no extant occurrences are documented within 10 miles of the Park. May be observed on a transient basis during migration.
Northern harrier *Circus cyaneus*	--/CSC/--	Nests in salt or freshwater wetlands, forages over wetlands, annual grasslands.	**Moderate (Potential to nest).** Suitable foraging and nesting habitat is present in the Park among coastal scrub.
black swift *Cypseloides niger*	BCC/CSC/--	Breeds in areas with cliff faces, on coasts or inland canyons. Nests are in sheltered crevices or ledges under overhangs near water, such as a seep or waterfall.	**Low (Potential to nest).** Suitable nesting substrate is present in the Park along the coastal bluffs though no previous records of nesting black swifts are documented in the Park. Two records of few nesting pairs in the regional vicinity, the closest is located at Año Nuevo Point from the 1970s with the other in Big Basin Redwoods State Park.
Saltmarsh common yellowthroat *Geothlypis trichas sinuosa*	BCC/CSC/--	Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.	**Moderate (Potential to nest).** Suitable habitat is present in the Park within the willow riparian wetland of the Bolsa Point Area. The closest documented occurrences are within 3.5 miles at the marsh between Butano Creek and Pescadero Road and within the Pescadero Marsh State Reserve to the north of the Park.
Mammals			
Pallid bat *Antrozous pallidus*	--/CSC/ WBWG High	Most common in open, dry habitats with rocky areas for roosting. Very sensitive to disturbance of roosting sites. Forages primarily on the ground.	**Low.** Suitable roosting habitat is not found in the Park. Closest extant occurrence is documented 5 miles northeast of the Park along Pescadero Road near Newell Gulch.
Townsend's big-eared bat *Corynorhinus townsendii*	--/CC, CSC/ WBWG High	Inhabits caves and mines, but may also use bridges, buildings, rock crevices and tree hollows in coastal lowlands, cultivated valleys and nearby hills characterized by mixed vegetation throughout California below 3,300 meters.	**Low.** Marginal roosting and foraging habitat for this species is present in the Park. Few extant occurrences are documented nearby. The closest occurrence is a maternity colony located within 2.5 miles southeast of the Park in and abandoned house (1987). Due to this specie's sensitivity to human disturbance, roosts within the Park are unlikely.
Santa Cruz kangaroo rat *Dipodomys venustus venustus*	--/*/--	Pine forest with chaparral habitat in the low foothills of the Santa Cruz Mountains in areas with sandy or loamy soils.	**Low.** Suitable habitat is not found in the Park which is outside of the species known range.
Steller sea-lion *Eumetopias jubatus*	FD/--/--	Coastal waters of the North Pacific Ocean from Japan to central California.	**Absent.** May be observed offshore of the Park. Closest rookery site is located on Año Nuevo Island to the south of the Park.

TABLE D.2
SPECIAL-STATUS SPECIES CONSIDERED IN EVALUATION OF THE PIGEON POINT LIGHT STATION STATE HISTORIC PARK GENERAL PLAN STUDY AREA

Common Name *Scientific Name*	Listing Status USFWS/ CDFW/Other	Habitat Description / Blooming Period	Potential to Occur in the Study Area
OTHER SPECIAL-STATUS SPECIES (cont.)			
Mammals (cont.)			
Hoary bat *Lasiurus cinereus*	--/*/ WBWG Medium	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for foraging. Roosts in dense foliage of medium to large trees. Feeds primarily on moths; requires water.	**Low.** Marginal roosting habitat is present in the eucalyptus trees of the easement; however, breeding understood to occur inland in densely forested areas. Foraging may occur throughout the Park as this species winters along the coast.
San Francisco dusky-footed woodrat *Neotoma fuscipes annectens*	--/CSC/--	Forests with moderate canopy cover and brushy understory.	**Low.** Marginal habitat is found in the Park near the willow riparian drainage of Spring Bridge Gulch within the Bolsa Point Area though vegetation is very dense here and no middens were observed.

[a] Potential to Occur Categories:
Unlikely = The project site and/or immediate vicinity do not support suitable habitat for a particular species. Project site is outside of the species known range. Species identified as unlikely to occur are not addressed further in the ISMND.
Low Potential = The project site and/or immediate vicinity only provide limited habitat. In addition, the species' known range may be outside of the project site.
Moderate Potential = The project site and/or immediate vicinity provide suitable habitat.
High Potential = The project site and/or immediate vicinity provide ideal habitat conditions.

STATUS CODES:

FEDERAL: (U.S. Fish and Wildlife Service)
FT = Listed as Threatened (likely to become Endangered in the foreseeable future) by the Federal Government.
BCC = Bird of Conservation Concern
FSC = Federal Species of Concern
FC = Candidate for federal listing
FD= Delisted

STATE:
CT = Listed as Threatened by the State of California
CE= Listed as Endangered by the State of California
CC = California Candidate for Listing
CSC = California Species of Special Concern
CFP= California Department of Fish and Wildlife designated "fully protected"

WL = Watch list
§3503.5 = Protection for nesting species of Falconiformes (hawks) and Strigiformes (owls)
* Special animal-listed on CDFW's Special Animal List

OTHER:
California Native Plant Society (CNPS) California Rare Plant Ranks (CRPR):
1A = Presumed extirpated in California; Rare or extinct in other parts of its range.
1B = Rare, threatened, or endangered throughout range; Most species in this rank are endemic to California.
2A = Extirpated in California, but common in other parts of its range.
2B = Rare, threatened, or endangered in California but common in other parts of its range.
3 = Need more information about species to assign it a ranking.
4 = Limited distribution and therefore warrants monitoring of status.
.1 = Seriously endangered in California
.2 = Fairly endangered in California
LS= Locally Significant Species

WBWG = Western Bat Working Group:
Low = Stable population
Medium = Need more information about the species, possible threats, and protective actions to implement.
High= Imperiled or at high risk of imperilment.

SOURCES: CDFW, 2016a; CDFW, 2016b; CDFW, 2016c; CDFW, 2016d; USFWS, 2016; CNPS, 2016; and eBird, 2016.

E List and Description of Systemwide Planning

Appendix E: List and Description of Systemwide Planning Influences

THE STATE PARK SYSTEM PLAN (2002)

This planning document in composed on two parks: 1). A System for the Future, and 2). Initiatives for Action. The first section presents changes that affect the parks system, including population growth, demographic shifts, and trends in visitor use and need. The second section presents an action plan for addresses the challenges presented in the first section. The Plan as a whole serves to guide park practices statewide into the future.

MEETING THE NEEDS OF ALL CALIFORNIANS: 2015 STATEWIDE COMPREHENSIVE OUTDOOR RECREATION PLAN

In September 2015, CDPR released the Statewide Comprehensive Outdoor Recreation Plan (SCORP), which details feedback from public input and evaluation of existing park and recreation land. The study included focus groups with 81 health and recreation experts, surveys of 295 public agency directors, and public input from 5,421 adults and 410 youth. The SCOPR presents findings on public interest in various uses of public lands, including interest in paying for certain services. The SCORP is an important resource in evaluating public need for recreational uses and interest in other potential park uses, such as habitat conservation and wildland preservation.

CDPR DEPARTMENT OF OPERATIONS MANUAL (DOM)

CDPR's *Department Operations Manual* (DOM) provides policies and procedures for operations of the all parks within the system. The DOM incorporates the legal responsibilities based on State and Federal laws and is intended to serve as resource for CDPR staff. It is expected that all parks within the system practice the protocols set forth in the DOM as standard practice.

The DOM establishes CDPR's management approach for park resources, including physical and biological resources (Section 0300, Natural Resources) and prehistoric, historic, and archaeological resources (Section 0400, Cultural Resources). Section 0900, Interpretation and Education provides guidance for in these areas.

CDPR DEPARTMENT ADMINISTRATION MANUAL (DAM)

CDPR's *Department Administration Manual* (DAM) is a reference for policies, procedures, requirements, and information that help to ensure a consistent approach to management.

CALIFORNIA STATE PARKS ACCESSIBILITY GUIDELINES (2015)

The Americans with Disabilities Act (ADA) of 1990 prohibits discrimination against people with disabilities to all programs, services, and activities by the State. CDPR published the first State Parks Accessibility Guidelines in 1994 to establish standards for providing universal access to parks and materials managed by CDPR.

The 2015 Edition of the California State Parks Accessibility Guidelines includes new and revised standards to ADA. The Accessibility Guidelines include department policies and practices and essential considerations for accessible parks. The Accessibility Guidelines additionally provide a project review process for determining accessibility of features across the park system.

STRATEGIC ACTION PLAN "BRILLIANCE IN THE BASICS" (2013-2014)

The Strategic Action Plan's purpose is to lay the foundation for a long-term vision and plan that will help to ensure a vibrant and sustainable CDPR system. In order to accomplish this purpose, the Strategic Action Plan identifies five main goals:

1. Restore public trust and accountability.
2. Protect and preserve resources as well as facilities in the existing park system.
3. Maintain the cleanest park facilities and restrooms in the country.
4. Connect people to the California's State Park System.
5. Build the foundation for a sustainable future.

Within the vision of the CDPR is a future where Californians are healthier through learning about parklands. In addition there is a focus on diverse heritages as well as the opportunities for visiting these treasured natural and cultural resources and wide ranging recreational opportunities available to all.

PARKS FORWARD—A NEW VISION FOR CDPR: RECOMMENDATIONS OF THE PARKS FORWARD INITIATIVE (FEBRUARY 2015)

The vision of this policy document is a system of parks that protects the state's iconic landscapes, natural resources, cultural resources and cultural heritage and is accessible to all Californians' and engages younger generations and promotes the healthy lifestyles and communities that are uniquely California. The Parks Forward Initiative has four main themes:

1. Transform the Department.
2. Work more collaboratively with new and existing partners.
3. Expand park access for all Californians.

4. Ensure stable funding for parks.

WILDLIFE ACTION PLAN - CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

CDFW established a statewide plan for wildlife conservation. Within the plan there are specific habitat communities targeted for conservation in the Central California Coast Ecoregion, where the Park is located. Targeted habitat communities are similar to ones found at the Park including coastal dune and bluff scrub and coastal terrace prairie. The report additionally targets California grassland and indicates that annual grasslands, such as the vegetation community found at the Park, might be able to provide similar habitat value. One of the conservation strategies included in the CDFW's plan includes partner engagement. CDFW indicates an interest in partnering with State and federal agencies, tribal entities, the NGO community and other partners to conserve these areas.

BASIN PLAN - CENTRAL COAST REGIONAL WATER QUALITY CONTROL BOARD

The Central Coast Regional Water Quality Control board has jurisdiction to protect water quality within the southern portion of San Mateo County, where the Park is located. The Basin Plan is the Regional Water Quality Control Board's master plan to control water quality within their jurisdictional area. The 2016 Basin Plan indicates that the Park is located within the Big Basin Hydrologic Unit and Año Nuevo Hydrologic Area. Neither of the riparian drainages within the Park, Yankee Jim Gulch or Spring Bridge Gulch, are listed in the Basin Plan for monitoring inland surface waters nor are they listed for beneficial uses

CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) MANUALS

The Park is located along Highway 1, a Caltrans facility. Access improvements to the Park that include Highway 1 will need to consider Caltrans standard practices, including but not limited to, those outlined in the following manuals:

- **Highway Design Manual** provides policies and procedures to carry out the State highway design functions.

- **Right of Way Manual** provides policies and procedures for establishing Right of Way functions.

- **Project Development Procedures Manual** provides policies and procedures for workflow within Caltrans.

F List and Description of Regional Planning Influences

Appendix F: List and Description of Regional Planning Influences

SAN MATEO COUNTY ZONING

According to the San Mateo County 2012 Zoning Map, all areas, including the Bolsa Point Area, Light Station Area, and Easement Area within the Park, are zoned Planned Agricultural Development/Coastal Development (PAD/CD).[1] Within the PAD, public recreation and shoreline trail uses are permitted with a PAD permit.

COMPLETING THE CALIFORNIA COASTAL TRAIL (COASTAL CONSERVANCY)

The Coastal Conservancy has been working since 1972 to increase access to the shoreline. The 1,100-mile California Coastal Trail is currently more than half complete. The goals and objectives of the trail are to provide a continuous walking and hiking trail close to the ocean; provide access of non-motorizes uses; connect to existing and proposed local trail systems; ensure that the trail has connections to trailheads parking, and transit; maximize ocean views; and provide an educational experience through interpretive programs. An approach for planning, implementation and operation of the trail has been developed that includes the California Coastal Commission and partners, such as CDPR, federal agencies (National Park Service, U.S. Forest Service, Bureau of Land Management, and Fish and Wildlife Service), U.S. military bases, State Agencies (Caltrans and Wildlife Conservation Board), local governments, and many nonprofits and some private landowners. Currently, a section of trails within the Park are considered part of the California Coastal Trail.

2014 VISION PLAN - MIDPENINSULA REGIONAL OPEN SPACE DISTRICT

Midpeninsula Regional Open Space District (Midpen) encompasses large sections of San Mateo and Santa Clara Counties from the San Francisco Bay to the Pacific Ocean. The District includes properties owned and managed by Midpen, as well as open space properties owned and managed by a variety of the agencies and nonprofits. The 2014 Vision Plan provides goals and implementation strategies for advancing projects within the District. Consideration of future improvements can influence decision making and prioritization within the Park.

[1] County of San Mateo Planning and Building. "Find My Zoning, Parcel Map, and Other Property Info." Find My Zoning, Parcel Map, and Other Property Info. Web. 08 Feb. 2016. <http://planning.smcgov.org/find-my-zoning-parcel-map-and-other-property-info>.

AMAH MUTSUN LAND TRUST FIVE-YEAR STRATEGIC PLAN: 2014-2019

The Strategic Plan defines the vision and mission for the Amah Mutsun Land Trust, a Native American land trust established by the Amah Mutsun Tribal Band. The Strategic Plan additionally outlines four work areas for the Land Trust during the time period of the plan. These include organizational management, protection of culturally significant places, stewardship and management in a manner to promote indigenous practices, and education around relationships between land and people. The Strategic Plan describes the practice of indigenous stewardship that is built on techniques of Native peoples, which the Land Trust would like to utilize in contemporary settings.

G List and Description of Park Planning Influences

Appendix G: List and Description of Park Planning Influences

CONCEPT STUDY: PIGEON POINT LIGHT STATION STATE HISTORIC PARK LOW COST LODGING AND CIRCULATION INVESTIGATION (2014)

The Concept Study provides an evaluation of existing site conditions in the Light Station as well as recommendations for improvements.

The study was intended to serve as a guide to identify improvements that would best provide an enhanced visitor experience without impacting the Light Station. Some of the key issues identified in the study include:

- Facilities and parking that have not been expanded to accommodate an increase in visitation.
- Key circulation connections are missing.
- Fencing is in need of repair and a cohesive fencing style is needed.
- Water system has failed creating a need for potable water to be delivered to site.
- Low cost lodging opportunities are lacking along the coast.
- Site elements do not have orientation maps and identification for self-guided tours.

Recommendations are given for key study components: circulation, trail and beach access, trail delineation, open space, circulation and parking, aesthetics, accessibility, and interpretation.

Some of the recommended actions included:

- Remove boardwalk and allow road to function as the main path for travel.
- Provide accessible ramp to beach.
- Use post and cable fencing for minimal visual intrusion.
- Maintain large amount of open space for larger group activities, like school group meetings, music events, or weddings.
- Add bicycle parking.
- Formalize and expand parking on shoulder of Pigeon Point Road.
- Investigate leasing or purchasing neighboring agricultural property for parking.
- Expand decking and open up views.
- Provide an interpretative master plan to guide development of interpretive programs, services and exhibits.
- Investigate expansion of the existing hostel units.
- Investigate permanent lodging expansion.

Since the completion of the Concept Study, the boardwalk and fence along the main pathway have been removed and native plants have been planted in this space.

The 2014 Concept Plan recommended additional studies or reports for the Park, including a General Plan, a topographic survey and a geotechnical study or report. Neither a topographic survey nor a geotechnical study has been completed.

DRAFT HISTORIC STRUCTURES REPORT PIGEON POINT LIGHT STATION (2013)

In 2013, Architectural Resources Group (ARG) drafted a Historic Structure Report for CDPR for Pigeon Point Light Station. A Historic Structures Report is part of the preservation planning process and "provides documentary, graphic, and physical information about a property's history and existing condition." The Historic Structures Report additionally provides recommendation treatments to preserve historic structures and defines the scope of rehabilitation and restoration. The Historic Structures Report for the Light Station provides a thorough timeline for development at the Park and provided the General Plan with significant background information. The Historic Structures Report finds that the Period of Significance is 1871-1915 and identifies structures constructed during that time as being "contributors" to the historic Light Station status. However, the General Plan notes that the Period of Significance may be extended to the date when the Lighthouse was automated (1974).

LIGHT STATION REHABILITATION (2009)

ARG developed a Rehabilitation Plan for the Pigeon Point lighthouse and oil house. The top levels of the lighthouse are in poor condition due to corrosion of the cast iron structural elements and pose a risk to human safety.

The proposed summary budget for the project to be completed is approximately $11M. A fundraising campaign is underway by the California State Parks Foundation to raise the funds needed for the lighthouse repair and rehabilitation. The elements of the proposed rehabilitation are listed below. Stage 1 has already been completed, and fundraising for Stages 2 through 4 is underway. The stages are as follows:

5. Removal of Fresnel Lens and Interim Stabilization
6. Rehabilitation of the Upper Lighthouse Tower
7. Rehabilitation of the Lower Lighthouse Tower
8. Rehabilitation of the Oil House

PIGEON POINT LIGHT STATION RESOURCES SUMMARY (1998)

The purpose of the Resources Summary is to enable the State Park and Recreation Commission to classify the project as is required by the Public Resources Code Section 5002.1. This report establishes the values of the area as well as presents information on resources. This summary provides a cultural resource history including historic structures; provides an archaeology and ethnographic summary; describes the primary historic zone; describes natural resources including topography, meteorology, hydrology, geology, soils, plants and animal life, and ecology; and describes aesthetic resources.

The Resource Summary designates a Primary Historic Zone to "protect the environmental integrity of significant historic resources."[2] The Primary Historic Zone encompassed the historic structures in the Light Station but did not include the cottages or the water sand filter building. The Resource Summary indicates that park use within this zone is restricted to public access and historic preservation.

[2]California Department of Parks and Recreation. "Pigeon Point Light Station Project Resource Summary." November 1998. Page 19.

H Existing Laws, Codes, and Policies

Appendix H: Existing Laws, Codes, and Policies

Existing federal and State laws, codes, and policies guide the planning and management of parks with the California Department of Parks and Recreation (CDPR) system. The General Plan for Pigeon Point Light Station State Historic Park (the Park) was developed to comply with these existing statutes, and it is assumed the Park will be managed in compliance with existing and future federal and state laws.

Following is a list of principal laws, codes, and policies related to the planning and managing the Park.

PLANNING AND ENVIRONMENTAL REVIEW

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

CEQA is the principal statute governing the environmental review of projects in the State. CEQA requires lead agencies to determine if a proposed project would have adverse effect on the environment. If a proposed project has the potential for a significant adverse environmental impact, an Environmental Impact Report (EIR) must be prepared. If there is no substantial evidence that the proposed project may have a significant impact, an Initial Study (IS) may satisfy the CEQA requirement. The IS may be accompanied by a Mitigated Negative Declaration (MND) if mitigation measures are determined to be necessary to ensure negative impact.

Sections of the CEQA directly relate the protection of resources and are described below.

PUBLIC RESOURCES CODE (PRC)

California law is made up of the State Constitution and Statutes and 29 codes enacted by the California State Legislature, referred to as the California Code of Regulations. The California Public Resources Code (PRC) provides guidance for management of for natural, cultural, and recreational resources of the State. Division 5 of the PRC addresses Parks and Monuments and includes classification of the units in CDPR's system. Other sections of the PRC directly relate the protection of resources or state-wide management practices and are described below.

AIR QUALITY AND CLIMATE CHANGE

The Park is located in the San Francisco Bay Area Air Basin (SFBAAB or Air Basin), and the **Bay Area Air Quality Management District** (BAAQMD) is the regional air quality agency for the SFBAAB.

CRITERIA AIR POLLUTANTS

The pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and State law under the **National and California Clean Air Act**, respectively. Air pollutants are categorized as primary and/or secondary pollutants. Primary air pollutants are those that are emitted directly from sources. Criteria pollutant precursors can form secondary criteria air pollutants through chemical and photochemical reactions in the atmosphere. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxides (NOx), sulfur dioxide (SO2), coarse inhalable particulate matter (PM10), fine inhalable particular matter (PM2.5), and lead (Pb) are primary air pollutants. Of these, all of them except for ROGs are "criteria air pollutants," which means that ambient air quality standards (AAQS) have been established for them. The National and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect those "sensitive receptors" most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

TOXIC AIR CONTAMINANTS

In addition to criteria air pollutants, both the State and federal government regulate the release of "toxic air contaminants" (TACs). The **California Health and Safety Code** define a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant pursuant to Section 112(b) of the **federal Clean Air Act** (42 United States Code §7412[b]) is a toxic air contaminant. Under State law, the California Environmental Protection Agency (Cal/EPA), acting through the **California Air Resources Board (CARB)**, is authorized to identify a substance as a TAC if it determines that the substance is an air pollutant that may cause or contribute to an increase in mortality or serious illness, or may pose a present or potential hazard to human health.

CLIMATE CHANGE

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as greenhouse gases (GHGs), into the atmosphere. The California Global Warming Solutions Act of 2006, or **Assembly Bill (AB) 32** requires the State to reduce GHG emissions to 1990 level emissions by 2020. CARB developed the **2008 Scoping Plan** to outline the State's strategy to achieve this emission reduction. The CARB Scoping Plan is applicable to state agencies and is the primary tool that is used to develop performance-based and efficiency-based CEQA criteria and GHG reduction targets for climate action planning efforts.

Furthermore, **Executive Order B-18-12** directed State agencies to take actions to reduce GHG emissions by at least 10 percent by 2015 and 20 percent by 2020, as measured against a 2010 baseline

COASTAL DEVELOPMENT

CALIFORNIA COASTAL ACT

Within the California Coastal Zone, the CCC also has authority to regulate development that would conflict with the provisions of the California Coastal Act. The coastal zone generally extends three miles seaward and about 1,000 yards inland from the mean high tide line of the sea. In significant coastal estuarine, habitat, and recreational areas it extends inland to the first major ridgeline paralleling the sea or five miles from the mean high tide line of the sea, whichever is less, and in developed urban areas the zone generally extends inland less than 1,000 yards. In order to carry out the policies of the Coastal Act, each of the 73 cities and counties in the coastal zone is required to prepare a local coastal program (LCP) for the portion of its jurisdiction within the coastal zone and to submit the program to the Commission for certification. The CCC manages protection of biological resources through a permitting process for all projects in the coastal zone. Once the CCC certifies a LCP, the local government gains authority to issue most coastal development permits (CDP). The CCC generally retains permit authority over certain specified lands (such as public trust lands or tidelands). Only the CCC can grant a coastal development permit for development in areas of its retained jurisdiction. The CCC has unusually broad authority to regulate development in the coastal zone, and a permit is required for any project that might change the intensity of land use in the coastal zone. For example, a project that would require a building or grading permit from a city or county would also require a CDP. Other projects, such as major vegetation clearing or subdividing, may also require a CDP. The local government or the CCC reviews applications before it to determine whether the proposed development would substantially change any existing biological resources, including wetlands, and to consider the net effects of the project on rare and endangered species.

SAN MATEO COUNTY LOCAL COASTAL PROGRAM

Once the CCC certifies a LCP, the local government gains authority to issue most CDPs. The San Mateo County LCP was certified in 1981 and has the authority to regulate development in the coastal zone within the County. A CDP is required for any project that might change the intensity of land use in the coastal zone. Other projects, such as major vegetation clearing or subdividing, may also require a CDP.

ENVIRONMENTALLY SENSITIVE HABITAT AREAS

The LCP defines several environmentally sensitive habitat areas (ESHA) that are afforded special protection. These ESHAs are defined in the Local Coastal Program as "…any area in which plant or animal life or their habitats are either rare or especially valuable and any area which meets one of the following criteria: (1) habitats containing or supporting 'rare and endangered' species as defined by the State Fish and Game Commission, (2) all perennial and intermittent streams and their tributaries, (3) coastal tide lands and marshes, (4) coastal and offshore areas containing breeding or nesting sites and coastal areas used by migratory and resident water-associated birds for resting areas and feeding, (5) areas used for scientific study and research

concerning fish and wildlife, (6) lakes and ponds and adjacent shore habitat, (7) existing game and wildlife refuges and reserves, and (8) sand dunes."

These sensitive habitat areas include, but are not limited to, riparian corridors, wetlands, marine habitats, sand dunes, sea cliffs, and habitats supporting rare, endangered, and unique species. Many of these resources occur within the Park; however, the designation of these habitats as ESHA are made by County staff on a case-by-case basis at the time a project is proposed. The LCP limits development in ESHAs to resource dependent uses and prescribes minimum set-back, or buffer distances, from ESHAs for other development.

VISUAL RESOURCES

Section 8 of the LCP provides guidance for the protection of visual resources. The Visual Resources Component of the LCP prohibits permanent structures development that would impede natural landforms such as those found at the Park, including beaches and cliffs and bluffs:

Section 8.2 Beaches

Prohibit permanent structures on open sandy beaches except facilities required for public health and safety (i.e., beach erosion control structures).

Section 8.4 Cliffs and Bluffs

a. Prohibit development on bluff faces except public access stairways where deemed necessary and erosion control structures which are in conformity with coastal policies on access and erosion.

b. Set back bluff top development and landscaping from the bluff edge (i.e., decks, patios, structures, trees, shrubs, etc.) sufficiently far to ensure it is not visually obtrusive when viewed from the shoreline except in highly developed areas where adjoining development is nearer the bluff edge, or in special cases where a public facility is required to serve the public safety, health, and welfare.

Section 8.5 establishes guidelines for the location of development. Rural lands larger than 20,000 square feet require that new development visible from State and County Scenic Roads does not significantly impact views from public viewpoints, including coastal roads, roadside rests, recreation areas, coastal accessways and beaches, and is consistent with all other LCP requirements.

The Visual Resources Component additionally provides protection for vegetative forms and provides guidance for the treatment of trees and vegetative cover growing within the coastal zone.

8.9 Trees

a. Locate and design new development to minimize tree removal.

b. Employ the regulations of the Significant Tree Ordinance to protect significant trees (38 inches or more in circumference) which are located in urban areas zoned Design Review (DR).

c. Employ the regulations of the Heritage Tree Ordinance to protect unique trees which meet specific size and locational requirements.

d. Protect trees specifically selected for their visual prominence and their important scenic or scientific qualities.

e. Prohibit the removal of trees in scenic corridors except by selective harvesting which protects the existing visual resource from harmful impacts or by other cutting methods necessary for development approved in compliance with LCP policies and for opening up the display of important views from public places, i.e., vista points, roadways, trails, etc.

f. Prohibit the removal of living trees in the Coastal Zone with a trunk circumference of more than 55 inches measured 4 1/2 feet above the average surface of the ground, except as may be permitted for development under the regulations of the LCP, or permitted under the Timber Harvesting Ordinance, or for reason of danger to life or property.

g. Allow the removal of trees which are a threat to public health, safety, and welfare.

8.10 Vegetative Cover (with the exception of crops grown for commercial purposes)

Replace vegetation removed during construction with plant materials (trees, shrubs, ground cover) which are compatible with surrounding vegetation and is suitable to the climate, soil, and ecological characteristics of the area.

COASTAL BLUFF TOPS

Section 9.8 of the LCP lists regulations for development on coastal bluff tops. They include the following:

- Permit bluff and cliff top development only if set back and design provisions would ensure stability and structural integrity for at least 50 years and if the development, which includes storm runoff, foot traffic, grading, irrigation, and septic tanks, will not contribute to erosion.

- Require a site stability evaluation report prepared for by a soils engineer or an engineering geologist based on a site evaluation. The site should consider historic, current, and future cliff erosion, cliff geometry and site topography, geologic conditions, wave and tidal action, ground and surface water conditions and variations, effects of development on the stability of the site and adjacent area, and any other factors that may affect stability.

- The area of demonstration of stability includes the base, face and top of all the bluffs as well as cliffs. If a proposed development is within 50 feet from the edge of a bluff it requires a site stability evaluation report.

- Prohibit land divisions that would require the need for bluff protection.

AGRICULTURAL SOILS

Section 5.1 of the LCP provides protection for "prime agricultural land," which the LCP defines as:

1. All land which qualifies for rating as Class I or Class II in the US Department of Agriculture Soil Conservation Service Land Use Capability Classification, as well as all Class III lands capable of growing artichokes or Brussels sprouts.

2. All land which qualifies for rating 80 to 100 in the Storie Index Rating.

3. Land which supports livestock for the production of food and fiber and which has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the U.S. Department of Agriculture.

4. Land planted with fruit or nut bearing trees, vines, bushes, or crops which have a non-bearing period of less than five years and which normally return during the commercial bearing period, on an annual basis, from the production of unprocessed agricultural plant production not less than $200 per acre.

5. Land which has returned from the production of an unprocessed agricultural plant product an annual value that is not less than $200 per acre within three of the five previous years.

Section 5.5 of the LCP describes permitted use on prime agricultural land, including conditional permits. Public recreation and shoreline access are included in the list of conditionally permitted uses. Section 5.8 describes the provisions of conditions use, including that projects demonstrate:

- That no alternative site exists for the use,

- Clearly defined buffer areas are provided between agricultural and non-agricultural uses,

- The productivity of any adjacent agricultural land will not be diminished, and

- Public service and facility expansions and permitted uses will not impair agricultural viability, including by increased assessment costs or degraded air and water quality.

Additional provisions in Section 5.8 apply to prime agricultural land owned by a public agency, such as CDPR. This section requires the agency to:

- To execute a recordable agreement with the County that all prime agricultural land and other land suitable for agriculture which is not needed for recreational development or for the protection and vital functioning of a sensitive habitat will be permanently protected for agriculture, and

- whenever legally feasible, to agree to lease the maximum amount of agricultural land to active farm operators on terms compatible with the primary recreational and habitat use.

RECREATION/VISITOR-SERVING FACILITIES

Section 11 of the LCP defines visitor-serving facilities, commercial recreation facilities, and public recreation facilities and permitted uses and locations of these facilities and development standards.

Section 11 of the LCP also defines the role of public agencies including CDPR. The following sections include CDPR.

Section 11.25 Requirement that State Parks Development Conform to the Local Coastal Program

h. Require that the State Department of Parks and Recreation, as part of any application for a Coastal Development Permit, and in addition to any other submittals required, submit a long-range plan for any park unit proposed for improvement which includes: (1) the development plan, including the location of all proposed structures, parking areas, trails, recreation facilities and any proposed alterations of the natural environment; (2) a map of sensitive habitats and lands which are needed for the protection and vital functioning of sensitive habitats; (3) evidence of how agriculture has been considered in the planning of each park unit by (a) demonstrating how the Department will continue or renew the maximum amount of prime agricultural land and other lands suitable for agriculture in agricultural production within each park unit and (b) providing site specific justifications, which are consistent with the criteria for conversion in the Agriculture Component, for converting prime agricultural land or other lands suitable for agriculture to non-agricultural use; and (4) any capital outlay projects proposed for the subsequent one-year period.

i. Require that, prior to granting a development permit to the State Department of Parks and Recreation, the development and the long-range park unit plan be found consistent with the certified Local Coastal Program, or with a public works plan approved by the California Coastal Commission.

Section 11.28 Role of the State Department of Parks and Recreation

a. Designate the State Department of Parks and Recreation as the primary agency for the acquisition, development and maintenance of public recreation and visitor-serving facilities in the Coastal Zone.

b. Encourage the Department to contribute the major portion of funds for the development, expansion and maintenance of public recreation and visitor serving facilities in accordance with the priorities and policies of this component.

c. Encourage the State Department of Parks and Recreation to develop and maintain segments of the California Coastal Trail on State-owned property, in conjunction with the shoreline access trails.

d. Consider the possibility of having the County undertake the maintenance of the facilities with reimbursed funds.

PHYSICAL RESOURCES

BLUFF EROSION AND SEA LEVEL RISE

See discussion of **San Mateo County LCP** in the coastal development section above.

WATER QUALITY

The Central Coast Regional Water Quality Control Board (RWQCB) regulates water quality in the region and provides water quality standards and management criteria, as presented in the ***Water Quality Control Plan for the Central Coastal Basin*** (2016). Water quality in unincorporated San Mateo County, including the plan area, is regulated by the Municipal **Regional Stormwater National Pollutant Discharge Elimination System** (NPDES) permit (MRP) issued for the San Francisco Bay Area Region (Order No. R2-2015-0049), which was recently revised and is in effect as of January 1, 2016.

Stormwater quality is implemented through the **San Mateo County Water Pollution Prevention Program** (SMCWPPP) to ensure compliance with NPDES permit requirements, and C.3 provisions, which are provisions that require projects that create and/or replace 10,000 square-feet or more of impervious surface to control the flow of stormwater and stormwater pollutants as a result of that new impervious surface.

WATER USE

In 2012, the governor of California issued **Executive Order B-18-12** that directed state agencies reduce overall water use at the facilities they operate by 10 percent by 2015 and by 20 percent by 2020, as measured against a 2010 baseline. Due to the State of Emergency declared in 2014, additional executive orders directing stricter water conservation, including Executive Order B-29-15 and B-36-15, have been issued with expiration dates in 2016. **Executive Order B-37-16** extended these provisions indefinitely, including a mandatory 25 percent reduction. The State Water Resources Control Board is responsible for implementing the executive orders and working with water suppliers, local governments, and environmental groups to meet water use targets.

NATURAL RESOURCES

FEDERAL REGULATIONS

FEDERAL ENDANGERED SPECIES ACT

The federal Endangered Species Act (FESA) (16 USC Section 1531 et seq.) provides for designation of species, both plant and animal, as threatened and endangered, and requires the establishment of measures for their protection and recovery. The "take" of listed plant or wildlife species is prohibited without first obtaining a federal permit. Take is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." Harm includes any act that actually kills or injures fish or wildlife, including significant habitat modification or degradation that significantly impairs essential behavioral patterns of fish or wildlife. Activities that damage the habitat of (i.e., harm) listed wildlife species require approval from the USFWS or National Marine Fisheries Service (NMFS). The FESA also generally requires determination of critical habitat for listed species. If critical habitat has been designated, impacts to areas that contain the primary constituent elements identified for the species, whether or not it is currently present, is also prohibited. FESA Section 7 and Section 10 provide two pathways for obtaining authority to take listed species.

MIGRATORY BIRD TREATY ACT

The federal Migratory Bird Treaty Act (MBTA) (16 USC, Section 703, Supp. I, 1989) prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. This act applies to whole birds, parts of birds, and bird nests and eggs. The ESA defines take as "…harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect any threatened or endangered species." Harm may include significant habitat modification where it actually kills or injures a listed species through impairment of essential behavior (e.g., nesting or reproduction). Therefore, for projects that would not result in the direct mortality of birds, the MBTA is generally also interpreted in CEQA analyses as protecting active nests of all species of birds that are on the List of Migratory Birds, published in the Federal Register in 1995. With respect to nesting birds, while the MBTA itself does not provide specific take avoidance measures, the USFWS and CDFW over time have developed a set of measures sufficient to demonstrate take avoidance. Since these measures are typically required as permitting conditions by these agencies, they are often incorporated as mitigation measures for projects during the environmental review process. These requirements include avoiding tree removal during nesting season, preconstruction nesting bird surveys, and establishment of appropriate buffers from construction if active nests are found.

MARINE MAMMAL PROTECTION ACT

The Marine Mammal Protection Act (MMPA) of 1972 and as amended in 1981, 1982, 1984, and 1995 establishes a federal responsibility for the protection and conservation of marine mammal species by prohibiting the harassment, hunting, capture, or killing of any marine mammal. The primary authority for implementing the act belongs to the USFWS and NOAA Fisheries.

FEDERAL REGULATION OF WETLANDS AND OTHER WATERS

The regulations and policies of various federal agencies (e.g., Corps, U.S. Environmental Protection Agency [EPA], and USFWS) mandate that the filling of wetlands be avoided unless it can be demonstrated that there is no practicable alternative to filling. The Corps has primary federal responsibility for administering regulations that concern waters and wetlands in the project area under statutory authority of the Rivers and Harbors Act (Sections 9 and 10) (see below) and the Clean Water Act (CWA; Section 404).

Pursuant to Section 10 of the Rivers and Harbors Appropriation Act of 1899 (RHAA; 33 USC 403), the Corps regulates the construction of structures in, over, or under, excavation of material from, or deposition of material into "navigable waters." In tidal areas, the limit of navigable water is the mean high tide line; in nontidal waters it is the ordinary high water mark (OHWM). Larger streams, rivers, lakes, bays, and oceans are examples of navigable waters regulated under Section 10.

The RHAA prohibits the unauthorized obstruction or alteration of any navigable water (33 USC Section 403). Navigable waters under the act are those "subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce" (33 CFR Section 3294). Typical activities requiring Section 10 permits are construction of piers, wharves, bulkheads, marinas, ramps, floats, intake structures, cable or pipeline crossings, and dredging and excavation.

Section 404 of the federal CWA (33 USC 1251-1376) prohibits the discharge of dredged or fill material into waters of the U.S., including wetlands, without a permit from the Corps. The CWA prohibits the discharge of any pollutant without a permit. Implicit in the CWA definition of "pollutant" is the inclusion of dredged or fill material regulated by Section 404 (33 USC 1362). The discharge of dredged or fill material typically means adding into waters of the U.S. materials such as concrete, dirt, rock, pilings, or side cast material that are for the purpose of replacing an aquatic area with dry land or raising the elevation of an aquatic area. Activities typically regulated under Section 404 include the use of construction equipment such as bulldozers, and the leveling or grading of sites where jurisdictional waters occur.

STATE REGULATIONS

CALIFORNIA ENDANGERED SPECIES ACT

Under the California Endangered Species Act (CESA), the CDFW has the responsibility for maintaining a list of threatened and endangered species (California Fish and Game Code Section 2070). The CDFW also maintains a list of candidate species, which are those formally under review for addition to either the list of endangered species or the list of threatened species.

The CESA prohibits the take of plant and animal species that the California Fish and Game Commission has designated as either threatened or endangered in California. "Take" in the context of the CESA means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill a listed species (California Fish and Game Code Section 86). The take

prohibitions also apply to candidates for listing under the CESA. However, Section 2081 of the CESA allows the CDFW to authorize exceptions to the state's take prohibition for educational, scientific, or management purposes.

In accordance with the requirements of the CESA, an agency reviewing a project within its jurisdiction must determine if any state-listed endangered or threatened species could be present in the project area. The agency also must determine if the project could have a potentially significant impact on such species. In addition, the CDFW encourages informal consultation on any project that could affect a candidate species.

CALIFORNIA NATIVE PLANT PROTECTION ACT

State listing of plant species began in 1977 with the passage of the California Native Plant Protection Act (CNPPA, California Fish and Game Code Sections 1900-1913), which directed the CDFW to carry out the legislature's intent to "preserve, protect, and enhance endangered plants in this state." The CNPPA gave the California Fish and Game Commission the power to designate native plants as endangered or rare and to require permits for collecting, transporting, or selling such plants. The CESA expanded on the original CNPPA and enhanced legal protection for plants. The CESA established threatened and endangered species categories and grandfathered all rare animals—but not rare plants—into the act as threatened species. Thus, three listing categories for plants are employed in California: rare, threatened, and endangered.

SPECIAL STATUS NATURAL COMMUNITIES

The CDFW's Natural Heritage Division identifies special-status natural communities, which are those that are naturally rare and those whose extent has been greatly diminished through changes in land use. The CNDDB tracks 135 such natural communities in the same way that it tracks occurrences of special-status species: Information is maintained on each site for the natural community's location, extent, habitat quality, level of disturbance, and current protection measures. The CDFW is mandated to seek the long-term perpetuation of the areas in which these communities occur. While there is no statewide law that requires protection of all special-status natural communities, CEQA requires consideration of the potential impacts of a project on biological resources of statewide or regional significance.

SPECIAL STATUS SPECIES

Section 15380(b) of the CEQA Guidelines provides a definition of rare, endangered, or threatened species that are not currently included in an agency listing, but whose "survival and reproduction in the wild are in immediate jeopardy" (endangered) or which are "in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens" or "is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered 'threatened' as that

term is used in the federal Endangered Species Act."[1] Species recognized under these terms are collectively referred to as "special-status species."

CALIFORNIA FISH AND GAME CODE

Fully Protected Species

Certain species are considered *fully protected*, meaning that the code explicitly prohibits all take of individuals of these species except for take permitted for scientific research. Section 5050 lists fully protected amphibians and reptiles, Section 5515 lists fully protected fish, Section 3511 lists fully protected birds, and Section 4700 lists fully protected mammals.

It is possible for a species to be protected under the California Fish and Game Code, but not be fully protected.

Protection of Birds and Their Nests

Under Section 3503 of the California Fish and Game Code, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided in the code or any regulation made pursuant thereto. Section 3503.5 of the code prohibits take, possession, or destruction of any birds in the orders Falconiformes (hawks) or Strigiformes (owls), or of their nests and eggs. Migratory non-game birds are protected under Section 3800, while other specified birds are protected under Section 3505.

Stream and Lake Protection

CDFW has jurisdictional authority over streams and lakes and the wetland resources associated with these aquatic systems under California Fish and Game Code Sections 1600 et seq. through administration of Lake or Streambed Alteration Agreements. Such agreements are not a permit, but rather a mutual accord between CDFW and the project proponent. California Fish and Game Code Sections 1600-1616 authorize CDFW to regulate work that will "substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river lake or stream." Because CDFW includes under its jurisdiction streamside habitats that may not qualify as waters or wetlands under the federal Clean Water Act definition (*see Federal Regulations*), CDFW jurisdiction may be broader than Corps jurisdiction.

Under Fish and Game Code Section 1602 (Streambed Alteration Agreements), the CDFW takes jurisdiction over the stream zone which is defined top of bank or outside extent of riparian vegetation, whichever is the greatest. Within the stream zone, waters of the State of California are typically delineated to include the streambed to the top of the bank and adjacent areas that would meet any one of the three wetland parameters in the Corps definition (vegetation,

[1] For example, the CDFW interprets Ranks 1A, 1B, 2A, and 2B of the California Native Plant Society's *Inventory of Rare and Endangered Vascular Plants of California* to consist of plants that, in a majority of cases, would qualify for listing as rare, threatened, or endangered. However, the determination as to whether an impact is significant is made by the lead agency, absent the protection of other laws.

hydrology, and/or soils). Whereas federal jurisdiction requires meeting all three parameters, in practice meeting one parameter, or even the presence (rather than dominance) of wetland plants in an area associated with a jurisdictional streambed would qualify an area as waters of the State of California. CDFW jurisdiction is not limited to navigable waters or tributaries to navigable waters; however, isolated wetlands and wetlands not associated with a lake shoreline or streambed are not typically subject to CDFW jurisdiction. CDFW enters into a Streambed Alteration Agreement with the project proponent and can impose conditions in the agreement to minimize and mitigate impacts to fish and wildlife resources.

REGIONAL WATER QUALITY CONTROL BOARD

The SWRCB and the Regional Water Quality Control Boards (RWQCBs) (together "Boards") are the principal state agencies with primary responsibility for the coordination and control of water quality. In the Porter-Cologne Water Quality Control Act (Porter-Cologne), the California Legislature declared that the "state must be prepared to exercise its full power and jurisdiction to protect the quality of the waters in the state from degradation..." (California Water Code §13000). Porter-Cologne grants the Boards the authority to implement and enforce the water quality laws, regulations, policies, and plans to protect the groundwater and surface waters of the state. Discharges to waters of the state determined to be jurisdictional may require a project proponent to obtain waste discharge permits (for non-federally-jurisdictional waters) and/or a Clean Water Act Section 401 certification to support non-NPDES federal project permitting (for federally jurisdictional waters, as in the case of the required Corps permit). The enforcement of the state's water quality requirements is not solely the purview of the Boards and their staff. Other agencies (e.g., the CDFW) have the ability to enforce certain water quality provisions in state law.

CALIFORNIA WETLAND DEFINITION

As legal protection of and scientific attention to wetlands have increased, so have the number of wetland definitions contained in State and federal law. Most of these definitions vary slightly but share common terms and concepts. In general, California agencies have adopted the Cowardin, et al. (1979) classification system to define wetlands. The Cowardin classification broadly describes wetlands as lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface. According to this classification system, wetlands must have one or more of the following three attributes: (1) at least periodically, the land predominantly supports hydrophytes;2 (2) the substrate is predominantly undrained hydric soil; or (3) the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of each year (Cowardin et al., 1979).

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[2] The USFWS has developed the following definition for hydrophytic vegetation: "plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content" (Cowardin et al., 1979).

Under normal circumstances, the federal definition of wetlands requires all three wetland identification parameters to be met, whereas the Cowardin definition requires the presence of at least one of these parameters.

The CDFW, in their review of Lake and Streambed Alteration Agreements under Section 1600 of the California Fish and Game Code, generally relies upon the Cowardin system and the presence of at least one parameter in considering an area a wetland and therefore subject to Fish and Game Code regulation.

The CCC broadly defines wetlands under the Coastal Act (Cal. Pub. Res. Code §30121) as follows:

> *Wetland means lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, or fens.*

The CCC Administrative Regulations (Cal. Code Regs. §13577(b)) provide a more explicit definition:

> *Wetlands are lands where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent or drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salt or other substance in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some time during each year and their location within, or adjacent to, vegetated wetlands or deepwater habitats*.

Although the exact procedures for delineating wetlands subject to CCC jurisdiction have varied somewhat in the past, the CDFW wetland definition and classification system is the delineation methodology generally followed by the CCC. For projects requiring federal (Corps) review, a CCC permit applicant may, in some cases, need to obtain two delineations, one for the coastal development permit and another for the Corps Section 404 permit.

CALIFORNIA RARE PLANT RANK

CDFW works in collaboration with the California Native Plant Society (CNPS) and botanical experts to maintain an Inventory of Rare and Endangered Plants, and the similar Special Vascular Plants, Bryophytes, and Lichens List. The plant species on these lists may meet the CEQA definition of rare or endangered. As a trustee agency for the plants and wildlife of California, ecological communities, and the habitat upon which they depend, CDFW advises public agencies during the CEQA process to help ensure that the actions they approve do not significantly impact such resources. CDFW often advises that plant species with an appropriate California Rare Plant Rank in the Inventory be properly analyzed by the lead agency during project review to ensure compliance with CEQA. The following identifies the definitions of the California Rare Plant Rankings (CRPR):

Rank 1A: Plants presumed extirpated in California and either rare or extinct elsewhere.

Rank 1B: Plants Rare, Threatened, or Endangered in California and elsewhere.

Rank 2A: Plants presumed extirpated in California, but more common elsewhere.

Rank 2B: Plants Rare, Threatened, or Endangered in California, but more common elsewhere.

Rank 3: Plants about which more information is needed - A Review List.

Rank 4: Plants of limited distribution - A Watch List.

REGIONAL AND LOCAL POLICIES AND LAND USE PLANS

SAN MATEO COUNTY LOCAL COASTAL PROGRAM

See description above in **Coastal Development Section**.

CULTURAL RESOURCES

FEDERAL REGULATIONS

NATIONAL HISTORIC PRESERVATION ACT

The National Historic Preservation Act (NHPA) of 1966 is congressional legislation passed to preserve historic and archaeological sites throughout the United State. NHPA created the National Register of Historic Places and the list of National Historic Landmarks. The State of California implements NHPA, as amended, through its statewide comprehensive cultural resource surveys and preservation programs. The California Office of Historic Preservation, as an office of CDPR, implements the policies of the NHPA on a statewide level. The Office of Historic Preservation also maintains the California Historical Resources Inventory. The State Historic Preservation Officer (SHPO) is an appointed official who implements historic preservation programs within the State's jurisdictions.

STATE REGULATIONS

CALIFORNIA ENVIRONMENTAL QUALITY ACT

CEQA, as *codified in California Public Resources Code (PRC) Sections 21000 et seq.,* is the principal statute governing the environmental review of projects in the State. CEQA requires lead agencies to determine if a proposed project would have a significant effect on historical resources, including archaeological resources. The CEQA Guidelines define a historical resource as: (1) a resource in the California Register; (2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a

historical resource survey meeting the requirements of PRC Section 5024.1(g); or (3) any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

If a lead agency determines that an archaeological site is an historical resource, the provisions of PRC Section 21084.1 and CEQA Guidelines Section 15064.5 would apply. If an archaeological site does not meet the CEQA Guidelines criteria for a historical resource, then the site may meet the threshold of PRC Section 21083 regarding unique archaeological resources. A unique archaeological resource is

"an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person" (PRC Section 21083.2 [g]).

The CEQA Guidelines note that if a resource is neither a unique archaeological resource nor a historical resource, the effects of the project on that resource shall not be considered a significant effect on the environment (CEQA Guidelines Section 15064[c][4]).

CALIFORNIA REGISTER OF HISTORICAL RESOURCES

The California Register is "an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC Section 5024.1[a]). The criteria for eligibility are based on National Register of Historic Places (National Register) criteria (PRC Section 5024.1[b]). Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for or listed in the National Register.

To be eligible for the California Register, an historical resource must be significant at the local, state, and/or federal level under one or more of the following criteria.

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. Is associated with the lives of persons important in our past.

3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

4. Has yielded, or may be likely to yield, information important in prehistory or history (PRC Section 5024.1[c]).

For a resource to be eligible for the California Register, it must also retain enough integrity to be recognizable as a historical resource and to convey its significance. A resource that does not retain sufficient integrity to meet the National Register criteria may still be eligible for listing in the California Register.

ASSEMBLY BILL 52

In September of 2014, the California Legislature passed **Assembly Bill (AB) 52**, which added provisions to the PRC regarding the evaluation of impacts on tribal cultural resources under CEQA, and consultation requirements with California Native American tribes. In particular, AB 52 now requires lead agencies to analyze project impacts on "tribal cultural resources" separately from archaeological resources (PRC Section 21074; 21083.09). The Bill defines "tribal cultural resources" in a new section of the PRC Section 21074. AB 52 also requires lead agencies to engage in additional consultation procedures with respect to California Native American tribes (PRC Section 21080.3.1, 21080.3.2, 21082.3). Finally, AB 52 requires the Office of Planning and Research to update Appendix G of the CEQA Guidelines by July 1, 2016 to provide sample questions regarding impacts to tribal cultural resources (PRC Section 21083.09).

1 Visitor Use Assumptions

Appendix I: Visitor Use Assumptions

The following calculations are based on 2015-2016 visitor counts at the Park and typical use rates at other parks in the San Mateo and Santa Clara Counties.

	Assumption	Annual Total
Overall Park Use	Assumes 25% increase from current visitor levels from new tower tours and new amenities.	**248,330**
Historic Zone	Assumes 90% of all visitors will visit the Historic Zone	223,500
Bolsa Point Zones	Assumes half of the overall beach and trail users and all visitors to the Indigenous Agriculture and Land Use Management Practice.	42,720
Pistachio Beach Area	Assume 25% of all beach users.	15,530
Individual Uses		
Trails	Assumes 90 users per day per mile of trail	65,700
Picnic	Assumes approximately 25 picnic users per day during week days and approximately 75 picnic users on weekends based on number of picnic spaces available.	14,300
Beach	Assumes 25% of visitors will visit the beach.	62,090
Environmental Education*		
Exploring New Horizons	Assumes 2 session of 30 students each for 35 weeks of the school year consistent with the current program schedule.	2,100
School Group Visits	Assumes 1 bus of 60 students 2 days a week for 35 weeks fo the school year.	4,200
Traditional Quiroste Agriculture and Land Management Practice	Assumes 10 practioners 3 days a week and 100 visitors per week.	6,760
Overnight Accomodations	Assumes 60-65% occupancy of 59 beds for overnight use consistent with existing occupancy levels.	17,500

J Parking Estimates

Appendix J: Parking Estimates

Projected Visitation (Annual)			Parking Demand		
Parking Area	**Week Day or Weekend Day**	**Estimated Visitors/ Day**	**Estimated Visitors to Drive-in**	**Vehicles/ Day (2.5 per car)**	**Maximum Parking Spaces Need**
Light Station	Week Day	214	210	84	8
	Weekend Day	**1607**	1,575	**630**	**63**
Bolsa Point	Week Day	41	40	16	3
	Weekend Day	**307**	301	**120**	**24**
Pistachio Beach	Week Day	15	15	6	1
	Weekend Day	**112**	**109**	**44**	**9**

Projected Visitation (Summer)			Parking Demand		
Parking Area	**Week Day or Weekend Day**	**Estimated Visitors/ Day**	**Estimated Visitors to Drive-in**	**Vehicles/ Day (2.5 per car)**	**Maximum Parking Spaces Need**
Light Station	Week Day	243	238	95	10
	Weekend Day	**1820**	1,783	**713**	**71**
Bolsa Point	Week Day	46	45	18	4
	Weekend Day	**348**	341	**136**	**27**
Pistachio Beach	Week Day	18	17	7	1
	Weekend Day	**133**	**130**	**52**	**10**

Assumptions:
98% of visitors arrive by car.
2.5 visitors/car .
Open access- 10 hours/ day.
Each parking space at the light station parking area serves 10 vehicles/day (average site visit ~1 hours).
Each parking space at Pistachio Beach and Bolsa Point parking area serves 5 vehicles/day (average site visit ~2 hours).
75% of visitation is on weekends (equal sat/sun distribution).

K California Red-Legged Frog and San Francisco Garter Snake Conservation Measures

Appendix K: California Red-Legged Frog and San Francisco Garter Snake Conservation Measures

The following conservation measures shall be implemented to minimize or eliminate potential adverse impacts on California red-legged frog (CRLF) and San Francisco garter snake (SFGS) during project-related activities:

1.) Construction activities in suitable CRLF upland habitat should ideally be conducted in the dry season, April 15 through October 15.

2.) A pre-construction survey for CRLF and SFGS shall be conducted within 14 days prior to ground-disturbing construction activity that occurs in designated suitable upland habitat. The survey shall include careful inspection of all potential refugia by a qualified biologist. Any detected CRLF shall be allowed to move out of project site on their own accord, or relocated by the qualified biologist to a suitable location a minimum of 300 feet outside of the work.

   A qualified biologist shall use best practices for capture, storage, and transport of California red-legged frogs, including not using latex gloves to handle amphibians; having clean hands that are free of lotions, soaps, and insect repellents; and keeping individuals in a cool, moist, aerated environment while in captivity.

3.) CDPR shall conduct a pre-construction survey of the project work areas for CRLF and SFGS immediately prior to the start of construction activities in suitable habitat. The surveys will consist of a qualified biologist walking the project limits and within the project sites to ascertain presence of these species. If CRLF are found they will be relocated by an authorized biologist according to methods described under measure 2. If SFGS are found, individuals shall not be disturbed but allowed to disperse on their own volition.

   If a SFGS is not dispersing on its own volition, the on-site biologist shall monitor the snake while work continues, as long as the on-site biologist can ensure the safety of the snake. The CDPR biologist shall halt or modify work (in the case of a buffer or non-dispersing individual), if necessary, to avert avoidable take of listed species.

4.) CDPR or its contractors shall install temporary exclusion fencing around key project boundaries where work will occur (including all project staging areas) within or nearby suitable habitat for CRLF and/or SFGS.

   - Fencing shall be installed immediately prior to the start of construction activities under the supervision of a qualified biologist. CDPR shall

ensure that the temporary exclusion fencing is continuously maintained until all construction activities are completed.

- CDPR shall ensure daily visual inspections of the fence for any amphibians or reptiles that may get stuck by the fence, including weekends. These daily checks shall be conducted by the qualified biological monitor.
- The fence shall be USFWS- and CDFW-approved species exclusion fencing (e.g., Ertec fence), with a minimum height of 3 feet above ground surface, with an additional 4 to 6 inches of fence material buried such that species cannot crawl under the fence, and shall include escape funnels to allow species to exit the work areas.
- The exclusion fence shall not cross Yankee Jim Gulch or Spring Bridge Gulch to allow unimpeded wildlife movement to continue through the creek corridors.

5.) No plastic monofilament erosion control or landscaping materials of any kind (including those labeled as biodegradable, photodegradable, or UV-degradable) shall be used. Only natural burlap, coir, or jute wrapped fiber rolls shall be used within the Park.

6.) All excavations of a depth of 8 inches or greater shall be covered at the end of each workday, or escape ramps shall be installed at a 3:1 grade to allow wildlife that fall in a means to escape.

7.) Vehicles or equipment parked overnight at the project work or staging areas sites shall be inspected for harboring species each morning by a qualified biological monitor before vehicles or equipment are moved.

8.) *Habitat Restoration Plan for California red-legged frog*

To mitigate for the loss of CRLF upland habitat, CDPR shall prepare and implement a Habitat Restoration Plan (Plan) that prescribes measures to enhance or restore CRLF habitat that is temporarily disturbed by the project. The Plan shall be subject to resource agency review and implemented in coordination with applicable resource agency permit requirements. Site-specific restoration measures and performance standards shall be outlined in the restoration component of the plan. The plan shall identify the locations to be restored; a suitable plant palette for each site and/or habitat; planting methods, sources, and materials to be used; installation timing and monitoring schedule; monitoring methods; potential contingency measures or adaptive management approach; and reporting guidelines. Annual monitoring reports shall be submitted to the applicable resource agencies.

The Plan shall also detail suitable habitat enhancements to be completed at the Park as part of the project for CRLF as compensation for permanent impacts to designated critical habitat resulting from the project. The Plan shall include performance standards for monitoring habitat restoration and enhancement activities with respect to these protected species as well as response actions to be implemented if the performance standards are not met.

The Plan shall be submitted to applicable resource agencies such as CDFW and the USFWS. The CDPR shall ensure that a qualified biologist, botanist, or restoration specialist reviews the restoration efforts in all vegetation communities. Described below are the minimum restoration and compensation measures that shall be included in the plan.

Minimum Restoration Measures for Temporarily Affected Areas

Temporarily disturbed areas located within the limits of construction but outside of the permanent impact area shall be restored to their baseline conditions. These areas include project staging areas and the footprint of the new water pipelines within the easement. Baseline conditions shall be identified for all affected habitats requiring mitigation under the project by conducting surveys of affected areas during the appropriate season and prior to the start of construction. Survey data shall document species composition, total vegetation cover (by vegetation type), total cover of weeds, and total cover of native and non-native species. These data shall inform the writing of the restoration plan and development of appropriate performance standards for each restoration area.

Minimum Performance Standards

The performance standards for restoring temporarily disturbed areas and habitat compensation planting areas shall be as follows:

1.) All non-native grassland temporarily disturbed during vegetation removal and ground disturbance associated with staging area preparation or water pipeline installation shall be restored to their approximate pre-construction condition. Annual grassland vegetation shall be reseeded with a native grass and forb seed mix. Percent cover and vegetation composition (other than non-native annual grassland) shall meet cover and composition criteria determined in consultation with applicable permitting agencies with the intent to return affected areas to baseline conditions

2.) Temporarily affected and restored areas and habitat enhancement areas shall be monitored at least once a year for at least 5 years or longer, as determined in consultation with the applicable permitting agencies and/or as needed, to verify whether the vegetation is fully established and self-sustaining. Any trees planted in habitat enhancement areas shall be monitored for 10 years.

3.) If full maturity of slow-growing vegetation takes longer than 5 years, such species shall be fully established and self-sustaining to meet the standards, and the monitoring period shall be extended accordingly to verify if the vegetation is fully established and self-sustaining.

4.) Restored native grassland and enhanced habitat areas shall be monitored for the first 5 years for invasive species. The relative cover of invasive plant species shall not exceed 10 percent in any year. Invasive plant species shall be defined as any high- or

moderate-level species on the California Invasive Plant Inventory or as A or B level species, as applicable, on the California Department of Food and Agriculture pest rating list.

5.) Winter/early spring monitoring for invasive weed seedlings shall occur in the first 2 years following installation. This monitoring will allow problem weed areas to be identified early and appropriate treatments can be planned and carried out. Successful weed management during the restoration establishment phase (first 2 years) when weed populations are small is critical for preventing costly future maintenance and chronic invasive weed issues in the restoration areas.

6.) Maintenance and monitoring shall continue until the performance standards are met. If performance standards cannot be met within 5 years, the CDPR may explore alternative mitigation options with the applicable resource agencies, such as offsite compensation or mitigation credits.

L Nesting Bird and Nest Protection Measures

Appendix L: Nesting Bird and Nest Protection Measures

Nesting birds and their nests shall be protected during construction by use of the following measures:

1.) Vegetation removal, tree trimming, and removal shall occur outside the bird nesting season (nesting season is defined as February 1 to August 30), to the extent feasible.

2.) If vegetation removal, tree trimming, and removal during bird nesting season cannot be fully avoided, a qualified biologist shall conduct pre-construction nesting surveys within 7 days prior to the start of such activities or after any construction breaks of 14 days or more. Surveys shall be performed for the individual project sites, vehicle and equipment staging areas, and suitable habitat within 250 feet in order to locate any active passerine (perching bird) nests and within 500 feet of these individual sites to locate any active raptor (birds of prey) nests.

3.) If active nests are located during the pre-construction nesting bird surveys, the wildlife biologist shall evaluate if the schedule of construction activities could affect the active nests and the following measures shall be implemented based on their determination:

   a. If construction is not likely to affect the active nest, it may proceed without restriction; however, a biologist shall regularly monitor the nest to confirm there is no adverse effect and may revise their determination at any time during the nesting season. In this case, the following measure would apply:

   b. If construction may affect the active nest, the biologist shall establish a no disturbance buffer. Typically, these buffer distances are between 25 feet and 250 feet for passerines and between 300 feet and 500 feet for raptors. These distances may be adjusted depending on the level of surrounding ambient activity (i.e., if the project site is adjacent to a road or active trail) and if an obstruction, such as a large rock formation, is within line-of-sight between the nest and construction. For bird species that are federally and/or State-listed sensitive species (i.e., fully protected, endangered, threatened, species of special concern), CDPR, shall consult with CDFW regarding modifying nest buffers, prohibiting construction within the buffer, modifying construction, and removing or relocating active nests that are found on the site.

4.) Any birds that begin nesting within the project site and survey buffers amid construction activities shall be assumed to be habituated to construction-related or similar noise and disturbance levels and no work exclusion zones shall be established around active nests in these cases; however, should birds nesting nearby begin to show disturbance associated with construction activities, no-disturbance buffers shall be established as determined by the qualified biologist.

M Noise Background and Modeling Data

Noise Background and Modeling Data

NOISE

Noise is most often defined as unwanted sound; whether it is loud, unpleasant, unexpected, or otherwise undesirable. Although sound can be easily measured, the perception of noise and the physical response to sound complicate the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as "noisiness" or "loudness."

Noise Descriptors

The following are brief definitions of terminology used in this chapter:

- **Sound.** A disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.

- **Noise.** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.

- **Decibel (dB).** A unitless measure of sound, expressed on a logarithmic scale and with respect to a defined reference sound pressure. The standard reference pressure is 20 micropascals (20 μPa).

- **Vibration Decibel (VdB).** A unitless measure of vibration, expressed on a logarithmic scale and with respect to a defined reference vibration velocity. In the U.S., the standard reference velocity is 1 micro-inch per second ($1x10^{-6}$ in/sec).

- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.

- **Equivalent Continuous Noise Level (L_{eq}); also called the Energy-Equivalent Noise Level.** The value of an equivalent, steady sound level which, in a stated time period (often over an hour) and at a stated location, has the same A-weighted sound energy as the time-varying sound. Thus, the L_{eq} metric is a single numerical value that represents the equivalent amount of variable sound energy received by a receptor over the specified duration.

- **Statistical Sound Level (L_n).** The sound level that is exceeded "n" percent of time during a given sample period. For example, the L_{50} level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period); that is, half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the "median sound level." The L_{10} level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum) and this is often known as the "intrusive sound level." The L_{90} is the sound level exceeded 90 percent of the time and is often considered the "effective background level" or "residual noise level."

- **Day-Night Sound Level (L_{dn} or DNL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the sound levels occurring during the period from 10:00 PM to 7:00 AM.

- **Community Noise Equivalent Level (CNEL).** The energy average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added from 7:00 PM to 10:00 PM and 10 dB from 10:00 PM to 7:00 AM. NOTE: For general community/environmental noise, CNEL and L_{dn} values rarely differ by more than 1 dB (with the CNEL being only slightly more restrictive – that is, higher than the L_{dn} value). As a matter of practice, L_{dn} and CNEL values are interchangeable and are treated as equivalent in this assessment.

- **Sensitive Receptor.** Noise- and vibration-sensitive receptors include land uses where quiet environments are necessary for enjoyment and public health and safety. Residences, schools, motels and hotels, libraries, religious institutions, hospitals, and nursing homes are examples.

Characteristics of Sound

When an object vibrates, it radiates part of its energy in the form of a pressure wave. Sound is that pressure wave transmitted through the air. Technically, airborne sound is a rapid fluctuation or oscillation of air pressure above and below atmospheric pressure that creates sound waves.

Sound can be described in terms of amplitude (loudness), frequency (pitch), or duration (time). Loudness or amplitude is measured in dB, frequency or pitch is measured in Hertz [Hz] or cycles per second, and duration or time variations is measured in seconds or minutes.

Amplitude

Unlike linear units such as inches or pounds, decibels are measured on a logarithmic scale. Because of the physical characteristics of noise transmission and perception, the relative loudness of sound does not closely match the actual amounts of sound energy. Table 1 presents the subjective effect of changes in sound pressure levels. Ambient sounds generally range from 30 dBA (very quiet) to 100 dBA (very loud). Changes of 1 to 3 dB are detectable under quiet, controlled conditions, and changes of less than 1 dB are usually not discernible (even under ideal conditions). A 3 dB change in noise levels is considered the minimum change that is detectable with human hearing in outside environments. A change of 5 dB is readily discernible to most people in an exterior environment, and a 10 dB change is perceived as a doubling (or halving) of the sound.

Table 1 Noise Perceptibility

Change in dB	Noise Level
± 3 dB	Threshold of human perceptibility
± 5 dB	Clearly noticeable change in noise level
± 10 dB	Half or twice as loud
± 20 dB	Much quieter or louder

Source: Bies, David A. and Colin H. Hansen. 2009. *Engineering Noise Control: Theory and Practice*. 4th ed. New York: Spon Press.

Frequency

The human ear is not equally sensitive to all frequencies. Sound waves below 16 Hz are not heard at all, but are "felt" more as a vibration. Similarly, though people with extremely sensitive hearing can hear sounds as high as 20,000 Hz, most people cannot hear above 15,000 Hz. In all cases, hearing acuity falls off rapidly above about 10,000 Hz and below about 200 Hz.

When describing sound and its effect on a human population, A-weighted (dBA) sound levels are typically used to approximate the response of the human ear. The A-weighted noise level has been found to correlate well with people's judgments of the "noisiness" of different sounds and has been used for many years as a measure of community and industrial noise. Although the A-weighted scale and the energy-equivalent metric are commonly used to quantify the range of human response to individual events or general community sound levels, the degree of annoyance or other response also depends on several other perceptibility factors, including:

- Ambient (background) sound level
- General nature of the existing conditions (e.g., quiet rural or busy urban)
- Difference between the magnitude of the sound event level and the ambient condition
- Duration of the sound event
- Number of event occurrences and their repetitiveness
- Time of day that the event occurs

Duration

Time variation in noise exposure is typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called L_{eq}), or alternately, as a statistical description of the sound level that is exceeded over some fraction of a given observation period. For example, the L_{50} noise level represents the noise level that is exceeded 50 percent of the time; half the time the noise level exceeds this level and half the time the noise level is less than this level. This level is also representative of the level that is exceeded 30 minutes in an hour. Similarly, the L_2, L_8 and L_{25} values represent the noise levels that are exceeded 2, 8, and 25 percent of the time or 1, 5, and 15 minutes per hour, respectively. These "n" values are typically used to demonstrate compliance for stationary noise sources with many cities' noise ordinances. Other values typically noted during a noise survey are the L_{min} and L_{max}. These values represent the minimum and maximum root-mean-square noise levels obtained over the measurement period, respectively.

Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law and many local jurisdictions use an adjusted 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL) or Day-Night Noise Level (L_{dn}). The CNEL descriptor requires that an artificial increment (or "penalty") of 5 dBA be added to the actual noise level for the hours from 7:00 PM to 10:00 PM and 10 dBA for the hours from 10:00 PM to 7:00 AM. The L_{dn} descriptor uses the same methodology except that there is no artificial increment added to the hours between 7:00 PM and 10:00 PM. Both descriptors give roughly the same 24-hour level, with the CNEL being only slightly more restrictive (i.e., higher). The CNEL or L_{dn} metrics are commonly applied to the assessment of roadway and airport-related noise sources.

Sound Propagation

Sound dissipates exponentially with distance from the noise source. This phenomenon is known as "spreading loss." For a single-point source, sound levels decrease by approximately 6 dB for each doubling of distance

from the source (conservatively neglecting ground attenuation effects, air absorption factors, and barrier shielding). For example, if a backhoe at 50 feet generates 84 dBA, at 100 feet the noise level would be 79 dBA, and at 200 feet it would be 73 dBA. This drop-off rate is appropriate for noise generated by on-site operations from stationary equipment or activity at a project site. If noise is produced by a line source, such as highway traffic, the sound decreases by 3 dB for each doubling of distance over a reflective ("hard site") surface such as concrete or asphalt. Line source noise in a relatively flat environment with ground-level absorptive vegetation decreases by an additional 1.5 dB for each doubling of distance.

Psychological and Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects the entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, thereby affecting blood pressure and functions of the heart and the nervous system. Extended periods of noise exposure above 90 dBA results in permanent cell damage, which is the main driver for employee hearing protection regulations in the workplace. For community environments, the ambient or background noise problem is widespread, through generally worse in urban areas than in outlying, less-developed areas. Elevated ambient noise levels can result in noise interference (e.g., speech interruption/masking, sleep disturbance, disturbance of concentration) and cause annoyance. Since most people do not routinely work with decibels or A-weighted sound levels, it is often difficult to appreciate what a given sound pressure level number means. To help relate noise level values to common experience, Table 2 shows typical noise levels from familiar sources.

Table 2 Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Onset of physical discomfort	120+	
	110	Rock Band (near amplification system)
Jet Flyover at 1,000 feet		
	100	
Gas Lawn Mower at three feet		
	90	
Diesel Truck at 50 feet, at 50 mph		Food Blender at 3 feet
	80	Garbage Disposal at 3 feet
Noisy Urban Area, Daytime		
	70	Vacuum Cleaner at 10 feet
Commercial Area		Normal speech at 3 feet
Heavy Traffic at 300 feet	60	
		Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (background)
Quiet Suburban Nighttime		
	30	Library
Quiet Rural Nighttime		Bedroom at Night, Concert Hall (background)
	20	
		Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: California Department of Transportation (Caltrans). 2009, November. Technical Noise Supplement ("TeNS"). Prepared by ICF International.

Vibration Fundamentals

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Vibration is normally associated with activities stemming from operations of railroads or vibration-intensive stationary sources, but can also be associated with construction equipment such as jackhammers, pile drivers, and hydraulic hammers. As with noise, vibration can be described by both its amplitude and frequency. Vibration displacement is the distance that a point on a surface moves away from its original static position; velocity is the instantaneous speed that a point on a surface moves; and acceleration is the rate of change of the speed. Each of these descriptors can be used to correlate vibration to human response, building damage, and acceptable equipment vibration levels. During construction, the operation of construction equipment can cause groundborne vibration. During the operational phase of a project, receptors may be subject to levels of vibration that can cause annoyance due to noise generated from vibration of a structure or items within a structure.

Vibration amplitudes are usually described in terms of either the peak particle velocity (PPV) or the root mean square (RMS) velocity. PPV is the maximum instantaneous peak of the vibration signal and RMS is the square

root of the average of the squared amplitude of the signal. PPV is more appropriate for evaluating potential building damage and RMS is typically more suitable for evaluating human response.

The units for PPV and RMS velocity are normally inches per second (in/sec). However, vibration is often presented and discussed in dB units in order to compress the range of numbers. In this analysis, PPV and RMS velocities are in in/sec, and vibration levels are in dB relative to 1 micro-inch per second (abbreviated as VdB). Typically, groundborne vibration generated by human activities attenuates rapidly with distance from the source of the vibration, therefore, man-made vibration problems are usually confined to relatively short distances from the source (500 to 600 feet or less).

As with airborne sound, annoyance with vibrational energy is a subjective measure, depending on the level of activity and the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Persons accustomed to elevated ambient vibration levels, such as in an urban environment, may tolerate higher vibration levels. Table 3 displays the human response and the effects on buildings resulting from continuous vibration (in terms of various levels of PPV).

Table 3 Human Reaction to Typical Vibration Levels

Vibration Level, PPV (in/sec)	Human Reaction	Effect on Buildings
0.006–0.019	Threshold of perception, possibility of intrusion	Vibrations unlikely to cause damage of any type
0.08	Vibrations readily perceptible	Recommended upper level of vibration to which ruins and ancient monuments should be subjected
0.10	Level at which continuous vibration begins to annoy people	Virtually no risk of "architectural" (i.e. not structural) damage to normal buildings
0.20	Vibrations annoying to people in buildings	Threshold at which there is a risk to "architectural" damage to normal dwelling – houses with plastered walls and ceilings
0.4–0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage

Source: California Department of Transportation (Caltrans). 2004, June. Transportation- and Construction-Induced Vibration Guidance Manual. Prepared by ICF International.

Construction operations can generate varying degrees of ground vibration, depending on the construction procedures and equipment. Operation of construction equipment generates vibrations that spread through the ground and diminish with distance from the source. The effect on buildings in the vicinity of the construction site varies depending on soil type, ground strata, and receptor-building construction. The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural damage at the highest levels. Vibration from construction activities rarely reaches the levels that can damage structures, but can achieve the audible and perceptible ranges in buildings close to the construction site. Table 4 lists vibration levels for typical construction equipment (not all of which is expected to be used at the proposed project site).

Table 4 Vibration Levels for Typical Construction Equipment

Equipment	Approximate Velocity Level at 25 Feet (VdB)	Approximate RMS[1] Velocity at 25 Feet (in/sec)
Pile Driver (impact) Upper Range	112	1.518
Pile Driver (impact) Lower Range	104	0.644
Pile Driver (sonic) Upper Range	105	0.734

Table 4 Vibration Levels for Typical Construction Equipment

Equipment		Approximate Velocity Level at 25 Feet (VdB)	Approximate RMS[1] Velocity at 25 Feet (in/sec)
Pile Driver (sonic) Lower Range		93	0.170
Large Bulldozer		87	0.089
Caisson Drilling		87	0.089
Jackhammer		79	0.035
Small Bulldozer		58	0.003
Loaded Trucks		86	0.076
Criteria	*FTA – Human Annoyance (Residential Daytime)* *FTA – Human Annoyance (Residential Nighttime)* *FTA – Human Annoyance (Office)*	*78* *72* *84*	—
	FTA – Structural Damage (Residential)	—	*0.20*
	FTA – Structural Damage (Office)	—	*0.30*

Source: FTA 2006
[1] RMS velocity calculated from vibration level (VdB) using the reference of 1 microinch/second.

As shown in Table 4, vibration generated by certain, vibration-intensive construction equipment has the potential to be substantial (should those particular items be employed at any given construction site), since these items have the potential to exceed the FTA criteria for structural damage of 0.20 in/sec.

Construction Equipment Noise Levels

Construction Equipment
Each stage of construction involves the use of different kinds of construction equipment and therefore has its own distinct noise characteristics. Noise levels from construction activities are dominated by the loudest piece of equipment and generally occur during the site preparation and grading phase, when bulldozers, backhoes, and graders are used. Table 5 shows the average noise levels from individual pieces of construction equipment. Table 6 shows the maximum operational noise levels of heavy construction equipment.

Table 5 Average Construction Equipment Noise Levels

Type of Equipment	Average Measured Sound Levels (dBA at 50 feet)
Pile Driver, Impact	101
Pile Driver, Sonic	96
Ballast Tamper	83
Compactor	82
Concrete Mixer	85
Crane, Mobile	83
Crane, Derrick	88
Loader, Large	85
Loader, Front-End	79
Paver	89
Scraper	89
Jack Hammers	88
Pneumatic Tools	85
Pumps	76
Dozer, Small	80

Table 5 Average Construction Equipment Noise Levels

Type of Equipment	Average Measured Sound Levels (dBA at 50 feet)
Dozer, Large	86
Hydraulic Backhoe	85
Hydraulic Excavators	82
Graders	85
Air Compressors	81
Trucks	91

Source: Bolt, Beranek and Newman, 1971; FTA, 2006.[1]

Table 6 Maximum Heavy Construction Equipment Noise Levels

Type of Equipment	Range of Maximum Sound Levels Measured (dBA at 50 ft.)	Suggested Maximum Sound Levels for Analysis (dBA at 50 ft.)
Jack Hammers	75–88	82
Pneumatic Tools	78–88	85
Pumps	74–84	80
Dozers	77–90	85
Pile Driver, Impact	95–110	105
Pile Driver, Sonic	90-105	100
Scrapers	83–91	87
Haul Trucks	83–94	88
Cranes	79–86	82
Portable Generators	71–87	80
Rollers	75–82	80
Tractors	77–82	80
Front-End Loaders	77–90	86
Hydraulic Backhoe	81–90	86
Hydraulic Excavators	81–90	86
Graders	79–89	86
Air Compressors	76–89	86
Trucks	81–87	86

Source: Bolt, Beranek & Newman; Noise Control for Buildings and Manufacturing Plants, 1987.

Construction equipment typically moves around on the project site and under variable power levels. Noise from construction equipment decreases by 6 to 7.5 dB with each doubling of distance between the source and receptor.[2] For example, the noise levels from a bulldozer that generates 85 dBA at 50 feet would measure 79 dBA at 100 feet, 73 dBA at 200 feet, 67 dBA at 400 feet, and 61 dBA at 800 feet (conservatively using a 6 dB

[1] Bolt, Beranek & Newman (BBN); Noise Control for Buildings and Manufacturing Plants, 1987; Federal Transit Administration (FTA). 2006, May. Transit Noise and Vibration Impact Assessment. U.S. Department of Transportation (DoT). FTA-VA-90-1003-06.

[2] As sound energy travels outward from the source, spreading loss accounts for a 6 dB decrease in noise level. Soft ground and atmospheric absorption effects can add another decrement of 1.5 dB (for a total of 7.5 dB per distance doubling).

per doubling of distance attenuation factor). Also, noise levels are typically reduced from this value due to usage factors[3] as well as the barrier effects provided by the physical structures once erected.

Existing Setting

The Pigeon Point Light Station Historic Park is adjacent to Cabrillo Highway, which is the source of most noise experienced at the proposed project area. Other existing noise sources include surf noise, current operations from existing recreational areas, or from residential operations. The proposed project area is surrounded by the Pacific Ocean to the south and west, and by other open space, active agricultural land, and large-lot single-family homes to the north and east. In addition, some of the surrounding land use is protected open space, including Pigeon Point Bluffs, owned by San Mateo County Parks, located directly south of the project. Since state and county regulations do not consider protected open space as a sensitive receptor, or provide criteria for open space receptors, the surrounding open space will not be included in the following analysis. The only sensitive receptors in the vicinity of the project site include four large-lot single-family homes (referred to as House #1, #2, #3, and #4). House #1 is located approximately 950 feet southeast of the proposed operations area, House #2 is located approximately 1,250 feet east of the proposed operations area, House #3 is located approximately 950 feet south of the northernmost proposed upland recreation area, and House #4 is located approximately 950 feet north of the northernmost proposed upland recreation area.

REGULATORY FRAMEWORK

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise.

Federal Regulations

Federal Highway Administration

The FHWA values are the maximum desirable values by land use type and area based on a "trade-off" of what is desirable and what is reasonably feasible. These values recognize that in many cases lower noise exposures would result in greater community benefits. The FHWA design noise levels are included in Table 4.

[3] Usage factor is the percentage of time during the workday that the equipment is operating at full power (on which the reference noise ratings for typical average and typical maximum noise emissions are based).

Table 4 FHWA Design Noise Levels

Activity Category	Design Noise Levels [1]		Description of Activity Category
	L_{eq} (dBA)	L_{10} (dBA)	
A	57 (exterior)	60 (exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (exterior)	70 (exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (exterior)	75 (exterior)	Developed lands, properties, or activities not included in Categories A or B, above
D	–	–	Undeveloped lands.
E	52 (interior)	55 (interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

Source: FHWA

[1] Either L_{eq} or L_{10} (but not both) design noise levels may be used on a project.

U.S. Environmental Protection Agency

In addition to FHWA standards, the United States Environmental Protection Agency (EPA) has identified the relationship between noise levels and human response. The EPA has determined that over a 24-hour period, a L_{eq} of 70 dBA will result in some hearing loss. Interference with activity and annoyance will not occur if exterior levels are maintained at an L_{eq} of 55 dBA and interior levels at or below 45 dBA. While these levels are relevant for planning and design and useful for informational purposes, they are not land use planning criteria because they do not consider economic cost, technical feasibility, or the needs of the community.

The EPA also set 55 dBA L_{dn} as the basic goal for exterior residential noise intrusion. However, other federal agencies, in consideration of their own program requirements and goals, as well as difficulty of actually achieving a goal of 55 dBA L_{dn}, have settled on the 65 dBA L_{dn} level as their standard. At 65 dBA L_{dn}, activity interference is kept to a minimum, and annoyance levels are still low. It is also a level that can realistically be achieved.

Occupational Health and Safety Administration

The federal government regulates occupational noise exposure common in the workplace through the Occupational Health and Safety Administration (OSHA) under the EPA. Such limitations would apply to the operation of construction equipment and could also apply to any proposed industrial land uses. Noise exposure of this type is dependent on work conditions and is addressed through a facility's Health and Safety Plan, as required under OSHA, and is therefore not addressed further in this analysis.

California State Regulations

The State regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise insulation standards and provides guidance for local land use compatibility.

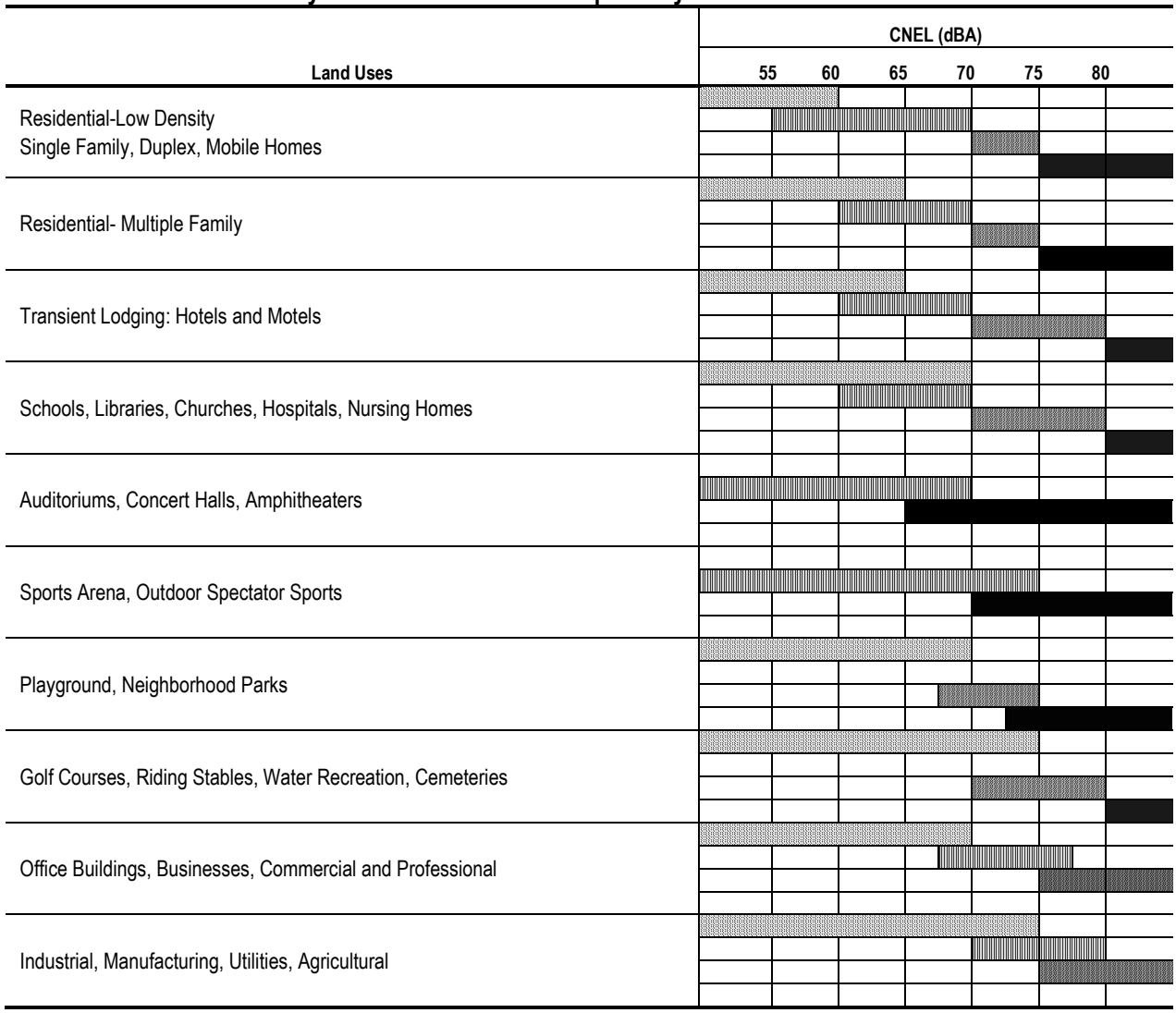
The California Building Code (CBC), Title 24, Part 2, Volume 1, Chapter 12, *Interior Environment*, Section 1207.11.2, *Allowable Interior Noise Levels*, requires that interior noise levels attributable to exterior sources shall not exceed 45 dB in any habitable room. The noise metric is evaluated as either the day-night average sound level (Ldn) or the community noise equivalent level (CNEL), consistent with the noise element of the local general plan.

The California Green Building Standards Code (CALGreen), Chapter 5, Division, 5.5 has additional requirements for insulation that affect exterior-interior noise transmission for non-residential structures: Pursuant to section 5.507.4.1, *Exterior Noise Transmission, Prescriptive Method*, Wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall meet a composite sound transmission class (STC) rating of at least 50 L_{dn} or CNEL or a composite outdoor-indoor transmission class (OITC) rating of no less than 40 L_{dn} or CNEL with exterior windows of a minimum STC of 40 or OITC of 30 within a 65 dBA CNEL noise contour of an airport or within a 65 dBA CNEL or L_{dn} noise contour of a freeway, expressway, railroad, industrial source, or fixed-guideway source as determined by the noise element of the general plan. Where noise contours are not readily available, buildings exposed to a noise level of 65 dBA L_{eq} 1-hour during any hour of operation shall have building, addition or alteration exterior wall and roof-ceiling assemblies exposed to the noise source meeting a composite STC rating of at least 45 L_{dn} or CNEL (or OITC 35), with exterior windows of a minimum of STC 40 (or OITC 30).

Residential structures located within the noise contours identified above require an acoustical analysis showing that the structure has been designed to limit intruding noise in the prescribed allowable levels. To comply with these regulations, applicants for new the residential projects are required to submit an acoustical analysis report. The report is required to show topographical relationship of noise sources and dwelling site, identification of noise sources and their characteristics, predicted noise spectra at the exterior of the proposed dwelling structure considering present and future land usage, basis for the prediction (measured or obtained from published data), noise attenuation measures to be applied, and an analysis of the noise insulation effectiveness of the proposed construction showing that the prescribed interior noise level requirements are met. If interior allowable noise levels are met by requiring that windows be unopenable or closed, the design for the structure must also specify the means that will be employed to provide ventilation and cooling, if necessary, to provide a habitable interior environment.

Table 5, presents a land use compatibility chart for community noise prepared by the California Office of Noise Control. This table provides urban planners with a tool to gauge the compatibility of land uses relative to existing and future noise levels. Table 5 identifies 'normally acceptable', 'conditionally acceptable', 'normally unacceptable', and 'clearly unacceptable' noise levels for various land uses. The 'conditionally acceptable' and 'normally unacceptable' designations indicate that new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements for each land use is made and needed noise insulation features are incorporated into the design. By comparison, a 'normally acceptable' designation indicates that standard construction can occur with no special noise reduction requirements.

Table 5 Community Noise and Land Use Compatibility



Explanatory Notes

Normally Acceptable:
With no special noise reduction requirements assuming standard construction.

Conditionally Acceptable:
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirement is made and needed noise insulation features included in the design.

Normally Unacceptable:
New construction is discouraged. If new construction does not proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Unacceptable:
New construction or development should generally not be undertaken.

Source: California Office of Noise Control. *Guidelines for the Preparation and Content of Noise Elements of the General Plan*. February 1976. Adapted from the US EPA Office of Noise Abatement Control, Washington D.C. Community Noise. Prepared by Wyle Laboratories. December 1971.

Calculations

	Sensitive Land Uses	Spatially AVG Distance (ft)	Worst-case Distance (ft)	Land Use Type
1	House #1	950	550	Residential
2	House #2	1250	900	Residential
3	House #3	950	550	Residential
4	House #4	950	300	Residential
5	Receptor 5	0	0	Residential
6	Receptor 6	0	0	Residential
7	Receptor 7	0	0	Industrial
8	Receptor 8	0	0	Residential

TYPE PHASE NAME >>>	Demolition	Site Prep	Grading	Construction	Paving	Arch Coating
Equipment Item (Dropdown Menu)	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity
None						
None						
None						
None						
None						
None						
None						
None						
None						
None						
None						
None						
None						
None						
None						
None						
None						
None						
None						
None						
None						
None						
	Demolition	**Site Prep**	**Grading**	**Construction**	**Paving**	**Arch Coating**
Totals	Total Leq	Total Leq	Total Leq	Total Leq	Total Leq	Total Leq
	89	89	89	89	89	89

Red cell indicates level exceeds FTA criteria

Total Leq

	Sensitive Receptor	Demolition		Site Prep		Grading		Construction		Paving		Arch Coating	
	[READ ONLY]	Spatially AVG	Worst-case	Spatially AVG	Worst-case	Spatially AVG	Worst-case	Spatially AVG	Worst-case	Spatially AVG	Worst-case	Spatially AVG	Worst-case
1	House #1	63.4	68.2	63.4	68.2	63.4	68.2	63.4	68.2	63.4	68.2	63.4	68.2
2	House #2	61.0	63.9	61.0	63.9	61.0	63.9	61.0	63.9	61.0	63.9	61.0	63.9
3	House #3	63.4	68.2	63.4	68.2	63.4	68.2	63.4	68.2	63.4	68.2	63.4	68.2
4	House #4	63.4	73.4	63.4	73.4	63.4	73.4	63.4	73.4	63.4	73.4	63.4	73.4
5	Receptor 5	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
6	Receptor 6	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
7	Receptor 7	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
8	Receptor 8	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Vibration Annoyance Equipment Item	VdB at 25 ft	House #1	House #2	House #3	House #4	Receptor 5	Receptor 6	Receptor 7	Receptor 8
Pile Driver (impact)(typ)	104	56.6	53.0	56.6	56.6	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Pile Driver (sonic)(typ)	93	45.6	42.0	45.6	45.6	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Clam Shovel drop (slurry wall)	94	46.6	43.0	46.6	46.6	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Hydromill (slurry wall)(soil)	66	18.6	15.0	18.6	18.6	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Vibratory Roller	94	46.6	43.0	46.6	46.6	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Hoe Ram	87	39.6	36.0	39.6	39.6	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Large Bulldozer	87	39.6	36.0	39.6	39.6	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Caisson Drilling	87	39.6	36.0	39.6	39.6	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Loaded Trucks	86	38.6	35.0	38.6	38.6	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Jackhammer	79	31.6	28.0	31.6	31.6	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Small Bulldozer	58	10.6	7.0	10.6	10.6	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Vibration Damage Equipment Item	PPV at 25 ft	House #1	House #2	House #3	House #4	Receptor 5	Receptor 6	Receptor 7	Receptor 8
Pile Driver (impact)(typ)	0.664	0.006	0.003	0.006	0.016	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Pile Driver (sonic)(typ)	0.17	0.002	0.001	0.002	0.004	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Clam Shovel drop (slurry wall)	0.202	0.002	0.001	0.002	0.005	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Hydromill (slurry wall)(soil)	0.008	0.000	0.000	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Vibratory Roller	0.21	0.002	0.001	0.002	0.005	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Hoe Ram	0.089	0.001	0.000	0.001	0.002	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Large Bulldozer	0.089	0.001	0.000	0.001	0.002	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Caisson Drilling	0.089	0.001	0.000	0.001	0.002	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Loaded Trucks	0.076	0.001	0.000	0.001	0.002	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Jackhammer	0.035	0.000	0.000	0.000	0.001	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Small Bulldozer	0.003	0.000	0.000	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

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