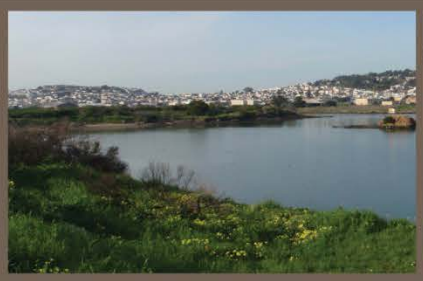
Candlestick Point State Recreation Area

Final General Plan and Program Environmental Impact Report

State Clearinghouse No. 2010012059
January 2013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January 201**3**

Edmund G. Brown, Jr.
Governor

John Laird
Secretary, Natural Resources Agency

Major General Anthony L. Jackson, USMC (Ret)
Director, California State Parks
P.O. Box 942896
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Resolution 1-2013
Adopted by the
CALIFORNIA STATE PARK AND RECREATION COMMISSION
at its regular meeting in Brisbane, California
January 18, 2013

General Plan and Final Environmental Impact Report for Candlestick Point State Recreation Area

WHEREAS, the Director of California State Parks has presented to this Commission for approval the proposed General Plan and Final Environmental Impact Report ("Plan") for Candlestick Point State Recreation Area ("Park"); and

WHEREAS, the Park is the first and one of the few intensely urban units in the State Park System, surrounded by industrial and residential uses and Candlestick Park stadium; and

WHEREAS, the Park is located in an urban area surrounded by the proposed Candlestick Point-Hunters Point Shipyard Phase II project, which will dramatically alter the neighborhood surrounding the park, replacing the existing Candlestick Park stadium, vacant lands, and other areas with a large, mixed-use development; and

WHEREAS, California State Parks entered into a land exchange agreement with the City and County of San Francisco that will reconfigure the park boundary, adding land in some of the narrowest areas and removing it from others and in exchange, California State Parks will receive funding to improve and enhance Candlestick Point State Recreation Area, and

WHEREAS, this general plan will guide the development and management of the Park for public use and resource protection for the next 20 or more years, by establishing goals and guidelines to assist in the daily and long-term management of the park to ensure that its resources are protected, while encouraging a variety of recreation activities; and

WHEREAS, the Plan is subject to the California Environmental Quality Act (CEQA) and includes the Environmental Impact Report (EIR) as a part of a General Plan, pursuant to Public Resources Code (PRC) Section 5002.2 and the California Code of Regulations (CCR) Section 15166 (CEQA Guidelines), providing discussion of the probable impacts of future development, establishing goals, policies and objectives, and addressing all the requirements of an EIR; and

WHEREAS, the Plan and EIR function as a "tiered EIR" pursuant to PRC 21093, covering general goals and objectives of the Plan, and that the appropriate level of CEQA review will be conducted for each project relying on the Plan; and

WHEREAS, the Plan establishes a foundation to designate the remaining portions of lands at Candlestick Point State Recreation Area for park priority use in the Bay Plan managed and maintained by the San Francisco Bay Conservation and Development Commission (BCDC);

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NOW, THEREFORE BE IT RESOLVED: That this Commission has reviewed and considered the information and analysis in the Plan prior to approving the Plan, and this Commission finds and certifies that the Plan reflects the independent judgment and analysis of this Commission and has been completed in accordance with the California Environmental Quality Act; and be it

RESOLVED: In connection with its review of the Plan prior to approving the General Plan, this Commission independently finds that the environmental conclusions contained in the Environmental Analysis Section of the Plan are supported by facts therein and that each fact in support of the findings is true and is based on substantial evidence in the record and that mitigation measures or other changes or alterations have been incorporated into the Plan which will avoid or substantially lessen the potential impacts identified in the Plan; and be it

RESOLVED: The location and custodian of the Plan and other materials which constitute the record of proceedings on which the Commission's decision is based is: State Park and Recreation Commission, P.O. Box 942896, Sacramento, California 94296-0001, Phone 916/653-0524, Facsimile 916/653-4458; and be it

RESOLVED: The California State Park and Recreation Commission hereby approves the Department of Parks and Recreation's General Plan and certifies the Environmental Impact Report prepared for Candlestick Point State Recreation Area, dated January 2012; and be it

FURTHER RESOLVED: That a Notice of Determination will be filed with the Office of Planning and Research within five days of this approval.

Attest: This Resolution was duly adopted by the California State Park and Recreation Commission on January 18, 2013 at the Commission's duly-noticed public meeting at Brisbane, California.

By: *ORIGINAL SIGNED BY* Date: *1-18-13*

Louis Nastro
Assistant to the Commission
For Major General Anthony L. Jackson, USMC (Ret), Director
Secretary to the Commission

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Acronyms and Abbreviations

ABAG	Association of Bay Area Governments
ADA	Americans with Disabilities Act
AWSS	Auxiliary Water Supply System
BART	Bay Area Rapid Transit
Basin Plan	San Francisco Bay Basin Water Quality Control Plan
BCDC	Bay Conservation and Development Commission
BMPs	Best Management Practices
BP	before present
BRT	Bus Rapid Transit
BTIP	Bayview Transportation Improvements Project
BWWF	Bayside Wet Weather Facilities
BYE	Bay Youth for the Environment
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CCMP	Comprehensive Conservation and Management Plan
CCTS	Central California Taxonomic System
CDBW	California Department of Boating and Waterways
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CNPS	California Native Plant Society
CPSRA	Candlestick Point State Recreation Area
CSLC	California State Lands Commission
CSO	combined sewer overflow
CSPF	California State Parks Foundation
CWA	Clean Water Act
DBH	diameter at breast height
DDT	dichloro-diphenyl-trichloroethane
DPH	Department of Public Health
DPR	Department of Parks and Recreation
DPS	distinct population segment

ECA	Environmental Condition Assessment
EIR	environmental impact report
ERM	Effects Range Median
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
GGAS	Golden Gate Audubon Society
GGNRA	Golden Gate National Recreation Area
HDMT	Healthy Development Measurement Tool
I-280	Interstate 280
I-380	Interstate 380
I-80	Interstate 80
IAPs	Interpretation Action Plans
IMAP	Parks Inventory, Monitoring, and Assessment Program
IMPs	Interpretation Master Plans
ISPs	Interpretive Service Plans
LEJ	Literacy for Environmental Justice
LOS	level of service
Lower Bay	San Francisco Lower Bay
M	magnitude
MBTA	Migratory Bird Treaty Act
MGD	million gallons per day
mL	milliliters
MPN	Most Probable Number
msl	mean sea level
MTC	Metropolitan Transportation Commission's
Muni	San Francisco Municipal Railway
mya	million years ago
NAP	Natural Areas Program
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRDL	Naval Radiological Defense Laboratory
OPC	California Ocean Protection Council
PAHs	polycyclic aromatic hydrocarbons
PCBs	polychlorinated biphenyls
PG&E	Pacific Gas & Electric Company

Porter-Cologne Act	Porter-Cologne Water Quality Control Act
PRC	California Public Resources Code
PV	Photovoltaic
RMP	Regional Monitoring Program
ROSE	Recreation and Open Space Element
RPD	San Francisco Recreation and Park Department
RV	recreation vehicle
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCC	California State Coastal Conservancy
SFEI	San Francisco Estuary Institute
SFEP	San Francisco Estuary Project
SFFD	San Francisco Fire Department
SFHA	Special Flood Hazard Area
SFMTA	San Francisco Municipal Transportation Agency
SFPD	San Francisco Planning Department
SFPUC	San Francisco Public Utilities Commission
SFRA	San Francisco Redevelopment Agency
SRA	State Recreation Area
State Parks	California Department of State Parks
SVOCs	semi-volatile organic compounds
SWPCP	Southeast Water Pollution Control Plant
SWRCB	State Water Resources Control Board
TEPH	total extractable petroleum hydrocarbons
TMDL	Total Maximum Daily Load
US-101	U.S. Highway 101
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
USNA	U.S. Department of the Navy
USSC	United Site Services of California, Inc.
UST	underground storage tank
WWII	World War II

0 Executive Summary

S. Executive Summary

S.1 Park Description

Candlestick Point State Recreation Area (CPSRA, or the park) is located in the City and County of San Francisco along the southeastern waterfront, adjacent to San Francisco Bay. It occupies 151 acres within San Francisco's Bayview Hunters Point neighborhood, and is surrounded by industrial uses, residential uses, and Candlestick Park stadium. As California's first urban state park, CPSRA provides access to open space, the Bay, and recreational opportunities in a highly urbanized and industrial area of San Francisco.

The shoreline of CPSRA is perhaps its most defining feature. The park skirts the western shore of San Francisco Bay for approximately 3.4 miles, offering access to the Bay and long-range scenic views. Visitors from the local and regional community engage in a wide range of day-use recreation activities, including trail use, picnicking, windsurfing, wildlife viewing, and beach use, among others.

Although CPSRA is built entirely on reclaimed land, the park conserves important natural and cultural resources. A rare open space resource in San Francisco's southeastern corner, CPSRA provides habitat for birds, small mammals, and other wildlife. The park's position along the Pacific flyway makes it a valuable stopover for migrating birds. CPSRA's history of use, from the Ohlone people, to Chinese fishing camps, to the filling of the Bay, enriches its story as the state's first urban state park.

S.2 Purpose of the General Plan/EIR

California State Parks (State Parks) created CPSRA's first General Plan in 1979, and later amended it in 1988, with the primary goals of improving urban quality of life, celebrating the San Francisco Bay and its natural and cultural resources, and providing public access to the shoreline. The process of updating CPSRA's General Plan began in early 2010, to respond to the adjacent proposed Candlestick Point-Hunters Point Shipyard Phase II Project. This project will dramatically alter the neighborhood surrounding the park, replacing the existing Candlestick Park stadium, vacant lands and other areas with a large, mixed-use development. This redevelopment project will change the relationship of the park with the surrounding neighborhood and is expected to both increase visitation and change the types of visitors. In addition, State Parks entered into a land exchange agreement with the City and County of San Francisco that will reconfigure the park boundary—adding land in some of the narrowest areas and removing it from others. In exchange, State Parks received funding to improve and enhance the park.

This General Plan amendment responds to the external pressures on CPSRA and sets forth a vision that is consistent with the park's mission while also adapting to large forces of change. All planning and design stems from the CPSRA's unique declaration of purpose: *To make available to the people the recreational opportunities, whether passive or active, that are offered by the existence of the shoreline and adjacent bay waters*. This most recent amendment to CPSRA's General Plan builds upon the vision set forth in earlier versions to create a state park that is a destination for the residents of San Francisco, the state of California, and other states and foreign countries.

S.3 Related Planning Efforts and Public Outreach

Interagency input was obtained through agency scoping as part of the environmental review process and from in-person meetings with members of the planning team. The following agencies and stakeholder groups provided input or were consulted during the planning process:

- City and County of San Francisco (various departments including the Mayor's Office, Redevelopment, Planning, Parks and Recreation, Public Utilities Commission, Public Health, and the Port)
- Bay Conservation and Development Commission (BCDC)
- California State Coastal Conservancy (SCC)
- California Department of Transportation (Caltrans)
- California Department of Fish and Wildlife (CDFW)
- U.S. Army Corps of Engineers (USACE)
- U.S. Fish and Wildlife Service (USFWS)

- U.S. Environmental Protection Agency (USEPA)
- U.S. Department of the Navy (USNA)
- California State Lands Commission (SLC)
- California Department of Boating and Waterways (DBW)
- Ohlone Indian Tribe
- California State Parks Foundation
- San Francisco Bay Trail
- Literacy for Environmental Justice
- Sierra Club, San Francisco Bay Chapter
- Golden Gate Audubon Society
- California Native Plant Society
- Nature in the City
- Bay Access

Public outreach included a variety of methods: four public workshops; a webpage on State Parks' website; and mailing materials, including emails, postcards, flyers, and newsletters. Notices of the public meetings were placed at CPSRA and in local business storefronts.

S.4 Park Vision

The park vision describes the future desired outcome of CPSRA, expressing what the park represents and its role as a state park. The vision for CPSRA is as follows:

> *The vision of Candlestick Point SRA, California's first urban state park, is to bring state park values and mission into an urban setting. Visitors from the local community, state of California and farther afield will enjoy a range of opportunities to participate in recreational activities and experience nature along the San Francisco Bay. Sweeping views of the Bay, native coastal landscapes, tidal marshes, beaches, and areas for community gathering and activity will all contribute to the character of CPSRA. The park will encourage active, healthy lifestyles while at the same time serving as a respite from the urban surroundings of San Francisco and the larger Bay Area. Recreation programs and facilities will maximize access to the Bay and be developed in concert with CPSRA's natural surroundings, treading lightly on the land. CPSRA will enhance the public's understanding of the Bay – its natural history, stories of settlement and development, and future challenges related to sea level rise. The park will foster community and encourage stewardship, and in doing so, become a destination along the Bay for visitors both near and far.*

S.5 Issues and Opportunities

As a result of the public outreach to agencies and stakeholders, a number of issues and opportunities emerged that assisted in the preparation of the General Plan. These issues include:

- Provide quiet, respite-based recreation and activities focused on nature education and stewardship at CPSRA while remaining true to the park's classification as a State Recreation Area.
- Balance the interests of local visitors, including the new residents of the adjacent planned Candlestick Point-Hunters Point Shipyard Phase II Project, with those of visitors from across the state and beyond.
- Expand interpretive and educational activities at CPSRA. Identified themes include the evolution of San Francisco Bay, the history of the Bayview Hunters Point neighborhood, wetland and shoreline ecology, and shipwrecks off Candlestick Point, among others.
- Highlight CPSRA as a state park with a specific mission and purpose, and therefore, as distinct from a city or neighborhood park. CPSRA can serve as a gateway to the State Parks system, providing information about other state parks in the Bay Area and across California at information kiosks and a visitor information center or community "storefront" within the adjacent planned development.
- Provide a balance of transit and parking to meet the needs of park visitors from throughout the region and state as well as from the surrounding neighborhood, in light of the anticipated increase in demand for parking in the area following construction of the Candlestick Point-Hunters Point Shipyard Phase II Project.
- Coordinate with regional planning efforts to extend the Bay Trail through CPSRA and provide connections to the San Francisco Bay Area Water Trail.
- Preserve and enhance existing stands of trees, low scrubland, wetlands, and shoreline habitat. Design stormwater management facilities for the park to minimize their use of CPSRA land and to allow space for other programs within the park.
- Implement an adaptive management approach to sea level rise. New facilities should be sited outside of areas expected to experience the most coastal flooding in the future. Shoreline treatments, such as berms and levees, can also prevent flooding of areas requiring protection, such as those that experience heavy visitor use. Other areas of the park, however, may undertake softer strategies, such as the creation of tidal marsh to dampen storm surges and flooding.
- Address visitor capacity and land use compatibility at CPSRA in light of the planned adjacent Candlestick Point-Hunters Point Shipyard Phase II Project, which will introduce thousands of new residents to the neighborhood. Coordinate with the City and County of San Francisco and the San Francisco Redevelopment Agency to integrate CPSRA into the planned development while maintaining the park's identity as a state recreation area.

- Provide a sense of security at CPSRA while continuing to allow visitors to connect to nature and the Bay.
- Continue to provide spaces for community gathering and expand cultural and recreation options in the park to serve both current and future park users.

S.6 General Plan Proposal and EIR

The General Plan establishes a long-range purpose and vision for CPSRA. Specific planning zones described in the plan help clarify management intent and desired visitor experiences for the various elements of CPSRA. Goals and guidelines provide guidance on how to achieve the purpose, vision, and management intent. The goals and guidelines address current issues while providing a foundation for resource protection, development, and interpretation of the park, as well as a framework for subsequent development and management plans.

The General Plan is the result of site analyses and extensive public outreach. Analysis of opportunities and constraints considered CPSRA's climate, topography, hydrology, biological resources, cultural resources, circulation patterns, surrounding land uses, and visitor experience. This analysis led to the development of four draft alternatives and the incorporation of the most popular elements into a single draft preferred alternative (the General Plan).

Specific park improvements that would be implemented under the General Plan would be phased in conjunction with the land exchange between State Parks and the City and County of San Francisco for the Candlestick Point-Hunters Point Shipyard Phase II Project. The land exchange will occur in phases over the next 20 years, as construction of the development moves forward. As a result, the timing and location of this construction will affect the implementation of programs planned for CPSRA.

The General Plan provides a general overview of the proposed enhancements throughout the following seven planning zones of the park:

- **Tidal Marsh Zone**, which would be managed to maximize ecological processes and opportunities for education;
- **Grassland/Coastal Shrub Zone**, which would be managed for upland habitat and low-impact, nature-based recreation;
- **Coastal Native Zone**, which would be managed to create a transition between CPSRA and the adjacent neighborhood;
- **Active Recreation Zone**, which would be managed for high levels of recreational activity and visitor use;
- **Community Garden/Plant Nursery Zone**, which would be managed to facilitate programs related to gardening, native plant propagation, and ecological restoration;

- **Beach Shoreline Zone**, which would be managed as a series of shoreline destinations that facilitate a range of visitor experiences; and
- **Administration/Maintenance Zone**, which would be managed as the center of operations for CPSRA staff and volunteers.

The General Plan proposes park improvements and new facilities throughout seven geographic areas within the park, as described below:

- **Yosemite Slough:** Proposed uses in the Yosemite Slough Restoration Plan include the creation of tidal marsh and upland habitats, low-impact recreation, (e.g., wildlife viewing, picnicking), and educational and interpretive activities related to the restoration project. New facilities include an information kiosk, iconic art, interpretive program area/pavilion, family gathering areas, public parking areas, and extension of the Bay Trail. Construction of Phase 1 (north of the slough) began in 2011, and detailed design of Phase II (south of the slough) will occur in the future.

- **South Basin Shoreline:** Proposed uses include low-impact recreation (e.g., trail use, wildlife viewing, picnicking) and nature-based education and interpretation. New facilities may include extension of the Bay Trail, paved and natural surface trails, a boardwalk underpass beneath the proposed bridge included in the planned Candlestick Point-Hunters Point Shipyard Phase II Project, interpretive signage/art, family gathering areas, a bay overlook, an outdoor classroom and interpretive center, and a new fishing and viewing pier. The South Basin Shoreline may also accommodate 100 year excess overland flow of stormwater in an area that may function as a raingarden during the wet season.

- **Candlestick Meadows:** Proposed uses include low-impact recreation and active play, family and community events and gatherings, and educational opportunities. New facilities in the northern portion of Candlestick Meadows may include a lawn for active play, family and group gathering areas, an information kiosk for visitors, a restroom, seasonal raingardens that treat stormwater and provide educational opportunities, and a public parking area. The remaining portion of Candlestick Meadows may include natural-surface trails, smaller family gathering areas, landforms for wind protection and spatial definition, a nature theater for small community events, and a restroom.

- **Heart of the Park:** The focus of the Heart of the Park is improved access to the Bay and water-oriented recreational opportunities. New facilities may include a non-motorized boat launch, ADA-accessible viewing pier, boatbuilding center with educational boating programs, bike and boat rentals, concession stands, beach enhancements, additional family and group gathering areas, an information kiosk, interpretive signage/art, parking areas, and landforms that provide shelter from the wind.

- **The Point:** The Point will provide enhanced access to the Bay, while preserving the area's current character as a quieter area of the park. New facilities may include a new bay viewing area, boat-landing beach, bike or boat-in campsites that may also serve as day-use facilities, family gathering areas, interpretive signage/art, and landforms to provide shelter from the wind. The existing pier will continue to provide fishing opportunities and views of the Bay.
- **The Neck:** This area will focus on expanding active recreational opportunities and access to the Bay through improving the existing windsurfer staging and launching facilities, fitness circuit, and beach at Hermit's Cove. The existing pier at The Neck may also be relocated slightly to the west and re-constructed as a groyne to facilitate the accretion of sand and expansion of the beach at Hermit's Cove, and an information kiosk may be constructed near the intersection of Harney Way and Arelious Walker Drive. Habitat terraces may also be created behind the beach at Hermit's Cove to reduce the grade change and facilitate easy access to the beach, and parking adjacent to Harney Way would ensure access to The Neck. The Neck may also accommodate overland flow of stormwater.
- **Last Port:** Plans for improvement will build upon the existing uses and facilities in the area, which include picnicking, trails, and beaches. New facilities may include iconic art that marks the entrance to the park, an interpretive plaza overlooking the Bay, a small lawn for picnicking and active play, family gathering areas, and enhancements to the beach at Candlestick Cove. A parking area along the northern edge of the Last Port would provide access to this area.

Parkwide goals and guidelines apply to CPSRA as a whole. They have been developed to address existing issues, needs, and opportunities for improvement, protection, or change, and provide guidance for the management of CPSRA to achieve its long-term vision. The goals establish the purpose and define the desired future conditions, while the guidelines provide directions that State Parks will consider to achieve the goals. Topics addressed in the parkwide goals and guidelines include visitor facilities and management, recreation and trails, and aesthetic resources; natural resources; shoreline management and water quality; community and cultural resources; interpretation and education; facilities and maintenance; neighborhood integration; access and parking; and agreements and concessions. Zone-specific guidelines are also provided to direct activities within the planning zones.

S.7 Plan Implementation Issues

Major programs and projects that will be implemented during the lifespan of the General Plan will require additional planning. Future planning efforts may include preparing specific resource management plans to protect sensitive resources or developing site-

specific area development plans for new facilities. Three significant planning issues have yet to be resolved in this General Plan/EIR.

First, the level of visitation based on the future residents of the adjacent planned Candlestick Point-Hunters Point Shipyard Phase II Project and other development projects in the neighborhood is difficult to predict, especially considering development phasing and the evolving demand for the park and its facilities. While visitation levels are expected to increase, it is not known by how much or at what rate the increase will occur over the next 20 years. Ongoing monitoring and adjustments will need to be made to respond to changing visitation levels and demand for park facilities.

Second, the appropriate parking management strategy for CPSRA has not been determined. Adequate parking is important to ensure access for a wide range of users, including visitors from other areas of the region or state and people with disabilities. In addition, specific recreational activities, such as windsurfing, non-motorized boating, and some group activities require vehicles to transport equipment and will require parking adjacent to the activity. CPSRA would provide at least the same amount of parking as under existing conditions, with the potential for additional parking.

As stated in Section 3.2.2, Access and Linkages, the planned Candlestick Point-Hunters Point Shipyard Phase II Project will provide parking, including a large garage for the regional retail area near the Last Port area and residential parking at a ratio of one space per unit. However, residential parking will be sold or leased separately from individual residential units (San Francisco Redevelopment Agency and San Francisco Planning Department, 2009). It is possible that future residents may forego purchasing or leasing off-street parking and use street parking instead, which would increase demand for parking in the neighborhood, including parking at CPSRA. Determination of CPSRA's parking capacity will need to consider the parking and alternative transportation upgrades planned for the surrounding redevelopment as well as the expected increase in parking demand in the neighborhood.

State Parks staff should work with the City and County of San Francisco to address parking issues and to ensure that adequate parking is available for CPSRA visitors. Possible parking management options include the following:

- Utilize an adaptive management approach, starting with low parking fees (e.g., $1/hour up to $6/day) during park hours and monitor any parking impacts from non-park users. If it is determined the non-park users are negatively affecting parking capacity, adjust fee rates or implement other options outlined below.
- Set the parking fees at CPSRA to be commensurate with the cost of metered parking and parking garage fees outside of the park. By ensuring that parking at CPSRA would cost the same as parking outside of the park, there would be no

incentive for non-park users (e.g., local residents and employees of nearby businesses) to park at CPSRA. The impact to park users would be costly parking rates.

- Install pay machines inside the park and require visitors to CPSRA to enter the park to pay for parking. This would require visitors to walk into the park (beyond the parking area) to pay for parking, which would be inconvenient if they were not planning to visit the park. This would discourage non-park users from parking at CPSRA. Parking fees could be reduced below metered parking and garage fees with this option.

Third, projected sea level rise and the effect on the Bay and in particular the shoreline of the park will require ongoing planning, monitoring, and management.

Future planning efforts include the preparation of project-specific environmental compliance documents for implementation of subsequent projects. These documents should tier off of and be consistent with the General Plan's Program EIR. Securing any permits required for future implementation projects would also be part of subsequent planning actions.

Finally, the General Plan may need to be amended if new developments or major commitments of resources are proposed for areas not covered in this plan or if circumstances change, making facts and findings in this plan no longer accurate.

S.8 Environmental Analysis

This General Plan/EIR provides a program-level evaluation of the potential for significant adverse environmental impacts on aesthetic resources, air quality, climate change, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, public services, transportation and traffic, and utility and service systems. The criteria used to determine the significance of impacts in the resource discussions were derived from State CEQA Guidelines.

Implementation of the General Plan is not expected to result in significant impacts on the environment. Implementation of the goals and guidelines contained in Chapter 4, Park Plan, in conjunction with federal, state, and local laws and regulations, would avoid potential significant effects or maintain them at less-than-significant levels.

Table S-1 presents a summary of the impacts that would potentially result from implementing the Draft General Plan Preferred Alternative and the guidelines that would mitigate impacts to less-than-significant levels.

Table S-1: Summary of Potential Impacts Resulting from the CPSRA Draft General Plan Preferred Alternative

Impact	Level of Significance[1]	Guidelines that Mitigate the Impact
Land Use and Planning		
LU-1: Potential for the Project to Physically Divide an Established Community	NI	--
LU-2: Conflict with Any Applicable Land Use Plan, Policy, or Regulation Adopted for the Purpose of Avoiding or Mitigating an Environmental Effect	LTSM	Guideline Recreation-1: Plan recreation opportunities and facilities within a regional context and in coordination with local agencies as well as with community organizations. Integrate recreation opportunities and facilities into recreation networks such as regional trail systems (e.g., the San Francisco Bay Trail, San Francisco Bay Area Water Trail, and the Blue Greenway). Focus on expanding the regional diversity of visitor experiences and complementing, rather than duplicating, existing regional facilities. Guideline Recreation-2: Provide recreation opportunities that respond to the specific characteristics of the urban setting along the Bay shoreline. Include activities at the park that reveal the sights, sounds, and experiences of the Bay. Appropriate activities may include, but are not limited to, walking, jogging and fitness, biking, kayaking, beach play, windsurfing, fishing, bird watching, picnicking, informal games, nature viewing, photography, experiencing the out-of-doors, and enjoying solitude and a respite from stressful lifestyles. Guideline Recreation-3: Evaluate new technologies and recreational activities and incorporate those that would enhance visitor experiences and benefit recreation facilities and programs. Use the Internet and/or social media for public outreach. Examine the benefits and challenges with wireless Internet access for visitors.

Impact	Level of Significance[1]	Guidelines that Mitigate the Impact
		Guideline Recreation-4: Allow dog walking within the park provided that dogs are kept on leash. Dogs are not allowed in the beach shoreline zone. Guideline Community-1: Promote community gathering through facilities such as group picnic and special event areas and enhanced beaches. Provide space for social programs (e.g., after school programs, senior activities). Guideline Access-1: Clearly designate trails for pedestrian, bicycle use, and/or multi-modal use to minimize trail user conflicts. Guideline Visitor Safety-3: Promote positive outreach to adjacent neighborhoods and communities to increase local visitation and foster a sense of ownership for CPSRA.
LU-3: Project's Potential to Conflict with Any Applicable Habitat Conservation Plan or Natural Community Conservation Plan	NI	--
Geology And Soils		
GEO-1: Risk of Exposure to Geologic and Seismic Hazards, Including Fault Rupture	LTSM	Guideline Geology-1: Conduct soil testing prior to implementing park improvements that require substantial earthmoving. If testing reveals potential instabilities or other hazards, develop specific construction methods to ensure the safety of staff and visitors. Given the seismically active environment and the potential for liquefaction and/or subsidence of bay fill and saturated clay-rich soils, avoid construction of facilities that could collapse or injure the visiting public during a seismic event. Guideline Geology-2: Conduct geotechnical and engineering evaluations as appropriate when locating and designing park improvements to avoid or reduce potential damage to people and property from unstable soil, coastal erosion, storm surge, floods, earthquakes, and tsunami inundation.
GEO-2: Adverse Effects Caused by Seismic-Related Ground Failure, Including Liquefaction, Landslides, and Expansive Soils	LTSM	

Impact	Level of Significance[1]	Guidelines that Mitigate the Impact
		Guideline Geology-3: Build all structures in conformance with seismic design criteria in the Uniform Building Code or California Building Code. Inspect all buildings as soon as possible after any large earthquake affecting the San Francisco Bay Area to ascertain damage.
GEO-3: Soil Erosion or the Loss of Topsoil.	LTSM	Guideline Shoreline-1: Use natural, soft shoreline protection where needed to protect critical infrastructure and water quality. Guideline Shoreline-2: Employ "soft" shoreline enhancement strategies (e.g., tidal wetland creation, beach enhancement, re-grading) where appropriate, to re-establish more natural shoreline contours and enhance habitat values. Evaluate site-specific factors, such as hydrodynamics, soil conditions, and land use and resource management objectives, to determine the suitability of such strategies. Guideline Shoreline-3: Explore the possibility of creating a living shoreline, consistent with the California State Coastal Conservancy's San Francisco Bay Living Shoreline Project. When planning shoreline enhancements (e.g., tidal wetland creation), consider a combined habitat approach that would make an integrated design connection between subtidal habitat restoration and adjacent tidal and riparian areas for the benefit of multiple species, including aquatic invertebrates, fish, ducks, and shorebirds. Guideline Shoreline-4: Consider structural reinforcements, such as engineered rock revetment or vertical seawalls, only in areas subject to severe erosion to protect critically needed infrastructure. Analyze potential negative effects of proposed structural reinforcements to surrounding shoreline areas. Incorporate structures that enhance recreation opportunities and aesthetics, where feasible.

Impact	Level of Significance[1]	Guidelines that Mitigate the Impact
		Guideline Shoreline-5: Adopt an adaptive management approach for shoreline improvement projects. Monitor and maintain projects to determine their effectiveness, and respond by implementing adjustments, as necessary. Guideline Shoreline-6: Design and construct all proposed shoreline enhancements (e.g., tidal wetland creation, beach enhancement, etc.) and facilities (e.g., piers, boat launches, etc.) only after conducting site-specific environmental analysis of factors such as local sea level rise, hydrology, soil suitability, storm surge impact, visual resources, cultural resources, subsurface toxics, water quality, and wetland habitat. Guideline Shoreline-7: Integrate shoreline protection measures with other park priorities, such as access and circulation, recreation, and economics.
Hydrology and Water Quality		
WATER-1: Impacts to Groundwater Supplies or Groundwater Recharge	LTSM	Guideline Water-1: Use low-flow water fixtures within newly constructed facilities, and consider incorporating them into existing facilities. Guideline Water-2: Use water-efficient irrigation design and systems for landscaping. Where feasible, use reclaimed water or recycled water for uses such as landscape irrigation, fire protection, toilet flushing, wetlands recharge, and outdoor water features. Guideline Water-3: Plant indigenous vegetation and species suited to the local environment to minimize water use.
WATER-2: Risk of Loss, Injury, or Death Involving Flooding	LTSM	Guideline Shoreline-8: Minimize the construction of new park facilities in areas susceptible to coastal flooding, using FEMA maps of the 100-year floodplain as a guide.

Impact	Level of Significance[1]	Guidelines that Mitigate the Impact
		Consider higher projections for sea level rise, increased storm surge, and greater coastal flooding when planning park improvements, and site facilities to minimize risk. Guideline Shoreline-10: Minimize impacts to CPSRA from erosion caused by increasing sea level rise and storm surges by avoiding construction of facilities in low elevation locations, and by designing resilient features that would accommodate the projected conditions of increased sea level and storm surges and storm wave attack. Guideline Shoreline-11: Protect CPSRA from increased flooding due to sea level rise by assuring that critical infrastructure is either located above the likely inundation elevation (+6', for example) or can withstand periods of sustained inundation and wave attack. Include a minimum 20-foot-wide adaptive management zone along the shoreline, where anticipated sea level elevation and storm surges would be accommodated. Also include a 20-foot-wide adaptive management zone along the park's inland boundary in case berms or other flood control structures are needed there. Guideline Geology-2: Conduct geotechnical and engineering evaluations as appropriate when locating and designing park improvements to avoid or reduce potential damage to people and property from unstable soil, coastal erosion, storm surge, floods, earthquakes, and tsunami inundation.
WATER-3: Temporary Impacts on Water Quality from Stormwater Runoff, Erosion, or Spills	LTSM	Guideline Water Quality-4: Establish adjacent urban storm flow outfalls that do not negatively impact the recreational values of the park by piping the flows underground to the bay. Implement storm flow BMPs to prevent erosion, minimize sediment and reduce impacts of 100 year storm flows across the park to the bay.

Impact	Level of Significance[1]	Guidelines that Mitigate the Impact
WATER-4: Impacts on San Francisco Bay Caused by Stormwater Runoff from Operation of the Project Site	LTSM	Guideline Water Quality-1: Install green infrastructure for onsite capture and treatment of stormwater runoff (e.g., seasonal raingardens, bioswales) to reduce stormwater runoff to San Francisco Bay and the amount of pollution and sedimentation in the runoff. Monitor their performance to ensure that they operate effectively, and adapt and maintain as necessary. Guideline Water Quality-3: Use appropriate stormwater Best Management Practices (BMPs) for maximizing rainwater infiltration in green infrastructure elements. Guideline Shoreline-1: Use natural, soft shoreline protection where needed to protect critical infrastructure and water quality. Guideline Shoreline-6: Design and construct all proposed shoreline enhancements (e.g., tidal wetland creation, beach enhancement, etc.) and facilities (e.g., piers, boat launches, etc.) only after conducting site-specific environmental analysis of factors such as local sea level rise, hydrology, soil suitability, storm surge impact, visual resources, cultural resources, subsurface toxics, water quality, and wetland habitat.
WATER-5: Impacts related to inundation by seiche, tsunami, or mudflow	LTSM	Guideline Geology-2: Conduct geotechnical and engineering evaluations as appropriate when locating and designing park improvements to avoid or reduce potential damage to people and property from unstable soil, coastal erosion, storm surge, floods, earthquakes, and tsunami inundation.
Hazards and Hazardous Materials		
HAZ-1: Risk of Public Exposure to Hazardous Materials during Transport, Use, Disposal, or Accidental Release during Project Construction and Operation	LTS	--

Impact	Level of Significance[1]	Guidelines that Mitigate the Impact
HAZ-2: Create a hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment	LTSM	Guideline Hazardous Materials-1: Prepare a contingency plan to address unknown contaminants encountered during construction activities. This plan should establish and describe procedures for implementing a contingency plan, including appropriate notification and site control procedures, in the event unanticipated subsurface hazards or hazardous material releases are discovered during construction. Guideline Hazardous Materials-2: Identify lands where additional environmental investigation is needed to assess the extent of contamination with hazardous material. Conduct additional investigations to adequately understand the extent of any contamination, and plan for its cleanup, as necessary. Guideline Hazardous Materials-3: Implement BMPs to discourage the use of environmentally damaging or hazardous materials for maintenance and management activities. CPSRA complies with the BMPs required by the San Francisco Department of Public Health Hazardous Materials Unified Program Agency, which include the following: store all incompatible hazardous materials/wastes separately and segregate them to prevent accidental mixing (e.g., acids from bases; poisons from flammables; oxidizers from flammables, etc.); ensure all hazardous materials/wastes are properly labeled with the following information: the title “hazardous waste”; generator information; composition and physical state; hazard property; and accumulation start date; ensure all hazardous material/waste containers are capped when not in use.
HAZ-3: Risk of Exposure of Schools to Hazardous Materials during Project Construction and Operation	LTSM	Guideline Hazardous Materials-1: Prepare a contingency plan to address unknown contaminants encountered during construction activities. This plan should establish and describe procedures for implementing a contingency plan, including appropriate notification and site control procedures, in the event unanticipated subsurface hazards or hazardous material releases are discovered during construction.

Impact	Level of Significance[1]	Guidelines that Mitigate the Impact
		Guideline Hazardous Materials-4: During implementation of specific site development projects, develop and implement a Construction Traffic Management Plan that specifies truck routes that would avoid residential streets and nearby schools, including Gilman Avenue and Bret Harte School.
HAZ-4: Interference with an Adopted Emergency Response Plan or Emergency Evacuation Plan	LTSM	Guideline Visitor Safety-4: Manage park service roads to allow easy and rapid access to CPSRA by public safety personnel and emergency vehicles.
HAZ-5: Adverse Effects Related to Wildland Fires	LTSM	Guideline Coastal Native Zone-4: Provide buffer areas with fire resistant plantings and landscape features between the Grassland/Coastal Shrub Zone and adjacent developed areas.
Noise		
NOISE-1: Short-Term Noise Levels Related to Project Construction	LTS	--
NOISE-2: Long-Term Noise Levels Related to Project Operations	LTS	--
NOISE-3: Incompatible Land Uses	LTS	--
NOISE-4: Short- and Long-Term Sources of Vibration	LTS	--
Biological Resources		
BIO-1: Adverse Effects on Special-Status Plants	LTS	--

Impact	Level of Significance[1]	Guidelines that Mitigate the Impact
BIO-2: Adverse Effects on Special-Status Wildlife and Fish Species	LTSM	Guideline Water Quality-4: Establish adjacent urban storm flow outfalls that do not negatively impact the recreational values of the park by piping the flows underground to the bay. Implement storm flow BMPs to prevent erosion, minimize sediment and reduce impacts of 100 year storm flows across the park to the bay. Guideline Wildlife-2: Maximize connectivity between vegetation communities, such as the grassland/coastal shrub and coastal native planning zones, to facilitate the movement of wildlife throughout the park. Provide transition zones between vegetation communities. Where possible, facilitate connections to other parks and open space areas in the region, such as Bayview Hill. Guideline Wildlife-3: Create upland vegetative buffers between trails and habitat areas, where necessary, to provide cover for wildlife and minimize disturbances from recreational activities. Plant buffers with locally native trees, shrubs, and herbaceous species. Consider limiting access by people and dogs to areas with sensitive wetland and upland habitats. Guideline Wildlife-5: If necessary to protect common wildlife species, develop a program to monitor and control non-native pests. Use methods consistent with the most current version of the State Parks Operations Manual, Pest Control chapter to regulate non-native animal populations.

Impact	Level of Significance[1]	Guidelines that Mitigate the Impact
BIO-3: Loss of Special-Status Wildlife and Fish Species	LTSM	Guideline Vegetation-6: Restore tidal wetlands in Yosemite Slough through continued implementation of the Yosemite Slough Restoration Project in partnership with the State Parks Foundation and local neighborhood organizations. Extend the tidal marsh zone along the South Basin shoreline to connect to Yosemite Slough and improve habitat for shorebirds, small mammals, and other wildlife that depend on tidal marshes. Enhance existing pockets of tidal marsh at other points along the CPSRA shoreline. Guideline Vegetation-7: Adopt an adaptive management approach for the creation and enhancement of tidal wetlands, given the uncertainties surrounding the restoration of wetlands on artificial fill and potential sea level rise. Guideline Vegetation-8: Protect and enhance existing tidal and freshwater wetlands at CPSRA. Minimize disturbance to existing wetlands, and implement any mitigation onsite, where possible.
BIO-4: Impacts to Wetlands and Other Waters of the United States	LTS	--
Cultural Resources		
CUL-1: Adverse Effect on Significant Prehistoric and Historic-Era Resources	LTSM	Guideline Cultural Resources-1: As part of the planning and design process for area-specific projects, and prior to commencement of any ground disturbance, grading, or construction related to new facilities or enhancements, a qualified cultural resource professional will conduct appropriate record reviews and any necessary fieldwork to determine the presence of cultural resources or culturally sensitive areas.

Impact	Level of Significance[1]	Guidelines that Mitigate the Impact
		Guideline Cultural Resources-2: If the cultural resources investigations indicate the presence of cultural resources or culturally sensitive areas within or adjacent to areas that will be affected by the proposed activities, such activities will be planned and designed to avoid or minimize impacts to the identified resources. Impacts may be reduced by avoidance, site capping, structural stabilization/preservation, project design and data recovery. Guideline Cultural Resources-3: In the event that some disturbance to cultural resources is unavoidable, identify appropriate measures and implement them in consultation with a qualified cultural resource professional. Such measures shall be consistent with all applicable rules and regulations relating to the protection of cultural resources. Guideline Cultural Resources-4: If cultural resources are discovered during construction activities, the construction contractor shall stop work immediately within 100 feet of the find, notify relevant agencies, and retain a qualified archaeologist to assess the significance of the find and, if necessary, to develop appropriate treatment measures.
CUL-2: Adverse Effect on Unique Paleontological Resources	LTSM	Guideline Cultural Resources-5: If paleontological resources are discovered during construction activities, the construction contractor shall stop work immediately within 100 feet of the find and retain a qualified paleontologist to assess the significance of the find and, if necessary, to develop appropriate treatment measures. Measures to mitigate impacts could include sampling and data recovery; and preparation, identification, analysis and curation of fossil specimens and the data recovered.

Impact	Level of Significance[1]	Guidelines that Mitigate the Impact
Aesthetic Resources		
AES-1: Adverse Effects on a Scenic Vista	LTSM	Guideline Aesthetic Resources-8: Locate development, structures, and other facilities to be sensitive to scenic views from and to the park, particularly views of San Francisco Bay. Locate facilities to minimize the impact on views from key viewpoints and to protect and/or emphasize positive scenic views. Use vegetative screening, land contouring and other appropriate methods to enhance vistas while minimizing visual impacts from structures and outdoor facilities.
AES-2: Degradation of the Existing Visual Character or Quality of the Site and Its Surroundings	LTSM	Guideline Aesthetic Resources-1: Extend the design language of the surrounding urban environment into CPSRA, using the design framework of paths, plantings and other elements. Guideline Aesthetic Resources-3: Coordinate with the City and County of San Francisco regarding the integration of CPSRA's design with that of adjacent city streets and parks while maintaining a unique identity for the park.

Impact	Level of Significance[1]	Guidelines that Mitigate the Impact
AES-3: Light and Glare	LTSM	Guideline Aesthetic Resources-5: Use lighting that is directed downwards to minimize light spillage to protect dark night skies and allow for star viewing. Guideline Visitor Safety-7: Use design strategies to increase natural surveillance. Consider the location and visibility of park facilities, landscape design, visual surveillance, lighting, and patrol vehicle accessibility to enhance safety. Guideline Energy-1: Clearly identify the actual purpose of lighting to determine minimum acceptable levels. Light the minimum area for the minimum time. Limit illumination to areas with actual night use or security concerns. Ensure that lighting will be directed downward to minimize light spillage.
Utilities and Service Systems		
UTIL-1: Increase Demand on Utilities and Service Systems	LTSM	Guideline Energy-1: Clearly identify the actual purpose of lighting to determine minimum acceptable levels. Light the minimum area for the minimum time. Limit illumination to areas with actual night use or security concerns. Ensure that lighting will be directed downward to minimize light spillage. Guideline Energy-2: Use renewable energy sources for lighting and other outdoor power, where feasible. Photovoltaic (PV) power is often cost effective, and may be used for applications such as solar path-lights, streetlights, security lights, pumps, and irrigation systems. Integrate PV panels into the architectural design of buildings and structures. Guideline Water-1: Use low-flow water fixtures within newly constructed facilities, and consider incorporating them into existing facilities.

Impact	Level of Significance[1]	Guidelines that Mitigate the Impact
		Guideline Water-2: Use water-efficient irrigation design and systems for landscaping. Where feasible, use reclaimed water or recycled water for uses such as landscape irrigation, fire protection, toilet flushing, wetlands recharge, and outdoor water features. Guideline Water-3: Plant indigenous vegetation and species suited to the local environment to minimize water use. Guideline Waste-1: Reduce material use through effective site layout. Consider factors such as renewability and recyclability when selecting materials. Where possible, specify reused and/or recycled-content materials (e.g., wood substitutes, concrete, asphalt, etc.) for site use, based on life-cycle performance requirements. Guideline Waste-2: Install recycling receptacles and educational signage throughout CPSRA to encourage park visitors to recycle and educate them about the benefits of reducing waste. Guideline Waste-3: Include composting in vegetation management and maintenance activities to reduce landfill usage and increase sustainability concepts for the park. Guideline Waste-4: Provide an easily accessible area for collection and storage of non-hazardous materials for recycling and composting. [2] Guideline Wildlife-4: Reduce and work toward elimination of wildlife access to human food and garbage by using wildlife-proof trash containers and dumpsters throughout the park, increasing the frequency of trash collection, and educating the public about the detrimental effects of human food on the ecological balance. Post signs throughout the park informing people not to feed wildlife and to cover and store food and trash appropriately.

Impact	Level of Significance[1]	Guidelines that Mitigate the Impact
Public Services		
PS-1: Adverse Effects on Police and Fire Services	LTSM	Guideline Visitor Safety-1: Coordinate with local law enforcement agencies and emergency response providers to promote the safety of park visitors. Incorporate community involvement, education and outreach programs to enhance safety. Guideline Visitor Safety-3: Promote positive outreach to adjacent neighborhoods and communities to increase local visitation and foster a sense of ownership for CPSRA. Guideline Visitor Safety-4: Manage park service roads to allow easy and rapid access to CPSRA by public safety personnel and emergency vehicles. Guideline Visitor Safety-5: Develop and implement a visitor safety program for special events and during peak recreation periods. Guideline Visitor Safety-10: Ensure sufficient State Parks ranger staffing to patrol CPSRA. Explore opportunities to share resources with adjacent parks and recreation facilities at Candlestick Point and the Hunters Point Shipyard, as well as with the San Francisco Police Department, and other security services. Guideline Visitor Safety-11: Engage neighborhood residents to participate in public safety efforts for the park through ongoing outreach and coordination and by providing them with contact information in case they observe anything suspicious at CPSRA. Guideline Visitor Safety-12: Install nighttime lighting and signage, and deploy night patrols as needed to provide oversight during extended hours. Consider operational options such as closing the park from 10:00 p.m. to 5:00 a.m.

Impact	Level of Significance[1]	Guidelines that Mitigate the Impact
Transportation and Traffic		
TRANS-1: Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system	LTSM	Guideline Integration-1: Extend the urban grid into CPSRA along new pathways to create multiple access points and improve access to the park for pedestrians and bicyclists. Guideline Integration-2: Create new park gateways from wedge parks (narrow parks planned within the surrounding neighborhood that lead to the Candlestick Meadows and Heart of the Park areas) and BRT stops to enhance access and connect CPSRA to the adjacent neighborhood. [2] Guideline Integration-3: Install a State Parks-staffed "information center" in the surrounding neighborhood and information kiosks along the edges of the park to provide visitor information on CPSRA and the State Park System. Guideline Access-1: Clearly designate trails for pedestrian, bicycle use, and/or multi-modal use to minimize trail user conflicts. Guideline Access-2: Coordinate with the City and County of San Francisco, Caltrans, and other relevant public agencies regarding the management of vehicle, bicycle, and pedestrian traffic. Coordination with these agencies will especially be needed to address changes in traffic conditions that would occur as a result of the planned development projects in the area and potential new uses at the existing Candlestick Park stadium. Guideline Multi-Modal-1: Enhance access to the park through connections to new pedestrian and bicycle route alignments

Impact	Level of Significance[1]	Guidelines that Mitigate the Impact
		planned in the surrounding neighborhood. Guideline Multi-Modal-2: Connect to new and planned alternative transportation modes, including pedestrian routes, bike paths, and BRT stops. Guideline Multi-Modal-3: Integrate the new Class 1 bikeway planned adjacent to and within the CPSRA with access points to the park. [2] Create a Class I bike commuter connector along the Last Port area to provide a continuous bike connection between CPSRA, the adjacent street grid, and BRT stops. Guideline Multi-Modal-4: Create clear pedestrian and bicycle linkages to CPSRA from new BRT stops.* Guideline Multi-Modal-5: Provide information kiosks near new BRT stops in the adjacent neighborhood to direct riders to CPSRA. [2] Guideline Multi-Modal-6: Work with the California Coastal Conservancy and its partner agencies, who implement the Bay Area Water Trail, and the San Francisco Neighborhood Council and its partners, who administer the Blue Greenway Project, to facilitate access to CPSRA via non-motorized watercraft. Provide boat launches, landing areas, campsites and other facilities to improve access for non-motorized boats. Guideline Multi-Modal-7: Provide a comprehensive and varied trail network to increase pedestrian and bicycle opportunities within CPSRA. [2]

Impact	Level of Significance[1]	Guidelines that Mitigate the Impact
		Guideline Multi-Modal-8: Work with the San Francisco Bay Trail Project, a nonprofit organization administered by the Association of Bay Area Governments, to extend the Bay Trail through CPSRA to provide continuous off-street pedestrian and bicycle opportunities for regional visitors, transit users and commuters.* Guideline Multi-Modal-9: Provide nighttime lighting along the CPSRA perimeter and the San Francisco Bay Trail to improve visitor and commuter safety. Guideline Parking-1: Provide parking in strategic areas for programs requiring staging, such as windsurfing, non-motorized boating, and picnicking. [2] Guideline Parking-2: Reuse existing parking areas and locate new parking areas to minimize the amount of new construction.* Guideline Parking-3: When planning for additional parking opportunities, consider other parking options in the immediate area. The planned Candlestick Point-Hunters Point Shipyard Phase II Project will create additional parking in the surrounding neighborhood, some of which CPSRA visitors may use while recreating at the SRA. Guideline Parking-4: Consider a range of options to ensure that sufficient parking is available to CPSRA visitors, especially as planned developments in the neighborhood are completed and visitor use increases. Possible parking management options may include setting CPSRA parking fees to be commensurate with metered parking and parking garage fees outside of the park; installing pay machines inside the park and requiring visitors to walk into the park to pay for parking; and requiring purchase of a day-long or hourly parking pass. Care should be given to assess potential conflicts with residential parking demand, the needs of both existing and new neighborhood residents who visit the park,

Impact	Level of Significance[1]	Guidelines that Mitigate the Impact
		and the needs of visitors from throughout the region and around the state. Consider partnering with adjacent recreation area managers and landowners to provide additional parking.
TRANS-2: Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses	LTSM	Guideline Access-1: Clearly designate trails for pedestrian, bicycle use, and/or multi-modal use to minimize trail user conflicts. Guideline Access-2: Coordinate with the City and County of San Francisco, Caltrans, and other relevant public agencies regarding the management of vehicle, bicycle, and pedestrian traffic. Coordination with these agencies will especially be needed to address changes in traffic conditions that would occur as a result of the planned development projects in the area and potential new uses at the existing Candlestick Park stadium.
TRANS-3: Conflict with adopted policies, plans, or programs supporting alternative transportation, or cause a substantial increase in transit demand that cannot be accommodated by existing or proposed transit capacity or alternative travel modes	LTSM	Guideline Multi-Modal-1: Enhance access to the park through connections to new pedestrian and bicycle route alignments planned in the surrounding neighborhood. Guideline Multi-Modal-2: Connect to new and planned alternative transportation modes, including pedestrian routes, bike paths, and BRT stops. Guideline Multi-Modal-3: Integrate the new Class 1 bikeway planned adjacent to and within the CPSRA with access points to the park. [2] Create a Class I bike commuter connector along the Last Port area to provide a continuous bike connection between CPSRA, the adjacent street grid, and BRT stops. Guideline Multi-Modal-4: Create clear pedestrian and bicycle linkages to CPSRA from new BRT stops.* Guideline Multi-Modal-5: Provide information kiosks near new BRT stops in the adjacent neighborhood to direct riders to CPSRA.*

Impact	Level of Significance[1]	Guidelines that Mitigate the Impact
		Guideline Multi-Modal-6: Work with the California Coastal Conservancy and its partner agencies, who implement the Bay Area Water Trail, and the San Francisco Neighborhood Council and its partners, who administer the Blue Greenway Project, to facilitate access to CPSRA via non-motorized watercraft. Provide boat launches, landing areas, campsites and other facilities to improve access for non-motorized boats. Guideline Multi-Modal-7: Provide a comprehensive and varied trail network to increase pedestrian and bicycle opportunities within CPSRA. [2] Guideline Multi-Modal-8: Work with the San Francisco Bay Trail Project, a nonprofit organization administered by the Association of Bay Area Governments, to extend the Bay Trail through CPSRA to provide continuous off-street pedestrian and bicycle opportunities for regional visitors, transit users and commuters. [2] Guideline Multi-Modal-9: Provide nighttime lighting along the CPSRA perimeter and the San Francisco Bay Trail to improve visitor and commuter safety.
Air Quality		
AQ-1: Short-Term Construction-Generated Criteria Air Pollutant Emissions	LTS	--
AQ-2: Long-Term Operational Criteria Air Pollutant Emissions	LTS	--
AQ-3: Exposure to Toxic Air Contaminants	LTS	--
AQ-4: Objectionable Odors	LTS	--

Impact	Level of Significance[1]	Guidelines that Mitigate the Impact
Climate Change		
GHG-1: Greenhouse Gas Emissions Exceeding BAAQMD Established Screening Criteria	LTS	--
GHG-2: Operational Greenhouse Gas Emissions Exceeding 1,100 MT CO2e per year	LTS	--

[1] NI= No Impact; LTS = Less than Significant; LTSM = Less than Significant with Mitigation

[2] Developed using the City and County of San Francisco's HDMT, in consultation with State Parks.

1 Introduction

1 Introduction

1.1 Location and Regional Context

Candlestick Point State Recreation Area (CPSRA, or the park) is located in the City and County of San Francisco along the southeastern waterfront, adjacent to San Francisco Bay. It occupies 151 acres within the Bayview Hunters Point neighborhood, south and east of Candlestick Park stadium, just east of U.S. Highway 101 (US-101). CPSRA skirts the western shore of San Francisco Bay for approximately 3.4 miles, from just north of Yosemite Slough to the San Mateo County line. Figure 1-1 shows the regional location of CPSRA.

As shown in Figure 1-2, the Bayview Hunters Point community borders CPSRA to the north and west, and the surroundings are primarily industrial. The South Basin industrial area, which surrounds Yosemite Slough and extends west to US-101, contains a variety of small-scale industrial uses, such as auto repair shops, food distributors, bulk warehouses, and recycling facilities. Light industrial uses such as metal fabrication and distribution facilities are located north of Carroll Avenue. West of Hawes Street and west and south of Candlestick Park, the predominant land use is single-family residential. Within the Bayview Hunters Point community are the Candlestick Point and Hunters Point Shipyard sites, which are located west of and northeast of CPSRA, respectively, and comprise over 700 acres along San Francisco's southeastern waterfront.

CANDLESTICK POINT STATE RECREATION AREA

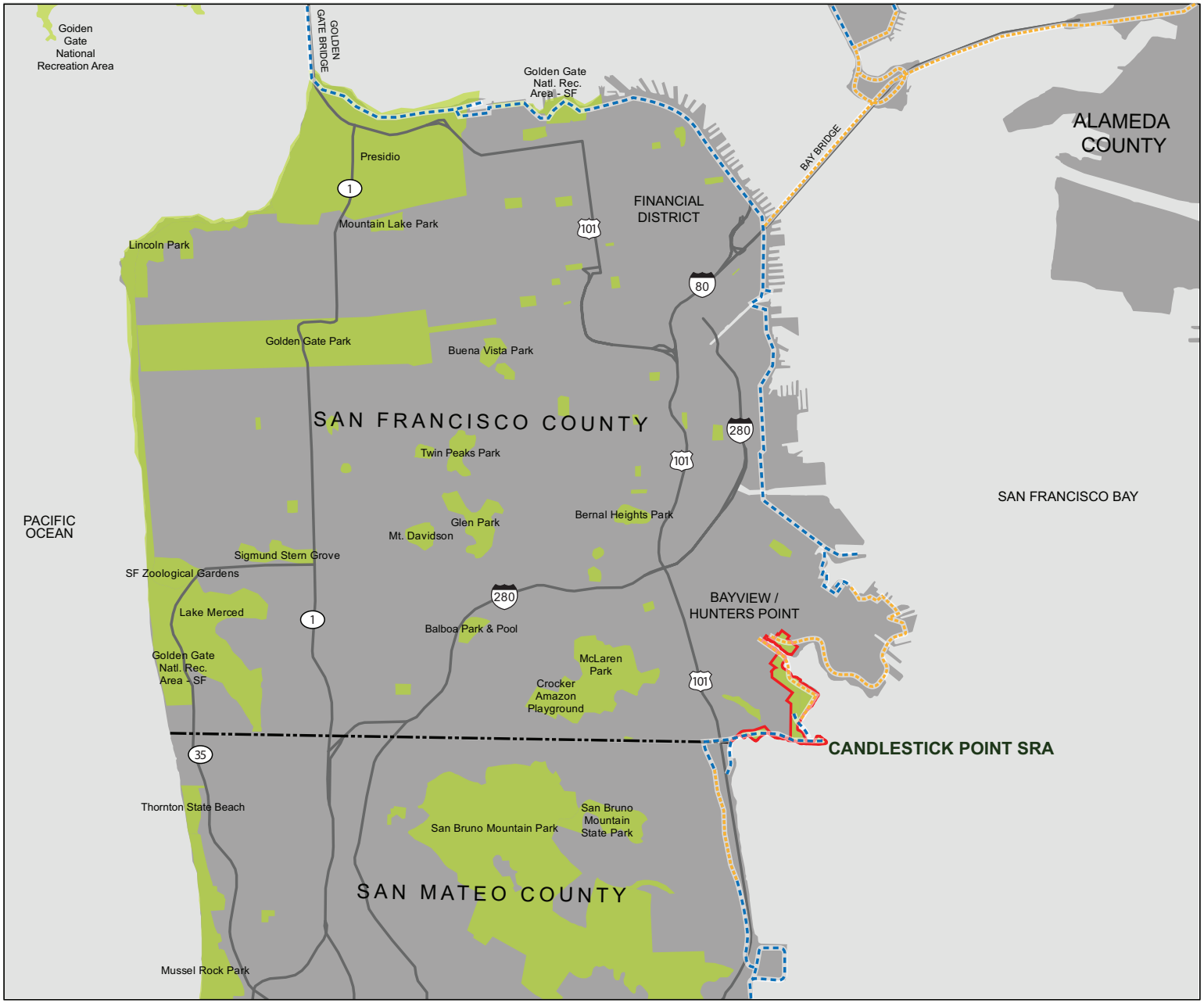

Figure 1-1

REGIONAL LOCATION

- Candlestick Point SRA Boundary (current)
- Major parks / open spaces
- Major roads
- Bay Trail
- Planned Bay Trail
  Future route - not developed

Extents of Main Map

0 2,750 5,500 11,000 Feet

Source: San Francisco Planning Department
10.31.2012

AECOM

CANDLESTICK POINT STATE RECREATION AREA

AECOM

11.28.2011

0 1250 2,500 5000 Feet

N

Figure 1-2

SITE CONTEXT

Redevelopment of this area will create over 10,500 residential units, approximately 700,000 square feet of destination retail and entertainment space, over 2.5 million square feet of commercial space oriented around a green science and technology campus, and approximately 240 acres of new waterfront parks. The project contains several phases: the Hunters Point Shipyard Phase 1 development is currently underway to construct 1,600 homes and 25 acres of open space. The remainder of the development will occur as part of the Candlestick Point-Hunters Point Phase II Project, with full build-out expected by 2020.

This second phase contains the Candlestick Point subcomponent, a 281-acre area that includes 120 acres of CPSRA as well as Candlestick Park stadium (home to the San Francisco 49ers football team) and the Alice Griffith public housing site, which are located immediately west of CPSRA. Plans for Candlestick Point include the creation of 7,850 residential units, 760,000 square feet of retail, 150,000 square feet each of office and hotel space, and approximately 8.1 acres of new parkland in the neighborhood and 5.7 acres of new land in CPSRA, as well as approximately 97 acres of improvements within CPSRA (SFRA and SFPD 2009).

Assembly Bill No. X1 26, and the subsequent decision of the California Supreme Court in its decision issued on December 29, 2011 (California Redevelopment Association et al. v. Ana Matosantos), dissolved Redevelopment Agencies statewide, impacting several redevelopment projects that are planned in the vicinity of CPSRA. These projects—including Executive Park, Visitacion Valley Redevelopment Project, and The Baylands—are described in the following paragraphs

Executive park is a proposed mixed-use neighborhood with 2,800 residential units, a town center, and connections to the nearby waterfront, open spaces, and commercial districts.

The Visitacion Valley Redevelopment Project is a proposed transit-oriented and pedestrian-friendly mixed-use development with up to 1,250 new housing units, 90,000 square feet of retail, three new parks, and a new community center. The Visitacion Valley Redevelopment Project no longer has access to San Francisco Redevelopment financing. The project is on hold until other sources of funding are identified to the project to move forward.

The Baylands is a 660-acre former rail yard and landfill in the City of Brisbane that is being considered for redevelopment (Brisbane 2009), and no longer has access to Brisbane Redevelopment financing. The City of Brisbane is proceeding with the Baylands project, and has scheduled publication of the Draft EIR for the project in summer 2012.

These projects no longer have access to redevelopment financing. To the extent that these projects depended on redevelopment financing, they are on hold until other sources of public or private financing are identified to enable these projects to move forward.

1.2 Site Characteristics

1.2.1 Topography

The entire CPSRA is nearly at sea level, with elevations ranging from approximately 0 to 20 feet above mean sea level (msl). Slopes typically range from 0% to 5%, although steeper slopes exist in certain areas of the park, notably along the South Basin Shoreline, on The Point, and above Candlestick Cove. Changes in elevation typically result from mounds of bay fill, the highest of which are at the eastern tip of Sunrise Point (State Parks 1978a, SFRA and SFPD 2009). More significant elevation changes and steeper slopes occur adjacent to CPSRA, most notably on Bayview Hill, which reaches a maximum elevation of approximately 400 feet above msl.

1.2.2 Existing Features and Land Uses within the Park

The shoreline of CPSRA is perhaps its most defining feature, particularly considering the park's urban surroundings. Long-range scenic views of San Francisco Bay are available from viewpoints throughout the park. Passive recreation is the focus of the park, and development is concentrated in areas that provide the greatest shoreline access, primarily south of the main park entrance. Activities include windsurfing, fishing, beach use, picnicking, walking, wildlife viewing, birding, and a variety of uses on the existing three miles of non-motorized trails (State Parks 2009a). The San Francisco Bay Trail, a regional trail that will circle the Bay when completed, follows the CPSRA shoreline from the San Mateo County line to Sunrise Point (The Point), and then continues through the Main Park (Heart of the Park) to Donohue Avenue. Figure 1-3 illustrates the existing conditions within CPSRA.

Before the current General Plan Update was prepared, the geographic areas within the park were called Yosemite Slough, Phase Four, Main Park, Sunrise Point, Windsurf Circle, and Last Port (see Figure 1-3). During the General Plan Update process, the places that were called Phase Four, Main Park, Sunrise Point, and Windsurf Circle were renamed Candlestick Meadows, Heart of the Park, The Point, and The Neck, respectively, as shown in Figure 4-1, Draft General Plan Preferred Alternative, in Chapter 4, Park Plan. The discussion below uses the original place names with the new names shown in parentheses.

CANDLESTICK POINT STATE RECREATION AREA

Figure 1-3

EXISTING CONDITIONS

LANDSCAPE TYPES

- Upland (grassland / coastal scrub)
- Salt marsh / wetland
- Active lawn / landscaped areas
- Beach
- Parking
- Community garden

TRAILS

- Soft
- Paved
- Boardwalks + Piers
- Bay Trail

GATHERING AREA TYPES

- Intimate
- Family
- Group

FACILITIES

- Buildings
- Piers + Boating Facilities
- Restrooms
- Interpretive Signage

- CPSRA Boundary

0 300 600 1,200 Feet

10.20.2011

AECOM

The most developed area in CPSRA is the Main Park (Heart of the Park), which generally extends south of the main park entrance and is bounded to the west by Windsurf Circle (The Neck). Further east is Sunrise Point (The Point), a peninsula that is generally a quieter area because it is farthest from urban features, such as Candlestick Park and Harney Way (State Parks 1988). West of the Main Park (Heart of the Park) is a narrow strip of land that extends along Jamestown Avenue and connects to the Last Port area (The Neck), which also provides recreation facilities.

The majority of the area north of the Main Park (Heart of the Park) entrance gate is unimproved, with visitor activity limited to trail use and special event parking. North of the Main Park (Heart of the Park) is the large, sparsely vegetated Phase Four area (Candlestick Meadows). The recent removal of concrete rubble from the Phase Four area's (Candlestick Meadows) northeastern corner (known as the Last Rubble or Rock City) and new trails have increased opportunities for visitor use. The area northwest of the Phase Four area (Candlestick Meadows) is largely unimproved and serves primarily as a parking lot during San Francisco 49ers home games. The adjacent Candlestick Park stadium typically hosts from eight to 10 home games (including preseason) between August and January (49ers 2009).

The unimproved area also includes a large parking area originally constructed for a paved boat launch; the boat launch has since been abandoned due to siltation of the South Basin that has limited its accessibility for boating. CPSRA's main office, maintenance shop, and Community Garden are located in an enclosed area on the northwestern edge of the unimproved area on Carroll Avenue (see Figure 1-3).

The northernmost area of CPSRA contains Yosemite Slough—a natural wetland that was filled and contaminated by surrounding industrial land uses over the years. The Yosemite Slough Restoration Project—a partnership between California State Parks (State Parks), the California State Parks Foundation, and various conservation agencies—includes plans for habitat restoration, soil remediation, trail construction, and educational programming in the area surrounding the slough. Construction of Phase I (north of the slough) began in July 2011, and detailed design of Phase II (south of the slough) will occur in the future.

1.3 Park Acquisition and History

The area occupied by CPSRA received its name because of a small rock outcropping that resembled a candlestick. Identified by the U.S. Coast Survey in the 1800s, this feature is believed to have been located at the present site of Candlestick Park stadium. In 1868, the state legislature approved an act "to survey and dispose of certain San Francisco Bay salt marsh and tidelands belonging to the State of California," which spurred development along the San Francisco Bay waterfront. The act allowed for the "reservation of streets, docks, piers, canals, basins and other uses necessary for public

convenience and the purposes of commerce," resulting in the block ownership pattern in the CPSRA and the adjacent tidelands (State Parks 1988).

In November 1940, the U.S. Government purchased the 48.6-acre Hunters Point Shipyard from Bethlehem Steel. Following the declaration of war one year later, the U.S. Navy began a program of rapid expansion. Hills on the site of the present-day shipyard were leveled to create flat industrial land, and the residue was used to fill in the surrounding tidelands to allow for further expansion. By the end of World War II, Hunters Point Shipyard contained over 500 acres of land. The area south of the shipyard, including the South Basin and Candlestick Point, remained virtually undisturbed during this period, serving instead as a recreational resource. The coves and beaches along the shore provided places for people to fish, picnic, and play at the water's edge, and were a great asset to the area (State Parks 1988).

The area was changed considerably by the construction of Candlestick Park stadium in the late 1950s as well as the haphazard filling of the adjacent tidelands (consistent with the mission statement of the Hunters Point Reclamation District, which was to increase San Francisco's industrial land base) (Kelley and VerPlanck 2009). The creation of the stadium parking lot from fill provided access to tidelands farther out into the Bay, encouraging additional fill activity. This turned the shoreline into an uninviting wasteland of junkyards and dumpsites (State Parks 1988; Bachman, pers. comm., 2009). With the authorization of the State Legislature in 1973 to begin purchasing lands, the California State Park Commission classified Candlestick Point State Recreation Area in 1977, establishing California's first urban State Recreation Area. CPSRA was created on 151 acres in San Francisco's southeastern corner to serve both residents of the major urban center and visitors from other parts of the state. State Parks classified the property as a State Recreation Area due to its proximity to large population centers and its ability to provide recreation and interpretive opportunities (State Parks 1979).

A portion of the original acquisition of CPSRA included parcels totaling approximately 51 acres that are submerged beneath bay waters. State Parks will cooperate with the State Lands Commission to evaluate the possible transfer of title of these submerged lands to the Commission.

In October 2009, Governor Arnold Schwarzenegger signed Senate Bill (SB) 792 which authorized reconfiguration of CPSRA and provided funding to assist with park improvements and operations and maintenance. The reconfiguration will remove a net total of 20.3 acres of land from CPSRA; transferring 26.9 acres, primarily along its western border, for development associated with the Candlestick Point-Hunters Point Shipyard Phase II Project and adding 6.6 acres in the Hermit's Cove Beach and Yosemite Slough areas (SFRA and SFPD 2009). The CPSRA acreage, per the revised boundary configuration, will total 131.5 acres.

1.4 Sense of Place

What characteristics make CPSRA distinctive, and draw users to this unit? What inherent qualities should be protected, highlighted, and enhanced? The first response must be the relationship of the site with San Francisco Bay, with over three miles of coastline, and ever-changing, sweeping Bay views that include distant mountains and ridges to the east. The presence of the Bay can be sensed throughout the entire unit, either through direct recreational activities with the water, or as a backdrop sensed through the taste of salty cool air, the sounds of water birds, gusting winds, and lapping waves, or the open and bright expanse beyond a tree-protected meadow. The changing shoreline offers a variety in Bay experience, from wind-driven choppy waves, to quieter protected coves and beaches, to the inlet of Yosemite Slough, where the water is a narrow channel marked by the presence of the bird-covered “Double Rock” feature.

Also idiosyncratic are the often-present strong winds, traveling from the Pacific Ocean through the Alemany Gap and swirling around the adjacent Bayview Hill. While the wind poses challenges for human comfort, it is undeniably a distinct characteristic of the site, and is what makes CPSRA a world famous windsurfing area. Despite being an urban site, with the influence of the Bay, the wind, and the backdrop of the undeveloped Bayview Hill, the park offers a sense of being in contact with natural forces. It is seen as a source of respite and renewal, although at times a bracing one.

Nonetheless, CPSRA is an urban state park. Its urban edge is as long as its shoreline, with CPSRA as the intermediary where these very different environments meet and blend. The existing urban context of acres of parking lot and a rarely used stadium means the park is rather isolated, and often with few visitors. This factor in itself contributes to the sense of being an “urban getaway” for a quiet walk alone.

The land, which is almost entirely fill, is a created landscape, characterized by features that were either placed there or that naturalized over time. Large areas of the park are undeveloped, and apart from the natural factors previously mentioned, offer a sense of place that resembles an open canvas. The shape of the shoreline follows the tidal lots where the Bay was sold off in rectangular blocks to be filled for new land. The very shape of the park offers an authentic story that is part of the spirit of the area.

The proposed redevelopment surrounding the park will greatly change the character of the urban edge. The park will provide a “green front lawn” for the planned community of townhomes, high rises, and shopping districts. There will be many more people visiting the park, looking to enjoy the incredible water’s edge recreation, as well as contact with nature and a respite from city life. Thus, future development of the park must carefully navigate this intermediary nature between the city and shoreline edges. CPSRA’s spirit of place will continue to evolve, as a gradient of these urban and natural experiences.

1.5 Purpose of the General Plan

General plans are broad-based policy documents that provide management guidelines for a park unit by defining a framework for implementing State Parks' diverse missions of resource stewardship, interpretation, and visitor use and services. By legal mandate, every state park in California must develop a General Plan before approval of major developments. The General Plan defines the purpose, vision, and long-term goals and guidelines for the management of the park. Typically, a General Plan is not a project-specific document; therefore, it typically does not define specific objectives, methodologies, and designs on how to accomplish its goals.

General planning provides opportunities to assess resource stewardship, facility development and management, relationships with the surrounding communities, and interpretation and other services provided to the public. The General Plan provides guidelines for future land use management and for the facilities required to accommodate expected visitation.

This General Plan provides a comprehensive framework to guide the development, ongoing management, and public use of CPSRA for the next 20 years or more. It offers a consistent vision for the future of CPSRA and was designed to support flexibility and accommodate change in its proposed approaches to potential management problems. Because the General Plan will be in effect for so long, it must remain consistent in the vision for the future of the park, general in its scope, and flexible in its proposed approaches for solving future management problems and accommodating change.

The current General Plan effort for CPSRA expands on the previous planning efforts that were conducted for the park. The original General Plan—which was approved by State Parks in November 1978—provided a guiding philosophy for development and opened the Bay shoreline to public use and access. An amendment to the General Plan was approved in May 1987.

The process of updating CPSRA's General Plan began in early 2010, to respond to the adjacent proposed Candlestick Point-Hunters Point Shipyard Phase II Project. The project will dramatically alter the neighborhood surrounding the park, replacing the existing Candlestick Park stadium, vacant lands and other areas with a large, mixed-use development. This redevelopment project will change the relationship of the park with the surrounding neighborhood and is expected to both increase visitation and change the types of visitors. In addition, State Parks entered into a land exchange with the City of San Francisco that reconfigured the park boundary—adding land in some of the narrowest areas and removing it from others. In exchange, CPSRA will receive a $10 million endowment to support the park's operations and maintenance and $40 million to fund improvements to the park over the long-term. This General Plan amendment

responds to the external pressures on CPSRA and sets forth a vision that is consistent with the park's mission while also adapting to large forces of change.

Please refer to Chapter 4 of this document for the CPSRA General Plan Declaration of Purpose.

1.5.1 Combined General Plan/EIR and Tiering

The California Environmental Quality Act (CEQA) of 1970 requires state agencies to analyze and disclose the potential environmental effects, both direct and indirect, of a proposed discretionary action. An environmental impact report (EIR), as prepared by state and local governments, is usually a stand-alone document intended to meet the requirements of CEQA.

However, CEQA also encourages options to avoid needless redundancy and duplication, such as combining General Plans and Environmental Impact Reports (EIRs) (State CEQA Guidelines Section 15166) and the use of tiering, a process where a lead agency prepares a series of EIRs or negative declarations, progressing from general concerns to more site-specific evaluations with the preparation of each new document (State CEQA Guidelines Section 15152). When the lead agency combines a General Plan and an EIR, all CEQA requirements must be covered and the document must identify where the requirements are met. Please refer to the Table of Contents of this General Plan for the location of EIR-required elements within this document.

This General Plan also serves as a first-tier EIR, as defined in Section 15166 of the State CEQA Guidelines. Chapter 5, Environmental Analysis, will be a reference for future environmental documents that could provide more detailed information and analysis for site-specific developments and projects.

Actions that may result from adoption and implementation of this General Plan at some time in the future were anticipated, and potential impacts resulting from these actions were analyzed. Impact mitigation measures were incorporated into this General Plan as goals and guidelines, wherever possible, to help ensure that planned actions described in the General Plan, including those to be implemented in the future, will not result in significant environmental impacts.

Therefore, the CEQA analysis detailed in the EIR that accompanies this General Plan is intended to be adequate for many future actions implemented as part of site development in a manner consistent with the goals and guidelines in the General Plan. Some actions described in the General Plan may require additional CEQA analysis documentation once the project details are known, while others may simply need to implement all goals, guidelines, and specific mitigation measures identified in this document to ensure they are in environmental compliance.

Both Chapter 2, Existing Conditions, and Chapter 5, Environmental Analysis, reference the Candlestick-Hunters Point Shipyard Phase II Draft Environmental Impact Report (San Francisco Redevelopment Agency and San Francisco Planning Department 2009), which presented a detailed, project-level analysis of the proposed development of and adjacent to CPSRA. The existing conditions and environmental impact analysis presented in this CPSRA General Plan are based on the information presented in that project-level EIR. However, because this is a program-level EIR for a General Plan, that detailed project-level analysis is not presented in this document.

All projects that may be implemented in the future as a result of adopting this General Plan will be subject to CEQA review according to State CEQA Guidelines Section 15168, in light of the information in the EIR prepared for this General Plan, to determine if additional CEQA documentation is necessary. The type of additional CEQA documentation completed will be determined based on State CEQA Guidelines Sections 15162–15164. When future projects requiring additional environmental review are implemented, State Parks may refer to the EIR prepared for the General Plan as a starting point for a "tiered CEQA analysis" per Section 15168 of the State CEQA Guidelines.

1.5.2 Purpose of the EIR

The purpose of the EIR is to analyze and disclose the preferred alternative's effects on the environment, in accordance with Section 15168 of the State CEQA Guidelines. It discloses any significant and potentially significant effects that could result from the implementation of the General Plan. The EIR informs decision makers and the public about the environmental consequences of the adoption of the General Plan, consistent with the requirements of CEQA and the State CEQA Guidelines.

1.6 Organization of the General Plan and EIR

This General Plan contains the following sections:

- Executive Summary;
- Chapter 1, Introduction;
- Chapter 2, Existing Conditions;
- Chapter 3, Issues and Analysis;
- Chapter 4, Park Plan (Goals and Guidelines);
- Chapter 5, Environmental Analysis;
- Chapter 6, References;
- Chapter 7, Glossary of Terms and Acronyms; and
- Chapter 8, Report Contributors.

1.6.1 Executive Summary

The Executive Summary is a brief discussion of the General Plan's most important points. It provides the reader with a clear picture of the key issues addressed in the General Plan. The Executive Summary is a stand-alone document that provides all of the essential General Plan and EIR information.

1.6.2 Introduction

Chapter 1, Introduction, provides an overview of CPSRA, including its location, local and regional context, park acquisition and history, and sense of place. It also explains the purpose and organization of the General Plan, subsequent planning, the planning hierarchy used by State Parks, and describes the interagency and stakeholder involvement that took place during preparation of the General Plan.

1.6.3 Existing Conditions

Chapter 2, Existing Conditions, describes the current physical conditions of CPSRA. It includes information on land use; significant physical, biological, cultural, aesthetic, and recreation values; and the park's existing relationship to the surrounding communities. Chapter 2 establishes the baseline against which proposed changes will be evaluated. The existing conditions section also lists system-wide and regional planning influences affecting CPSRA.

1.6.4 Issues and Analysis

Chapter 3, Issues and Analysis, documents the planning assumptions underlying the General Plan and identifies key issues to be addressed during the planning process. Sources of information for the issues and analysis section include early input from stakeholders and focus groups, issues identified by the various stakeholder groups, issues identified during scoping, and resource-specific issues unique to the site.

1.6.5 Park Plan (Goals and Guidelines)

Chapter 4, Park Plan (Goals and Guidelines), presents the purpose, vision, and guidance for CPSRA. It states the basic philosophy or management intent for the park and establishes planning zones, goals, and guidelines for the overall park and for specific zones, as applicable.

1.6.6 Environmental Analysis

Chapter 5, Environmental Analysis, contains the Program EIR for the General Plan. Chapter 5 includes an analysis of the environmental impacts resulting from implementation of the General Plan.

Chapter 5 includes the following sections:

- Section 5.1, Introduction;
- Section 5.2, EIR Summary;
- Section 5.3, Project Description;
- Section 5.4, Environmental Setting;
- Section 5.5, Environmental Effects Eliminated from Further Analysis;
- Section 5.6, Environmental Impacts and Mitigation;
- Section 5.7, Other CEQA Considerations; and
- Section 5.8, Alternatives to the Proposed Plan.

1.6.7 References

This section lists all written sources, organizations, and individuals consulted in the preparation of the General Plan.

1.6.8 Report Contributors

This section lists all contributors to the preparation of the General Plan.

1.6.9 Appendices

In addition to the sections described above, the General Plan contains the following appendices:

- Appendix A, Special-Status Plant and Wildlife Species With Potential to Occur in the Vicinity of CPSRA
- Appendix B, Application of the City and County of San Francisco Healthy Development Measurement Tool to CPSRA
- Appendix C, CPSRA Draft Concept Master Plan
- Appendix D, CPSRA Draft Concept Master Plan Interpretive Opportunities

1.7 Subsequent Planning

Major programs and projects that will be implemented during the lifespan of the General Plan will require additional planning. Examples of future planning efforts include developing a parking management strategy and preparing an interpretive prospectus that recommends suitable methods and media for interpreting the park's cultural, natural and recreational resources.

Future planning efforts also include the preparation of project-specific environmental compliance documents for implementation of management plans and subsequent development projects. These documents will tier off of and be consistent with the General Plan's Program EIR. Securing any permits required for future implementation projects will also be part of subsequent planning actions.

Finally, the General Plan might need to be amended if new developments or major commitments of resources are proposed for areas not covered in this plan or if circumstances change, making facts and findings in this plan no longer accurate. Please refer to Section 3.4, Assumptions for Future Scenario without the Candlestick Point-Hunters Point Shipyard Phase II Project, for further discussion.

1.8 Planning Process

1.8.1 Planning Hierarchy

Several key elements of the State Parks planning process provide a framework for establishing the park and directing how it is managed. Key elements of the planning hierarchy are described below.

State Parks and Recreation Mission

The mission sets the fundamental parameters within which State Parks acquires and manages its units. State Parks' mission 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.*

Classification

Park management and direction is further guided by the park unit's classification. In April 1977, State Parks classified CPSRA as a State Recreation Area, because it is capable of withstanding extensive human impact. Additionally, it is close to large centers of population and major routes of travel; it has proven recreational resources; and it can be developed and operated to provide many outdoor recreational and interpretive opportunities in San Francisco Bay, its surroundings, and the Bay ecosystem (State Parks 1988).

The following is the classification definition for a State Recreation Area unit according to public resources code (updated in 1994):

> **Public Resources Code (PRC) Section 5019.56:** State recreation units consist of areas selected, developed, and operated to provide outdoor recreational opportunities. The units shall be designated by the commission by naming, in accordance with Article 1 (commencing with Section 5001) and this article relating to classification.

In the planning of improvements to be undertaken within state recreation units, consideration shall be given to compatibility of design with the surrounding scenic and environmental characteristics.

State recreation units may be established in the terrestrial or nonmarine aquatic (lake or stream) environments of the state and shall be further classified as one of the following types:

(a) **State recreation areas**, consisting of areas selected and developed to provide multiple recreational opportunities to meet other than purely local needs. The areas shall be selected for their having terrain capable of withstanding extensive human impact and for their proximity to large population centers, major routes of travel, or proven recreational resources such as manmade or natural bodies of water. Areas containing ecological, geological, scenic, or cultural resources of significant value shall be preserved within state wildernesses, state reserves, state parks, or natural or cultural preserves, or, for those areas situated seaward of the mean high tide line, shall be designated state marine reserves, state marine parks, state marine conservation areas, or state marine cultural preservation areas.

Improvements may be undertaken to provide for recreational activities, including, but not limited to, camping, picnicking, swimming, hiking, bicycling, horseback riding, boating, waterskiing, diving, winter sports, fishing, and hunting.

Improvements to provide for urban or indoor formalized recreational activities shall not be undertaken within state recreation areas.

Declaration of Purpose

The Declaration of Purpose is a unique broad statement of direction that is specific to CPSRA. The Declaration of Purpose is presented in Chapter 4.

Park Vision

The vision statement describes the future desired outcome of CPSRA. It expresses what the park will ultimately be and look like and what kind of experiences should be available to the visitor. The park vision is presented in Chapter 4.

1.8.2 Interagency and Stakeholder Involvement

CPSRA is located in the City and County of San Francisco along the southeastern waterfront, adjacent to San Francisco Bay. Planning for the park requires close coordination with a variety of agencies and stakeholders. State Parks obtained interagency and stakeholder input through scoping as part of the environmental review

process, and in public workshops that were held during the CPSRA General Plan process.

The following agencies and stakeholder groups provided written input or were consulted during the planning process:

- City and County of San Francisco (various departments including the Mayor's Office, Planning, Parks and Recreation, Public Utilities Commission, Public Health, and the Port)
- City of San Francisco Redevelopment Agency
- Bay Conservation and Development Commission (BCDC)
- California State Coastal Conservancy (SCC)
- California Department of Transportation (Caltrans)
- California Department of Fish and Wildlife (CDFW)
- California State Lands Commission (CSLC)
- California Department of Boating and Waterways (CDBW).
- U.S. Army Corps of Engineers (USACE)
- U.S. Fish and Wildlife Service (USFWS)
- U.S. Environmental Protection Agency (USEPA)
- U.S. Department of the Navy (USNA)
- Ohlone Indian Tribe
- California State Parks Foundation
- San Francisco Bay Trail
- Literacy for Environmental Justice
- Sierra Club, San Francisco Bay Chapter
- Golden Gate Audubon Society
- California Native Plant Society
- Nature in the City
- Bay Access

Native American Consultation

State Parks staff contacted the Native American Heritage Commission to request a list of individuals who might have information regarding Native American use of CPSRA. The Native American Heritage Commission provided a list of seven Most Likely Descendents of the Ohlone tribe, and letters were sent to each person on the list. State Parks did not receive any written replies to those letters. State Parks staff had a telephone conversation with Ann Marie Sayers, one of the Most Likely Descendants identified by the Native American Heritage Commission, who voiced her concern about the unknown archaeological resources in the park and how they might be protected. She also is interested in reviewing any materials that State Parks prepares to interpret Ohlone culture. Additionally, State Parks had a telephone conversation with Jackie Keel, another Ohlone Most Likely Descendant, who raised concerns about protecting

the archaeological resources in the park. State Parks staff explained that no known archaeological sites are present within CPSRA. However, archaeological sites have been identified in surrounding areas, and it is possible that unknown sites are located under the thick layer of fill that covers the CPSRA boundary. No responses were received from the other Ohlone Most Likely Descendants.

1.8.3 Public Involvement

Public input is an important component of the General Planning process. It is sought at the very beginning and throughout the planning process for a variety of reasons. The people of California have entrusted State Parks to manage natural and cultural resources and provide recreational opportunities within California's designated State Parks. Constituency building is necessary to ensure the public's support for their local State Parks. In the case of CPSRA, public involvement also focused on the local communities because of the location of the project site within the Bayview Hunters Point neighborhood and the planned Candlestick Point-Hunters Point Shipyard Phase II Project that will be adjacent to the park. A variety of methods, such as public meetings, a project web page, postings on the CPSRA website, and periodic mailings were used to identify interested parties, inform them about the planning process, and identify their issues and concerns.

Public Workshops

The planning team held three public workshops in support of the General Plan. The format of each public workshop is described below.

Public Workshop 1: This meeting was held on January 30, 2010 at Bret Harte Elementary School located at 1035 Gilman Avenue, San Francisco, CA 94124. The meeting included an existing conditions presentation of the CPSRA planning to date, an explanation of the General Plan process, and a presentation of the anticipated schedule. The presentation was followed by an open forum for questions and answers. This first public meeting also served as a CEQA scoping meeting.

Public Workshop 2: This meeting was held on July 14, 2010 at the Southeast Community Facility, Alex L. Pitcher, Jr. Community Room located at 1800 Oakdale Avenue, San Francisco, CA 94124. The format of the meeting was an open house to present four alternatives developed by the planning team. Participants were encouraged to express their likes or concerns about the specific elements of the alternatives. Workshop participants also were asked to fill out a questionnaire to provide their opinions of each of the four design alternatives.

Public Workshop 3: This meeting was held on November 3, 2010 at the Southeast Community Facility, Alex L. Pitcher, Jr. Community Room located at 1800 Oakdale Avenue, San Francisco, CA 94124. The format of the meeting was an open house to

present the preferred alternative. The presentation was followed by an open forum for questions and answers. During the public comment period, meeting participants broke into groups to review the CPSRA area-specific designs further.

Project Web Pages

The CPSRA website includes information about all aspects of the park. The site can be accessed at http://www.parks.ca.gov/?page_id=519.

A separate website was developed specifically for the General Plan. This website contains information about the planning process, links to documents and maps, contact information for planning team members, and announcements of upcoming meetings. In addition, all materials used during public meetings (e.g., PowerPoint presentations, graphics, handouts) and summaries of comments received are posted on the planning website to enable interested members of the community to follow the planning process closely, even if they are unable to attend the public meetings. The General Plan website can be accessed at www.parks.ca.gov/candlestickgp. The Preliminary General Plan/Draft EIR and Final General Plan/Final EIR and materials related to the State Parks Commission Hearing on the General Plan and EIR will also be posted on this website, when available.

Mailing Materials

Mailing materials used to announce upcoming meetings included e-mails, postcards, flyers, newsletters, and postings on the General Plan website.

2 Existing Conditions

2 Existing Conditions

The discussion of regional land use, site topography, and park land use and facilities is included in Chapter 1, Introduction, of this General Plan under Sections 1.1, 1.2.1, and 1.2.2, respectively.

Before the current General Plan Update was prepared, the geographic areas within the park were called Yosemite Slough, Phase Four, Main Park, Sunrise Point, Windsurf Circle, and Last Port (see Figure 1-3, Existing Conditions, in Chapter 1). During the General Plan Update process, the places that were called Phase Four, Main Park, Sunrise Point, and Windsurf Circle were renamed Candlestick Meadows, Heart of the Park, The Point, and The Neck, respectively, as shown in Figure 4-1, Draft General Plan Preferred Alternative, in Chapter 4, Park Plan. The discussion presented in this chapter uses the original place names with the new names shown in parentheses.

2.1 Significant Resource Values

The following description of existing conditions in the vicinity of CPSRA was developed based on information obtained from site surveys and existing documents, including the Candlestick Point-Hunters Point Shipyard Phase II Draft EIR (2009) and related studies.

2.1.1 Physical Resources

Climate

San Francisco typifies a Mediterranean climate with cool wet winters and dry summers; however, the proximity of the coastal waters creates cool, often cloudy summers. Average temperatures range from 51ºF to 64ºF throughout the year. Rainfall occurs primarily between October and April and averages approximately 21 inches per year[1] (SFRA and SFPD 2009).

Wind

Winds in San Francisco Bay fluctuate greatly with the time of year and day. The highest winds typically occur in the late afternoon between March and October. Prevailing winds at CPSRA are predominately from the west and west-northwest. However, winter storm winds are predominately from the east and east-southeast direction. Local topography, most notably Bayview Hill, influences wind patterns at CPSRA, resulting in accelerated and gusting winds. This effect is particularly pronounced at the southern end of Bayview Hill (SFRA and SFPD 2009), in CPSRA's Last Port area.

Geology, Soils and Seismicity

Geology

CPSRA lies within California's Coast Ranges province, a 500-mile area of northwest-trending ridges and valleys. Bedrock underlying the park is associated with the Jurassic- and Cretaceous-age Franciscan Complex (KJ), an assemblage of deformed and metamorphosed rock units from 65 to 165 million years ago (mya). Basement units of the Franciscan Complex that underlie the park include sandstone and shale, greenstone, chert, and serpentinite (ENGEO 2009, SFRA and SFPD 2009). Depths to bedrock beneath CPSRA vary but exceed 200 feet in some areas along the coastline (State Parks 1978b, ENGEO 2009).

Bay Mud (Qm) deposits were created by fluctuating sea levels and erosion-deposited estuarine sediments from the Holocene and Pleistocene periods (0 to 1.8 mya) above CPSRA's basement rocks (ENGEO 2009, SFRA and SFPD 2009). Young Bay Mud consists of soft gray sand and silt, with local occurrences of shell fragments, plant remains, and thin beds of sand (State Parks 1978b, SFRA and SFPD 2009). The Young Bay Mud deposits increase in thickness as they extend into the Bay off CPSRA's coastline. Deeper units of older Bay Mud, known as Old Bay Clay, occur locally and consist of stiff to very stiff sand, silt, and clay (SFRA and SFPD 2009).

[1] As measured at the Western Regional Climate Center's San Francisco Mission Dolores Station from 1914 to 2008.

Land reclamation activities beginning in the 1930s resulted in the placement of fill (Qaf) above the Bay Mud deposits, creating the present-day CPSRA. The fill is generally composed of excavated Franciscan Complex bedrock that contains a mixture of sand, gravel, clay, and silt. Manmade debris, such as wood, glass, brick, concrete blocks, and other industrial debris, may also be present. Densities vary widely from loose to very dense granular materials and soft to stiff clays and silts (SFRA and SFPD 2009). The fill is typically about 20 to 30 feet deep, although localized deposits may be 70 feet below the ground surface (ENGEO 2009).

Soils

Imported fill materials comprise all of CPSRA soils. Most of the soils are classified by the Natural Resources Conservation Service (NRCS) as Urban land-Orthents, reclaimed complex, 0–2% slopes. Small areas directly north of Yosemite Slough and the Last Port area contain soils classified as Urban Land and Pits and Dumps, respectively (NRCS 2010). All soil types present at CPSRA are moderately corrosive to concrete and uncoated steel. The erosion hazard rating for the local soils is slight to severe because of the variable nature of the deposits (SFRA and SFPD 2009).

Faults and Seismicity

The San Francisco Bay Area is a seismically active region with a number of major active faults. The San Andreas Fault is nearest to CPSRA, approximately 7 miles to the southwest. Additional faults near the park include the northern and southern segments of the Hayward Fault, both approximately 12 miles to the east and the San Gregorio Fault, approximately 11 miles to the southwest. The Monte Vista-Shannon, Calaveras and Rodgers Creeks faults lie farther away, as illustrated in Table 2-1. Several other inactive faults traverse the immediate area of the park (SFRA and SFPD 2009).

Numerous earthquakes have been recorded in the San Francisco Bay Area, including 13 with a moment magnitude (M) of 6.0 or greater between 1800 and 2005. The moment magnitude scale provides an accurate measurement of the size of major earthquakes and is nearly identical to the historically used Richter scale for earthquakes of less than M 7.0. The Uniform California Earthquake Rupture Forecast, a prediction by the U.S. Geological Survey, California Geological Survey, and others, places the overall probability of a magnitude 6.7 or greater earthquake in the greater Bay Area by 2036 at 63%. The Hayward-Rodgers Creek Fault system has the highest earthquake probability at 31%. The San Andreas Fault has a 21% probability of a large earthquake by 2036 (USGS 2009). Table 2-1 illustrates the characteristics of the major active faults in the greater San Francisco Bay region (SFRA and SFPD 2009).

Table 2-1: Active Regional Faults

Fault	Approximate Distance from CPSRA (miles)	Direction from CPSRA	Maximum Earthquake Magnitude (M)
San Andreas (Peninsula)	7	Southwest	7.1
San Gregorio (North)	11	Southwest	7.2
San Andreas (North Coast South)	11	Northwest	7.4
Hayward (South)	12	East	6.7
Hayward (North)	12	East	6.4
Monte Vista-Shannon	21	South	6.7
Calaveras (North)	22	East	6.8
Rodgers Creek	25	North	7.0
Source: SFRA and SFPD 2009			

Seismic Hazards

Ground-shaking is the most widespread effect of earthquakes. The intensity of the seismic shaking, or strong ground motion, during an earthquake depends on a number of factors, including the earthquake's distance, direction, and magnitude, as well as regional geologic conditions. The San Andreas, San Gregorio, and Hayward Faults are the closest to CPSRA and therefore, most capable of producing strong ground-shaking (SFRA and SFPD 2009).

Large earthquakes can cause liquefaction, a temporary loss of soil strength during strong ground-shaking. The vast majority of liquefaction hazards are associated with sandy and silty soils of low plasticity, such as the Orthents and Urban Land soils that comprise CPSRA. For this reason, the entire CPSRA is in a zone of high risk for liquefaction hazards, which include lateral spreading, ground oscillation, and ground collapse, among others (SFRA and SFPD 2009).

Structural instability of CPSRA's fill materials may also cause settlement or subsidence of the ground surface in the event of an earthquake. The underyling Bay Mud consists of unconsolidated sediments that are vulnerable to any type of movement (State Parks 1988). CPSRA's shoreline, described under the *Shoreline Conditions* section, is comprised of the same artificial fill over relatively weak Bay Mud and is therefore at risk for subsidence or lateral deformation during a strong earthquake (ENGEO 2009).

Earthquakes may cause slope failures, resulting in such hazards as landslides, rock-falls, and debris slides. Slope stability depends on a number of variables including local

geology, structure, groundwater quantity, climate, topography, slope geometry, and human activity. The risk of slope failure is low within CPSRA because of the relatively level terrain; however, the steep hillsides of Bayview Park above CPSRA represent a major landslide hazard. A section of the hillside that is approximately 2,500 feet wide and 2,500 feet long extends to Harney Way just north of CPSRA's Last Port area (SFRA and SFPD 2009).

Hydrology and Water Quality

Drainage

Urban development has obscured and modified San Francisco's historic drainage basins or watersheds (SFRA and SFPD 2009). The majority of the City and County of San Francisco's creeks are buried underground in culverts or filled so that watersheds drain to San Francisco's sewer system. Most of CPSRA falls within the Yosemite Basin, which historically drained into Yosemite Creek. A small area of CPSRA west of the intersection of Jamestown Avenue and Hunters Point Expressway lies within the Sunnydale Basin.

Yosemite Basin

The Yosemite Basin includes the Bayview Hunters Point neighborhood, as well as portions of Portola, Bayview Heights, Excelsior, and Silver Terrace in southeast San Francisco. Yosemite Basin is approximately three square miles in area and is bounded by McLaren Park to the west and Hunters Point and San Francisco Bay to the east (SFPUC 2008).

Sunnydale Basin

The Sunnydale Basin is 1.6 square miles in area and is located on the southeastern side of the city, bordering CPSRA in the Last Port area. The Visitacion Valley neighborhood, and portions of the Bayview Heights, Excelsior, and Crocker Amazon neighborhoods, is located within this basin. This basin is bounded by McLaren Park to the west and Candlestick Park stadium and San Francisco Bay to the east (SFPUC 2008).

Sewer Systems

Combined Sewer Systems

Combined sewers serve most of the City and County of San Francisco. The combined system carries stormwater and wastewater together through the city's underground pipes to one of two main wastewater treatment plants. The culverted Yosemite Creek carries stormwater runoff from the area surrounding Yosemite Slough, including the portion of CPSRA northwest of Arelious Walker Drive and Fitch Street, to San

Francisco's Southeast Water Pollution Control Plant (SWPCP), located north of CPSRA in the Bayview District. The SWPCP also treats stormwater generated in the Sunnydale Basin, which includes CPSRA's Last Port area. The SWPCP treats approximately 80% of the City's wastewater flows, which it discharges through a deep water outfall at Pier 80, 800 feet into San Francisco Bay (SFRA and SFPD 2009; SFPUC 2009a).

The combined sewer system is designed to ensure that most wastewater receives secondary treatment. However, during wet-weather flows that exceed the SWPCP's capacity, excess flows are stored in underground tanks and tunnels, known as the Bayside Wet Weather Facilities (BWWF). The BWWF was designed to capture sewage and stormwater during wet weather events and store it until it can be treated at the wastewater treatment plant. When the storage capacities of the BWWF and SWPCP are exceeded during very large storm events, "flow through treatment" is conducted to remove settleable solids and floatable materials from the flow before direct discharge into the San Francisco Lower Bay (Lower Bay). Twenty-nine combined sewer overflow (CSO) discharge points are located along the city's bayside waterfront, running from Fisherman's Wharf to the Candlestick Point site. As shown in Figure 2-1, Existing Hydrology, five combined sewer discharge sites currently exist along CPSRA's shoreline: three surrounding Yosemite Slough, one east of Yosemite Slough and one at the park's southernmost end (SFRA and SFPD 2009). When capacity is available, all solids that are removed in the BWWF prior to discharge are flushed to the SWPCP for treatment. Water released during CSO events is always treated to a minimum of primary treatment in the storage and transport system prior to discharge.

The BWWF system of storage tanks and tunnels was designed to limit CSO discharges from the system to a specified long-term average number of annual discharges, as set forth in the City and County of San Francisco's National Pollutant Discharge Elimination System (NPDES) permit for the SWPCP (NPDES No. CA0037664). For the southeast sector of the city, this long-term average goal is only one CSO event per year (SFRA and SFPD 2009). In 1997, the City completed a 20-year Master Plan for Wastewater Management that significantly reduced the number of CSO events that occur during wet weather from an average of over 80 untreated discharges per year to an average of ten discharges per year that are treated to a primary standard (SFPUC 2004, SFPUC 2009a).

The Sunnydale Pump Station, located in CPSRA's Last Port area, is part of the "Endangered Garden" art project. The project incorporates the image of the endangered San Francisco Garter Snake into a public walkway that coincides with the roof of the combined sewer facility (Johanson 2011).

CANDLESTICK POINT STATE RECREATION AREA

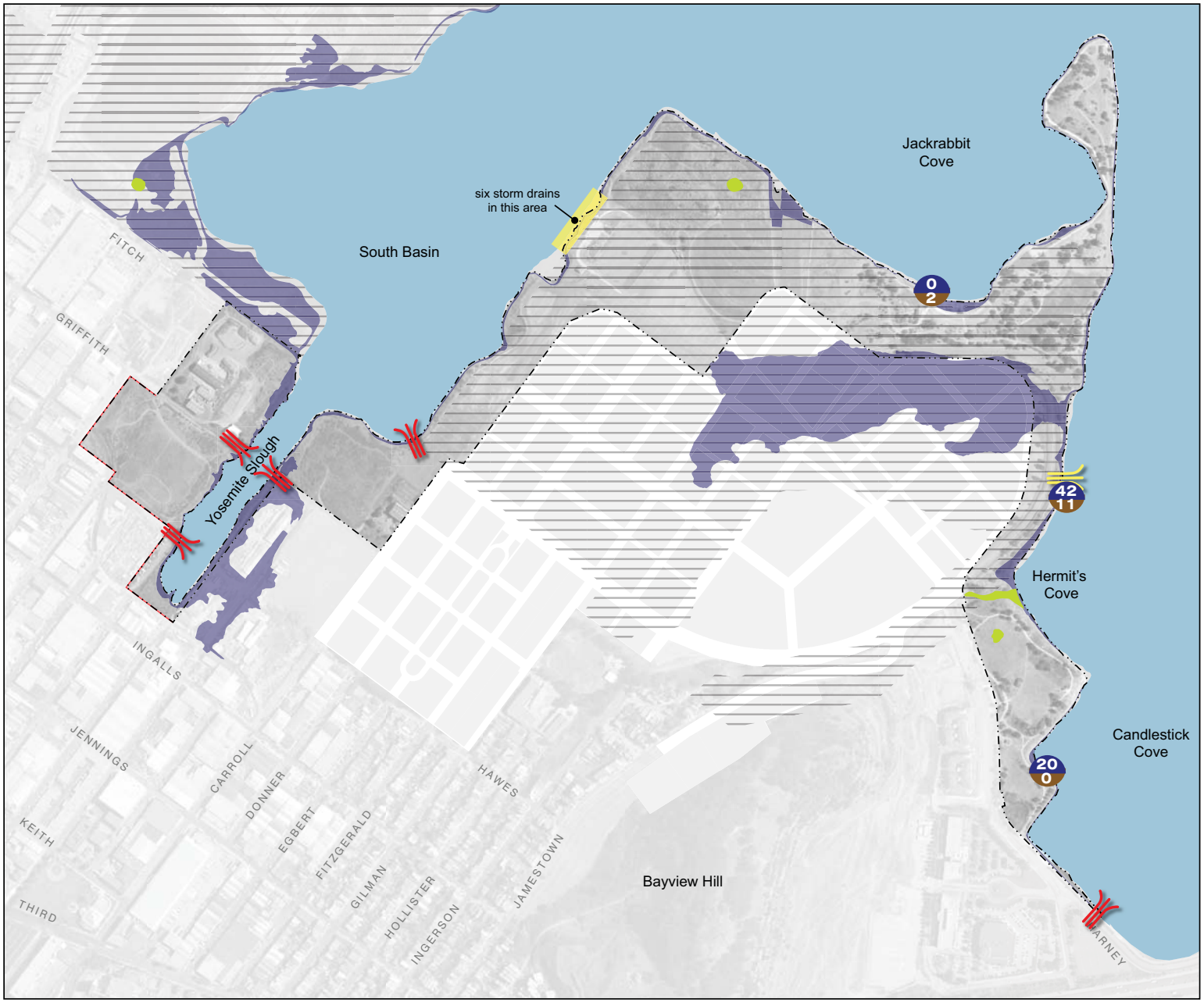

Figure 2-1

EXISTING HYDROLOGY

- Combined Sewer / Stormwater Outflow
- Storm Drain
- Bacteriological Monitoring Station
  Instances bacteria exceeded "standard sample" quantities between 2004 and 2008
  - 20 in wet weather
  - 11 in dry weather
- FEMA 100-year Flood Zone
- Separate Storm Sewer Areas
  (drain to bay or local storm drains)
- Freshwater Seasonal Wetlands

0 300 600 1,200 Feet

Sources: May 21, 2009 Draft HP-CSP EIR Appendix L (Prepared by ENGEO), RHAA 2009, Winzler & Kelly

11.28.2011

AECOM

Separate Sewer Systems

Approximately 10% of the City of San Francisco is served by separate storm sewer systems or is lacking storm sewer infrastructure. Most existing separate storm sewer systems, as well as areas without storm sewer infrastructure, do not provide treatment prior to discharge to the Lower Bay. Most of CPSRA drains directly to the Bay, either as direct runoff or through an outfall located west of the Windsurf Circle (The Neck) (SFRA and SFPD 2009).

The area just north and west of CPSRA, which includes portions of the Candlestick Park stadium parking lots, is within a separate storm sewer area, maintained by State Parks. Six storm drains are located in the boat launch area. A stormwater outfall consisting of four three-inch-diameter drainpipes is located between the Windsurf Circle (The Neck) and Windharp Hill group picnic area drain to the Bay. One culvert owned by the City of San Francisco also drains to the shoreline just west of the Windsurf Circle (The Neck), below a small footbridge (Moises, pers. comm., 2010). This system is 30 years old and has a history of flooding due to inadequate capacity. The San Francisco Public Utilities Commission (SFPUC) provides assistance on outfall maintenance (SFRA and SFPD 2009).

Surface Water Bodies

The Lower Bay borders CPSRA to the east. Major water features along CPSRA's shoreline include the South Basin, Yosemite Slough, and Candlestick Cove. Because of its history of alterations associated with urban development, CPSRA does not contain any natural freshwater bodies or streams (SFRA and SFPD 2009).

Yosemite Slough

Yosemite Slough, a tidal inlet, is a remnant of a much larger tidal flat and mudflat system that served as the transition between Yosemite Creek and the Lower Bay. Currently culverted and channelized, Yosemite Creek originates from a hilltop spring in today's McLaren Park and formerly entered San Francisco Bay via Yosemite Slough. Historic fill activities to support residential and industrial development have altered the slough, creating its current shoreline and raising the elevation of the site to approximately five to 20 feet above sea level. Filling of the tidelands continued through the 1960s, until the approximate current shoreline became established in 1972. Surface inflows in Yosemite Slough are limited to stormwater runoff and wastewater from the nearby CSO discharge sites during the rainy season. Circulation in Yosemite Slough is particularly limited because the water body is constricted (SFRA and SFPD 2009).

Yosemite Slough

State Parks, in collaboration with the California State Parks Foundation and local environmental groups, such as Literacy for Environmental Justice and Citizens for Clean Water, is conducting natural wetland restoration along Yosemite Slough, as part of the Yosemite Slough Restoration Project. The restoration of Yosemite Slough includes restoring 12 acres of upland fill back to tidally influenced wetlands. The restoration design includes the creation of bird nesting habitat, nursery areas for fish and benthic organisms, buffer areas to sensitive habitats, new interpretive trails, and additional recreation and education amenities. The restoration project will also address soil contaminant issues arising from previous fill activities that could affect human and wildlife health (Bay Area IRWMP; RMC & Jones & Stokes 2006). Construction of Phase I (north of the slough) began in 2011, and detailed design of Phase II (south of the slough) will occur in the future.

South Basin

Located southeast of Yosemite Slough along the eastern edge of Candlestick Point, South Basin is an embayment (a small bay or semi-enclosed coastal water body whose opening to a large body of water is restricted) with direct and open tidal exchange with the Lower Bay. Yosemite Slough flows into the South Basin from the west, and the South Basin also receives stormwater discharges from separate drainage systems

located in Candlestick Point and the Hunters Point Shipyard. The South Basin also receives surface drainage from three wet weather overflow points that discharge into Yosemite Slough. Because of the South Basin's location and reduced exposure to tidal action, circulation is limited (SFRA and SFPD 2009).

South Basin

Candlestick Cove

Candlestick Cove is a sheltered area along the southern shoreline of CPSRA, historically drained by two small creeks that have since been filled. Today, this portion of the Bay receives surface flows from one wet weather overflow point, as well as from direct stormwater runoff and discharge from a separate storm sewer outfall (SFRA and SFPD 2009) directly west of the Windsurf Circle (The Neck).

Surface Water Quality

CPSRA is under the jurisdiction of the San Francisco Bay Regional Water Quality Control Board (RWQCB) and is located within the South Bay Basin hydrologic planning area. The RWQCB's *San Francisco Bay Basin (Region 2) Water Quality Control Plan*

(Basin Plan) identifies uses for surface water bodies in the San Francisco estuarine system that are critical to management of water quality in California. The *Basin Plan* identifies the following existing beneficial uses for the Lower Bay: industrial service supply; ocean, commercial, and sport fishing; shellfish harvesting; estuarine habitat; fish migration; preservation of rare and endangered species; wildlife habitat; water contact recreation; noncontact water recreation; and navigation. The *Basin Plan* also identifies fish spawning as a potential beneficial use of the Lower Bay (RWQCB 2007a).

As described in the *Basin Plan* (RWQCB 2007a), wet weather overflows of wastewater affect water contact recreation, non-contact water recreation, and shellfish harvesting beneficial uses. The water quality characteristics that can adversely affect these beneficial uses are pathogens, oxygen-demanding pollutants, suspended and settleable solids, nutrients, toxics, and floatable matter.

The quality of surface water and groundwater in the vicinity of CPSRA is affected by past and current land uses at the site. Water quality within CPSRA's watersheds is also affected by the composition of local geologic materials. In 1993, the San Francisco Estuary Institute initiated the Regional Monitoring Program (RMP) for the San Francisco Bay to assess regional water quality conditions and characterize patterns and trends of contaminant concentrations and distribution in water and sediment, as well as identify general sources of contamination to the Bay. The trends identified by this monitoring program reflect regional, rather than site-specific, water quality conditions. However, based on monitoring results from the RMP for 2002 to 2006, the Lower Bay did not contain contaminant concentrations above regulatory thresholds (SFEI 2007).

Site-specific data on stormwater runoff quality from Candlestick Point are not available. However, stormwater runoff quality is highly dependent on the natural and human-influenced nature of the drainage area. As such, stormwater runoff from urban land uses, like the current land uses at and around CPSRA, would likely contain pathogens, metals, nutrients, sediment, trash and debris, oxygen-demanding substances, various organic chemicals, pesticides, polychlorinated biphenyls (PCBs), and mercury. Primary stormwater pollutants of concern in recreational and landscaped areas include sediment, trash, nutrients, and pesticides. The primary pollutants in CSOs are pathogens, oxygen-depleting substances, total suspended solids, toxics (metals, petroleum hydrocarbons, manmade organic chemicals, nutrients, and floatables) (SFRA and SFPD 2009).

Bacterial Monitoring

Wet weather beach water quality data collected by the SFPUC and San Francisco Department of Public Health (DPH) in the vicinity of CPSRA, which includes the effects of CSOs, discharges from separate storm drain systems, and runoff discharging directly

into the Bay, indicate levels above those presented in the *Basin Plan* water quality objective for total coliform bacteria. The other pathogen indicators that are monitored have significantly higher concentrations in wet weather than in dry weather (SFRA and SFPD 2009).

The SFPUC conducts weekly sampling year round from Sunnydale Cove directly south of CPSRA, the Windsurf Circle (The Neck), and Jackrabbit Beach (Kellogg, pers. comm., 2009) and additional monitoring whenever a treated discharge from the city's combined sewer system occurs that affects a monitored beach (SFPUC 2009a) (see Figure 2-1). Generally, among the three sampling locations, Jackrabbit Beach has the lowest total coliform, E. coli, and enterococcus bacteria concentrations for both wet and dry weather. Windsurf Circle (The Neck), located just south of Candlestick Park stadium, has the highest pathogen concentrations. Pathogen indicator concentrations are significantly higher in wet weather than in dry weather for all three stations. The causes of elevated counts are not always clear but are probably related to stormwater runoff from the beaches themselves that might contain human and animal feces, decaying plant and animal material, and naturally occurring soil bacteria (SFPUC 2009b).

If bacteria levels exceed State standards, the SFPUC posts "No Swimming" notices at beaches and conducts daily sampling until bacteria levels meet the standards. In addition, permanent information signs are posted at the Windsurf Circle (The Neck), where storm drains outside of the city's combined sewer system represent known or potential sources of dry weather contamination (during the summer) (SFPUC 2009b).

Section 303(d) of the Clean Water Act

The State Water Resources Control Board (SWRCB) has identified the Lower Bay as an impaired water body in compliance with Section 303(d) of the Clean Water Act of 1977. The pollutants identified as causing impairment in the Lower Bay include chlordane, dichloro-diphenyl-trichloroethane (DDT), dieldrin, dioxin compounds, exotic species, furan compounds, mercury, and PCBs. Candlestick Point, including the areas at Jackrabbit Beach and Windsurf Circle (The Neck) within CPSRA and Sunnydale Cove to the south of the park, is listed as an impaired water body for indicator bacteria. The potential sources of pollutants identified in the impaired water bodies adjacent to CPSRA include non-point sources, industrial and municipal point sources, atmospheric deposition, ballast water, resource extraction upstream, natural sources, and unknown sources (USEPA 2007).

A Total Maximum Daily Load (TMDL), or the amount of a pollutant that a waterbody can receive and still safely meet water quality standards, for the entire San Francisco Bay has been developed for mercury and incorporated by amendment into the *Basin Plan*. A

TMDL for the entire San Francisco Bay has also been developed for PCBs, and its adoption is pending approval by the SWRCB and USEPA (SFRA and SFPD 2009).

Sediment Quality

Freshwater inflow, salinity, currents, and suspended sediments in the Bay are influenced by the amount and timing of precipitation, air temperature, tidal cycle, and wind patterns. The Bay is subject to strong westerly winds that generate waves and suspend and disperse sediments, creating turbid conditions (SFRA and SFPD 2009).

Sediments in parts of Yosemite Slough and the South Basin are known to be contaminated with PCBs. Results of sediment sampling in some areas of the South Basin and Yosemite Canal have found levels of PCBs at more than five times the proposed cleanup goal of 0.2 milligrams per kilogram. However, the entire southern half of the South Basin has not yet been sampled. PCBs are believed to be from surrounding industrial uses, including Hunters Point Shipyard and the City and County of San Francisco's combined sewer overflow system (Arc Ecology 2003). In addition, the SFPUC found elevated levels of heavy metals, notably mercury and nickel, in surface sediments in Yosemite Slough. Concentrations of metals found in Yosemite Slough sediments decreased with depth, and below two feet in depth, were found to be consistent with concentrations in surface sediments reference sites around the Bay. Please see the *Hazardous Materials* section for additional discussion of sediments in Yosemite Slough.

Flood-prone Areas

The Federal Emergency Management Agency (FEMA) is in the process of delineating those areas in San Francisco subject to flooding during the 100-year flood event (a flood with a 1% chance of occurrence in a given year). These Special Flood Hazard Areas (SFHAs) fall into two categories (Zone V and Zone A). Both zones are subject to flooding during the 100-year storm, but Zone V applies to areas also subject to the additional hazard associated with storm waves. FEMA's preliminary mapping shows that both types of SFHAs occur within CPSRA. The entire CPSRA shoreline is within SFHA Zone V because of the risk for coastal flooding. Additional areas within SFHA Zone A exist adjacent to the shoreline and Yosemite Slough, as well as a large area along Hunters Point Expressway between the shoreline and Gilman Avenue. FEMA will publish the final versions of the SFHAs on its Flood Insurance Rate Maps (SFRA and SFPD 2009).

CPSRA is responsible for flood protection on its land, primarily through stormwater management and coastal protection features. Please see the *Shoreline Conditions* section for a description of historic and current shoreline conditions.

Groundwater

The majority of CPSRA overlies the South San Francisco groundwater basin. The southernmost portion of CPSRA, from near Candlestick Cove to the San Mateo County line, overlies the Visitacion Valley groundwater basin (DWR 2003). The South San Francisco groundwater basin is separated to the south from the Visitacion Valley groundwater basin by bedrock topographic highs. San Francisco Bay is the eastern boundary of both groundwater basins.

Natural recharge of CPSRA's groundwater basins occurs through infiltration of rainfall, landscape irrigation, and leakage from water, wastewater, and stormdrain pipes. The rates of natural groundwater recharge in the South San Francisco and Visitacion Valley basins average an estimated 696 and 269 acre-feet per year, respectively, based on an analysis of water years 1987-1988 (DWR 2003).

Both of the groundwater basins underlying CPSRA have maintained relatively stable groundwater levels (DWR 2003). The *Basin Plan* identifies industrial service water supply and industrial process water supply as existing beneficial uses for both the South San Francisco and Visitacion Valley groundwater basins (RWQCB 2007a). The *Basin Plan* also identifies municipal and domestic water supply and agricultural water supply as potential beneficial uses of both basins. No groundwater wells are located in CPSRA (Moises, pers. comm., 2010).

Shoreline Conditions

CPSRA's location on the San Francisco Bay has endowed it with approximately 3.4 miles (3,930 feet) of waterfront land (State Parks 1988, 2009b). The current CPSRA shoreline historically consisted of marshland with tidal sloughs. Fill activities since the mid-19th century have altered the area's natural shoreline, extending it as far as 3,300 feet into the Bay in some locations (SFRA and SFPD 2009). As a result, the entire CPSRA shoreline is comprised of fill above relatively weak Bay Mud (ENGEO 2009). Much of the current CPSRA shoreline consists of moderate to steep slopes as well as flatter vegetated areas and sandy beaches. Shoreline armoring in the form of concrete rubble lines large stretches of the steeper slopes to protect against erosion (State Parks 1988). The slopes along the shoreline are likely at risk for subsidence or lateral deformation during a strong earthquake because of their Bay Mud and fill composition and evidence of failure (ENGEO 2009). Some areas along the shoreline may require improvements to minimize the risks of coastal flooding from wave-induced run-up (Moffatt and Nichol 2009).

Existing slope protection on the north shore of CPSRA consists of a mixture of concrete rubble and rock riprap. The slope protection varies in size from cobbles to four feet in

diameter. Much of the shoreline along the South Basin (north of the boat launch area) and Yosemite Slough is largely unimproved (State Parks 2006). Steep banks (approximately four to eight feet high) drop off from the park to Yosemite Slough, which is bordered by a narrow band of salt marsh vegetation (State Parks 2005a; SFRA and SFPD 2009).

Armoring along the eastern shoreline of CPSRA is primarily in the form of riprap, with the exception of one sandy beach area that gives way to exposed mud flats associated with the extensive Young Bay Mud deposits (SFRA and SFPD 2009).

The majority of the southern shoreline of CPSRA is highly eroded (SFRA and SFPD 2009). Even with armoring, the Bay's tides and waves have continued to erode areas of the southern shoreline, resulting in failure and compromising the stability of adjacent trails and utilities. CPSRA staff has identified seven areas along the southern shoreline, between the eastern tip of CPSRA and the Old Pier, in need of shoreline armoring. The areas along Sunrise Point's (The Point's) eastern tip and along Jamestown Avenue have both been recently armored (Moises, 2010). The area north of the beach at Hermit's Cove is gently sloping; however, steep bluffs rise above the shoreline between this and the smaller beach to the west in the Last Port area. A public art piece, in the form of a colored snake that also serves as a paved trail and a stormwater treatment facility, hugs the area of CPSRA's shoreline adjacent to US-101.

Hazardous Materials

Fill Contaminants

The soils at CPSRA consist entirely of fill materials, primarily obtained from dune sands, quarried rock from local hillsides, and industrial refuse. The areas surrounding Yosemite Slough were filled between the 1930s and 1950s (SFRA and SFPD 2009), with the remainder of CPSRA filled in after this point (USGS 1947). The type of fill so far identified in the area of CPSRA consists primarily of clays, with some sand and gravel; an area south of Yosemite Slough contains less clay and more sand, gravel and silts. A 1998 investigation that included CPSRA found its fill to contain crushed concrete, red brick, foam, plastic, ceramic tiles, copper wire, porcelain, glass, and wood fragments. The investigation also noted the presence of underground storage tanks (USTs) in the area, some of which have been removed and the associated soil remediated, and the potential for unknown USTs (SFRA and SFPD 2009). The California Environmental Protection Agency's Cortese List was reviewed in July 2011 and no hazardous waste sites or underground storage tanks were identified within CPSRA (California Environmental Protection Agency 2011).

Extensive soil sampling was conducted throughout CPSRA as part of the 1998 investigation (Geomatrix 1998); metals and organic compounds were detected at a wide range of locations and depths (up to 15 feet), indicating their likely association with fill materials. Contaminants detected included chromium, copper, lead, mercury, nickel, zinc petroleum hydrocarbon constituents (PAHs), PCBs, and trace amounts of chlorinated pesticides. Groundwater sampling also detected low levels of a few organic compounds in shallow groundwater. A human health risk evaluation concluded that the presence of the detected chemicals in soil and shallow groundwater did not pose a significant carcinogenic or non-carcinogenic risk to nearby residents, workers, visitors, or recreational users of areas adjacent to the Bay. Compounds of potential ecologic concern (metals and pesticides) were determined not to pose a significant risk to aquatic organisms (Geomatrix 1998; SFRA and SFPD 2009).

Last Rubble Removal

The California Integrated Waste Management Board (now the California Department of Resources Recycling and Recovery [CalRecycle]) funded the cleanup of CPSRA's Last Rubble Pile Disposal Site in 2009. Over the years, the 13-acre area southeast of the abandoned boat launch had served as a disposal site for debris including reinforced concrete, metals, tires, treated wood waste, and granite. Several fires in the early 1980s damaged the area, and suppression of an underground fire in 2006 initiated the clean-up efforts (CIWMB 2009, SFRA and SFPD 2009). The cleanup effort tested soil, burn ash, and other materials in the area for organic constituents and removed any materials considered hazardous (SFRA and SFPD 2009). In total, the cleanup removed approximately 13,300 tons of concrete; 90 tons of rebar and metals; 75 tons of granite; and 41 tons of waste tires, treated wood waste, trash, and other debris (CIWMB 2009).

Yosemite Slough

The California State Parks Foundation, in partnership with State Parks, has led the funding and planning of the Yosemite Slough Restoration Project, which entails habitat restoration, improved public access, and cleanup activities. As part of the project, a 2004 Phase II Environmental Site Assessment (California State Parks Foundation 2005) assessed soil and groundwater contamination to determine the suitability of using the existing fill surrounding Yosemite Slough for habitat restoration. Soil sampling revealed the presence of total extractable petroleum hydrocarbons (TEPH), primarily hydraulic oil, throughout the soils surrounding Yosemite Slough. PAHs, possibly from asphalt fragments or hydraulic oil, were also found throughout the area; the highest levels were detected near a suspected sump north of the slough. In some places, these chemicals extend to depths of over 20 feet below the existing ground surface. Groundwater sampling detected chemicals in two localized areas north of Yosemite Slough; lead,

nickel, cobalt, and TEPH are present in one small area, and TEPH is present in a second area near a suspected sump. Dissolved chemical concentrations do not appear to have migrated beyond these localized areas (State Parks 2005a).

The restoration project involves the remediation of about 41,000 cubic yards of soil, either on site or by hauling the material off site (Archambault, pers. comm., 2010). Because it is not feasible to remove all chemically impacted soil beneath the restoration area, additional soil suitable for wetlands and upland cover will be placed above the subsurface fill that is left in place (California State Parks Foundation 2005).

The City and County of San Francisco is investigating sediments in Yosemite Slough. Primary constituents detected include lead, mercury, TEPH, PCBs, and pesticides. Concentrations of these chemicals are generally lower in shallower sediments, indicating lower concentrations in more recently deposited sediments (RWQCB 2007b).

USEPA is currently investigating past dumping of contaminants into Yosemite Slough (Archambault, pers. comm., 2010). No report on the status of this investigation is available at this time.

Hunters Point Shipyard

Since 1984, the Navy has participated in investigations related to hazardous materials associated with former uses of Hunters Point Shipyard (SFRA and SFPD 2009). The shipyard was placed on the National Priorities List (NPL) as a Superfund site, and the Navy is continuing remediation activities pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (Navy 2008). To expedite remediation, the shipyard has been divided into five parcels. Parcel F consists of approximately 446 acres of sediment in the offshore area surrounding the shipyard. Parcel F contains 11 subareas, two of which (Area IX and Area X) encompass portions of the South Basin and border the northeastern shoreline of CPSRA (Navy 2008). Environmental investigations have determined that PCBs are of greatest concern in both subareas because of the risks to human health and ecological receptors (SFRA and SFPD 2009). Concentrations of PCBs are highest in subsurface sediment samples from the mouth of Yosemite Slough and decrease with greater distance from the eastern shoreline of the South Basin. The Navy is currently considering alternatives for remediation of Area IX and Area X (Navy 2008).

Noise

CPSRA and the surrounding area are in an urbanized, industrial area of San Francisco. Existing ambient noise levels vary in the vicinity of CPSRA, with some areas quieter than others. Sources of noise in CPSRA are typically associated with visitors' voices,

vehicles, maintenance activities, birds, insects, and wind waves on the Bay. Additional sources of noise just outside CPSRA result from surrounding residential and industrial land uses and automobile and truck traffic.

Urban areas typically display noise levels that range from 45 to 75 dBA. Long-term ambient noise measurements (taken over 24 hours) in the area surrounding CPSRA in 2009 show that ambient noise ranges from 58 dBA to 67 dBA.[2] Noise levels were highest from a sampling location adjacent to the CPSRA's Ranger Station (on Carroll Avenue), likely due to higher levels of truck traffic than in other areas. Traffic on roadways adjacent to CPSRA is a considerable source of noise in the area. Data obtained during the peak weekday commute period show that traffic noise surrounding the park ranges from 61.4 to 88.0 dBA (SFRA and SFPD 2009).

Football games at Candlestick Park stadium are also sources of noise in the area surrounding the CPSRA. Noise levels in the vicinity of the stadium vary widely when a football game in progress. Noise data show the average noise level during a home football game at Candlestick Park stadium to be in the mid 60s dBA. Peak noise levels range from the upper 60s to mid 70s dBA and are typically associated with activities such as pre-game ceremonies, crowd cheering, music, and announcements on the public address system. San Francisco International Airport, approximately 10 miles south of CPSRA, is an additional source of noise in the area. Commercial aircraft regularly fly over CPSRA on major approach and departure routes to and from the airport. Peak noise levels associated with these aircraft range from the low to mid 70s dBA and typically last longer than peak noise events at the football stadium (SFRA and SFPD 2009).

Noise-Sensitive Uses

Noise-sensitive uses include land uses and other receptors likely to include individuals who may be sleeping, learning, worshipping or recuperating (SFRA and SFPD 2009). Such uses in the vicinity of CPSRA include the surrounding residential neighborhood, schools and churches.

2.1.2 Biological Resources

Biological resources within the CPSRA were assessed through a review of existing documentation; consultation with biologists familiar with the local biological resources; a reconnaissance-level field survey (conducted on February 17, 2010); and data collected and analyzed by AECOM biologists. Existing documentation from previous biological

[2] Measured as L_{dn} (day-night average noise level), a 24-hour average (L_{eq}) with a 10 dBA penalty added to noise during the hours of 10:00 P.M. to 7:00 A.M. to account for increased nighttime noise sensitivity.

surveys conducted on or adjacent to CPSRA was reviewed and utilized by AECOM biologists in creating the majority of this report. The reports include the following:

- Bayview Transportation Improvements Project, Biological Assessment (City and County of San Francisco 2007)
- Bayview Transportation Improvements Project, Natural Environmental Study Report, Draft (City and County of San Francisco 2007)
- Bayview Waterfront Project Biological Technical Report (SF RA and SFPD 2008)
- Candlestick Point/Hunters Point Shipyard Tree Survey (CP Development Co., LP 2009)
- Draft Environmental Impact Report, Candlestick Point-Hunters Point Shipyard Phase II, Volume II, Volume III: Draft EIR (Section III.N to Chapter VIII) (SFRA and SFPD 2009)
- Final Report, Yosemite Slough Watershed Wildlife Survey 2003 – 2004 (GGAS 2004)
- Hunters Point Shipyard and Candlestick Point State Recreation Area Preliminary Delineation of Wetlands (Lennar Corporation 2008)

Additional information sources included the California Natural Diversity Database (CNDDB 2010) and the California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Plants of California (CNPS 2010). The CNDDB search covered six U.S. Geological Survey (USGS) 7.5-minute quadrangles (Hunters Point, Oakland West, Redwood Point, San Francisco South, San Leandro, and San Mateo) and captured similar shoreline and terrestrial habitat on both sides of San Francisco Bay from approximately Berkeley on the east shore and San Francisco on the west shore and south to the Highway 84 bridge crossing.

Plant Communities and Wildlife Habitats

During a period of land reclamation that began in the mid-1800s, the area where CPSRA is located was created by placing artificial fill material on the tidal mudflats and bedrock of San Francisco Bay (SFRA and SFPD 2009). Today a variety of trees of various ages, as well as shrub, grass, and broad-leafed species grow on the upland portion of CPSRA, while salt-tolerant wetland plant species (halophytes) are present at a few shoreline locations and along much of Yosemite Slough. Most of the trees and shrubs present in CPSRA were likely planted as part of park improvement projects. An exception is coyote brush (*Baccharis pilularis*), a native shrub common throughout CPSRA. Coyote brush is able to colonize and spread quickly into open areas and likely colonized the site from other open space habitat in the area. Native salt marsh vegetation and introduced annual and native perennial grasses and herbaceous species also naturally colonized the area over time as seed or plant material made its way onto the site. Please refer to Figure 2-2, Existing Habitat.

CANDLESTICK POINT STATE RECREATION AREA

Figure 2-2

EXISTING HABITAT

HABITAT PLANT COMMUNITY + LAND USE TYPES

- Freshwater Seasonal Wetland
- Newly Created Pond
- Landscaped Area
- Non-Native Annual Grassland
- Open Water
- Salt Marsh
- Seasonal Brackish Marsh
- Urban
- Delineated Section 404 Wetlands
- Shoreline Habitat (Rocky shoreline and / or intertidal mudflats)

0 300 600 1,200 Feet

Source: California State Parks, 2009; HT Harvey, 2009; PBS and J, 2009; California Natural Diversity Database 2009

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Landscaped Planted Vegetation

The landscaped area in the southern portion of CPSRA contains a mixture of native and non-native trees, shrubs, annual grass, and lawn. Most of the tree canopy cover is characterized by non-native cypress (*Cupressus* spp.) and Monterey pine (*Pinus radiata*), but native coast live oak (*Quercus agrifolia*) is also present in significant numbers and is even dominant in some locations. Monterey pine is commonly planted along the California coast; however, its native range includes the Monterey Peninsula and one additional area near Cambria on the central coast. Ngaio tree (*Myoporum laetum*) is also common across CPSRA, occurring primarily along the edges of the parking lot and some walkways. Some of the coast live oaks on site are of considerable age, with trunks approaching 20 inches diameter at breast height (DBH). Other native trees occasionally found in the landscaped areas include California bay (*Umbellularia californica*) and California buckeye (*Aesculus californica*), while occasional non-native trees include Peruvian peppertree (*Schinus molle*), Australian tea tree (*Leptospermum laevigatum*), eucalyptus (*Eucalyptus* spp.), acacia (*Acacia* spp.), and olive (*Olea europeaea*).

The established shrub layer associated with these wooded areas is made up of primarily native species, with coyote brush as the most dominant species. Other established native shrubs that occur occasionally across the area include toyon (*Heteromeles arbutifolia*), flannel bush (*Fremontodendron californicum*), wild lilac (*Ceanothus* sp.), chaparral currant (*Ribes malvaceum*), pitcher sage (*Lepechinia calycina*), coffeeberry (*Rhamnus californica*), and arroyo willow (*Salix lasiolepis*). With the exception of coyote brush, it is likely that most of the native shrubs were planted, although natural recruitment may also be occurring to some degree as the original planting matured and spread. Non-native shrubs are less common in the area, but rock rose (*Cistus* sp.) and firethorn (*Pyracantha* sp.) are present in a few locations.

Native perennial ground cover occurs in an open area near the fishing pier at Sunrise Point (The Point) and includes creeping wild rye (*Leymus triticoides*) and a rush (*Juncus* sp.), both apparently planted in the area. Additionally, volunteers are planting some of the same native tree and shrub species across the entire CPSRA, which is evident by the plantings and the pin flags marking each new planting basin. Introduced annual grassland characterizes mounded open areas, interspersed within the wooded areas. Lawn is present in the center of the Main Park (Heart of the Park) near the fishing pier.

Wildlife Associated with Landscaped/Planted Vegetation

While landscaped environments do not generally provide high-quality wildlife habitat and values relative to natural environments, the minimal amount of natural habitat in the surrounding region makes this landscaped area a valuable resource for wildlife.

The abundant evergreen trees in the landscaped area provide important cover, foraging, and nesting habitat for many bird species. A healthy population of ground squirrels (*Spermophilus beecheyi*) provides abundant prey for hawks and other raptors. This was confirmed during the February 2010 reconnaissance survey, when multiple red-tailed hawks (*Buteo jamaicensis*) were seen actively pursuing ground squirrels at several locations, and red-shouldered hawks (*B. lineatus*) were observed perched on fences in the area. Songbirds commonly observed in this area during wildlife surveys conducted in 2003 and 2004 included bushtit (*Psaltriparus minimus*), white-crowned sparrow (*Zonotrichia leucophrys*), golden-crowned sparrow (*Z. atricapilla*), house finch (*Carpodacus mexicanus*), common raven (*Corvus corax*), and European starling (*Sturnus vulgaris*) (GGAS 2004).

The acorns, leaves, wood, and sap of coast live oaks provide sustenance for many native insects, birds, and mammals, while other wildlife indirectly benefit from them. Reptiles and amphibians, for example, do not consume oak products directly but prey on the insects that do (Pavlik et al. 1991). Other examples of native wildlife benefiting from coast live oak trees include caterpillars that consume large quantities of leaves, mice and gophers that eat the bark and roots of young saplings, burrowing insects that tunnel into limbs and roots, bees and other insects that gather pollen from flowers, and moth larvae and bird species that feed on the catkins (Pavlik et al. 1991). Coast live oaks are also known for their many nooks and crannies that provide shelter for birds and small mammals, especially when they develop multiple canopy layers and have understory shrub and herb layers.

Many of the native shrubs in the area are important cover, foraging, and nesting habitat for many songbirds, small mammals, reptiles, amphibians, and insects. When in bloom, the flowers on these shrubs support hummingbirds, such as Anna’s hummingbird (*Calypte anna*), and many native bees, bumblebees, and butterflies, which are in turn prey for birds and other wildlife. During the 2003 and 2004 wildlife surveys, cabbage white (*Pieris rapae*), anise swallowtail (*Papilio zelicaon*), and common checkered skipper (*Pyrgus communis*) were often observed within this community (GGAS 2004).

Annual Grassland Vegetation

Several areas in the northern portion of CPSRA are characterized by annual grassland and ruderal vegetation; however, the area north of the landscaped area described

above also contains native coyote brush scrub, native perennial grassland, and a large area that is highly disturbed. The coyote brush occurs occasionally across the entire area, but a relatively dense stand (approximately 200 x 40 feet) is located in the northwest section. An area characterized by native perennial grasses is located due west of the dense coyote brush scrub along an embankment or levee that generally runs north to south on the west side of the Bay Trail. Species present include purple needle grass (*Nassella pulchra*), creeping wild rye (*Leymus triticoides*), and possibly a third species that could not be identified during the February 2010 reconnaissance survey. The origin of these species is uncertain, but old nearby pin flags and restoration plantings suggest that they have been planted as part of ongoing restoration efforts in the area. Following the levee northward, these grasses occur interspersed within the annual grassland matrix and eventually disappear after approximately 300 feet. Discussions with CPSRA park staff indicated that some of these grasses may have been planted while others may have naturally colonized (Meneguzzi, pers. comm., 2010).

The northern end of the annual grassland community is highly disturbed. The eastern portion of this area, on the San Francisco Bay side, has recently been excavated and seeded with native vegetation (Meneguzzi, pers. comm., 2010), but currently the surface material is mainly composed of unconsolidated gravel and rock material. Short, grassy vegetation is beginning to colonize the area, but it is unclear whether ruderal verses native vegetation will establish, given the lack of topsoil. A newly excavated small pond located near the center of the annual grassland area was full of rainwater during the February 2010 reconnaissance survey and could eventually provide wetland habitat if it remains inundated through most of the growing season. Ruderal herbaceous species are colonizing the top of a single mound adjacent to the pond. The western portion of the area, on the urban side, is covered with mounds of rock and rubble that are being colonized by a variety of non-native vegetation, including several invasive species. Ngaio tree, pampas grass (*Cortaderia jubata*), French broom (*Genista monspessulana*), and fennel (*Foeniculum vulgare*) all are common throughout the area; and annual grasses and ruderal weedy species make up the majority of the vegetative ground cover. Some coyote brush is present as well.

The dominant annual grass species at CPSRA include wild oats (*Avena fatua*), ripgut brome (*Bromus diandrus*), soft chess (*B. hordeaceus*), foxtail fescue (*Vulpia myuros*), and hare barley (*Hordeum murinum* ssp. *leporinum*). Dominant broad-leafed species include black mustard (*Brassica nigra*), cut-leaf plantain (*Plantago coronopus*), painted charlock (*Raphanus raphanistrum*), wild radish (*R. sativus*), spring vetch (*Vicia sativa*), Italian thistle (*Carduus pycnocephalus*), filarees (*Erodium* spp.), and mallows (*Malva* spp.). The narrow section of bank on the south side of the South Basin contains a

mixture of annual grassland, ruderal, invasive, and native vegetation. In addition to annual grasses, these areas include French broom, pampas grass, coyote brush, and toyon. The section of bank that turns the corner into Yosemite Slough is covered with dense shrubs, mainly French broom. Coyote brush is also sprouting across the surface of the larger open area on the southwest side of Yosemite Slough, but it appears the area is regularly scraped to keep them from becoming established.

Wildlife Associated with Annual Grassland Vegetation

Although the annual grassland community at CPSRA is dominated by non-native species and likely provides fewer habitat values than those provided by areas of primarily native grassland, large open areas of this habitat are uncommon along this section of the San Francisco Bay shoreline; therefore, this community is a valuable resource for many wildlife species.

The annual grassland and scrub communities provide foraging, cover, and potential breeding habitat for a variety of wildlife species, including California ground squirrel, black-tailed jackrabbit (*Lepus californicus*), gopher snake (*Pituophis catenifer*), southern alligator lizard (*Elgaria multicarinata*), western meadowlark (*Sternella neglecta*), American goldfinch (*Carduelis tristis*), northern harrier (*Circus cyaneus*), red-tailed hawk, red-shouldered hawk, and other common grassland-associated wildlife species. California slender salamander (*Batrachoseps attenuatus*) was the only amphibian found within CPSRA during the Yosemite Slough watershed wildlife surveys and is the primary prey for the ring-necked snake (*Diadophis punctatus*); both species were found in multiple locations in CPSRA, but primarily in the grassland around Yosemite Slough (*GGAS 2004*).

While there is potential for the site to serve as breeding habitat for some small mammals and songbirds, primarily in the scrub, the potential for most bird species and wildlife is likely low due to the presence of humans who regularly visit the area, and due to unleashed domestic and feral animals, which humans introduce to the area.

The bank areas along the South Basin and leading into Yosemite Slough support scattered to dense shrubs. While much of this vegetation is non-native and may be classified as invasive, it likely provides similar cover, foraging, and breeding habitat for wildlife.

The current condition of the highly disturbed area offers limited values to wildlife. The eastern portion of this area, which is mainly barren, adversely affects the movement of ground-dwelling species and currently offers minimal habitat value. However, as the vegetation becomes more established across the site and possibly around the small pond, the habitat values will increase to those species found in the neighboring

grassland communities. One shorebird species that could currently utilize the gravel substrate during the breeding season is kildeer (*Charadrius vociferous*), which often seek out open gravelly areas to breed and nest. The mounded areas and scattered vegetation on the western portion of this area provide better habitat values than the excavated portion, but the altered surface and the increased presence of non-native and invasive species have altered the native food webs (e.g., reduced invertebrate prey populations) and disrupted biogeochemical processes (e.g., altered the timing of carbon availability) that take place in native or naturalized communities and soils. Nevertheless, species such as snakes, ground squirrel, Norway rat (*Rattus norvegicus*), western fence lizard (*Sceloporus occidentalis*), and various bird species, such as burrowing owl (*Athene cunicularia*), could use mounds and rock piles for perching, cover, breeding, and nesting.

Wetlands

The wetlands referred to in the following sections were described in a wetland delineation conducted by H.T. Harvey & Associates (Lennar Corporation 2008). The delineation included the entire CPSRA and documented jurisdictional wetlands and other waters of the United States subject to USACE jurisdiction under Section 404 of the Clean Water Act (CWA). Wetlands documented within CPSRA's boundary include coastal saltmarsh and freshwater seasonal wetland. Seasonal brackish marsh is present just outside of CPSRA's boundary; although it is mapped on the habitat map for CPSRA, it is not described in the following descriptions as it is not present within the planning area.

Coastal Salt Marsh

Coastal salt marshes around San Francisco Bay occur above exposed intertidal sand and mudflats and below upland communities not subjected to tidal action. The vegetation is characterized by halophytic plants that are adapted to tolerate high salinity (20 – 30 parts per thousand of sodium chloride) and grow on saturated soil (mud) that accumulates as a result of the fluctuating tides. Coastal salt marsh ecotones generally occur between high, intermediate, and low elevation zones, which are each exposed to different degrees of tidal inundation and support different plant communities. However, the species assemblages in each zone often vary with salinity, competition, tidal drainage patterns, and other factors (Baye 2006).

Coastal salt marsh on CPSRA is found along the banks of Yosemite Slough and in two small coves along the shoreline of the South Basin. The majority of salt marsh vegetation occurs at the west end of Yosemite Slough where daily tidal fluctuations inundate the marsh during high tides. The high marsh is characterized by saltgrass (*Distichlis spicata*), hairy gumplant (*Grindelia hirsutula* var. *hirsutula*), fleshy jaumea

(*Jaumea carnosa*), and alkali heath (*Frankenia salina*); the intermediate marsh primarily by pickleweed (*Salicornia virginica*) and fleshy jaumea; and the low marsh primarily contains areas of invasive cordgrass (*Spartina alterniflora*) and possibly native Pacific cordgrass (*S. foliosa*). The upper marsh edge around Yosemite Slough is covered with annual grasses, iceplant (*Carproprotus edulis*), and other non-native plants. The development of additional coastal salt marsh along this and the remaining shoreline in CPSRA is limited by extensive riprap and rubble used to combat erosion.

Coastal salt marsh is identified as a sensitive natural community and tracked in the CNDDB, a database of California's most sensitive species and habitats (CNDDB 2010). Coastal salt marsh habitat also qualifies as wetland habitat subject to USACE jurisdiction under Section 404 of the CWA.

Wildlife Associated with Coastal Salt Marsh

Large areas of coastal salt marsh in and around San Francisco Bay are known to provide food, cover, and nesting and roosting habitat for a variety of upland birds, mammals, reptiles, and amphibians, some of which are endemic and rare. State Park biologists reportedly observe snow egret (*Egretta thula*) on a regular basis and have seen western garter snake (*Thamnophis elegans*) on multiple occasions in the areas with salt marsh habitat. The habitat located in Yosemite Slough, however, is fragmented, degraded, and relatively small due to the adjacent and surrounding industrial and urban development. Nevertheless, this coastal salt marsh provides foraging habitat for waterfowl, shorebirds, and wading birds, particularly at low tide when areas of mudflats are exposed and tidal pools are accessible. According to an LSA Associates biologist who conducted wildlife surveys in 2003 and 2004, Yosemite Slough is not an important waterfowl area but can support large numbers of shorebirds, especially when outgoing tides expose foraging areas on the mudflats. However, they also noted that relative to other high-quality salt marsh habitat in the area, shorebird numbers here are typically low except when migratory pulses of shorebirds are present in the region (GGAS 2004). Within Yosemite Slough and, to a lesser extent, along the entire CPSRA shoreline, western sandpiper (*Calidris mauri*), least sandpiper (*C. minutilla*), and dunlin (*C. alpina*) were most common, but many other species were also observed (*GGAS 2004*).

Freshwater Seasonal Wetland

This plant association typically resembles a wetland community only following the wet season; it dries up rapidly in the summer, and the wetland indicator species become dormant. During the dry season, seasonal wetlands may not easily be recognizable as wetlands because upland grasses and forbs typically become established.

Two small freshwater seasonal wetlands occur on the southwest portion of CPSRA. These wetlands are characterized by the presence of annual grasses and broad-leafed forbs and occur in topographic depressions that hold water for a short to medium duration during the rainy season. Because the depressions lack outlets for drainage, they function similar to coastal vernal pools. The water that inundates the depressions during the winter and spring seasons creates a condition favoring hydrophytic plants such as annual blue grass (*Poa annua*), brass buttons (*Cotula coronopidolia*), common plantain (*Plantago major*), and curly dock (*Rumex crispus*).

Freshwater seasonal wetlands are considered sensitive natural communities and are subject to USACE jurisdiction under Section 404 of the CWA.

Wildlife Associated with Freshwater Seasonal Wetland

During winter and spring when the seasonal wetlands are filled with water, wetland plants, and aquatic life, they act as an important foraging habitat for a variety of common wildlife species such as great blue heron (*Ardea herodias*) and great egret (*A. alba*). Other common wildlife supported by freshwater seasonal wetlands include dabbling ducks, invertebrates (native bees and insects), and reptiles and amphibians like the Pacific tree frog (*Pseudacris regilla*). During dry summer months, they provide protection for eggs, cysts, or seeds of many of the aquatic breeding species, as well as terrestrial species normally found in adjacent grassland habitat.

Aquatic Habitat

Intertidal Mudflats

Intertidal mudflats are unvegetated areas regularly exposed and inundated by water as a result of tidal action. They occupy the area or elevation below salt marsh vegetation and above the subtidal zone. These areas are comprised of very soft sediments and, other than eelgrass (*Zostera marina*), they do not support vegetation. Large expanses of mudflats occur around San Francisco Bay and are visible during low tide events. Relative to these areas, the mudflats along the shoreline of CPSRA are small, with the largest occurring on the southern shore of Yosemite Slough. Smaller mudflats are found along the shoreline of the South Basin and Jackrabbit Beach, and much larger areas exist just south of CPSRA along the San Francisco Bay shoreline.

Intertidal mudflats are considered “other waters of the United States” subject to USACE jurisdiction under Section 404 of the CWA.

Wildlife Associated with Intertidal Mudflats

Intertidal mudflats provide important habitat for a vast array of invertebrates that are an important part of the estuary food web and a popular food source for many resident and migratory shorebirds and waterfowl. During a low tide, thousands of small holes covering the mudflats are made by invertebrates, most of which are filter-feeders that suck in mud and water through their systems, selecting the most nutritious materials and taking in oxygen. The most common invertebrates are crustaceans such as blue mud shrimp (*Upogebia pugettensis*) and bay ghost shrimp (*Callianassa* spp.). Shorebirds commonly found on these mudflats include sandpipers, dunlin, black bellied plover (*Pluvialis squatarola*), American avocet (*Recurvirostra americana*), willet (*Catoptrophorus semipalmatus*), and numerous others.

Subtidal Open Water

While the open water habitat of San Francisco Bay is primarily outside the borders of CPSRA, its proximity and nexus with the site have important physical and ecological implications. Subtidal open water refers to unvegetated tidal areas located below the mean high-water elevation. This area is subject to tidal action and during high tides can overlap with the mudflat and coastal salt marsh habitat.

Subtidal open water habitat is subject to USACE jurisdiction under Section 10 of the Rivers and Harbors Act.

Wildlife Associated with Subtidal Open Water

Open water habitat within San Francisco Bay supports an array of estuarine and marine species from encrusting tunicates, sponges, and algae to bottom-dwelling fish and surface feeding birds. Common fish include Pacific halibut (*Hippoglossus stenolepis*), starry flounder (*Platichthys stellatus*), to more open water fish such as the Pacific herring (Clupea pallasi), Pacific sardine (*Sardinops sagax*), and anchovies (*Anchoa* spp.). Common water birds include western grebe (*Aechmophorus occidentalis*), Clark's grebe (*A. clarkii*), several cormorant species (*Phalacrocorax* spp.), and brown pelican (*Pelecanus occidentalis*); and common waterfowl include surf scoter (*Melanitta perspicillata*), scaup (*Aythya* spp.), bufflehead (*Bucephala albeola*), and ruddy duck (*Oxyura jamaicensis*). Open water also provides resting and rafting habitat for water birds, and San Francisco Bay is a vital annual stopover location along the Pacific flyway for migratory waterfowl that rest and often form large rafts offshore for several days prior to continuing their migration.

The open water of San Francisco Bay also supports numerous protected fish species, including green sturgeon (*Acipenser medirostris*), steelhead (*Oncorhynchus mykiss*),

Chinook salmon (*O. tshawytscha*), longfin smelt (*Spirinchus thaleichthys*), northern anchovy (*Engraulis mordax*), Pacific sardine (*Sardinops sagax*), and starry flounder (*Platichthys stellatus*), which could all potentially inhabit the water near CPSRA.

Sensitive Biological Resources

Sensitive biological resources addressed below include special-status species and sensitive habitat that are afforded special protection under the California Environmental Quality Act (CEQA), California Fish and Game Code (including the California Endangered Species Act (CESA), federal endangered species act (ESA), CWA, the Porter-Cologne Water Quality Control Act (Porter-Cologne Act), and the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act).

Special-Status Species

Special-status species are plants and wildlife that are legally protected or otherwise considered sensitive by federal, state, or local resource conservation agencies and organizations, including:

- Species officially listed by the State of California as endangered, threatened, or rare.
- Species officially listed by the federal government as endangered or threatened.
- Candidates for State or federal listing as endangered or threatened.
- Taxa (i.e., taxonomic categories or groups) that meet the criteria for listing, even if not currently included on any list, as described in Section 15380 of the State CEQA Guidelines.
- Species identified by CDFW as species of special concern.
- Species listed as Fully Protected under the California Fish and Game Code.
- Species protected under the Magnuson-Stevens Act.

Plant species considered by the CNPS to be “rare, threatened, or endangered in California.” These include plants on the following three CNPS lists:

- List 1A—Plants presumed to be extinct in California.
- List 1B—Plants that are rare, threatened, or endangered in California and elsewhere.
- List 2—Plants that are rare, threatened, or endangered in California but more common elsewhere.

Appendix A provides lists of special-status plant and wildlife species known from or with potential to occur either on CPSRA or in the surrounding area. These lists were compiled by performing database searches of the CNPS Electronic Inventory of Rare and Endangered Plants (CNPS 2010), CDFW’s CNDDB (CNDDB 2010), and the USFWS online endangered species database (USFWS 2010). The searches captured

special-status species in the San Francisco South USGS 7.5-minute quadrangle, where CPSRA is located, and in the five additional quadrangles (Hunters Point, Oakland West, Redwood Point, San Leandro, and San Mateo) that represent similar habitat to that on CPSRA and surrounding San Francisco Bay in this region.

Sensitive Habitats

Sensitive habitats are those that are of special concern to CDFW, or that are afforded specific consideration through CEQA, Section 1602 of the California Fish and Game Code, the Porter-Cologne Act, Section 404 of the CWA, and/or the Magnuson-Stevens Act. Sensitive habitats may be of special concern to regulatory agencies and to conservation organizations for a variety of reasons, including their locally or regionally declining status, or because they provide important habitat for common and special-status species. The two sensitive habitat types present on CPSRA include coastal salt marsh and freshwater seasonal wetland. Coastal salt marsh is identified as a sensitive natural community (CNDDB 2010), and is also a jurisdictional water of the U.S., protected under the federal CWA. Freshwater seasonal wetlands are considered sensitive natural communities because they also typically qualify as jurisdictional wetlands subject to USACE jurisdiction under Section 404 of the CWA.

Special-Status Plants

Based on the database searches, literature review, and habitats present, 62 special-status plant species were considered to have potential to occur on CPSRA or in the vicinity. Following the analysis of these species, however, 46 of these species were eliminated from further consideration because they are restricted to habitats that do not occur on CPSRA or because the property is outside their elevation range. Sixteen species were determined to have potential to occur on CPSRA. These species are associated with valley and foothill grassland, coastal scrub, coastal salt marsh, or freshwater seasonal wetland. Table A-1 in Appendix A lists the legal status of each special-status plant species with potential to occur, the habitat it inhabits, the notes on its potential to occur within CPSRA, and findings of previous botanical surveys.

In support of the City and County of San Francisco’s Bayview Transportation Improvements Project, Jones & Stokes biologists conducted a botanical habitat survey on October 29, 2004, a botanical and wildlife assessment for Yosemite Slough on March 1, 2006, a focused late-blooming sensitive plant species survey on October 6, 2006, and a focused spring-blooming sensitive plant species survey on May 17, 2007 (CCSF 2007). The latter two surveys, however, did not include the landscaped area and the most southwest portion, west of the old pier, within CPSRA. Additional biological surveys to identify plant communities and special-status species were conducted by

PBS&J biologists on August 7, 2007 and July 8, 2008, and a focused rare plant survey was conducted on May 5, 2008 (SFRA and SFPD 2008). No special-status plants were found within or around CPSRA during these surveys, likely because the species with potential to occur (see Table A-1 in Appendix A) are limited to unique environmental conditions such as specific native soils, salinity and moisture regimes, and other factors not present due to the fill material and related disturbed nature of the site.

Special-Status Wildlife and Fish

Based on the database searches, literature review, and habitats present, 75 special-status wildlife and fish species were considered to have potential to occur on CPSRA or in the vicinity. Following a closer analysis of these species, 50 were eliminated from further consideration because they are restricted to habitats, such as vernal pools or freshwater streams with riparian, that do not occur on CPSRA. Potentially suitable habitat for 28 special-status wildlife and fish species is present on or in the vicinity of CPSRA. These species are associated with valley and foothill grassland, coastal scrub, coastal salt marsh, freshwater seasonal wetland, and open water. A limited number of special-status wildlife species have been documented in the recent past or historically, most likely due to the entire site being set on artificial fill and disturbed. Table A-2 in Appendix A lists the legal status of each special-status wildlife species with potential to occur, the habitat it inhabits, the notes on its potential to occur within CPSRA, and findings of previous wildlife surveys. Several species (Mission blue butterfly [*Icaricia icarioides missionensis*], Callippe silverspot butterfly [*Speyeria callippe callippe*], and fish species) are not expected to occur on CPSRA but were included in the table because of local interest or, in the case of the fish, because they occur in San Francisco Bay and could enter the waters near CPSRA.

The primary wildlife survey for CPSRA was conducted by LSA Associates biologists for the Golden Gate Audubon Society (GGAS) and recorded common and special-status species (GGAS 2004). LSA biologists conducted a total of 29 surveys at Yosemite Slough and across CPSRA between January 11, 2003 and April 3, 2004. Other wildlife surveys included focused California clapper rail [*Rallus longirostris obsoletus*] surveys conducted for the San Francisco Estuary Invasive Spartina Project in 2006, which assessed Yosemite Slough and the shoreline of CPSRA, and wildlife habitat assessments conducted by Jones & Stokes biologists at Yosemite Slough in December 2001 and on October 19, 2002, and October 29, 2004; however, the latter three surveys did not focus on special-status species.

2.1.3 Cultural Resources

A cultural resource is any defined location of past human activity, occupation, or use, identifiable through field investigation, historical documentation, or oral histories. Cultural resources include archaeological, historic, or architectural sites, structures, places, objects, and artifacts. Other locations, however, such as landscape features or entire landscapes can also be considered cultural resources if they are integral to the traditional practices, spiritual beliefs, or world-view of specific cultural groups. A cultural landscape is defined as a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein associated with a historic event, activity, or person, or that exhibits other cultural or aesthetic values. The four general kinds of cultural landscapes are ethnographic, historic designed, historic vernacular, and historic site.

Ethnographic Setting

In the later prehistoric and early historic eras, peoples affiliated with the Ramaytush band of the Costanoan (or “Ohlone) tribe are known to have inhabited the San Francisco peninsula and the area within which CPSRA is currently situated. The term “Costanoan” is derived from the Spanish word Costaños, meaning “coastal people”. The Ohlone (as the native people from this region prefer to be called) belong to a language family composed of the inhabitants of the San Francisco peninsula, the East Bay south of the Sacramento-San Joaquin Delta, and the Santa Clara Valley down to Monterey and inland south of San Juan Bautista.

The first documented European incursion into Ohlone territory was that conducted by Sebastian Vizcaino in 1602, who traveled through the Monterey area. However, the beginning of regular European (Spanish) contact with the Ohlone did not take place until 1769, when the Portola expedition arrived in the Bay Area (Hoover et al. 1990:331). Spanish explorations of the Bay Area became regular events in the 1770s, followed by the establishment of a series of missions and presidios along the California coastal strip, including in San Francisco in 1776. These permanent settlements eventually had a major impact on traditional Ohlone lifeways. The early Spanish arrivals essentially dreamed of “civilizing” California by converting the native peoples into Christianized farmers and ranchers, and to exploit the land’s resources for the Spanish crown and the Catholic Church.

Prior to sustained Euro-American contact and the physical and cultural devastation that followed, Ohlone lifeways remained largely unchanged for centuries. Each of the eight documented Ohlone groups included several seasonal settlements and camps that were probably occupied seasonally by groups of families. This settlement pattern allowed for the ready harvesting of seasonally available resources, notably the acorn,

shellfish, deer, and rabbit. Some of these were stored for winter use when the families tended to gather to make use of the shared stores and engage in annual ceremonial activities (Kroeber 1925). Ohlone groups sustained rich social and religious customs that were inter-connected by communal rituals performed during the winter months and throughout the year. Prayers, offerings, and various complex dances were an integral part of many of these ceremonies. Broadbent (1972) and Levy (1978) note that the sun was one of the principal deities, and prayers were directed to this being through offerings of tobacco and tobacco smoke, shell beads, and various food stuffs.

Traditional Ohlone practices, beliefs, and social structures, were severely impacted by a rapidly Bay Area Euro-American population during the 1700s and 1800s. Although records are sparse and incomplete, it has been estimated that the Bay Area Ohlone may have numbered around 10,000 in 1770 when Mission Dolores was established in present-day San Francisco (Kroeber 1925; Milliken 1995). By the time the California missions were secularized by the Mexican government in 1834, it is estimated that the Ohlone population had dropped by 80% following decades of cultural disruption, introduced diseases, harsh living conditions, and an accompanying reduction in birth rates. By the middle of the 19th century, the Ohlone population had dropped even further to around 1,000 individuals. Those who remained in the Bay Area often found jobs as manual laborers in local industries or on the Mexican and later American cattle ranches that were established in the region.

By the latter decades of the 20th century, however, the Ohlone people began a period of cultural revitalization based on family ties and affiliations with the rancherias (small “reservations”) established during the Mexican and American periods (Albion Environmental 2001). Some of the Ohlone bands have received federal recognition and are increasingly organized, exerting an economic and political influence not available to them for over 200 years. This has enabled a renewed focus on their ancestral heritage, and today many Ohlone are actively engaged in maintaining their cultural traditions and serving as advocates for issues concerning Native American peoples throughout the Bay Area and California. The Costanoan Rumsen Carmel Tribe of Ohlone, a 2,000-member tribe in Northern California, has recently held a series of ceremonies at Ohlone sacred sites in San Francisco. The tribe held a sunrise ceremony at Yosemite Slough in August 2010. Further information on this tribe is presented in Section 2.1.3, Cultural Resources.

The Costanoan Rumsen Carmel Tribe of Ohlone includes 2,000 members who trace ancestry to both Mission Dolores and to an ancient Ohlone village near Carmel, the village of Echilat, now known as San Francisco Flats. The tribe demonstrates key features of all California tribes: it initiates new members annually employing ceremonies recognized by other Northern California tribes, conducts regular sweat lodges, and

elects its leadership and has an active board. The tribe includes a fifty person dance and song group, the Humaya (Hummingbird) Singers and Dancers.

During the last few years, a small group of San Franciscans called the Ohlone Profiles Project has initiated a process to re-engage the Costanoan Rumsen Carmel Tribe of Ohlone with the City of San Francisco. By obtaining support from the San Francisco Arts Commission, the Ohlone Profiles Project has brought the tribe to a series of ceremonies at Ohlone sacred sites in San Francisco. The Ohlone Profiles Project has also brought the tribe to the San Francisco Board of Supervisors, who voted unanimously to support an Ohlone-led Native American cultural center in San Francisco, as well as to the mayor and the City Planning Department and Redevelopment Agency. The mayor honored the tribe with a city declaration and the tribe performed its dances at City Hall. On August 10, 2010, the tribe held a sunrise ceremony at Yosemite Slough.

Local Archaeological Investigations and Sites

Bay Area archaeological investigations have occurred in three major waves (Lightfoot 1997). The first, early in the 20th century, focused on examination of the most visible prehistoric site type: shellmounds, sometimes hundreds of feet in diameter, that lined the bayshore, as well as large earthen mounds found near stream outlets and banks running inland. Early archaeologists assumed that the shellmounds were the remains of large Native American villages that subsisted solely on Bay and estuary resources. The second wave of investigations took place after World War II, when mounds and other sites were investigated by archaeologists working through the various local universities, particularly U.C. Berkeley, San Jose State, and Stanford. By this period, research questions being asked had broadened to a wider interpretation of the region's prehistory and the connection to different geographic areas. In the last 30 years or so, the third push in archaeological exploration has been largely the result of compliance with new cultural resources regulations. The most recent research has been able to take advantage of new technology and paradigms that have evolved over the course of the 20th century.

The current body of archeological evidence indicates that the mounds served multiple purposes as residential places, ceremonial locations, and burial sites with many diverse and complex aspects. Other prehistoric site types recorded in the region include lithic scatters, quarries, bedrock mortars or other milling sites, petroglyphs, and isolated burial sites (Basin Research Associates 2004). Together, these sites form part of a larger pattern of subsistence and interaction in the prehistoric San Francisco Bay which is being explored in an ever-expanding series of investigations in the Bay Area.

A discussion of early Native American shell mound sites is particularly relevant to CPSRA due to the location of a number of these resources immediately adjacent to its boundaries. Although the majority of CPSRA is situated on historic-era landfill, the former natural shoreline is immediately adjacent to the boundary of CPSRA. The archaeological sites described below were documented in areas in close proximity to CPSRA, and there is some potential for ground-disturbing activities to encounter materials associated with those archaeological deposits. Most of these sites have, however, been heavily impacted by urban development. Although considerable and often intact archaeological contexts can remain following such development, the degree to which these sites retain physical integrity is currently unknown.

CA-SFR-7

A large shellmound located near the southwestern-most extent of CPSRA in the vicinity of Harney Way, known as the Bayshore Mound or Crocker Mound, was recorded by Nelson and extensively “tested” by him in 1910. The site reportedly measured 500 feet long from north to south, 75 to 100 feet wide, and at least 16.5 feet deep. Nelson recovered over a hundred artifacts including mortars, pestles, hammerstones, charmstones, flaked stone artifacts, bird bone whistles, abalone and shell beads, and faunal remains. Nelson also documented 28 human interments, many with associated grave goods. Later research and study of the grave goods suggested that the burials (and site) dated to approximately 1700 – 700 BP. According to Pastron et al. (2009), the site was subsequently heavily impacted and the soils used for filling a nearby marsh and construction of an office park.

Banks (1981) conducted subsequent auger tests at the location of CA-SFR-7 and recovered prehistoric materials suggesting that some portions of the site could remain intact. More recently, Archeo-Tec (Pastron et al. 2008) conducted a preliminary auger testing program to locate the boundaries and depth of the shell midden at CA-SFR-7 as part of the planning process for the Executive Park Project. This study documented significant and intact shell midden deposits existing below the present-day grade.

CA-SFR-8 (P-38-08)

Nelson also recorded this site in 1910 but as with CA-SFR-9, the original site form contains little information. However, it was probably a shell midden and is generally situated to the southwest of Candlestick Park stadium. The site area was also documented by P. Nichols on a Cabrillo College Archaeological Site Survey Record (Northwest Information Center 2010) but no further information regarding site location or constituents was provided.

CA-SFR-9

This site, originally recorded by Nelson around 1910, was mapped in the immediate vicinity of present-day Candlestick Park Stadium. . Nelson's site record, however, provides no description, but suggests it was probably a shell midden now destroyed or otherwise obscured by development.

CA-SFR-10

This is a "lost" site that has been equated with Nelson's Mound Site #387a. The site record provides no description but suggests it was probably a shell midden. The MEA Shellmound Data Base indicates that it was located approximately 0.62 miles north of CA-SFR-7.

CA-SFR-110 (Griffith-Shafter Shellmound)

Banks records how archival research suggested that a potential shellmound was spotted on the 1852 Coast Survey map in the vicinity of Griffith Street between Thomas and Shafter Avenue. Banks also located the site with augering in 1981. This buried shell midden was identified beneath Griffith and Revere Streets by auger borings for the S.F. Clean Water Project. The site measures an estimated 400 feet NE-SW, and extends half-way between Shafter and Thomas Streets. The shellmound that originally stood there has been leveled, leaving a midden deposit four to seven feet thick and buried by eight to ten feet of landfill.

CA-SFR-11H (P-38-109)

Originally documented by Department of Parks and Recreation archaeologists John W. Foster and James P. Delgado in 1986, this resource consists of a ship hulk located in the mudflats adjacent to CPSRA. This wood sailing ship hull was burned and the tops of framing timbers and stations are exposed above the Bay mud with additional elements being present on a sandy beach below hiking trails. Although all of the upper portions of the ship are now gone, the hull appears to be relatively intact although additional research would be necessary to confirm its integrity. Foster and Delgado note that the vessel may have been a lumber schooner typical of those that plied the waters of San Francisco Bay during the latter decades of the 19th century and the early years of the 1900s. They also note that the timber framing, spacing, and dimensions roughly match those of a documented wreck: the C.A. Thayer per research conducted at the National Maritime Museum in San Francisco.

Historic-era Setting

Although mapped and possibly explored to some extent during the Spanish, Mexican, and early American periods (circa 1776-1848), no evidence of occupation of land use of CPSRA dating to these early periods had been noted by researchers or appears in early written accounts or maps of the area (Patron et al. 2009:37). However, with the coming of the Gold Rush in 1849 and statehood a year later, San Francisco's size and population grew rapidly over a very short period of time. Settlement in the CPSRA vicinity during the 1850s and 1860s was primarily limited to the area just north of Hunter's Point in India Basin, where northern European boat builders established small family boatyards. From the 1880s through 1910, this area was the center of the design and construction of vessels. The flat-bottomed, shallow draft scow schooner was specifically developed in the Bay Area for hauling cargo and could navigate the often shallow waters of San Francisco Bay and the Sacramento-San Joaquin Delta (NPS 2010; Olmstead et al. 1980:130). Construction of these distinctive schooners quickly became a major regional industry, and dry docks were soon being constructed to build and service these and numerous other vessel types.

Apart from the dry docks and boat-building enterprises that were located on the shoreline, and prior to the large-scale residential and commercial developments of later decades, much of the inland portion of the Hunter's Point area was devoted to agriculture (see Pastron et al. 2009; Kelley and Verplanck 2010). Italian and Chinese farmers moved into the area starting in the mid-19th century to grow vegetables for the rapidly growing city and for shipment to distant markets, including those in the active gold fields to the east. By the early 1900s, Italian farmers dominated this local industry (Pastron et al. 2009:70), but toward the end of the century, rapid urban growth and pressures from other local industries eventually pushed out these local agricultural endeavors. Further settlement of the area was hindered by a lack of established roads. Regardless, access to the Bay attracted real estate speculators to the area as early as the 1850s. Hunters Point is named for Robert and Philip Hunter, a pair of brothers and well-financed speculators from the east coast. Despite detailed development plans, the area was simply located too far from the center of San Francisco to be marketable. However, the Hunter brothers stayed at Hunters Point as a pioneering family operating dairy and gardening ventures (O'Brien 2005:47).

Although some further early homesteading attempts in the area enjoyed modest success, by the early 1900s most of the area was still fairly open. In the aftermath of the 1906 San Francisco earthquake and fire, Hunters Point, which was spared from the worst of the disaster, essentially became a refuge from the massive destruction throughout the city (San Francisco Call May 31, 1906 in VerPlanck 2010:69). To some extent, this led to the belated recognition of the area as a prime location for increased

residential and industrial development, and the Southern Pacific Railroad finished the Bayshore Cutoff in 1908, opening a direct rail line to Hunters Point (San Francisco Call, August 14, 1904 in Corrette 2001). During the mid-1920s, the character of the area finally started to shift from a mix of industrial and pastoral uses to a more organized urban environment. However, the boatyards, dry docks, greenhouses, and small farms continued to dominate the landscape.

In 1939, the City finally recognized Hunters Point as a separate district and after fighting for years for paved streets, parks, and sewer-line extensions the Hunters Point Improvement Association (originally called the Hunters Point Improvement Club) worked to have bus and streetcar lines established between the residential neighborhoods and the area's largest employers: the dry docks and boat builders on the shoreline (Kelley and VerPlanck 2010:87-91).

Chinese Fishing Villages

Other than shipping-related activities on Hunters Point and Candlestick Point, fishing, and specifically shrimping were the major economic endeavors taking place along the shoreline during the latter decades of the 19th century and into the early years of the 1900s (see Hupman and Chavez 2001; Kelley and VerPlanck 2010; Olmstead et al. 1980; Pastron et al. 2009; San Francisco Redevelopment Agency 2007). In the San Francisco area, Chinese fisherman dominated these industries, and quickly between the 1870s and the 1900s, Chinese fishing camps flourished in San Francisco and elsewhere around the Bay. Most of the earliest fishing camps were started by workers who found themselves unemployed and restricted from other industries after the completion of the transcontinental railroad in 1869. The Chinese-owned and operated companies thrived due to the large and readily available shrimp and fish populations in the Bay, their purchase of key waterfront lots, and the use of high-yield bag nets. A substantial amount of dried fish, abalone, abalone shells, and shrimp were sold at local markets or exported to China.

The amount of San Francisco fish and shrimp exported overseas led fishermen of other ethnicities to petition the State to levy taxes on Chinese commercial fishing. In 1885 and 1886, 600 Chinese fishermen were arrested for tax reasons. The federal government revived old trade laws and applied them to the dried fish and shrimp trade. Chinese vessels were seized and their captains fined. The State Legislature outlawed the bag net in 1910, although a redesign in the 1920s facilitated the continuation of the industry. No fewer than 12 fishing camps were observed along the Hunters Point shoreline just prior to World War II.

In 1939, the San Francisco Health Department, responding to complaints about the pungent smell of the fishing camps, declared the camps unsanitary and ordered several of them burned. The fishing activity also declined because of Bay landfill and pollution, and the movement of the Navy to Hunters Point in the 1940s. One camp, the Hunters Point Shrimp Company, was still in operation in the late 1950s, but finally closed in 1959. Although no known Chinese shrimp camps were located in the CPSRA area, this does not preclude the possibility that unidentified camps existed within that area.

Shipyard Development

Just prior to World War II, the Navy contracted with the dry docks at Hunters Point, and the area quickly developed into one of the most important shipyard resources on the west coast of the United States. Construction during WWII dramatically increased the dry landmass around the end of Hunters Point and changed the topography of the entire area through reclamation efforts. Demands for housing for the defense workers at the shipyard resulted in the construction of over 12,000 housing units in the immediate area (Pastron et al. 2009). The rapid population increase transformed the surrounding and comparatively rural Bayview and Hunters Point neighborhoods into an urban center almost overnight. Demographic shifts from Italian to African-American predominance, economic shifts from agriculture to heavy industry, and social shifts from multigenerational families to transient settlers all occurred during this highly tumultuous time. After WWII, construction continued at Hunters Point Shipyard, but the number of jobs began to decrease. A sizable peacetime workforce was needed, but not in the around-the-clock fashion that characterized the war years. The post-war period at Hunters Point and in San Francisco in general was marked by an extreme shortage of quality housing, especially for the low-income segment of population. Much of the temporary housing built by the Navy around Hunters Point became apartment units managed by the San Francisco Housing Authority, transforming the area into the highest concentration of low-income housing in San Francisco. The history of the post-war period within and near Hunters Point is largely a story of the transition of this housing stock and its impact on the more well-established surrounding community (see Hupman and Chavez 2001; Jerman 2007; Kelley and VerPlanck 2010; Naval Engineering Command 2000; Pastron et al. 2009).

Candlestick Point

Historically, land use at Candlestick Point has largely been characterized by a quarry, landfill, a planned quarantine hospital, and ultimately a park. The 1852 U.S. Coast Survey manuscript map shows Candlestick Point in its natural state, and most of the current CPSRA area not existing as dry land. Pastron et al. (2009: Figure 5) provides a view of the present-day shoreline overlaid on the 1852 Coast Survey Map, which

demonstrates that CPSRA is built on an artificial landform with the exception of a small area immediately south and to the west of Candlestick Park. During the mid-19th century, only a narrow area of shoreline within the India Basin area, the coastal area and eastern end of Hunters Point, and two relatively small areas of land fronting the Bay within the Candlestick Point area were above water.

The area occupied by CPSRA owes its existence directly to the proposed communicable diseases quarantine hospital when area residents and landowners protested the plans and succeeded in getting the point established as a City park, which was finally dedicated in 1915 (Pastron et al. 2009). Little in the way of park development occurred until 1954, when a bond measure was passed to construct a major league baseball stadium. By1958, Candlestick Park stadium, the first baseball stadium to be constructed entirely of concrete, was under construction. The stadium soon became the major sports venue for the Bay Area and was finished in time for the San Francisco Giants 1959 season. The Oakland Raiders played their 1961 American Football League season at the stadium, and it has been home to the National Football League's San Francisco 49ers since 1971 (Kelley and VerPlanck 2010:106-107; San Francisco Redevelopment Agency 2007:7-8).

While the stadium dominated the cultural setting of Candlestick Point, residential development, particularly just prior to and after World War II, largely characterized the landscape. Prior to the construction of the existing Alice Griffith housing project, the site was occupied by the Double Rock War Dwellings, constructed in the 1940s to house over 500 shipyard workers and their families. In 1962, the San Francisco Housing Authority developed the Alice Griffith public housing to replace the war dwellings. At the time, Alice Griffith was one of the few San Francisco Housing Authority sites that accepted African-American tenants, due to a "neighborhood patterns policy" that only allowed those of the predominate ethnicity in the specific neighborhood to reside in City housing.

The closure of the Hunters Point Shipyard in the early 1970s resulted in a catastrophic loss of jobs and contributed to the isolation and increasing poverty of the area. The shipyards had been the primary employer of the area for several generations, and the area began a rapid economic decline. Economic and social conditions were exacerbated by the construction of US-101 in the late 1940s and early 1950s, which made the trip to the Candlestick Point and Hunters Point neighborhoods more difficult and often circuitous.

Candlestick Point State Recreation Area

Following the creation of the landmass by Navy operations during the WWII-era, no development occurred on the property now occupied by CPSRA. After the Navy's closure of the shipyard in the early 1970s, the land quickly became an illegal dumping ground for area residents and businesses. Recognizing the value of the property as a potential recreational resource, the local community began lobbying the State to purchase and reclaim the land for the establishment of a park. As a result of these grass-root efforts, the California State Legislature authorized $10 million to purchase a total of 170 acres. In 1977 the Legislature voted to develop the property as California's first urban state recreation area and facilities such as trails, parking areas, and a ranger station and support facilities were soon constructed (DPR 2010).

Efforts to improve CPSRA and adjacent Bay waters, Yosemite Slough in particular, have been ongoing since CPSRA's establishment. In 1987, the State Parks System, following considerable public input, approved the Candlestick Point State Recreation Area General Plan. The General Plan identified the restoration of natural areas within Yosemite Slough as a high priority. In 2003, a total of 34 acres, including Yosemite Slough, was assessed for restoration potential in a feasibility study funded by the California State Parks Foundation. The study determined that restoration activities were feasible and would create the largest contiguous wetland area in the County of San Francisco. The project would help restore wildlife habitat, improve water quality, and prevent erosion along the shoreline of the City of San Francisco (California State Parks Foundation 2010).

2.1.4 Aesthetic Resources

CPSRA is located at the southeastern-most extent of bayfront within the County of San Francisco and comprises one of the largest, public, undeveloped expanses of shoreline on the City's eastern waterfront. It is located within the Bayview Hunters Point neighborhood where the topography varies from flat areas near the San Francisco Bay to undulating slopes and prominent hills, most notably Bayview Hill and Hunters Point Hill. Existing development in the neighborhood is generally sited on flat or moderately sloped areas. Steeper slopes are generally undeveloped and vegetated with native and non-native trees, shrubs, and grasses (SFRA and SFPD 2009).

As the name Bayview implies, the Bay is visible from many locations throughout the neighborhood. The East Bay hills are visible in the distance looking toward the east from locations near the Bay or in hilly neighborhoods. The neighborhood is surrounded by visually heterogeneous neighborhoods, including Visitacion Valley to the south, Portola to the west, Bernal Heights to the northwest, and Potrero Hill to the north. The

Bay lies to the east. The overall character of the Bayview Hunters Point neighborhood consists of urbanized, moderate density development. Building heights range from one to four stories, and building massing ranges from small-scale residences to block-scale warehouses. The architectural character includes 19th century and early 20th century residential buildings, commercial buildings (including wood frame and brick structures), World War II–era industrial and commercial facilities, and more recently built warehouses and industrial development (SFRA and SFPD 2009).

CPSRA is characterized as predominantly open and flat with minimal buildings and crossed by a series of paved and natural surface trails. It is largely vegetated with expanses of non-native grasses, some areas mixed with scattered clusters of native and non-native shrubs and trees that serve to block views of the surrounding areas in some locations. Due to historic and recent grading activity across the site, there are isolated areas with berm-like landforms that serve to visually separate areas of the site from others. The predominant visual character of CPSRA is largely defined by the extent of waterfront shoreline, providing open, unencumbered views of the Bay and the East Bay hills.

Surrounding land uses that contribute to the viewshed of CPSRA include Candlestick Park stadium as the dominant feature due to its height, overall mass, and location immediately adjacent to CPSRA. Vast, open, asphalt parking areas between the base of the stadium and the South Basin shoreline define the dominant ground plane in view, particularly from the abandoned boat launch site and the main parking area. This view shifts at the Last Port area where the adjacent condominium housing comprises the foreground view. The remains of the shipyard site, particularly the taller, dry dock structures including the 182-foot-tall re-gunning crane,[3] are also dominant from the northeast shoreline and areas north of the main park entrance.

Additional land uses within view of CPSRA include single- and multi-family residential structures, particularly in view on the higher elevation slopes above the shipyard and north of the main park entrance, as well as industrial uses near Donahue Street and in and around Yosemite Slough. None of the buildings located in the vicinity of CPSRA is identified as a scenic resource or a feature of the built environment that contributes to a scenic public setting.

[3] Re-gunning cranes are a type of crane used in shipbuilding and repair that are particularly suited to lift heavy objects such as ship engines.

Candlestick Park Stadium

Throughout CPSRA, the shoreline character is a combination of open mudflats (during low tide) adjacent to a mixture of flat, moderate, and steep slopes with mostly grassy or tidal marsh vegetation. The shoreline undulates in elevation throughout the site and is interspersed with boulders, concrete, and riprap edges, punctuated by occasional sandy beach areas. Due to the extent of shoreline within the site and the linear configuration of the property, few areas block views of the open Bay. This occurs predominantly in the parking area that extends from the main park entrance, where trees and shrubs form a visible barrier between parking and the park. There are also isolated areas where random grading has occurred to create berm-like landforms that temporarily block views to the water from adjacent trails.

Adjacent to Yosemite Slough, views in the immediate vicinity are of the open, vacant lots containing building and foundation remains and predominantly low-lying, weedy vegetation. Development in the foreground in this area is predominantly industrial, single-story warehouse type structures with extensive street parking of larger trucks and trailers. Distant views from this location are of the undulating landscape containing predominantly moderate and high density residential buildings on the lower slopes of

Hunters Point Hill with more trees and vegetation at the higher points of this local landform. There are open water views of the slough and open Bay in this area; however, the adjacent shoreline of the shipyard is immediately beyond. This is the only area of CPSRA where open water views of the Bay are less expansive due to the enclosed nature of the shoreline.

Moving southeasterly along the shoreline past the abandoned boat launch site and from the point adjacent to South Basin, there are expansive, long distance views across the Bay, mostly to the east and south. To the north from the shoreline adjacent to South Basin are views of the shipyard remains, including some larger warehouse structures with distant background views of the East Bay hills. Extensive areas of the landscape have been regraded and are largely unvegetated. All along the shoreline adjacent to the Last Rubble area, open and expansive views of the Bay continue. In the opposite direction from this area, the Candlestick Park stadium is the dominant feature in view.

Sunrise Point (The Point), a small peninsula, is the easternmost point of CPSRA. From this vantage point, one can enjoy wide open water views in three directions. The point contains a loop trail and fishing pier and picnic areas with scattered mature trees and shrubs amidst a grassy understory. From the northern shoreline, views are similar to those from the South Basin area; however, a larger expanse of open water is prominent. Views back to the west are still dominated by the stadium but in context with the backdrop of Bayview Hill and adjacent urban development.

From the southern shore and fishing pier, distant views of San Bruno Mountain and adjacent coast range can be seen with urban development at the base. US-101 is also in view and clearly marks the edge of the Bay. Toward the east are long, open views of south San Francisco Bay with distant views of the San Mateo Bridge.

The Point

A trail traverses the southern edge of Sunrise Point (The Point) and continues all along the shoreline to the intersection of Jamestown Avenue and Harney Way. This provides visitors with close-up views of the water's edge as well open water views out over Candlestick Cove, with US-101 and adjacent development in the middle ground. The Last Port area also contains a loop trail, which is generally parallel to Harney Way and then largely follows the shoreline.

The views from this area to the north and west are primarily of a portion of the stadium although the adjacent multi-family residential development is the dominant feature in the foreground. Immediately behind these two- and three-story structures, the peak of Bayview Hill rises up, a few hundred feet higher than the viewer's elevation, providing a strong vertical backdrop to this portion of the park. Most of the landform is undeveloped and vegetated in stark contrast to much of the surrounding areas. The shoreline at the Last Port area slopes up steeply from the water's edge, providing the viewer with an overlook to adjacent Candlestick Cove and toward the Old Pier and Jamestown Avenue. Strong distant views of San Bruno Mountain are also dominant from the Last Port.

2.1.5 Recreation Resources

Recreational Activities and Facilities

Recreation, both active and passive, is the focus at CPSRA, which provides opportunities for day use only. Current recreational uses include walking, jogging, bicycling, leashed dog walking, limited rollerblading and skateboarding, picnicking, nature viewing, beach use, windsurfing, and fishing, as well as special events (SFRA and SFPD 2009; Meneguzzi, pers. comm., 2010). Most recreation in the park takes place in the developed Main Park area (Heart of the Park), which provides shelter from the wind and waves and opportunities for day use activities, including windsurfing, trail use, and picnicking (State Parks 2006). The Main Park (Heart of the Park) is also popular on days when the San Francisco 49ers play at home (typically eight to ten per year, between August and January) because of its proximity to the Candlestick Park stadium.

Sunrise Point (The Point) and the Last Port also provide opportunities for trail use, picnicking, fishing, and shoreline access. Fewer recreational facilities exist in the unimproved areas of CPSRA north of the main park entrance, although the Phase Four area (Candlestick Meadows) offers opportunities for walking, biking, and other trail-based activities, while the former Last Rubble or Rock City area provides access for occasional fishing along the shoreline and for walking, since the removal of concrete debris in 2009 (State Parks 2006; CIWMB 2009).

Development of recreation facilities at Candlestick Point CPSRA is most intensive in the Main Park area (Heart of the Park). Vehicles must pass through the Main Entrance Station on Jamestown Avenue, approximately 100 feet from the intersection with Hunters Point Expressway, to enter this area of the park. However, CPSRA only staffs the station to collect parking fees when 49ers home games are scheduled. No parking fees are collected at CPSRA on non-game days. This building is currently outside of the updated CPSRA boundary that resulted from the land exchange. The Main Entrance Station is approximately 1,500 square feet and comprised of concrete masonry walls, a metal roof with cathedral ceilings, and wooden pilings for support. Two drive-through areas allow vehicles to enter and exit CPSRA. The center of the building contains a restroom with one individual flush-toilet and sink and one drinking fountain.

A sand beach along the eastern shoreline provides opportunities for beach play and access to the Bay and mudflats. A small lawn near the eastern shoreline known as Big Meadow and a larger lawn in the southern portion of the Main Park (Heart of the Park) provide space for additional day use opportunities. CPSRA irrigates Big Meadow year round (Moises, pers. comm., 2010). The Windsurf Circle (The Neck), the terminus of the parking area along Hunters Point Expressway, provides parking and shoreline access for windsurfers (State Parks 2009c). Fitness course stations are interspersed along the Main Park's (Heart of the Park's) trails for exercises (Meneguzzi, pers. comm., 2010). These stations are constructed of wood and metal and are in fair condition due to their age; several are missing instructional signage.

The Main Park (Heart of the Park) contains 67 picnic tables, as well as four group picnic areas (Jackrabbit, Plover, Windharp Hill, and Pelican), available by reservation from March to September (Meneguzzi, pers. comm., 2009; Moises, pers. comm., 2010).

Main Park

Each group picnic area accommodates a maximum of 60 people (State Parks 2003) and has between six and eight wooden tables, a large barbeque grill, trashcans, a faucet with potable water, and a large wooden windscreen. The Windharp Hill picnic area has a second barbecue pit and a sink with counter space. The Plover picnic area has a set of metal “wind drums,” and an art installation from the 1988 CPSRA artist-in-residence program.

The Main Park (Heart of the Park) has four restroom buildings that are open to the public, each with four individual flush-toilets and sinks. The Main Entrance Station contains one restroom (Restroom 1) with a single flush toilet and sink, open only when CPSRA staffs the station during 49ers’ home games and other special events. The three additional restroom buildings are located near the Jackrabbit (Restroom 2) and Plover (Restroom 4) group picnic areas and the Windsurf Circle (The Neck) (Restroom 3). The restroom at the Windsurf Circle (The Neck) has an outdoor shower. Each restroom building is approximately 1,800 square feet and constructed of concrete masonry walls, a metal roof with wooden cathedral ceilings, and wooden pilings for support. These buildings are in fair condition, with rotting wood that needs replacement. Each restroom building has one drinking fountain and an alleyway for housekeeping storage.

Sunrise Point

Sunrise Point (The Point), the eastern peninsula of CPSRA is located farthest from the surrounding urban uses, such as US-101, providing for a quieter atmosphere (State Parks 1988). The southern shoreline of Sunrise Point (The Point) has four individual picnic sites, each with one wooden table, barbecue pit and a small wooden windscreen. The large pier at the point’s easternmost tip provides access to fishing for halibut, striped bass, perch, sturgeon, and flounder, depending on the season (State Parks 2009c). A restroom building with four individual flush-toilets and sinks is located at the foot of the fishing pier. The 12-foot-wide wooden pier extends south into the Bay for approximately 300 feet and widens to a 28-foot by 20-foot platform at its end that has an asphalt deck. Wooden benches along the pier sides provide areas for sitting. A fish cleaning station with a single sink is located near the Bay end of the pier. The pier is in good condition.

Old Pier

The Old Pier extends south from Jamestown Avenue between the Last Port and the Main Park (Heart of the Park) areas and provides fishing opportunities. The wooden pier is approximately four feet wide and just under 400 feet long, with a platform at its end

that is approximately eight feet wide and 36 feet long. The pier is temporarily closed for rehabilitation of fire damage (Moises, pers. comm., 2010).

Last Port

The Last Port area provides additional shoreline and day use facilities. Two small sand beaches (at Hermit's Cove and Candlestick Cove to the west) provide shoreline access and beach play. Trails in the Last Port area also contain fitness course stations like those in the Main Park (Heart of the Park). Fourteen individual picnic sites line the perimeter of the Last Port, each with one wooden table. Some of the sites have barbecue pits, and all but one have a small, wooden windscreen. One restroom building with two individual flush-toilets and sinks is in the western portion of the Last Port, near Harney Way.

Phase Four Area

The Phase Four area (Candlestick Meadows) is largely undeveloped, with the exception of natural surface trails that primarily receive pedestrian use. However, trails in this area have also served as a cyclocross racecourse for off-road cycling events, which have occurred several times per year, typically for two weekend days. A total of about seven cyclocross events have occurred at CPSRA over the last several years (Meneguzzi, pers. comm., 2010).

The western portion of the Phase Four area (Candlestick Meadows) just north of the main entry has a portion of a "wind tunnel," two concrete walls designed to make noise in the wind. The remainder of this feature is immediately outside of the revised CPSRA boundary.

The Phase Four area (Candlestick Meadows) includes a motorized boat launch area – the launch was removed in the 1980s because siltation of the South Basin has limited its accessibility for boating. The boat launch area contains a paved loop road, marked vehicle and boat parking spaces, and parking and directional signs intended to serve a planned boat ramp for motorized boats. In 2006, park staff removed previously installed waterside facilities, including piers, lights, and channel markers (State Parks 2006). The area contains gates that restrict vehicle access (State Parks 2006; Moises, pers. comm., 2010), and some visitors use the adjacent paved area for passive recreation, such as walking and flying model airplanes. During San Francisco 49ers home games and special events, the boat launch drop-off area and parking lot are used for stadium parking and not open to the public (Meneguzzi, pers. comm., 2010). Pacific Gas and Electric (PG&E) also uses the boat launch parking area once per year to conduct vehicle safety courses (Moises, pers. comm., 2010).

Two circular, concrete viewing platforms overlook the Bay in the boat launch area. These structures have heavy graffiti and are overgrown with vegetation but are otherwise in sound condition. Two additional concrete overlooks, located along the eastern shoreline, were designed as an art element as part of a wind wall. The Bay's tides and waves have broken the concrete path leading up to these overlooks, and State Parks has closed them for safety purposes.

The boat launch contains one restroom with six individual flush-toilets and sinks that are open only during 49ers home games and special events (Moises, pers. comm., 2010). This restroom building is similar to those in the Main Park (Heart of the Park); however, it requires a new door, and the drinking fountain is not currently working. This building is a frequent target for vandals (Moises, 2010).

Ranger Station

The CPSRA Ranger Station is at 1150 Carroll Avenue near the intersection with Arelious Walker Drive, at the north end of the park. The Ranger Station consists of two adjacent buildings and a small parking area bounded by a chain-link fence and gate that is locked after hours. Both buildings have frontage along Carroll Avenue; however, they are accessed via the parking area. These buildings house CPSRA's office and maintenance activities and do not currently provide any visitor services, although the small visitor services building has served as a meeting place in the past for visiting school groups (Moises, pers. comm., 2010).

The main office is a 7,500-square-foot building that contains office and maintenance activities. The building is a warehouse with concrete tilt-up walls, 28-foot high ceilings, and a flat roof and is in fair condition (Moises, pers. comm., 2010). Most of the building houses CPSRA vehicles, and a 1,000-square-foot area serves as a maintenance shop. Wooden walls and a door separate the 1,600-square-foot main office from the larger maintenance area. The main office provides offices for five employees; a stationary closet and small bay for a copier, fax machine, and communication radios; and a small kitchen with a sink and microwave oven. The main office's two restrooms meet Americans with Disabilities Act (ADA) requirements (Moises, pers. comm., 2010).

Directly northwest of the main office is a 600-square-foot building, originally constructed to provide visitor services. Although this building contains interpretive materials, such as signs and an empty fish tank, and has served as a meeting point for visiting school group, it currently serves as the Supervising Ranger's office. This building contains redwood exterior panel walls, a metal security door, barred windows, and a flat roof and is in fair condition. Its single restroom does not meet ADA requirements (Moises, pers. comm., 2010).

Community Garden

CPSRA's Community Garden is on the east side of the Ranger Station. The garden offers 48 individual plots for growing vegetables and flowers. The plots are fully allocated and used primarily by members of the local community. The Community Garden is open during park hours and is surrounded by a fence with a gate that is locked after hours (Moises, pers. comm., 2010). Literacy for Environmental Justice, a community-based group, propagates native plants in a nursery located in the Community Garden (Rump, pers. comm., 2009). The nursery includes a shade structure constructed of wooden posts and netting, as well as a recently built greenhouse, made of polycarbonate. The garden area also has eight picnic tables for visitors to use (Meneguzzi, 2009).

Community Garden

Yosemite Slough

Yosemite Slough, at the northern end of CPSRA, is largely inaccessible due to fencing and surrounding industrial land uses, although visitors may enter the area on foot from the unimproved area to the southeast. Plans are underway for ecological restoration, soil remediation, and recreation via the Yosemite Slough Restoration Project. The project includes the development of new trails, vehicle access points, parking areas,

picnic areas, lawn areas, an interpretive area that could include an enclosed structure or an outdoor pavilion, and educational displays. The area of CPSRA east of Yosemite Slough contained four buildings formerly used as warehouses. These buildings were demolished with the Yosemite Slough Phase I project. Public access is restricted to this area of Yosemite Slough.

RV Park

Candlestick RV Park is a private RV park located adjacent to CPSRA, in front of Candlestick Stadium. The RV Park offers 165 RV sites with fill hookups, 24 tent sites and a variety of amenities including a laundromat, grocery store, game room, restrooms, showers, Wi Fi, and a shuttle between downtown San Francisco and the park.

Accessible Facilities

Accessible facilities at CPSRA include 1.5 miles of mostly level, paved trails; four picnic tables with barbecue grills and one restroom at the Plover group picnic area; four picnic tables at the Windharp Hill group picnic area; three picnic tables at the Last Port area; and one restroom at Sunrise Point (The Point) (State Parks 2003, 2009d).

Trails

CPSRA contains 3 miles of trails for non-motorized use (State Parks 2009a). CPSRA contains both paved and natural surface trails, described separately below. The Shoreline Trail is a paved facility meeting the ADA requirements extending 0.75 mile from the main parking area to the fishing pier. This trail provides hiking, biking, rollerblading, and skateboarding opportunities (State Parks 2009d; Meneguzzi, pers. comm., 2010).

Paved Trails

A network of paved service roads linking the restrooms and picnic areas serve as the primary trails for visitors, offering opportunities for walking, jogging, nature viewing, and biking in the Main Park area (Heart of the Park) (Meneguzzi, 2009). A one-mile paved segment of the Bay Trail also skirts CPSRA's shoreline in the Main Park (Heart of the Park) and Last Port areas (State Parks 2009d). Paved trails are typically asphalt, although several segments in the Phase Four area (Candlestick Meadows) are concrete. The paved trails are generally in good condition.

Natural Surface Trails

Natural surface trails wind through the entire CPSRA. Small dirt spur trails connect to the paved trails in the Main Park area (Heart of the Park), and a natural surface

segment of the Bay Trail skirts the eastern tip of CPSRA. Numerous natural surface spur trails in the Main Park (Heart of the Park), Last Port, and Phase Four (Candlestick Meadows) areas are designated segments of the Bay Trail. The Phase Four area (Candlestick Meadows) has dirt trails for hiking, nature viewing, and bicycling. Non-designated (user-created) trails are prevalent in this area. The Last Port area also contains natural surface trails that provide opportunities for walking, bicycling, and the use of the exercise stations along the paths (Meneguzzi 2009). Some of the natural surface trails in CPSRA have a decomposed granite surface, although in some cases visitor use has worn down the decomposed granite so that only dirt remains (Moises 2010). The southern shoreline of CPSRA is subject to strong erosion from the Bay's tides and waves, which has encroached upon segments of natural surface trails, notably the Bay Trail.

Park Attendance

State Parks produces annual statistical reports with visitor attendance estimates for each unit. Estimates rely on data collected at each unit on the number of day-use and camping visits (as opposed to number of visitors). Day use visits – the only type at CPSRA – include entry by motor vehicle, on foot, bicycle, or boat. The Statistical Report for the 2007/08 Fiscal Year reported approximately 278,000 visits to CPSRA between July 1, 2007 and June 30, 2008. More than 2.5 million people have visited CPSRA over the last 13 years, with an average annual attendance of approximately 195,000 visits (State Parks 2009a). The recreational user capacity in CPSRA is approximately 1,000 visitors at any given time (Meneguzzi 2009).

The 2007-2008 State Parks survey interviewed a total of 263 visitors at CPSRA on five different occasions (fall 2007; winter 2007-2008; and spring, summer, and fall 2008) and provides information on the activities participated in by respondents while visiting the park. The activity participated in by almost all survey respondents (96.5%) was beach play. Over half of respondents (54.4%) participated in walking for pleasure, and over one-third (42.6%) participated in relaxing in the outdoors. Other popular activities included biking (on paved and natural surface trails) (27%), picnicking (25.1%), wildlife viewing (17.9%), and bird watching (17.5%) (State Parks 2009b). Based on the 2007-2008 State Parks survey, summer is the most popular time of year at CPSRA, in large part because of warm, sunny weather. While other parts of San Francisco may be foggy, San Bruno Mountain to the southwest prevents fog from encroaching upon CPSRA. Memorial Day weekend, in late May, and July 4th are particularly popular days at CPSRA, with visitors picnicking, using the beaches, and participating in other day use activities. Windsurfing also occurs primarily in the summer afternoons, when the winds are strongest. The popularity of fishing at CPSRA varies depends on the game fish species in season. For example, March is halibut season and a particularly popular time

for visitors to fish from the large pier (Moises, pers. comm., 2010). CPSRA also sees spikes in visitor use during the fall coincident with 49ers home games (Meneguzzi, pers. comm., 2009).

Visitor Profile

Based on 2007-2009 State Parks survey data, CPSRA receives primarily local use from repeat visitors. The vast majority of survey respondents were from San Francisco (87.8%), with few respondents from the East Bay (5.7%), North Bay (3.0%), or Sacramento area (3.0%). Very few survey respondents were from out of state (0.4%). In addition, the vast majority of respondents (89.4%) had visited the park before. Congruent with most visitors originating from San Francisco, 60% of survey respondents learned of the park because they grew up nearby or live nearby. About a quarter of respondents (23.7%) visited the park on a recommendation from someone else, and approximately 10% of respondents learned of the park by chance (State Parks 2009b).

CPSRA was the primary trip destination for 80% of visitors. Most visitors stayed at the park for four hours or less, and almost one-half of respondents (49%) stayed at CPSRA for 31 minutes to two hours. Approximately 25% of respondents stayed up to four hours, while approximately 19% of respondents stayed from four to ten hours. Overall, the average length of stay in CPSRA was 3.2 hours (State Parks 2009b).

Over one-third of survey respondents visited CPSRA alone (36%), which was twice as many unaccompanied visitors as at similar state parks (16.1%) with the same classification (State Recreation Area). Of the 64% of survey respondents that were in groups, most respondents were visiting the park with family (45%) or friends (27%) (State Parks 2009b).

In general, visitors to CPSRA were in smaller groups than at other state parks, based on 2007-2009 survey data. Thirty percent of park survey respondents were in groups of two, and 16% were in groups of three to five people. The average group size for CPSRA was two people; average group size at similar state parks was three people (State Parks 2009b).

Visitor Demographics

Information on visitor demographics, such as gender, age, ethnicity, and income level, was also gathered as part of the 2007-2009 state park survey. Compared to other state parks with the same classification, respondent percentages for CPSRA were similar in gender and age categories, but CPSRA had a higher ethnic diversity of visitors, as well as more respondents with lower household incomes than other similar parks.

Almost two-thirds (63.1%) of park visitors surveyed between 2007 and 2009 were men. Almost one-half (46.1%)of park visitors surveyed were between the ages of 35 and 54, and just under one-quarter (22.8%) were between the ages of 18 and 34. Visitors 55 years of age and older accounted for 28% of survey respondents. For respondents that were part of a group, other group members were primarily under the age of 54, with almost one-quarter (24%) under the age of nine, and 20% between the ages of 35 and 44 (State Parks 2009b).

About three-quarters of CPSRA survey respondents classified themselves as White/Caucasian (28.1%), Hispanic or Latino (24.3%), or Black or African American (22.4%). Of note, the percentage of survey respondents at CPSRA that classified themselves as Black or African American (22.4%) was over 3.5 times higher than at other similar state parks (6.3%) (State Parks 2009b).

One-third of respondents had a household income of under $50,000, including approximately 20% with a household income between $25,000 and $49,999 and 16% with a household income under $25,000. One-quarter of respondents (25.1%) had a household income between $50,000 and $99,999. The remaining 15% of respondents had a household income of $100,000 or more (State Parks 2009b).

2.2 Interpretation and Education Resources

2.2.1 Existing Interpretation and Education

Due to budget cuts and staffing reductions over the last decade, very little interpretation and no scheduled State Parks-provided educational programming is currently offered at Candlestick Point SRA. The park does not have a visitor center or docents, and only one ranger, who is primarily tasked with unit management and protection duties, is available for interpretation-related inquiries.

Considerable demand for Candlestick Point educational programming exists with local schools and this is partially met through programs offered by a local non-profit organization (See current programs below).

2.2.2 Previous Interpretation and Education

In the past, when the unit was fully staffed, rangers provided regularly scheduled interpretive walks and hosted school groups on a weekly basis. The most popular offering was the “mud walk”: a one to two hour-long, ranger-led, low tide exploration of mudflat and wetlands ecology.

Other previous activities with an interpretive element included guided bird walks, talks on the natural history of San Francisco Bay, a Junior Ranger program, youth fishing events, a community garden, an Artist In Residence program and FamCamp® where rangers helped introduce urban families to camping and outdoor skills.

2.2.3 Interpretation and Education Facilities

No buildings are currently available at the SRA for interpretive or educational use. A 600-square foot building was originally constructed near the SRA's main office on Carroll Avenue to serve as a small visitor center. It still contains a non-ADA compliant restroom, an empty aquarium and some out-of-date interpretive panels, but is now used as the Supervising Ranger's office.

A fenced community garden area adjacent the Carroll Avenue main office dates from the period when the SRA offered formal interpretive programming. Today the garden has been revitalized by the Bay Youth for the Environment program, a partnership between State Parks, the California State Parks Foundation and local non-profit Literacy of Environmental Justice (LEJ). Besides the raised vegetable beds tended by community members, the fenced area now features an interpretive sign, a native plant nursery and a small garden of native plants with identification labels. At this time few, if any, general visitors access this out-of-the way venue, although LEJ occasionally uses the area in its K-12 educational programming.

Other interpretive amenities in the SRA includes the main entrance kiosk on Donner Avenue and a few out-of-date interpretive wayside signs remaining from different signage programs in the 1980s and 1990s.

The entrance kiosk is primarily used to communicate general information about the SRA (hours of operation, rules, etc.) but special notices, including those with interpretive messages, can be tacked up on its bulletin boards. The existing wayside signs interpret art installations from the previous Artist In Residence program, birds, rip tides, remains of wooden ships visible at low tide and previous uses of the area. The signs show the effects of years of exposure to shoreline weather and their graphic design and content no longer conform to current State Parks standards for interpretive signage.

2.2.4 Current Programs / Personal Interpretation

No formal interpretive or educational programming is currently offered by State Parks at the SRA, although the one ranger with interpretive capabilities available on site will try to accommodate special requests from schools. This same ranger will also occasionally provide informal interpretation when contacted by visitors during the course of protection or management duties at the SRA.

A local non-profit organization, Literacy for Environmental Justice (LEJ) is now the only provider of formal interpretive and environmental education at the SRA.

LEJ has partnered with State Parks and the California State Parks Foundation to operate Bay Youth for the Environment, a science-based, after-school work program at the SRA that employs local youth from the Bayview Hunter's Point community. Through their native plant nursery at the SRA's Community Garden, the youth are supplying up to 10,000 native plants needed for the Candlestick/Yosemite Slough Wetlands Restoration project, and are learning wetlands ecosystem ecology while they promote community stewardship and voluntarism.

LEJ also provides free educational programs during the school year at the SRA for K-12 school groups engaging in stewardship-focused, science-based learning. Demand for this programming continues to grow each year, but because of staffing constraints LEJ cannot accommodate all school groups interested in participating

2.2.5 Print Publications

A Candlestick Point SRA informational brochure with a map of the unit is available via free download on the California State Parks website.

Literature for Environmental Justice (LEJ) sells a Candlestick Point SRA and Heron's Head Park-based environmental education curriculum titled, "Calling Nature Home: Restoring Environmental Justice to a Wetland Habitat". This 200 page K-12 curriculum focuses on watershed studies, animals and habitats, plants, birds, water quality, marine biology, urbanization and habitat destruction, environmental justice, and environmental health. Activities match California's educational standards, including classroom and community-based activities.

No other interpretive or educational publications specific to the Candlestick Point SRA are available at this time, although many existing teachers guides, curriculums and other publications about San Francisco Bay natural history, Bay wetlands ecology and Ohlone cultural history are relevant to the interpretive and educational opportunities at the SRA.

2.2.6 Electronic Interpretation

Information on Candlestick Point SRA, including brief summaries of the unit's history, wetlands restoration and other interpretive values, are provided on the websites of both California State Parks and the California State Parks Foundation. The CSPF site includes a Podcast about the SRA.

In addition, Literacy for Environmental Justice (LEJ) outlines their Candlestick Point SRA-based environmental education programming on their website.

2.2.7 Universal Accessibility of Park Interpretation

Not including the wetlands restoration areas of Yosemite Slough–which are not yet open to the public–many of the SRA's interpretive resources can be experienced via two generally accessible trails:

The Bay Trail is a popular paved hike, bike and roller blade trail about one mile long that follows the shore. Trailheads, generally accessible restroom and parking are at Candlestick SRA main lot and at the Last Port parking lot. The Shoreline Trail is a paved accessible hike, bike, and skate trail about .75-mile long that leads to a fishing site at the Point. Trailhead, accessible parking, and restroom are located at the main parking lot.

Existing interpretive signage at the SRA is outdated and does not meet current California State Parks Accessibility Guidelines. Some key features of the SRA used in past interpretive programming, such as beaches and mudflats, are not accessible to persons with mobility disabilities. Beach wheelchairs provided at other State Parks are not available at the SRA.

Under the new Candlestick Point SRA General Plan universal access for park visitors will be incorporated into all program areas. This will include interpretive and educational facilities, media, programs and routes to interpretive/educational areas.

2.2.8 Interpretation and Education Planning

The previous Candlestick Point SRA General Plan, approved November 1978 and amended May 1987 identified the following interpretive opportunities and related topics:

Interpretation of the park's cultural environment

- Programs dealing with urban populations
  - Ethnic dance, music and art
- Naval history of the site
- Native American use of the baylands
- Chinese shrimp fishing in the bay

Interpretation of the artificial bay fill upon which the park is built

- Effects of bay fill
- Various materials that make up the fill

Interpretation of the park's natural features

- Energy, especially that of wind and water
- Bird life and fish life
- Marshland ecosystems and restoration of marshland habitats
- Upland habitats where birds and mammals reside

Programs about the environment of the San Francisco Bay region

- Helping visitors understand the San Francisco Bay environment
  - As it existed during occupation by Native Americans
  - As it exists today
- Helping visitors understand their responsibilities to the San Francisco Bay environment

The 1978 (amended 1987) General Plan also outlined two primary themes for interpretation at Candlestick Point SRA:

1. Primary theme: Adaptation of an ecological system to intrusion by people
    a. Emphasize the drastic changes in the SRA's ecological system
    b. Tell the story of the landfill
    c. Draw parallels between the change in the ecology of the SRA and adaptations of people in a changing environment, e.g. from rural to city dwellers
    d. Subtheme: interpretation of the mudflats and marsh lands
        i. Ecological adaptations
        ii. How they form
        iii. How they change through time
        iv. The animals and plants that inhabit them
        v. The animals and birds that rest here during their annual migrations
    e. Subtheme: interpretation of the State Park system
        i. Meaning to urban dwellers
        ii. What it has to offer urban dwellers
        iii. Why it is important to them
        iv. How they may enjoy it
        v. Where they can find State Park units near them
        vi. How they can get there

2. Primary theme: Human potential of the diverse populations of the urban areas surrounding Candlestick Point
    a. Concepts of human dynamics, self-discovery and self-improvement
    b. New system of urban interpretation with creative ideas concerning possible subthemes of:

i. Non-renewable resources
ii. Energy systems
iii. Human potential
iv. Leisure time
v. Self-enlightenment
vi. Awareness
vii. Sensitivity to the surrounding lands

2.2.9 Interpretive Collections

Collections and displays of objects can be useful in interpreting ideas, concepts and themes important to a State Park. At this time Candlestick Point SRA lacks any interpretive collections and has yet to develop a Scope of Collections Statement for acquiring interpretive objects in the future.

Collections will play an important role in the expanded interpretive and educational programming outlined in the new General Plan. Hands-on or displayed objects will be especially important for interpreting themes that have no remaining tangible evidence at the SRA, such as themes related to past Ohlone culture or 19th Century Chinese fishing camps.

Artifacts and reproduction objects related to cultural history themes at the SRA may be available in the existing archives of the California Department of Parks and Recreation. Natural history specimens to aid interpretation of the SRA's flora and fauna may be collected on site or acquired from other State Park collections or the collections of non-State Park agencies doing similar interpretation.

2.2.10 Interpretation Audience Demographics

Demographics of Candlestick Point SRA's current potential interpretive audiences match those of existing visitors and the surrounding Bayview Hunters Point neighborhood (See visitor demographics section of this document).

Since budget and staffing cutbacks over the last ten years have eliminated State Parks-provided interpretive and educational programming at the SRA, only a small portion of the SRA's potential interpretation audience is being reached through the K-12 educational programming provided by local non-profit Literacy for Environmental Justice (LEJ). Both LEJ and State Park staff report substantial unmet demand for interpretive and educational services at the SRA.

Future interpretive audience demographics for the SRA will likely be altered by new development projects planned for the surrounding area. An estimated 35,000+ new residents and workers would be added to the local community by the proposed

Candlestick Point-Hunters Point Shipyard Development Project. Further changes in potential audience demographics can also be expected from other proposed development projects, such as in Executive Park and Visitation Valley.

2.2.11 Support for Interpretation

State Parks currently lacks sufficient staff and financial resources to present interpretive and educational programming at Candlestick Point SRA.

California State Parks Foundation (CSPF) has partnered with Literacy for Environmental Justice (LEF) to provide some environmental education at the SRA via the Bay Youth for the Environment program. Financial support for the program includes grants from Adobe Foundation, S.D. Bechtel, Jr. Foundation, Walter and Elise Haas Fund, the California State Coastal Conservancy, William Randolph Hearst Foundation and CSPF.

Financial resources for State Parks-provided interpretive and educational programming at the SRA may become available in the future via funding related to the proposed Candlestick Point-Hunters Point Shipyard Development Project. Senate Bill (SB) 792, signed into law in October 2009, authorized reconfiguring the SRA and transferring 29.2 acres to the Candlestick Point-Hunters Point Development Plan in exchange for improvements within the park and an on-going funding source for park operations and maintenance.

2.2.12 Local, Regional, and Statewide Context

As California's first urban State Park, Candlestick Point SRA has unique stories of statewide importance to interpret relating to site history, environmental justice and themes centered around ecological adaptation to urbanization and the diverse human resources of the surrounding urban neighborhoods.

Some of the most popular interpretive and educational programming presented at the SRA in the past by State Parks and currently by the non-profit Literacy for Environmental Justice (LEJ) deals with the topics of marsh and wetlands ecology, tidal mudflat ecology, birds and fish of San Francisco Bay, environmental stewardship and habitat restoration. While similar subject matter is interpreted at numerous other venues in the San Francisco Bay region, the SRA offers a rare opportunity for local residents and area school children to have access to these interpretive resources along San Francisco's industrialized Southeast Waterfront.

At present, the SRA is not meeting the interpretation and education needs of local educators or of visitors to the park from the local community, the San Francisco Bay region or statewide. There is an opportunity to meet these needs when future funding allows State Parks to resume interpretive and educational programming at the SRA.

The nearest similar urban shoreline resource-based interpretive facility to the SRA is the recently opened (Fall, 2010) EcoCenter at Heron's Head Park, located on the Hunters Point waterfront about 3 miles driving distance north of the SRA. The EcoCenter plans to offer programs focusing on Ecology, Society, and Well Being: clean air and water, safe energy, healthy food, non-toxic homes and schools, open space restoration, and equitable education and employment. A project of the non-profit Literacy for Environmental Justice (LEJ), which also provides the only current environmental education programming at Candlestick Point SRA, the EcoCenter serves the same local schools as the SRA and is expected to be a future partner to interpretation and education at the SRA.

Other shoreline-based interpretive facilities available to local educators in nearby communities include:

- Crissy Field Center, Golden Gate National Recreation Area (approximately 11.5 miles driving distance north of the SRA). Programming topics include Ohlone cultural history, Early California cultural history, marsh ecology, marsh birds, urban environmental school programs.
- San Francisco Bay Model Regional Visitor Center–U.S. Army Corps of Engineers, Sausalito (approximately 17 miles driving distance north, across the Golden Gate Bridge). Programming focus is on tidal action in San Francisco Bay and the impacts of human activities on the Bay.
- Crab Cove Visitor Center and Marine Reserve–East Bay Regional Parks District, Alameda (approximately 19.5 miles driving distance east, across the Bay Bridge). Programs include Bay Lab and Bay in the Classroom.
- Hayward Shoreline Interpretive Center, Hayward (approximately 28 miles driving distance east, across the San Mateo Bridge). Programming focus is on marsh and wetland ecology.
- China Camp State Park, San Rafael (approximately 30 miles driving distance north, across the Golden Gate Bridge). Programming focus is on history of Chinese fishing in San Francisco Bay.
- Newark Slough Learning Center, Don Edwards National Wildlife Refuge, Newark (approximately 32 miles east, across the Dumbarton Bridge). Programming focus is on wetland ecology and the role of urban wildlife refuges.
- Coyote Hills Regional Park–East Bay Regional Parks District, Fremont (approximately 34 miles driving distance east, across the Dumbarton Bridge). Programming topics include Native American history and culture, birds and butterflies, marsh and grassland ecology, general nature exploration.

- Environmental Education Center, Don Edwards National Wildlife Refuge, Alviso (approximately 40 miles south of the SRA). Programming focus is on wetland ecology and the role of urban wildlife refuges.

In addition to the above facilities, a number of non-profit groups and agencies offer shoreline resource-based interpretation and education in the San Francisco Bay Area. These include:

- San Francisco Nature Education, San Francisco (Environmental conservation, birds and coastal bird ecology)
- Environmental Volunteers, Palo Alto (Bay lands and marine ecology)
- Kids for the Bay, Berkeley (San Francisco Bay ecology)
- Marine Science Institute, Redwood City (San Francisco Bay science and ecology)
- Save the Bay, Oakland (watershed and San Francisco Bay and estuary ecology)

2.3 Operations and Maintenance

2.3.1 Utilities and Services

Lighting

The Main Park area (Heart of the Park) is lighted at night for safety purposes (Moises, 2010). Lampposts along the trails and main parking area consist of wooden poles with metal lamp fixtures. Several of these fixtures are not functioning, as replacement parts are not available for lights of their age. The old boat launch area has streetlights with metal poles and double arms; however, due to vandalism of the cooper wires, these light standards are inoperable (Moises, 2010).

Water

The SFPUC supplies CPSRA with water from its Regional Water System that spans from the Hetch Hetchy Reservoir in the Sierra Nevada mountain range to the San Francisco Bay Area (SFRA and SFPD 2009). The main water valve for CPSRA is near the intersection of Carroll Avenue and Arelious Walker Drive. Water main lines throughout CPSRA distribute potable water to all of the buildings, group picnic areas, fishing pier, and Community Garden. Water lines also serve six irrigation stations, five in the Main Park area (Heart of the Park) and one in the Last Port area, with backflow prevention controls. Additional water lines provide irrigation for recent native plantings in the Phase Four area (Candlestick Meadows).

CPSRA uses irrigation underground with underground pipes, sprinkler systems, and hoses depending on the area (Moises, pers. comm., 2010).

Wastewater

CPSRA uses lift stations to pump wastewater from its restroom buildings to San Francisco's combined sewer system, described previously in the *Hydrology and Water Quality* section. Each restroom building has its own sewage lift station, which is pump-fed to the main lift station and subsequently, to the city sewage system. The Main lift station is adjacent to the Main Entrance Station. Buildings at the Ranger Station use a wastewater vault, pumped twice monthly to the City's combined sewer system. CPSRA has contracted with United Site Services of California, Inc. (USSC) for wastewater pumping on a bi-monthly basis. Water from the sink at the Windharp Hill group picnic area drains to a vault that USSC pumps out on-call, about two or three times per year. CPSRA does not have any septic tanks on site (Moises, pers. comm., 2010).

Stormwater

As described previously under the *Hydrology and Water Quality* section, San Francisco's combined sewer system serves a portion of CPSRA. A network of storm drains and pipes collects and conveys stormwater from the Last Port and Yosemite Slough areas to the San Francisco Southeast Water Pollution Control Plant. The portion of CPSRA not served by the combined sewer system contains six stormwater outfalls at the lowest portion of paved road leading to the boat launch and three 4-inch corrugated drainpipes between the Windharp Hill group picnic area and the Windsurf Circle (The Neck), which drain excess storm water toward the shoreline. One culvert owned by City of San Francisco also drains to the shoreline just west of the Windsurf Circle (The Neck), below a small footbridge. A depression that remained following the concrete rubble removal in the Phase Four area (Candlestick Meadows) collects and temporarily stores stormwater (Moises 2010).

Solid Waste

Sunset Scavenger Company collects solid waste in CPSRA and delivers it to the San Francisco Recycling Center for sorting and removal of recyclables and organic materials. Excess yard waste is transported to the Jepson Prairie composting facility near Vacaville on a weekly basis. CPSRA composts other organic waste on-site, for use in the Community Garden or Main Park area (Heart of the Park). Non-recyclable and non-compostable solid waste is transported to the Altamont Landfill in Livermore (Moises, pers. comm., 2010, SFRA and SFPD 2009; Meneguzzi, pers. comm., 2009). CPSRA's Community Garden also has three stalls for composting on site.

Electricity and Natural Gas

PG&E provides electricity to CPSRA (Meneguzzi, pers. comm., 2009). Overhead electric lines along the streets in the surrounding neighborhood deliver power to CPSRA via a pole on Carroll Avenue. However, all electric lines within CPSRA are underground.

Electricity powers all of CPSRA's buildings, lighting, and wastewater lift stations (Moises, pers. comm., 2010).

The park does not use natural gas (Meneguzzi, pers. comm., 2009), although an underground gas line extends into CPSRA along Griffith Street east of Yosemite Slough (State Parks 1978c).

Telecommunications

AT&T provides telecommunications at CPSRA, which service the Ranger Station buildings and Main Entrance Station. Aboveground lines are along streets surrounding CPSRA. CPSRA does not have any public telephones. Both buildings at the Ranger Station have internet service, linked with the State Parks system in Sacramento. The Main Entrance Station has telephone service only (Moises, pers. comm., 2010).

2.3.2 Security and Emergency Services

Park Security

Three full-time State Park Peace Officers, including one supervising ranger and two rangers, are the first line of public safety protection at CPSRA. CPSRA has had few law enforcement problems (Meneguzzi, pers. comm., 2009). However, rangers routinely remove homeless people camped in the Yosemite Slough area and enforce the rule requiring dogs to be on-leash. Other problems that have occurred in CPSRA include graffiti, stolen electrical wiring, and the creation of non-designated trails, notably in the Phase Four area (Candlestick Meadows), as well as vehicles performing "donuts" in the Windsurf Circle (The Neck) (Moises, pers. comm., 2010).

CPSRA also falls within the San Francisco Police Department's Bayview District, whose Bayview Police Station is less than one mile to the west, at 201 Williams Avenue. The Bayview Station provides two officers during San Francisco 49ers home games to assist with security, including patrolling the parking lots, and control traffic in the stadium vicinity (SFRA and SFPD 2009).

Fire Protection

The San Francisco Fire Department (SFFD) provides fire protection and emergency services for the entire City of San Francisco, including CPSRA. The SFFD Station 17 is two blocks north of Yosemite Slough (at the intersection of Shafter Avenue and Ingalls Street) and the closest to the park. The estimated response time to the CPSRA vicinity is 1 minute.[4] Station 17 has nine employees on duty per shift, including one paramedic

[4] Response times to CPSRA are based on the estimated travel time to the corner of Hawes Street and Caroll Avenue.

specialist capable of providing pre-hospital advanced medical and trauma care. The station maintains one fire engine, staffed with one officer and three firefighters, and one ladder truck, staffed with one officer and four firefighters (SFRA and SFPD 2009).

Southeast San Francisco has four additional fire stations, all staffed with paramedic specialists. Typically, stations east of US-101, a considerable obstacle, respond to calls from the Bayview Hunters Point neighborhood, although stations west of the freeway may respond as well. Response times to the CPSRA vicinity range from four to seven minutes. Table 2-2 provides information on the Fire Stations in the vicinity of CPSRA (SFRA and SFPD 2009).

Table 2-2: Fire Stations in the Vicinity of CPSRA

Station	Location	Equipment	Personnel per Shift	Response Time (Min.)
17	1295 Shafter Ave.	Engine, Ladder Truck	9	1
44	1298 Girard St.	Engine	4	4
42	2430 San Bruno Ave.	Engine	4	4
25	3305 Third St.	Engine	4	6
9	2245 Jerold Ave.	Engine, Ladder Truck, Battalion Chief	10	7

Note: Response time represents the estimated travel time to the corner of Hawes Street and Caroll Avenue.
Source: SFRA and SFPD 2009

San Francisco's Auxiliary Water Supply System (AWSS) provides water for fire suppression through a system of reservoirs, pumping stations, and pipes throughout the city. The proposed Candlestick Point-Hunters Point Shipyard Development Project plans to extend the AWSS along Gilman Avenue and construct a new loop in Candlestick Point to ensure adequate water pressure for fire protection (SFRA and SFPD 2009).

2.4 Transportation and Circulation

The transportation network near CPSRA includes highways, surface streets, railways, and public transit services that link San Francisco with other parts of the Bay Area and Northern California.

2.4.1 Regional Circulation

Roadway Network

Regional access to CPSRA is provided by US-101, a north-south highway that extends through the states of Washington, Oregon, and California. US-101 provides access to CPSRA via freeway interchanges at Harney Way/Alana Way and Bayshore Boulevard/Third Street.

Approximately two miles north of the CPSRA, US-101 merges with Interstate 280 (I-280), another north-south highway that extends from San Francisco south to San Jose. North of the US-101/I-280 junction, US-101 merges with Interstate 80 (I-80), an east-west highway that leads to the Bay Bridge and the East Bay.

Bayshore Boulevard and Third Street also provide regional access to CPSRA. Bayshore Boulevard is a north-south arterial that generally parallels US-101. Third Street is the principal north-south arterial in the southeast part of San Francisco, extending from its interchange with US-101 and Bayshore Boulevard to Market Street in downtown San Francisco. It is the main commercial street in the Bayview Hunters Point neighborhood and also provides access to the industrial areas north and east of US-101.

Local streets that serve CPSRA include the following:

- Alana Way and Harney Way serve as the primary connection between US-101 and CPSRA.
- Jamestown Avenue and Hunters Point Expressway circle the existing Candlestick Park stadium and parking lot and provide access to the CPSRA main entrance. Jamestown Avenue also provides access to Bayview Park.
- Arelious Walker Drive, Griffith Street and Ingalls Street run east-west in the CPSRA vicinity. Arelious Walker Drive and Griffith Street are interrupted by Yosemite Slough.
- Carroll Avenue, Gilman Avenue, Ingerson Avenue, Underwood Avenue and Thomas Avenue extend from Third Street southeast to CPSRA and Candlestick Park stadium.
- Tunnel Avenue extends south of Bayshore Boulevard and merges onto Bayshore Boulevard at Old County Road. Tunnel Avenue provides access to the Bayshore Caltrain Station and to the US-101 ramps at Alana Way and Beatty Road.

Traffic Operations

As part of the transportation study that was prepared for the Candlestick Point -Hunters Point Shipyard Phase II EIR, existing traffic conditions on regional roadways and at local intersections in the CPSRA vicinity were analyzed for the weekday a.m. (8:00 to

9:00 a.m.) and p.m. (5:00 p.m. to 6:00 p.m.) peak hours, and for Sunday (no football game) p.m. peak hour (4:00 p.m. to 5:00 p.m.) which coincide with the current morning and evening commute periods.

Traffic conditions at the study intersections were evaluated using the concept of Level of Service (LOS). Level of Service is a qualitative description of operating conditions ranging from LOS A, which indicates excellent conditions with little or no delay, to LOS F, or congested conditions with extremely long delays. LOS A through D are considered excellent to satisfactory service levels, LOS E is undesirable, and LOS F conditions are unacceptable. During the weekday AM and PM peak hours, most intersections in the CPSRA vicinity currently operate at LOS D or better. While the transportation study for the Candlestick Point - Hunters Point Shipyard Phase II Development Plan identified a few intersections that operate at LOS E during the weekday AM and PM peak hours, these intersections are not relevant to CPSRA.

Existing Game Day Operations

Candlestick Park stadium currently serves as the home of the San Francisco 49ers football team. The stadium typically hosts up to 12 games per year on Sunday afternoons.

On Sundays when no football game is scheduled, intersections in the CPSRA vicinity currently operate at LOS D or better during the Sunday PM peak hour (4:00 to 5:00 p.m.). The Sunday p.m. peak hour coincides with the time that afternoon football games at Candlestick Park typically end, and the majority of the spectators depart the stadium.

On Sundays when football games are held, the additional traffic added to the transportation network results in substantial congestion on local streets between parking facilities and the freeway, and on the freeways, particularly where game day traffic merges with other traffic already on the freeway. On game days, traffic congestion occurs both before and after the game, but it is substantially worse immediately following the game because most spectators leave the stadium at the same time. (Mitchell, 2010)

Transit Service

Transit service to and from CPSRA and vicinity is primarily provided by the San Francisco Municipal Railway (Muni) bus and light rail lines, which can be used to access regional transit operators. Service to and from the East Bay is provided by Bay Area Rapid Transit (BART), AC Transit, and ferries; service to and from the North Bay is provided by Golden Gate Transit buses and ferries; and service to and from the Peninsula and South Bay is provided by Caltrain, SamTrans, and BART.

Regional Transit Providers

BART

BART operates regional rail transit service connecting San Francisco with the East Bay and northern San Mateo County. BART provides service along Market and Mission streets and near the western I-280 corridor in San Francisco.

Caltrain

Caltrain provides rail passenger service on the Peninsula and in Santa Clara Valley between Gilroy and San Francisco. The Peninsula Corridor Joint Powers Board, a joint powers agency consisting of San Francisco, San Mateo, and Santa Clara counties, operates the service. Caltrain currently operates 86 trains each weekday, with a combination of Baby Bullet, express, and local services. The San Francisco Caltrain terminal is at Fourth Street between King and Townsend Streets to the north of CPSRA.

The closest Caltrain station to CPSRA is the Bayshore station in Brisbane at the San Mateo/San Francisco border. The station is on Tunnel Avenue, just southeast of Bayshore Boulevard. There are no direct connections with other transit services from the Bayshore station. However, Muni and SamTrans can be accessed by walking two to three blocks from the station to bus stops along Bayshore Boulevard.

SamTrans

SamTrans, operated by the San Mateo County Transit District, provides bus service between San Mateo County and San Francisco. SamTrans operates two routes—292 and 397—that serve the Bayview neighborhood along Bayshore Boulevard, and only Route 292 operates during peak hours. There is no direct SamTrans service to CPSRA vicinity, except during football game days. Route 7B operates along Bayshore Boulevard and stops near the Bayshore Caltrain station on game days.

AC Transit

AC Transit is the primary bus operator for the East Bay, including Alameda and western Contra Costa counties. AC Transit operates 37 routes between the East Bay and San Francisco, all of which terminate at the Transbay Transit Terminal, located on Mission Street between First and Fremont streets. Most Transbay service is peak-hour and peak-direction (to San Francisco during the AM peak period and from San Francisco during the PM peak period). To access the CPSRA vicinity, AC Transit riders must transfer at the Transbay Terminal to the Muni T-Third light rail line, and then to the Muni 29-Sunset at Paul Avenue.

Golden Gate Transit

The Golden Gate Bridge, Highway, and Transportation District (Golden Gate Transit) provides bus service between the North Bay (Marin and Sonoma counties) and San

Francisco. Golden Gate Transit does not provide local service within San Francisco. Golden Gate Transit can be accessed from CPSRA via the Muni T-Third light rail line, with a transfer near the Transbay Terminal.

Golden Gate Transit also provides ferry service between the North Bay and San Francisco. During the AM and PM peak periods, ferries operate between Larkspur and San Francisco and between Sausalito and San Francisco. The San Francisco terminal is at the Ferry Building, on the Embarcadero at Market Street. Access to the Ferry Building would generally require travel on the T-Third light rail line to the Embarcadero station.

Muni Service

Muni bus and light rail lines provide local access to CPSRA. The Muni lines that currently serve CPSRA and the vicinity include the following:

- 23-Monterey: The 23-Monterey bus line travels between the Bayview District and the Parkside District in the western end of the city, and it provides service to the Bernal Heights, Glen Park, Sunnyside and St. Francis Wood districts and the San Francisco Zoo. It also serves the Glen Park BART station.
- 29-Sunset: This is the only bus line that provides daily direct service to Candlestick Point. The route travels between the Bayview District and the Richmond District and provides service to the Portola, Excelsior, Outer Mission, Ingleside, Parkside Outer Sunset, Outer Richmond, and Seacliff districts. It serves the Balboa Park BART, City College of San Francisco, San Francisco State University, Stonestown mall, and Golden Gate Park.
- 54-Felton: The 54-Felton bus line is a community route that travels between the Bayview District and the Balboa Park and Daly City BART stations.
- T-Third: This light rail line travels along Bayshore Boulevard and Third Street in the Bayview District and provides service to downtown San Francisco. This line provides service to the Visitacion Valley, Bayview, Dogpatch, Mission Bay and Downtown districts. This route serves all Muni and BART stations along Market Street as well as the Caltrain station at Fourth and Townsend Streets.

Bicycle Network

Existing bicycle facilities in the CPSRA vicinity include routes that are part of the San Francisco Bicycle Network as well as regional routes that are part of the San Francisco Bay Trail system.

Bikeways are typically classified as Class I, Class II, or Class III facilities. Class I bikeways are bike paths with exclusive right-of-way for use by bicyclists or pedestrians.

Class II bikeways are striped bike lanes within the paved areas of roadways and established for the preferential use of bicycles. Class III bikeways are signed bike routes that allow bicycles to share travel lanes with vehicles.

In June 2009, the San Francisco Bicycle Plan was approved by the San Francisco Municipal Transportation Agency (SFMTA) Board (SFMTA 2009). Near-term improvement projects on the existing bicycle network in the vicinity of CPSRA are noted below.

Route #5 is a north-south bicycle route that runs between Visitacion Valley and North Beach, primarily as a Class III facility along Third Street and Illinois Street, and as a Class II facility along Bayshore Boulevard (south of US-101), the Embarcadero, and much of San Bruno Avenue. Since southbound Third Street does not cross over US-101 to connect with Bayshore Boulevard, southbound Bicycle Route #5 is routed onto Paul Avenue (via Connector Route #705) and San Bruno Avenue (also Bicycle Route #25). This split in the route is required, since the US-101 undercrossing between southbound Third Street and southbound Bayshore Boulevard that would require bicyclists to weave across high-speed traffic. Bicycle Route #5 connects with a regional bicycle route in Brisbane.

Route #7 is a Class III bike route between Mariposa Street and Carroll Avenue, via Indiana Street, Third Street, Phelps Street, Palou Avenue, and Keith Street. Route #7‘s southern terminus is at Keith Street and Carroll Avenue at the Bayview Playground. It is a Class III facility; however, wider travel lanes that allow bicyclists to ride outside of the path of vehicle travel are provided on sections of Indiana and Phelps streets, and on Keith Street.

Route #25 runs between the southeastern part of San Francisco and the Marina District. Route #25 runs along San Bruno Avenue, Bayshore Boulevard, and Oakdale Avenue in the Bayview Hunters Point area. In the CPSRA vicinity, Route #25 is a Class III facility. North of CPSRA, Route #25 runs as both a Class II facility (e.g., along Potrero Avenue, Harrison Street, and 11th Street), and as a Class III facility (e.g., 10th Street, Polk Street). San Francisco Bicycle Plan Project 5-4: Bayshore Boulevard Bicycle Lanes will involve the installation of Class II bicycle lanes in both directions of travel on Bayshore Boulevard between Cesar Chavez Street and Silver Avenue.

East-West Route #70 runs along Palou Avenue, Silver Avenue, and Monterey Boulevard between the Bayview Hunters Point area and West Portal as a Class III facility. The eastern terminus of this route is currently the Crisp south gate to Hunters Point Shipyard at Griffith Street and Palou Avenue.

Route #170 runs along Oakdale Avenue between Third Street and Bayshore Boulevard. Between Third Street and Bayshore Boulevard, this route has Class II bicycle lanes on both sides of the street.

Route #805 is a Class III facility that connects between Beatty Avenue and Tunnel Avenue (near the Bayshore Caltrain Station) in Brisbane and Third Street and Carroll Avenue. This route passes Candlestick Park stadium and the Candlestick Point State Recreation Area via Harney Way, Hunters Point Expressway, Gilman Avenue, Arelious Walker Drive, and Carroll Avenue.

Route #905 is a short Class III route that runs along Tunnel Avenue south, east of Bayshore Boulevard. Bicycle Route #905 connects with regional bicycle routes to the south in Brisbane and South San Francisco.

Route #925 is a short Class III route that runs along Blanken Avenue between Tunnel Avenue and Bayshore Boulevard, connecting Route #5 and Route #905.

Pedestrians

CPSRA has a network of existing multi-use trails that extend from the County line to the unimproved area just southeast of the land used for game day parking. Most of these trails are within CPSRA and do not intersect the local roadways, although some connect to, or are part of, the Bay Trail.

There are several dedicated pedestrian overcrossings in the vicinity of Candlestick Park stadium. These structures are designed to reduce pedestrian-vehicle conflicts associated with Candlestick Park events and adjacent schools. These include the stadium-related overcrossing of Jamestown Avenue just north of Harney Way and overcrossing of Harney Way, just west of Jamestown Avenue, and the overcrossing of Gilman Avenue at Griffith Street adjacent to the Bret Harte School.

Pedestrian activity in the immediate vicinity of CPSRA is light throughout the day during non-game days. During game days, pedestrians flood the area, traveling between the on-site and off-site parking facilities and the stadium.

On Third Street and on the residential streets immediately surrounding Third Street, the sidewalk network is adequate and relatively complete. In the light manufacturing areas surrounding Yosemite Slough, the sidewalk network is less complete and frequently obstructed by illegally parked vehicles and or vehicles loading. The extent, condition, and usability of the sidewalks generally decrease closer to Yosemite Slough.

Third Street is the primary pedestrian corridor in the vicinity, with the central commercial core located roughly between Thomas Avenue and Kirkwood Streets (north of CPSRA).

Counts of pedestrian volumes at crosswalks at three intersections on Third Street were conducted in September 2007 during the weekday AM and PM peak periods. Peak hour pedestrian volume at the crosswalks ranged between 25 and 400 pedestrians per hour, with the greatest number of pedestrians at the intersection of Third/Palou.

San Francisco Bay Trail

The San Francisco Bay Trail is designed to create recreational pathway links to the various commercial, industrial, and residential neighborhoods that surround San Francisco Bay. In addition, the trail connects points of historic, natural, and cultural interest; recreational areas such as beaches, marinas, fishing piers, boat launches, and over 130 parks and wildlife preserves, totaling 57,000 acres of open space. At various locations, the Bay Trail consists of paved multi-use paths, dirt trails, Class II bike lanes, and sidewalks. Within the CPSRA vicinity, the Bay Trail has a discontinuous segment of existing, off-street pathway in the area of Candlestick Point and Harney Way. An unimproved on-street segment of the Bay Trail extends from Harney Way west of CPSRA, under U.S. 101 to Sierra Point Parkway, near the intersection with Beatty Road.

The majority of CPSRA and the vicinity is flat, with limited changes in grades, facilitating bicycling within and through the area. East of Third Street, there are active and inactive rail tracks within the roadways that could impede bicycle travel. While Bayview Hill and Hunters Point Hill pose challenges for bicyclists, the majority of the area is relatively flat.

Bicycle activity in the vicinity of CPSRA is generally low. Weekday a.m. and p.m. peak period and Saturday midday period bicycle volume counts were conducted on Third Street, Oakdale Avenue, and Evans Avenue as part of the Candlestick Point – Hunters Point Shipyard Phase II Development Plan. Hourly bicycle volumes ranged between one and 30 bicyclists per hour, with the greatest number of bicyclists on Third Street and on Oakdale Avenue. More bicyclists were observed on weekdays than weekends.

Parking

On-street parking in the vicinity of CPSRA is generally unrestricted (other than weekly street cleaning), and is typically permitted on both sides of the street. Parking spaces for CPSRA visitors are available off Harney Way, west of Jamestown Avenue. Please see the description of parking under *Internal Circulation*, below, for additional description of parking for CPSRA visitors. On the wider avenues with light industrial land uses, roadways accommodate 90-degree perpendicular parking. Along Third Street on-street parking is metered, and has been removed in the vicinity of the light rail stations. No Residential Permit Parking areas occur within the CPSRA vicinity.

As part of the planning for the Candlestick – Point Hunters Point Shipyard Phase II Development Plan, surveys of on-street parking were conducted within the mostly residential and partial industrial area bounded by Third Street to the west, Carroll Avenue to the north, Arelious Walker Drive to the east, and Jamestown Avenue to the south.

During the daytime, on-street parking demand in the vicinity of CPSRA ranges between 66% during the midday period (accommodating employee parking demand associated with the industrial uses) and 57% during the evening.

No City-owned off-street parking facilities exist in the vicinity of CPSRA. While a limited number of privately owned parking facilities occur in this area, most drivers rely on on-street parking. The available privately owned off-street parking facilities serve employees and visitors to the adjacent businesses and are not available for general public parking.

2.4.2 Internal Circulation

Access and Roads

The main access to CPSRA is via Hunters Point Expressway (Meneguzzi, pers. comm., 2009), a four-lane road that separates CPSRA from the Candlestick Point stadium parking lot to the west. Donner Avenue, a single-lane, paved road, branches off Hunters Point Expressway and leads to the main park entrance gate approximately 50 feet to the east. The main interior road in CPSRA turns sharply south from the entrance gate and provides vehicle access to the Windsurf Circle (The Neck). An unnamed paved road continues north from the main park entrance gate to the boat launch area and large parking lot, although this is not open to the public.

Hunters Point Expressway increases to five lanes and becomes Jamestown Avenue as it approaches the shoreline to the south and west. This portion of Jamestown Avenue abuts the CPSRA boundary to the west.

Jamestown Avenue loops north, and the four-lane Harney Way branches off to the west, forming the northern boundary of CPSRA to the San Mateo County line. A small parking lot just south of Harney Way provides vehicle access to the Last Port area. Visitors may also park along Jamestown Avenue or Hunters Point Expressway and enter CPSRA on foot through the open gateways in the park fence. The Bay Trail, which traverses much of CPSRA, provides additional pedestrian and bike access from adjacent roadways and neighborhoods (Meneguzzi, pers. comm., 2009).

Parking

CPSRA contains two parking areas and additional unmarked parking along adjacent roadways for visitors. The main parking area extends along both sides of Donner Avenue, from approximately 500 feet south of the main park entrance gate to the Windsurf Circle (The Neck), and provides 180 marked parking spaces, including five handicap spaces.

The Last Port's smaller, natural surface parking area accommodates 32 vehicles in unmarked parking spaces (Musillami, pers. comm., 2009). Jamestown Avenue and Hunters Point Expressway provide additional street parking near the Windsurf Circle (The Neck); however, street parking for CPSRA is not permitted during Francisco 49ers home games (Meneguzzi, pers. comm., 2009). The paved boat launch area and the large unimproved (and natural surface) area to the northwest serve as parking areas during home games. These areas accommodate approximately 314 vehicles during home games (Musillami, pers. comm., 2009). The Last Port's parking area and a portion of the unimproved area used for game day parking were included in the 2009 land exchange and are now outside the CPSRA boundary.

A small, paved parking area at the Ranger Station provides parking for CPSRA staff. A chain-link fence encloses this area, which is locked after hours.

2.5 Park Support

2.5.1 Current Operations

CPSRA is open year-round, seven days per week between 8 AM and 5 PM, with a later closing time in the summer. The main entrance station is staffed on 49ers home game days and for other special events (Meneguzzi, pers. comm., 2009).

The three full-time CPSRA rangers provide visitor services in addition to law enforcement. Five full-time employees currently attend to maintenance services, which include facility, equipment, and landscape maintenance; equipment operation; housekeeping; grounds keeping; and resource protection (Meneguzzi, pers. comm., 2009).

2.5.2 Partnerships

Maintenance

CPSRA contracts with Social Vocational Services, Inc., a non-profit organization that provides vocational and community-based opportunities for developmentally disabled

individuals (SVS 2010) for housekeeping services, including restroom cleaning, litter pick-up, etc. (Meneguzzi, pers. comm., 2009).

Volunteer Programs

Literacy for Environmental Justice, a local organization, runs volunteer programs at CPSRA. Volunteers are from corporate groups or monthly drop-in days coordinated by HandsOn Bay Area, a local volunteer group. Program participants help care for CPSRA's Community Garden, nursery, and winter plantings. Since the organization's involvement in 2004, volunteers have planted over 6,000 native plants at CPSRA. Specific areas of restoration include the Last Port, where Literacy for Environmental Justice removed invasive plants and planted 500-600 large native trees and shrubs. Literacy for Environmental Justice also planted 3,000 natives in the Phase Four area (Candlestick Meadows) to restore seasonal wetlands and create new trails following the concrete rubble clean up. Literacy for Environmental Justice is currently growing 3,300 native plants to revegetate the Rock City area. The organization's CPSRA volunteer program has grown each year, with over 600 volunteers last year, and routinely turns down interested volunteers because of staffing constraints (Rump, pers. comm., 2009).

Literacy for Environmental Justice also serves as the San Francisco County coordinator for Coastal Clean-Up Day (Rump, pers. comm., 2009), an annual statewide volunteer event sponsored by the California Coastal Commission. CPSRA hosted 500 volunteers on the 2009 Coastal Clean-Up Day. Volunteers have removed more than 35,000 pounds of garbage from CPSRA's shoreline over the last five years (Rump, pers. comm., 2009).

CPSRA also hosts volunteers participating in the California State Parks Foundation Earth Day Restoration and Cleanup program, an annual event to involve local community members in environmental improvement projects at State Parks (California State Parks Foundation 2010a). CPSRA staff usually prepares volunteer projects, which have included planting, mulching, habitat restoration, native plant propagation, and repair and improvements of the Community Garden and nursery. The event typically occurs on a Saturday in April. In 2009, CPSRA accommodated 100 Earth Day volunteers for four hours (Moises, pers. comm.; 2010, California State Parks Foundation 2010b).

Yosemite Slough Restoration Project

State Parks has collaborated with California State Parks Foundation for planning and implementation of the Yosemite Slough Restoration Project, which will create the largest contiguous wetland area in San Francisco. California State Parks Foundation has led the fundraising for the cleanup and construction and has raised $14.3 million from

multiple sources, including the Wildlife Conservation Board/State Coastal Conservancy, Association of Bay Area Governments, Bay Conservation Development Commission, the City and County of San Francisco, Bay Area Rapid Transit (BART), the Richard and Rhoda Goldman Foundation, U.S. EPA Region 9 - San Francisco Bay Water Quality Improvement Fund/San Francisco Estuary Partnership, the S.D. Bechtel, Jr. Foundation, the San Francisco Foundation, the Barkley Fund, and the California Department of Parks and Recreation. Construction of Phase I (north of the slough) began in 2011, and detailed design of Phase II (south of the slough) will occur in the future.

2.6 Planning Influences

2.6.1 System-wide Planning

In addition to the Planning Handbook (State Parks 2008), which provides guidance on the preparation and content of Park General Plans managed by State Parks, the following codes and policy documents provide additional information for park management:

- State Parks Mission Statement
- Public Resources Code
- CEQA
- State Parks Administration Manual
- State Parks Operations Manual
- California Recreational Trails Plan (Phase One)
- State Parks Accessibility Guidelines
- State Parks System Plan
- Concessions Program Policies
- Inventory, Mapping, and Assessment Program

State Parks Mission Statement

The State Parks mission statement 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”.

Public Resources Code

The California Public Resources Code (PRC) addresses natural, cultural, aesthetic, and recreational resources of the state. PRC sections 5019.50 to 5019.80, Classification of Units of the State Park System, provide guidelines for the designation of state park units

and guiding principles for state park improvements. The PRC also classifies different types of state park improvements of park units. This code will be used as a reference to plan appropriate improvements within CPSRA.

California Environmental Quality Act

CEQA requires state and local agencies to regulate activities with consideration for environmental protection. If a proposed activity has the potential for a significant adverse environmental impact, an EIR must be prepared and certified as to its adequacy before taking action on the proposed project. General plans require a Programmatic EIR, and park development projects require appropriate environmental review, which may include an EIR.

State Parks System Plan

The *California State Park System Plan* describes both the challenges that face the State Park System as well as the goals, policies, objectives, and proposals for new programs and initiatives needed to guide the State Park System.

California Recreational Trails Plan (Phase One)

The *California Recreational Trails Plan* (State Parks 2002) was prepared by the State Parks and released in June 2002. The plan identifies 12 trail-related goals and lists general action guidelines designed to reach those goals. The goals and their action guidelines will direct the future actions of State Parks Statewide Trails Office regarding trail programs. This plan will be followed by a more comprehensive Statewide Trails Plan (Phase Two) still to be to be developed. Phase One should serve as a general guide for trail advocates and local trail management agencies and organizations in planning future trails and developing trails-related programs. Additionally, other regional trails near CPSRA have the potential to connect with Bay Area and Central Valley trails identified in the Plan. Phase Two will use parts of Phase One as a guide and will incorporate hard data and generally accepted planning practices, including additional public input and comment.

The mission of the Statewide Trails Office is as follows:

> *Promote the establishment and maintenance of a system of trails and greenways that serves California's diverse population while respecting and protecting the integrity of its equally diverse natural and cultural resources. The system should be accessible to all Californians for improving their physical and mental well-being by presenting opportunities for recreation, transportation, and education, each of which provides enhanced environmental and societal benefits.*

State Parks Accessibility Guidelines

ADA, the federal law that prohibits discrimination on the basis of disability, is applicable to all actions by the states, including the preparation of state park general plans. In compliance with the ADA, State Parks published *State Parks Accessibility Guidelines,* which was first published in 1994 as *The Access to Parks Guidelines*. The *Accessibility Guidelines* detail the procedure to make state parks universally accessible while maintaining the quality of park resources. Also included in the guidelines are recommendations and regulations for complying with the standards for accessibility. State Parks has also published the *All Visitors Welcome: Accessibility in State Park Interpretive Programs and Facilities (State Parks 2003a),* which provides guidance on developing accessible interpretive programs and facilities. State Parks' *Transition and Trail Plans for Accessibility in State Park*s (2001b) outlines the agency's commitment to achieve programmatic access throughout the State Park System and in each of the parks.

Concessions Program Policies

The California State Park and Recreation Commission's Statements of Policy include specifications for the enlistment of concessionaires within State Parks in Policy I.4 "Operating Contracts." This policy documents provisions for leases and permits, program and concessionaire conflict resolution, outsourcing, contracts, interpretive concessions, public stakeholder meetings, performance bonds, and sureties. Concessions programs provide an important part of the visitor experience at California's state parks. Concessionaires offer facilities, services, and goods that the State could not otherwise provide, ranging from traditional food services and campground grocery stores, to off-road vehicle tours and rafting trips. Within the system's historic parks, concessionaires help State Parks achieve its interpretive mission by providing historical reenactments and other programs, which are known in the park profession as "interpretation." The Commission defines "interpretive concession" as a concession that provides a service to the public by exemplifying skills reflective of the state park's interpretive period or theme through products sold, services rendered, or interpretive programs provided. These programs add vitality, interest, and excitement to California's fascinating heritage as preserved and protected by State Parks.

To offer the public these goods and services, State Parks establishes partnerships with a variety of businesses, nonprofit organizations, and public agencies through concession contracts, cooperative agreements, and operating agreements. The way in which these opportunities are made available to the public is regulated by Public Resources Code Section 5080 et seq.

2.6.2 Other Statewide Planning Influences

State Lands Commission and the Public Trust Doctrine

In California, tidelands and submerged lands, including those that have been filled, are subject to the Public Trust Doctrine, under which these lands are held in trust for the statewide public and are dedicated to uses such as commerce, fisheries, navigation, environmental preservation, and recreation (CSLC n.d.). Uses of these lands must be consistent with the Public Trust Doctrine.The State Lands Commission is the state agency with authority concerning the Public Trust Doctrine and owns and manages much of the state's public trust land. The State may grant public trust lands to other public agencies; granted lands remain subject to the public trust unless it is specifically removed. Under limited circumstances, the California legislature may authorize termination of the trust, permitting the conveyance of public trust lands into private ownership (SFRA and SFPD 2009). Pursuant to this authority, SB 792 authorized an exchange of public trust lands along with the reconfiguration of CPSRA, placing its shoreline and significant portions of the Main Park (Heart of the Park) and Sunrise Point (The Point) areas under public trust. The State Lands Commission retains ownership of public trust lands within CPSRA and leases them to State Parks.

Bay Conservation and Development Commission

The McAteer-Petris Act, enacted in 1965, created the BCDC, the State agency charged with preserving San Francisco Bay from indiscriminate filling and ensuring public access to the Bay. BCDC has jurisdiction over a 100-foot shoreline band around the entire San Francisco Bay. Any development that falls within this area must apply to BCDC for a permit. BCDC also designates locations for water-oriented land uses and increased public access to shoreline and waters, encouraging the provision of maximum feasible public access to the Bay and its shoreline that is compatible with wildlife protection.

As directed by the Act, BCDC (2008) administers the *San Francisco Bay Plan (Bay Plan)*, whose policies include encouraging the development of waterfront recreation facilities and linkages between existing shoreline parks, as well as the protection of sensitive species and other natural resources. BCDC is currently considering an amendment to the *Bay Plan* to address climate change. The amendment would create a new climate change section with policies to address sea level rise through planning, permitting, and regional coordination, as well as the protection and enhancement of wetlands. The *Bay Plan* amendment would also update existing policies on shoreline protection, the safety of fills, wetland restoration, and the siting of public access to minimize the adverse effects of sea level rise (BCDC 2009).

The *Bay Plan* identifies the *Shoreline Spaces: Public Access Design Guidelines for the San Francisco Bay* (BCDC 2005), a handbook that guides the siting and designing of public access to the Bay. The handbook functions as a design resource for development projects along the San Francisco Bay shoreline, and includes recommendations for site planning, designing and developing attractive and usable public access areas.

Executive Order S-13-08

Governor Schwarzenegger signed California Executive Order S-13-08 on November 14, 2008, to address the potential impacts of global climate change, including sea level rise. The order emphasizes the need for timely planning to mitigate and adapt to the potential effects of sea level rise on the State's resources. As a result, any State agency planning construction projects in areas vulnerable to future sea level rise must evaluate and reduce the potential risks and increase resiliency, to the extent feasibly. Planning must consider a range of sea level rise scenarios for 2050 and 2100 (SFRA and SFPD 2009). In addition, the order requires development of a climate adaptation strategy, described below.

2009 California Climate Adaptation Strategy

The *2009 California Climate Adaptation Strategy* is the California Natural Resource Agency's (2009) response to Executive Order S-13-08. The document outlines adaptation strategies for seven major sectors organized around risks to the State's natural resources, infrastructure, and public health in the face of climate change. State Parks was part of the Coastal and Ocean Working Group that developed strategies related to oceans and coastal resources, most of which focus on sea level rise. The strategies emphasize the need to avoid new development in areas vulnerable to sea level rise. However, the strategies also promote the protection of vulnerable areas with regionally significant existing development and habitat and the accommodation of in-fill development. State Parks is also an implementing agency for strategies that seek to conserve biodiversity and restore ecosystems, primarily by establishing a system of habitat preserves.

California Ocean Protection Council

The California Ocean Protection Act established the California Ocean Protection Council (OPC) in 2004 to conserve, restore, and manage the State's ocean, bays, estuaries, and coastal wetlands (OPC 2009). *A Vision for Our Ocean and Coast* is the OPC's five-year strategic plan that guides the agency's priorities. Goals and actions seek to improve coastal water quality; protect, enhance, and restore beaches; and sustain healthy coastal ecosystems (OPC 2006).

2.6.3 Regional Planning

Open Space 2100

Open Space 2100 is a collaboration of the Mayor's Office of Greening, City agencies, and the not-for-profit Neighborhood Parks Council to create a comprehensive open space network in San Francisco. The initiative's Open Space Framework guides this effort by striving to improve the quality of existing parks, trails, and recreation facilities and create new open space. Three components comprise the Open Space Framework: (1) a vision for open space in the City for the next 100 years, (2) a guiding policy document in the form of the *San Francisco General Plan's* Recreation and Open Space Element (ROSE), and (3) a short-term Action Plan with implementation programs for the next five to ten years (Open Space 2100 2009). Goals contained in *An Open Space Vision for San Francisco* that are of particular relevance to CPSRA, include the following (SFPD et al. 2009):

- Create a signature park in the City's southeastern portion, well connected to area residents by on-street green connectors and served by an uninterrupted waterfront.
- Create a cross-town trail comprised of diverse and quality open spaces that connects the Presidio in the north to CPSRA in the south.

San Francisco General Plan

San Francisco is currently updating its General Plan to reflect the Open Space 2100 vision for the City's ideal open space network. The *Draft Recreation and Open Space Element (ROSE)* includes objectives and policies to increase and enhance open space throughout San Francisco. Policies that may affect CPSRA seek to enhance existing shoreline open space, encourage the development of regional-serving open space at the Hunters Point Shipyard, and create a network of connected regional trails, both along the shoreline and through a cross-town corridor (SFPD 2009a).

Bayview Hunters Point Area Plan

The *Bayview Hunters Point Area Plan* applies the elements of San Francisco's General Plan (i.e., land use, transportation, recreation, and open space) to the Bayview Hunters Point District, with the main goal of addressing conflicts between incompatible land uses. Revitalization of the area adjacent to CPSRA, known as the Candlestick Point Perimeter Area, is a priority, with policies to improve the industrial lands surrounding Yosemite Slough and spur economic growth. Additional policies seek to improve public transit and pedestrian access to CPSRA, as well as the compatibility of surrounding land uses (SFPD 2004).

San Francisco Bay Regional Water Quality Control Board Basin Plan

The SWRCB, along with nine RWQCBs, implement the federal CWA and the Porter-Cologne Act. The San Francisco Bay RWQCB administers these laws to regulate surface and groundwater for the approximately 4,600-square-mile San Francisco Bay Region through the Basin Plan (RWQCB 2007a). The *Basin Plan* identifies the beneficial uses, water quality objectives, and actions necessary to control sources of pollution to receiving waters in the region, notably the San Francisco Bay. Beneficial uses, together with applicable water quality objectives, comprise the relevant water quality standards (SFRA and SFPD 2009).

Existing beneficial uses for the San Francisco Lower Bay include industrial service supply; ocean, commercial, and sport fishing; shellfish harvesting; estuarine habitat; fish migration; preservation of rare and endangered species; wildlife habitat; water contact recreation; noncontact water recreation; and navigation. Fish spawning is a potential beneficial use of the Lower Bay. Existing beneficial uses of both the South San Francisco and Visitacion Valley groundwater basins include industrial process water supply and industrial service water supply; potential beneficial uses include municipal and domestic water supply and agricultural water supply (RWQCB 2007a).

Narrative and numeric water quality objectives define appropriate levels of environmental quality and control activities that could adversely affect water quality. The *Basin Plan* specifies water quality objectives for beneficial uses, all surface waters, and specific watersheds and water bodies. Water quality objectives specific to the Lower Bay prescribe numeric limits for copper and nickel. The *Basin Plan* also includes attainment strategies to meet water quality objectives and uphold beneficial uses (RWQCB 2007a).

Projects that discharge waste to wetlands or waters of the state must meet waste discharge requirements of the RWQCB, which may be issued in addition to a water quality certification or waiver under Section 401 of the Clean Water Act.

San Francisco NPDES Permits

The RWQCB regulates stormwater quality under authorities of the federal Clean Water Act and California's Porter-Cologne Water Quality Control Act. Stormwater management activities and sanitary discharges within San Francisco must comply with NPDES permits. The City and County of San Francisco's sanitary and CSO discharges are covered by two NPDES permits and its stormwater is covered by two permits (SFPUC 2004). Two of these permits are relevant to CPSRA: (1)Southeast, Northpoint, & Bayside Wet Weather Facilities permit for sanitary/CSO discharges (CA0037664); and (2) Phase II Municipal General Permit for Municipal Stormwater Discharges (Order No. 2003-0005-DWQ; Permit No. CAS000004).

San Francisco Healthy Development Measurement Tool

The Healthy Development Measurement Tool (HDMT), presented in Appendix B, is a comprehensive tool created by the San Francisco Department of Public Health to evaluate the effects of urban development plans and projects on public health. The HDMT uses neighborhood demographic data to assess baseline conditions and monitor change related to community health. Over 100 indicators on environmental, economic, and social conditions and a set of development targets evaluate the potential effects of a specific project or plan on a community's health. A list of policies and design strategies can also serve as recommendations to improve a proposed plan or project (SFDPH 2009a). The HDMT is a voluntary tool that has been used to evaluate several San Francisco projects, particularly in the southeastern portion of the city (SFDPH 2009b).

Candlestick Point Design for Development

The Candlestick Point Design for Development (San Francisco Redevelopment Agency 2010) identifies CPSRA as a unique opportunity to create a model urban recreation area that links city residents and regional visitors to the diversity of estuary and upland habitats of the Bay. This document also identifies principles for the design process, which include:

- Design city parks and state recreation areas to feel, from a user perspective, as one park system despite potential programmatic and operational differences between jurisdictions.
- Develop a park that is programmed and designed for safe and active 18–24 hour daily use by the public.
- Design a pedestrian- and bike-accessible transition zone between all private development parcels and the park.
- Develop frequent routes into the park from the neighborhood, aligning with the planned street network with major linkages with transit stops, bike routes, and linear greenway features.
- Create a mixture of passive and active spaces that activate the open space, drawing neighbors and visitors to the waterfront.
- Provide duplicative trail systems, including linkage to a Class One Bike Trail and multi-use recreation trail close to neighborhoods, a continuous Bay Trail close to the water, and multiple linkages between.
- Install multiple human-powered boat access points, including facilities for windsurfers south of Bayview Hill and kayak/canoe facilities near Jackrabbit Beach.
- Preserve and expand the existing pocket beach.

- Utilize sustainable design principles through park planning to expand the ecological functions of the recreation area and minimize resource consumption by park facilities, programs, and users.
- Introduce limited commercial uses to provide food and recreational services for visitors.
- Balance dedicated parking facilities for the recreation area with available on- and off-street parking provided in the neighboring development, and transit access to the area.
- Upgrade existing and install additional fishing and viewing piers into the bay.
- Provide multiple day use facilities to accommodate family and social gathering in multiple areas of the park, and consider larger scaled gathering opportunities for events.

Recreation and Park Acquisition Policy

The San Francisco Recreation and Park Department's (RPD's) *Recreation and Park Acquisition Policy* contains guidelines for expenditures of the Open Space Fund, created through voter approval of Proposition C in 2000. The document guides the prioritization of acquisitions to support new open space and recreation facilities through 2030, focusing on neighborhoods experiencing residential growth or lacking in open space and recreational resources, as well as unprotected natural areas. The policy identifies the area immediately north and west of CPSRA as a high priority area (behind highest priority areas) in need of open space and recreation improvements (RPD 2006).

San Francisco Estuary Project Comprehensive Conservation and Management Plan

The federal Clean Water Act (Section 320) established the San Francisco Estuary Project (SFEP) in 1987, as part of the National Estuary Program, to protect and restore the Bay-Delta Estuary. The *2007 Comprehensive Conservation and Management Plan (CCMP)*, which serves as the SFEP's implementation tool. The *CCMP* promotes sound watershed management through objectives and corrective actions in nine program areas, including natural resources, water quality, water use, and land use. State Parks, or park districts in general, are identified as implementing agencies to promote the completion of the San Francisco Bay Subtidal Habitat Goals Project. Included are comprehensive long-term management of the Bay; enhanced wildlife habitat biodiversity; recreational access to the Bay that protects wildlife habitat; and a regional program for coordinated signage, education, and outreach (SFEP 2007).

San Francisco Bay Trail Project

The San Francisco Bay Trail Project (Bay Trail) is an initiative led by the Association of Bay Area Governments (ABAG) to construct a 500-mile loop trail around the perimeter of the San Francisco Bay. *The San Francisco Bay Trail Project Gap Analysis Study*

analyzes gaps in the alignment of the planned 500-mile network of bicycling and hiking trails that will connect the shorelines of the San Francisco and San Pablo Bays. The study identifies three Bay Trail segments that would cross CPSRA land – one in the short-term (within five years) and two in the mid-term (six to ten years). For each of these segments, the study includes information on the location, length, cost, and benefit rank, as well as aerial maps of the alignments (ABAG 2005).

San Francisco Bay Area Water Trail

Assembly Bill 1296, enacted in 2005, mandated the creation of the San Francisco Bay Area Water Trail (Water Trail), a regional network of trailheads providing Bay access for non-motorized boats. The Water Trail is currently in the planning stages, led by the State Coastal Conservancy, in collaboration with BCDC, ABAG, and other agencies and organizations. The *Draft San Francisco Bay Area Water Trail Plan* guides the implementation of the Water Trail through policy, trail planning, operations, and maintenance recommendations. The plan identifies a Water Trail Backbone of over 100 existing and potential trailheads along the Bay, as well as sensitive wildlife areas requiring managed access. The existing CPSRA launch site is among a subset of "high opportunity sites," targeted for early implementation due to minimal planning and management issues. Implementation at high opportunity sites focuses on new Water Trail signage, as well as follow-up activities to identify and address any conflicts. The plan also recommends incorporation of the Water Trail into general and master plans (BCDC 2007).

Blue Greenway

The Blue Greenway is an initiative on the part of the San Francisco Mayor's Office, City agencies, and nonprofit groups to create new waterway/greenway along the 13 miles that spans the southeast shoreline, from China Basin to CPSRA (Alexander 2009). As detailed in the Blue Greenway Task Force's *Vision and Roadmap to Implementation (Draft)* (2006), the Blue Greenway would connect parks, trails, surrounding neighborhoods, public art, and interpretive elements as a means of completing San Francisco's portions of the Bay Trail and Water Trail. Guiding principles seek to create an identity for the area as a working urban waterfront, connect the southeastern neighborhoods to the Bay, provide an environmentally sustainable and accessible shoreline, and spur responsible economic development. A series of maps illustrate improvements that would occur in the short term (0 to 2 years), medium-term (two to ten years), and long-term (10 to 25 years).

Bayview Transportation Improvements Project

The Bayview Transportation Improvements Project (BTIP) is an initiative to develop a more direct trucking route between US-101, Hunters Point Shipyard, and the South

Basin industrial areas and to reduce heavy truck traffic in residential areas of the Bayview Hunters Point neighborhood. The *Bayview Transportation Improvements Project Alternatives (Draft)* maps six alternative truck routes, four of which would run adjacent to CPSRA (SFDPW and Caltrans 2008). The environmental review process for the BTIP is currently underway (SFDPW 2010).

San Francisco Bike Plan

The *2009 San Francisco Bicycle Plan* is a citywide bicycle transportation plan to enhance San Francisco's bikeability. The plan describes the existing bicycle route network (a series of interconnected streets where bicycling is encouraged) and identifies gaps within the citywide bicycle route network that require improvement. Objectives and policy changes seek to expand the existing bicycle network and implement improvements, such as additional bicycle parking and increased access to transit, to promote biking as an alternative transportation mode. Among the plan's recommended long-term improvements, , is the creation of new bike routes along the proposed Bay Trail and BTIP routes (described above), which would connect CPSRA to surrounding neighborhoods and the Hunters Point Shipyard (SFMTA 2009).

Transportation 2035 Plan for the San Francisco Bay Area

The *Transportation 2035 Plan for the San Francisco Bay Area (Final)* is the Metropolitan Transportation Commission's (MTC's) strategy to accommodate future growth, alleviate congestion, improve safety, reduce pollution, and ensure mobility for all residents throughout the region. The plan details the current and future investments and strategies required to maintain, manage, and improve the surface transportation network in the nine-county San Francisco Bay Area. Projects proposed for San Francisco County in the vicinity of CPSRA include extending the Third Street Light Rail to the Bayshore Caltrain Station, implementing a Bus Rapid Transit (BRT) project on the Geneva Avenue/Harney Way corridor, reconstructing and widening Harney Way to eight lanes with improved bicycle lanes and sidewalks, and improving water access to San Francisco parks.

Regional Bicycle Plan for the San Francisco Bay Area, 2009 Update

The *Regional Bicycle Plan for the San Francisco Bay Area, 2009 Update* is a component of MTC's regional transportation plan (described above) that specifically encourages bicycling as an alternative mode of transportation. The plan's principal goals are to ensure that bicycling is a convenient, safe, and practical means of transportation throughout the Bay Area; reduce congestion and the risk of climate change; and increase opportunities for physical activity. The plan states several objectives to meet these goals, including definition of a comprehensive Regional Bike Network. The current plan updates information on the Regional Bike Network, which will

include 2,140 miles of continuous and connected bicycling corridors when complete. The completed portion of the Bay Trail on CPSRA land is part of the existing network in San Francisco County; unbuilt links include the remaining segment of the Bay Trail and Third Street between King Street and Bayshore Boulevard (MTC 2009b).

2.6.4 Redevelopment Projects

The Candlestick Point-Hunters Point Shipyard Development Project

Together, the Candlestick Point and Hunters Point Shipyard sites comprise over 700 acres along San Francisco's southeastern waterfront (SFOEWD 2009). Redevelopment of the area stems from the *Bayview Hunters Point Redevelopment Plan*, which focuses on generating economic development, affordable housing, and community enhancements (SFRA 2009a). The new development will create over 10,500 residential units, approximately 700,000 square feet of destination retail and entertainment space, over 2.5 million square feet of commercial space oriented around a green science and technology campus, and approximately 240 acres of new waterfront parks. The project contains several phases: the Hunters Point Shipyard Phase I development is currently underway to construct 1,600 homes and 25 acres of open space. The remainder of the development will occur as part of the Candlestick Point-Hunters Point Phase II Project, with full build-out expected by 2020. This second phase contains the Candlestick Point subcomponent, a 281-acre area that includes 120 acres of CPSRA, Candlestick Park stadium, and the Alice Griffith public housing site. Plans for Candlestick Point include the creation of 7,850 residential units, 760,000 square feet of retail, 150,000 square feet each of office and hotel space, and approximately 8.1 acres of new parkland in the neighborhood and 5.7 acres of new land in CPSRA, as well as approximately 97 acres of improvements within CPSRA (SFRA and SFPD 2009).

Executive Park Neighborhood Plan

Executive Park comprises 71 acres in the southernmost portion of San Francisco's Bayview neighborhood. Bounded by Harney Way and US-101, the area is directly north of the westernmost portion of CPSRA. The *Executive Park Sub-Area Plan* aims to transform Executive Park from a site with an office park and small amount of gated housing to a new mixed-use neighborhood with 2,800 residential units, a town center, and connections to the nearby waterfront, open spaces, and commercial districts. The plan emphasizes the creation of a walkable neighborhood and creates new pedestrian paths and alleys that connect to CPSRA via Harney Way. Specific policies encourage the reconfiguration of the intersection of Harney Way, Mellon Drive, and Alanna Way to improve walkability and traffic management and the creation of bike and pedestrian connections to CPSRA and the Bayshore (SFPD 2009b).

Visitacion Valley Redevelopment Project

The Visitacion Valley Redevelopment Project comprises 46 acres in San Francisco's Visitacion Valley neighborhood, less than one-half mile west of the CPSRA. The area targeted for redevelopment includes the 20-acre industrial brownfield formerly occupied by the Schlage Lock Company factory, properties fronting Bayshore Boulevard, and the Leland Avenue commercial corridor (SFRA and SFPD 2009, SFRA 2009b). The project includes the creation of a new, transit-oriented and pedestrian-friendly mixed-use development with up to 1,250 new housing units, 90,000 square feet of retail, three new parks, and a new community center. The California Department of Toxic Substances Control is currently administering environmental remediation of the site (SFRA 2009b).

Baylands

The Baylands is a 660-acre area in the City of Brisbane, directly south of CPSRA and west of U.S. Highway 101. Formerly a railyard and landfill, the area has received extensive remediation (which is ongoing) for contamination. The City of Brisbane is currently considering alternatives for the redevelopment of about 300 acres in the Baylands eastern portion, as part of the environmental review process. Future uses could include trails, enhanced open spaces, and sustainable development (Brisbane 2009).

2.6.5 Regional Recreation Resources

A wide range of recreational resources exists in the vicinity of CPSRA, from neighborhood mini-parks to national recreation areas. The following sections describe these park and recreation areas in greater detail, according to ownership.

National Parks

Golden Gate National Recreation Area

With nearly 80,000 acres and 75 miles of shoreline in San Francisco, San Mateo, and Marin counties, Golden Gate National Recreation Area (GGNRA) is one of the world's largest urban national parks (GGNRA 2006; GGNRA 2009a). Each year, 17 million people (from local residents to international tourists) visit the GGNRA's diverse array of lands. Most of the GGNRA destination sites are within a one-hour drive of San Francisco (GGNRA n.d.); those within the city limits include Crissy Field, the Presidio, Alcatraz, Fort Mason, Fort Funston, Ocean Beach, Lands End, China Beach, and Baker Beach. GGNRA offers a variety of recreation and educational opportunities through trails, campgrounds, picnic areas, historic sites, natural areas, and public programs (GGNRA 2009b).

San Francisco Maritime National Historic Park

A unit of the National Park Service, the San Francisco Maritime National Historic Park occupies 50 acres along San Francisco's northern waterfront in the Fisherman's Wharf neighborhood (NPS 2009a). Approximately 4 million people visit the park each year. The park focuses on the region's maritime history, with opportunities to explore historic vessels, exhibits, artifacts, as well as participate in guided tours and educational programs. Outdoor recreation opportunities include walking, picnicking, and use of the Aquatic Park and the adjacent beach (NPS 2009b).

State Parks

State Parks manages 51 park properties in the San Francisco Bay Area, which includes state parks, historic parks, seashores, recreation areas, and vehicular recreation areas. The nearest, at less than four miles southwest of CPSRA, is the 2,326-acre San Bruno Mountain State Park (San Mateo County 2009). San Mateo County operates the park, which is a popular hiking and sightseeing destination due to the views afforded by the 1,000-foot plus elevation change (State Parks 2009e). Angel Island is the state park closest to CPSRA that offers waterfront recreation opportunities. Angel Island is accessible by ferry from San Francisco. Eastshore State Park and Robert Crown Memorial State Beach provide waterfront recreation along the urban shoreline of Alameda County. See Table 2–3 for more information on state park units in the greater vicinity of CPSRA and the primary opportunities available at each.

Local Parks

The RPD oversees 3,500 acres in 230 city parks (RPD 2009a), ranging from mini parks (a fraction of an acre) to the 1,017-acre Golden Gate Park. In addition, RPD operates a variety of playgrounds, recreation centers, swimming pools, golf courses, playing fields, and other open space areas (RPD 2009b). Parks and recreation facilities within one-half mile of CPSRA include the following:

- Adam Rogers Park
- Hilltop Park
- Bay View Playground
- Gilman Playground
- Candlestick Park stadium
- Bayview Hill Park (Bayview Hill Natural Area)
- LeConte Avenue Mini-Park
- Little Hollywood Park

Table 2–3: State Park Units and Activities in the Greater Vicinity of CPSRA

State Park Unit Name	Miles from SRA[a]	Primary Uses + Activities										
		Boating	Surfing	Fishing	Hiking	Biking	Horses	Picnicking	Camping	RV Use	Historical	Interpretive
San Bruno Mountain SP	7				●	●	●	●				
Angel Island SP	10	●		●	●	●		●	●			●
Eastshore SP	12				●	●						
Pacifica SB	16		●		●							
Robert W. Crown Memorial SB	17	●		●		●		●				●
Gray Whale Cove SB	20			●	●			●				
Montara SB [b]	21			●	●	●	●					
Burleigh H. Murray Ranch SP	21				●	●	●	●			●	
Mount Tamalpais SP [b]	21			●	●	●	●	●	●	●	●	●
Point Montara Light Station[b]	22										●	
China Camp SP	26	●		●	●	●	●	●	●	●	●	●
Samuel P. Taylor SP	35				●	●	●	●	●	●		●
San Gregorio SB	36			●				●			●	
Pomponio SB	37			●	●			●				●
Benicia SRA	39			●	●	●	●	●		●		
Pescadero SB	40			●	●			●				●
Benicia Capitol SHP	41										●	●
Mt. Diablo SP	43				●	●	●	●	●	●	●	●

Notes: SB = State Beach; SHP = State Historic Park; SP = State Park; SRA = State Recreation Area.
[a] Approximate driving mileage.
[b] Overnight accommodation (e.g., hostel, inn) available.
Sources: EBRPD 2011, City of Pacifica 2009, San Mateo County 2009, State Parks 2009f

About one mile west of CPSRA is the large-scale John McLaren Park, whose 317 acres contains seven miles of trails, a tennis complex, indoor pool, nine-hole golf course, basketball courts, athletic fields, 75 picnic tables, and two playgrounds.

San Francisco Natural Areas Program

RPD manages 35 parks or portions thereof through its Natural Areas Program (NAP), which includes Natural Areas ranging from less than one acre to nearly 400 acres (RPD 2009a). The NAP mission is to restore and enhance remnant natural areas while developing community-based stewardship for these Natural Areas (RPD 2009c). Bayview Hill Natural Area, also known Bayview Hill Park, is immediately northwest of CPSRA and may support the greatest biodiversity of all Natural Areas in the program (RPD 2009d).

2.7 Demographics

2.7.1 Recreation Trends

Numerous recreation studies have been conducted in recent years with the goal of creating a profile of California's outdoor recreationists. A 2009 study, The Complete Findings, Survey on Public Opinions and Attitudes on Outdoor Recreation in California (State Parks 2009g), found the five most popular outdoor recreation activities for adults in the San Francisco Bay Area to be walking for fitness or pleasure; picnicking in picnic areas; driving for pleasure or sightseeing; visiting outdoor nature museums, zoos, gardens or arboretums; and beach activities. Among the Bay Area's youth, the top five preferred activities were playing, sports, jogging/running, walking, and bicycling (State Parks 2009g).

The Recreation Assessment Summary Report, prepared for the San Francisco Recreation and Park Department in 2004, evaluated the recreational needs of residents and identified key recreational issues that the community felt needed to be addressed. In a survey conducted for the Recreation Assessment, San Francisco residents ranked walking and biking trails as the top priority for recreational facilities. The recreational activities that the highest percentage of respondent households participates in include: running or walking (67%) and visiting nature areas (61%). Running or walking (28%) had the highest percentage of respondents select it as one of the four recreational activities they would participate in more often if more programming were made available by the City. There are five other activities that at least 20% of respondents selected as one of the four they would most participate in more often, including: visiting nature areas (24%); attending live theater/concert performances (24%); adult fitness/aerobics classes (22%); and recreational swimming/swim lessons (20%).

Growth and changing patterns of California's population are expected to change recreation activities and preferences throughout the state. Demographic trends of particular note include a population that is aging, increasing in cultural and racial diversity, and finding new ways to engage in outdoor recreation, particularly through advances in technology and transportation. Three generations of Americans—baby boomers (born 1943-1960), GenXers (born 1961-1981) and the Millennials (born 1982-2000)—exhibit different recreation preferences. Of particular note is a declining interest in visiting parks and in participating in traditional recreation activities, such as walking and picnicking, among the younger generations (State Parks 2010).

Many of the activities preferred today will continue to be popular in the future. However, data from multiple sources indicate that California's demographic changes will likely increase demand for outdoor recreation activities with learning components, trail-related outdoor recreation, and water-related recreation. The state's increasingly diverse population highlights the likely demand for a growing variety of outdoor recreation opportunities. In addition, the importance of transportation, affordable access, and recreational programming (particularly for youth), as well as greater participation by older and healthier adults, are expected to influence future recreation trends (State Parks 2005b).

Demographic changes are also affecting the demand for recreation in and around San Francisco Bay. Recent years have seen an increase in the demand for waterfront parks in the Bay Area. Large, public sandy beaches are particularly popular, and only a few such resources exist along the Bay shoreline. The types of recreation popular in the Bay Area have also shifted in recent years as a result of population changes. While boating, windsurfing, and fishing remain popular, activities such as kite surfing, dragon-boating, kayaking, and rollerblading have grown in popularity. The projected growth of the Bay Area's population will likely result in increased demand for water-oriented recreation, while continued diversification will produce an increase in the types of recreational use preferred (BCDC 2006).

2.7.2 Population and Employment

Bayview Neighborhood

San Francisco's Bayview Hunters Point neighborhood surrounds CPSRA. The neighborhood is generally bounded by Cesar Chavez Street and Islais Creek Channel to the north, the San Francisco Bay to the east, the San Mateo County line to the south, and US-101 to the west (SFPD 2004). Bayview Hunters Point is one of San Francisco's least densely populated neighborhoods, with a population of 31,832 in 2007 (SFDPH 2009c). The area immediately surrounding CPSRA is primarily industrial, and the Alice Griffith Housing Complex supports the main permanent residential population (256 households in 2005). A small number of residents also live on Jamestown Avenue and

in the Candlestick Point Recreation Vehicle (RV) Park on Gilman Avenue (SFRA and SFPD 2009). The population of Bayview Hunter Point has experienced a steady decline since the 1980s (SFPD 2004).

The largest ethnic group (35%) at Bayview Hunters Point is Asian/Native Hawaiian/Other Pacific Islander. The neighborhood has San Francisco's largest African American population, with 34% categorized within this racial group, compared to approximately 6% citywide (SFDPH 2009d). Table 2-4 lists the ethnic composition of Bayview Hunters Point in 2007. As with the neighborhood's total population, the African American population has declined substantially: 73% of Bayview Hunters Point's population was African American in 1980.

Table 2-4: Bayview Hunters Point Ethnic Composition, 2007

White	Hispanic/Latino	African American	American Indian/Alaska Native	Asian/Native HI/Other Pacific Islander	Other Race	Multi- racial
22%	14%	34%	0.3%	37%	3%	2%
Source: SFDPH 2009d						

The Bayview Hunters Point neighborhood also has one of San Francisco's highest poverty rates; in 2000, 21% of the neighborhood's population was living below the poverty level (as classified by the U.S. Census Bureau) compared to 11% citywide (SFDPH 2009e). Similarly, the neighborhood's unemployment rate in 2000 was among San Francisco's highest, at 10%, while the average unemployment rate citywide was 5% (SFDPH 2009f). However, between 1990 and 2000, the proportion of the neighborhood living in poverty decreased by nearly 20%, while the unemployment rate declined by over 50% (SFPD 2004). Poor neighborhoods are more vulnerable to external factors that are detrimental to health, and the residents of the Bayview Hunters Point neighborhood have a disproportionate number of health issues (SF Department of Public Health, 2006a).

Bayview Hunters Point has one of the highest percentages of children (under 18 years old) in the City and County of San Francisco, at 32% compared to the city average of 17%. The proportion of families with children is also significantly higher in Bayview Hunters Point than the city average, 55% and 40% respectively. The proportion of seniors aged 65 years old and over is 11% of the Bayview Hunters Point population, while citywide, the proportion is slightly higher at 15% (San Francisco Department of Public Health, 2006b).

New development projects planned for San Francisco's southeastern corner are likely to change the Bayview neighborhood's existing demographics considerably. The proposed Candlestick Point-Hunters Point Shipyard Development Project estimates creating housing for 24,465 new residents and about 10,730 new jobs, for a total resident and

worker population of 35,195 at full build-out in 2030 (SFRA and SFPD 2009). Additional proposed development projects, such as in Executive Park and Visitation Valley, will likely also change the demographics of the area surrounding CPSRA.

City and County of San Francisco

San Francisco has long been a magnet for business, culture, retail, tourism, and education; it is the finance capital for the West and an emerging gateway to the Pacific Rim (SFPD 1996). Despite high housing costs, San Francisco continues to grow, surpassing the population peak of the 1950s, due in large part to the dot.com boom of the 1990s. According to ABAG estimates, San Francisco was home to 798,907 residents in 2007[5] (SFPD 2009c). Table 2-5 shows population trends and projections for 1990-2030 for the City and County of San Francisco. As with population, San Francisco's job base grew steadily between 1970 and 2000. The dot.com crash caused a slight downturn in the subsequent decade, but the City's employment is expected to increase by over 30% from 2010 to 2030 (SFPD 2009c).

Table 2-5: San Francisco Population Trends and Projections

	1990	2000	2010	2020	2030
Total Population	723,959	776,733	808,700	857,200	922,600
Population Change		7.3%	4.1%	6.0%	7.6%
Source: SFPD 2009c (based on U.S. Census Bureau 2000 and ABAG 2007)					

San Francisco's rich 150-year history contributes to the diversity of its neighborhoods (SFPD 1996). The proportion of San Francisco residents claiming white racial affiliation has fluctuated in recent decades but has ultimately remained stable since 1980, while the proportions of those claiming Hispanic/Latino and Asian/Pacific Islander[6] affiliations have increased (Bay Area Census 2009a). The city's African American and American Indian populations have steadily declined. Table 2-6 illustrates San Francisco's ethnic composition in 2008. Table 2-7 illustrates San Francisco's age composition in 2010.

Table 2-6: San Francisco Ethnic Composition, 2008

White	Hispanic/ Latino	African American	American Indian	Asian	Pacific Islander	Other Race	Two/More Races
45.1%	14%	6.4%	0.4%	31.1%	0.4%	0.3%	2.4%
Source: Bay Area Census 2009a							

[5] According to the San Francisco General Plan Draft Housing Element (SFPD 2009c), ABAG provides an accurate estimate of population based on the City's prevailing housing stock and existing vacancy rates, in line with recent U.S. Census estimates.

[6] The Bay Area Census historical data (1980-2000) combines Asian/Pacific Islander into a single category.

Table 2-7: San Francisco Age Composition, 2010

Under 5 Years	5 to 17 years	18 to 64 years	65 years and over
4.4%	9.0%	73%	13.6%
Source: Bay Area Census 2010			

San Francisco Bay Area

The San Francisco Bay Area has grown rapidly over the last several decades; between 1970 and 2007, the nine-county region grew by over 35% to approximately 7.2 million residents (Bay Area Census 2009b, 2009c). Between 2010 and 2030, the population is expected to grow by approximately 16% to over 8.7 million.

During this same period, employment is expected to increase by approximately 27% from around 3.5 million to 4.7 million jobs (ABAG 2009).

San Mateo County, which borders CPSRA to the south, had approximately 703,730 residents in 2008, a 21% increase from 1970 (Bay Area Census 2009d, 2009e). Alameda County to the east saw a 26% increase in population during this period, with nearly 1.5 million residents in 2008 (Bay Area Census 2009f, 2009g). Marin County to the north experienced a smaller increase but still grew 16% between 1970 and 2007, to about 247,000 residents (Bay Area Census 2009h, 2009i). Continued population growth is expected in each of these counties in the future, although at slightly slower rates than in recent decades (California Department of Finance 2007).