

Candlestick Point State Recreation Area

Final General Plan and Program Environmental Impact Report

State Clearinghouse No. 2010012059
January 2013



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Governor

John Laird
Secretary, Natural Resources Agency

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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);

CONTINUED ON PAGE 2

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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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- B: Application of the City and County of San Francisco Healthy Development Measurement Tool to CPSRA
- C: CPSRA Draft Concept Master Plan
- D: CPSRA Draft Concept Master Plan Interpretive Opportunities

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
CNDDDB	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	<p>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.</p> <p>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.</p> <p>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.</p>

Impact	Level of Significance ¹	Guidelines that Mitigate the Impact
		<p>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.</p> <p>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).</p> <p>Guideline Access-1: Clearly designate trails for pedestrian, bicycle use, and/or multi-modal use to minimize trail user conflicts.</p> <p>Guideline Visitor Safety-3: Promote positive outreach to adjacent neighborhoods and communities to increase local visitation and foster a sense of ownership for CPSRA.</p>
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.
GEO-2: Adverse Effects Caused by Seismic-Related Ground Failure, Including Liquefaction, Landslides, and Expansive Soils	LTSM	<p>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.</p> <p>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.</p>

Impact	Level of Significance ¹	Guidelines that Mitigate the Impact
		<p>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.</p>
<p>GEO-3: Soil Erosion or the Loss of Topsoil.</p>	<p>LTSM</p>	<p>Guideline Shoreline-1: Use natural, soft shoreline protection where needed to protect critical infrastructure and water quality.</p> <p>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.</p> <p>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.</p> <p>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.</p>

Impact	Level of Significance ¹	Guidelines that Mitigate the Impact
		<p>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.</p> <p>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.</p> <p>Guideline Shoreline-7: Integrate shoreline protection measures with other park priorities, such as access and circulation, recreation, and economics.</p>
Hydrology and Water Quality		
WATER-1: Impacts to Groundwater Supplies or Groundwater Recharge	LTSM	<p>Guideline Water-1: Use low-flow water fixtures within newly constructed facilities, and consider incorporating them into existing facilities.</p> <p>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.</p> <p>Guideline Water-3: Plant indigenous vegetation and species suited to the local environment to minimize water use.</p>
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
		<p>Consider higher projections for sea level rise, increased storm surge, and greater coastal flooding when planning park improvements, and site facilities to minimize risk.</p> <p>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.</p> <p>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.</p> <p>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.</p>
<p>WATER-3: Temporary Impacts on Water Quality from Stormwater Runoff, Erosion, or Spills</p>	<p>LTSM</p>	<p>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.</p>

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	<p>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.</p> <p>Guideline Water Quality-3: Use appropriate stormwater Best Management Practices (BMPs) for maximizing rainwater infiltration in green infrastructure elements.</p> <p>Guideline Shoreline-1: Use natural, soft shoreline protection where needed to protect critical infrastructure and water quality.</p> <p>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.</p>
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
<p>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</p>	<p>LTSM</p>	<p>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.</p> <p>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.</p> <p>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.</p>
<p>HAZ-3: Risk of Exposure of Schools to Hazardous Materials during Project Construction and Operation</p>	<p>LTSM</p>	<p>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.</p>

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
<p>BIO-2: Adverse Effects on Special-Status Wildlife and Fish Species</p>	<p>LTSM</p>	<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>

Impact	Level of Significance ¹	Guidelines that Mitigate the Impact
BIO-3: Loss of Special-Status Wildlife and Fish Species	LTSM	<p>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.</p> <p>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.</p> <p>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.</p>
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	<p>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.</p>

Impact	Level of Significance ¹	Guidelines that Mitigate the Impact
		<p>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.</p> <p>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.</p> <p>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.</p>
<p>CUL-2: Adverse Effect on Unique Paleontological Resources</p>	<p>LTSM</p>	<p>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.</p>

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	<p>Guideline Aesthetic Resources-5: Use lighting that is directed downwards to minimize light spillage to protect dark night skies and allow for star viewing.</p> <p>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.</p> <p>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.</p>
Utilities and Service Systems		
UTIL-1: Increase Demand on Utilities and Service Systems	LTSM	<p>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.</p> <p>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.</p> <p>Guideline Water-1: Use low-flow water fixtures within newly constructed facilities, and consider incorporating them into existing facilities.</p>

Impact	Level of Significance ¹	Guidelines that Mitigate the Impact
		<p>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.</p> <p>Guideline Water-3: Plant indigenous vegetation and species suited to the local environment to minimize water use.</p> <p>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.</p> <p>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.</p> <p>Guideline Waste-3: Include composting in vegetation management and maintenance activities to reduce landfill usage and increase sustainability concepts for the park.</p> <p>Guideline Waste-4: Provide an easily accessible area for collection and storage of non-hazardous materials for recycling and composting. ²</p> <p>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.</p>

Impact	Level of Significance ¹	Guidelines that Mitigate the Impact
Public Services		
<p>PS-1: Adverse Effects on Police and Fire Services</p>	<p>LTSM</p>	<p>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.</p> <p>Guideline Visitor Safety-3: Promote positive outreach to adjacent neighborhoods and communities to increase local visitation and foster a sense of ownership for CPSRA.</p> <p>Guideline Visitor Safety-4: Manage park service roads to allow easy and rapid access to CPSRA by public safety personnel and emergency vehicles.</p> <p>Guideline Visitor Safety-5: Develop and implement a visitor safety program for special events and during peak recreation periods.</p> <p>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.</p> <p>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.</p> <p>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.</p>

Impact	Level of Significance ¹	Guidelines that Mitigate the Impact
Transportation and Traffic		
<p>TRANS-1: Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system</p>	<p>LTSM</p>	<p>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.</p> <p>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</p> <p>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.</p> <p>Guideline Access-1: Clearly designate trails for pedestrian, bicycle use, and/or multi-modal use to minimize trail user conflicts.</p> <p>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.</p> <p>Guideline Multi-Modal-1: Enhance access to the park through connections to new pedestrian and bicycle route alignments</p>

Impact	Level of Significance ¹	Guidelines that Mitigate the Impact
		<p>planned in the surrounding neighborhood.</p> <p>Guideline Multi-Modal-2: Connect to new and planned alternative transportation modes, including pedestrian routes, bike paths, and BRT stops.</p> <p>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.</p> <p>Guideline Multi-Modal-4: Create clear pedestrian and bicycle linkages to CPSRA from new BRT stops.*</p> <p>Guideline Multi-Modal-5: Provide information kiosks near new BRT stops in the adjacent neighborhood to direct riders to CPSRA.²</p> <p>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.</p> <p>Guideline Multi-Modal-7: Provide a comprehensive and varied trail network to increase pedestrian and bicycle opportunities within CPSRA.²</p>

Impact	Level of Significance ¹	Guidelines that Mitigate the Impact
		<p>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.*</p> <p>Guideline Multi-Modal-9: Provide nighttime lighting along the CPSRA perimeter and the San Francisco Bay Trail to improve visitor and commuter safety.</p> <p>Guideline Parking-1: Provide parking in strategic areas for programs requiring staging, such as windsurfing, non-motorized boating, and picnicking.²</p> <p>Guideline Parking-2: Reuse existing parking areas and locate new parking areas to minimize the amount of new construction.*</p> <p>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.</p> <p>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,</p>

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	<p>Guideline Access-1: Clearly designate trails for pedestrian, bicycle use, and/or multi-modal use to minimize trail user conflicts.</p> <p>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.</p>
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	<p>Guideline Multi-Modal-1: Enhance access to the park through connections to new pedestrian and bicycle route alignments planned in the surrounding neighborhood.</p> <p>Guideline Multi-Modal-2: Connect to new and planned alternative transportation modes, including pedestrian routes, bike paths, and BRT stops.</p> <p>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.</p> <p>Guideline Multi-Modal-4: Create clear pedestrian and bicycle linkages to CPSRA from new BRT stops.*</p> <p>Guideline Multi-Modal-5: Provide information kiosks near new BRT stops in the adjacent neighborhood to direct riders to CPSRA.*</p>

Impact	Level of Significance ¹	Guidelines that Mitigate the Impact
		<p>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.</p> <p>Guideline Multi-Modal-7: Provide a comprehensive and varied trail network to increase pedestrian and bicycle opportunities within CPSRA.²</p> <p>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</p> <p>Guideline Multi-Modal-9: Provide nighttime lighting along the CPSRA perimeter and the San Francisco Bay Trail to improve visitor and commuter safety.</p>
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 CO ₂ e 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





1.1 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

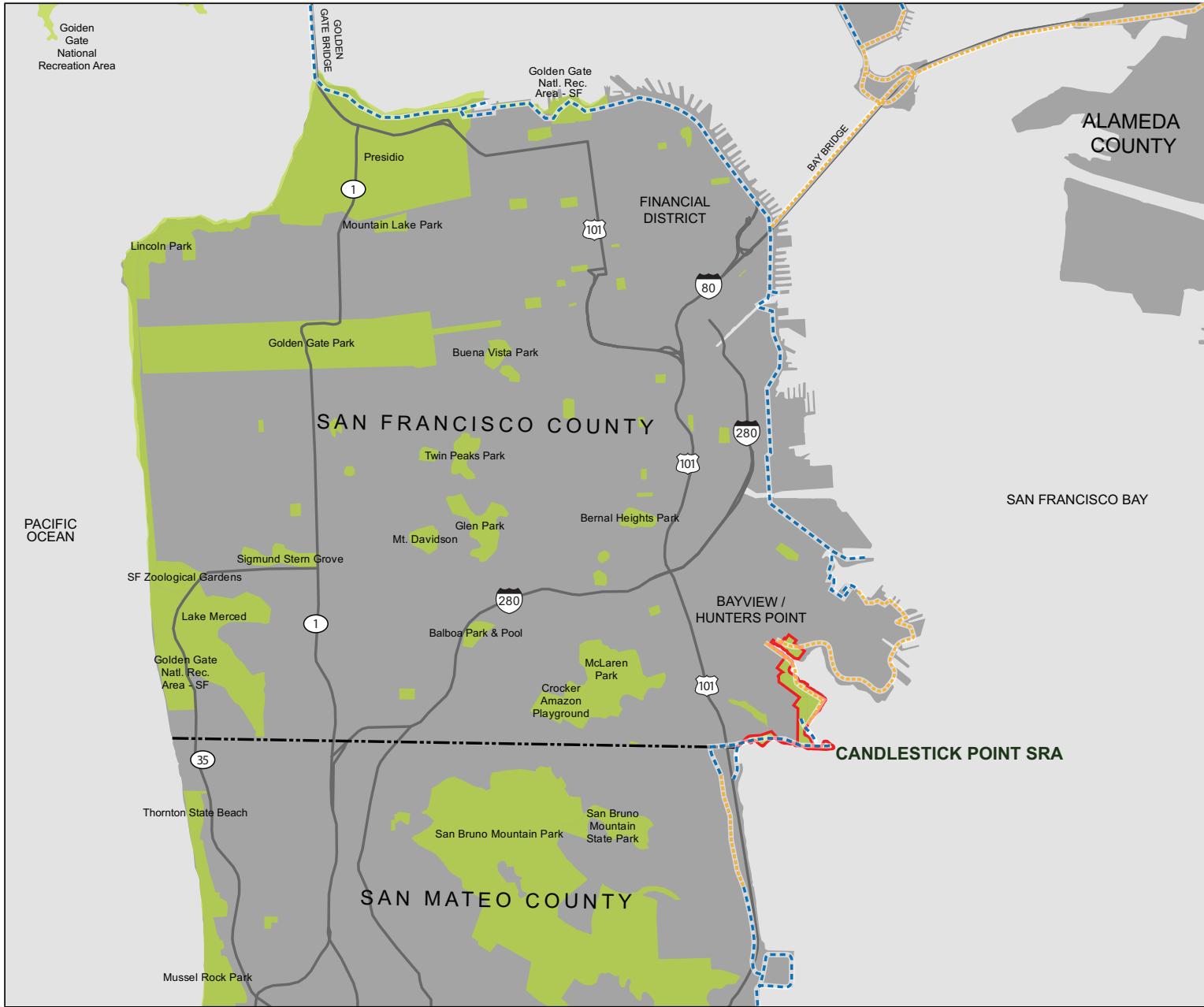
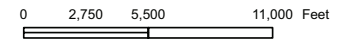


Figure 1-1
REGIONAL LOCATION

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

Extents of Main Map



Source: San Francisco Planning Department
10.31.2012



CANDLESTICK POINT STATE RECREATION AREA



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



10.20.2011



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 Descendants 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 51°F to 64°F throughout the year. Rainfall occurs primarily between October and April and averages approximately 21 inches per year¹ (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 underlying 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 Arellious 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).

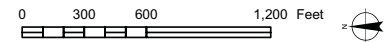
The Sunnydale Pump Station, located in CPSRA's Last Port area, is part of the "Endangered Garden" art project. The project incorporates the image of the endangered San Francisco Garter Snake into a public walkway that coincides with the roof of the combined sewer facility (Johanson 2011).

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



Sources: May 21, 2009 Draft HP-CSP EIR
Appendix L (Prepared by ENGE),
RHAA 2009, Winzler & Kelly
11.28.2011



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 cleanup 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 (CNDDDB 2010) and the California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Plants of California (CNPS 2010). The CNDDDB 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

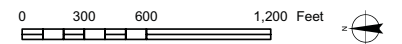
During a period of land reclamation that began in the mid-1800s, the area where CPSRA is located was created by placing artificial fill material on the tidal mudflats and bedrock of San Francisco Bay (SFRA and SFPD 2009). Today a variety of trees of various ages, as well as shrub, grass, and broad-leafed 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.



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)



Source: California State Parks, 2009;
HT Harvey, 2009; PBS and J, 2009;
California Natural Diversity Database 2009
10.20.2011



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 versus 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 (*Sturnella 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 killdeer (*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 CNDDDB, a database of California's most sensitive species and habitats (CNDDDB 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-leaved 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 (*Callinassa* 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 pallasii*), 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 CNDDDB (CNDDDB 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 (CNDDDB 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. By 1958, 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 barbecue 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 (LEJ) 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 copper 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 pumped 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 Carroll 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 Carroll 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 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 Parks (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 2007⁵ (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 Islander⁶ 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).

3 Issues and Analysis





3 Issues and Analysis

3.1 Planning Assumptions

The planning assumptions incorporated into this General Plan are based on California State Park and Recreation Commission (State Parks) policy, core program initiatives, and statewide planning issues that form the planning context and parameters for addressing general planning issues at Candlestick Point State Recreation Area (CPSRA).

The following planning assumptions apply to CPSRA:

- State Parks will continue to manage CPSRA as a State Recreation Area, as defined by Public Resources Code Section 5019.56(a). Future management will seek to fulfill the park's purpose by improving and increasing, where appropriate, the overall level and range of recreational opportunities for visitors to CPSRA.
- The five foundational goals established for CPSRA during this General Plan process will guide development of the park. The General Plan will seek to incorporate and balance goals related to Recreational Resources, Natural Resources, Cultural Resources, Community Resources, and Interpretation and Education.
- The CPSRA boundary will be reconfigured in accordance with Senate Bill 792, enacted October 2009, which authorized the exchange of land between State Parks and the San Francisco Redevelopment Agency.

- The planned Candlestick Point-Hunters Point Shipyard Phase II Project, approved by the San Francisco Redevelopment Agency in June 2010 and the San Francisco Board of Supervisors in August 2010, will be constructed on lands adjacent to CPSRA. The development program will be similar to the program included in the project's final EIR. This project will transform CPSRA to a true urban state park, integrated into the fabric of the city. This implies a 24 hours per day/7 days per week/365 days per year operation, with porous boundaries that cannot be closed or controlled in the traditional sense.
- Visitation will increase substantially above current levels when the adjacent planned Candlestick Point-Hunters Point Shipyard Phase II Project is fully built and occupied (which is expected to occur in 2020). Future programming of CPSRA must satisfy the needs of current and future visitors, despite the uncertainty associated with the latter.
- State Parks will continue to collaborate with the City and County of San Francisco and the San Francisco Redevelopment Agency, and adjacent landowners and residents during the planning and implementation process, to integrate plans for the adjacent Candlestick Point-Hunters Point Shipyard Phase II Project and the open space network with the future development of CPSRA. State Parks will also seek input from local, regional, and statewide interests.
- The San Francisco Redevelopment Agency will provide State Parks with an operational endowment to allow for full build-out of CPSRA and ensure sustainable operations over the long term.
- The existing conditions and environmental impact analysis presented in Chapters 2 and 5 of this CPSRA General Plan, respectively, are based on the information presented in 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 adjacent to CPSRA. However, because this is a program-level EIR for a General Plan, that detailed project-level analysis is not presented in this document.
- The Yosemite Slough Restoration Project will move forward as planned.

3.2 Parkwide Issues

The key issues that influenced the planning effort for CPSRA are discussed below. The General Plan addresses these issues through the parkwide management goals and guidelines, which are presented in Chapter 4, Park Plan.

3.2.1 Recreation and Visitor Resources

State Recreation Area Classification

Classified as a State Recreation Area, the chief purpose of CPSRA is to provide visitors with opportunities for recreation. While natural resources are important elements of the park, they do not receive the same focus as units classified as state parks or preserves. However, because CPSRA is a unique open space resource in the southeastern portion of San Francisco, many visitors value it for its access to nature and the Bay. Numerous stakeholders involved in the CPSRA general planning process have expressed an interest in CPSRA as a natural “oasis” in an otherwise urban context. Satisfying these interests while remaining true to the park’s classification highlights the potential for quiet, respite-based recreation and activities focused on nature education and stewardship.

CPSRA Boundary

The reconfigured boundary for CPSRA has removed some areas of the park and added land in others. The new boundary includes additional land north of Harney Way, resulting in the relocation of the roadway and expansion of the narrowest portion of the park from a width of 20 feet to 200 feet. This expansion increases connectivity between the Main Park and the Last Port and creates opportunities for improvements to the existing windsurf launch at Windsurf Circle, the beach at Hermit’s Cove, and the Bay Trail. The new boundary also removes some areas of CPSRA, notably the area that contains the existing main entrance, requiring a rethinking of access to the park. The new boundary will also exclude a portion of the unimproved area currently used for parking during San Francisco 49ers home games. This area will function as a linear park along the shoreline, which raises the issue of buffering park users from the adjacent development.

Neighborhood Open Space and Recreation

The planned Candlestick Point-Hunters Point Shipyard Phase II Project includes approximately 240 acres of new parks and open space (Lennar Corporation 2009). Neighborhood parks, sports fields, shoreline promenades, and ecological restoration projects incorporate a wide range of recreational, cultural, educational, and nature-based programs (Figure 3-1). As a result, CPSRA will not need to provide all types of recreation facilities, duplicating those planned elsewhere in the neighborhood. Facilities such as dog runs and tennis courts do not necessarily reflect the State Parks mission, and therefore, are more appropriately located beyond CPSRA. The comprehensive park and open space enhancements planned for the neighborhood will allow CPSRA to focus on providing programs that reflect its unique characteristics and visitor interests.

CANDLESTICK POINT STATE RECREATION AREA

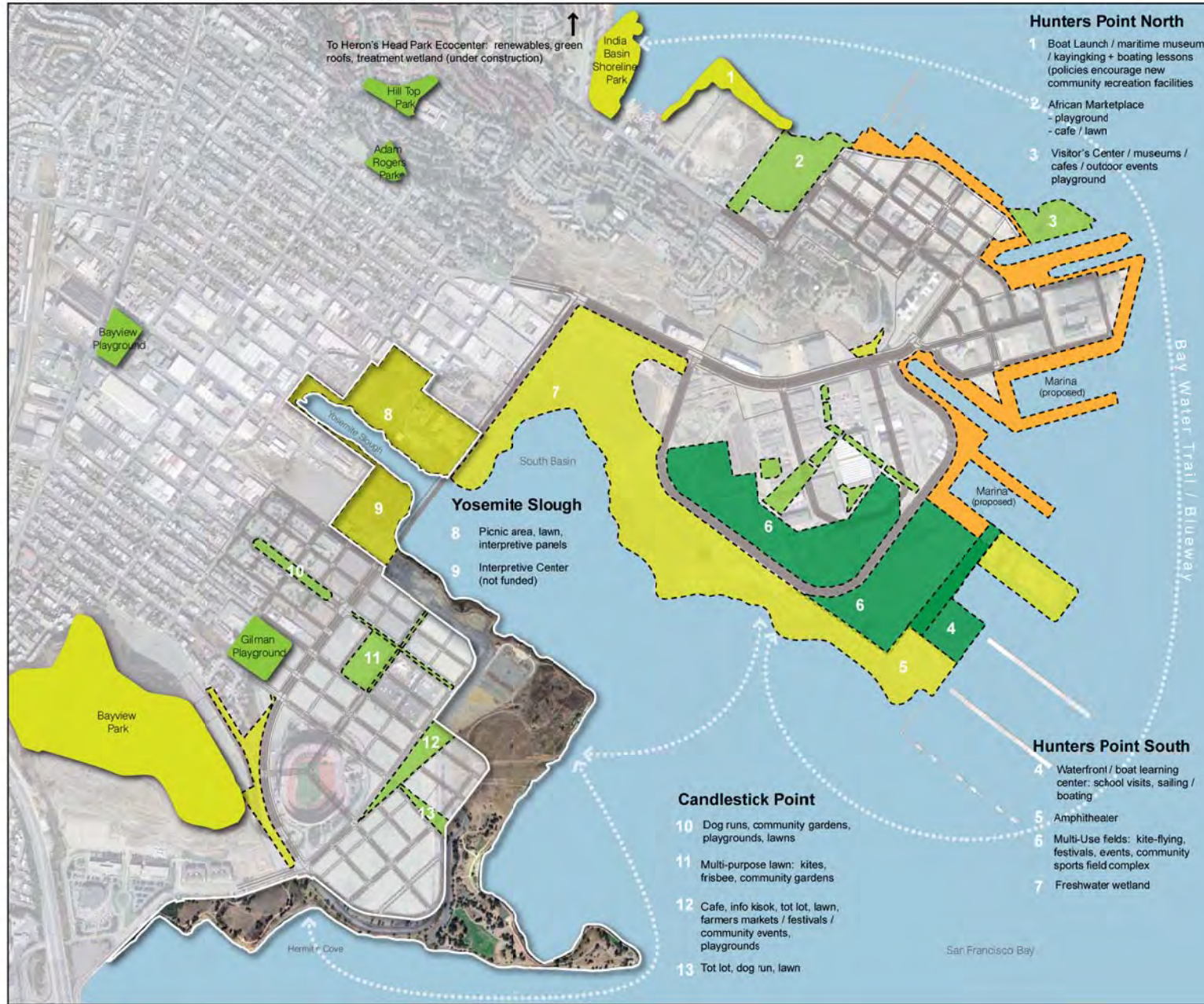


Figure 3-1
Opportunities + Constraints
PARKS + OPEN SPACE

- EXISTING**
- Restoration / Ecological Park
 - Neighborhood Park
- PROPOSED**
- Restoration / Ecological Park
 - Neighborhood Park
 - Sports Field / Recreation
 - Promenade



04.24.2012



3.2.2 Access and Linkages

Access to the Bay

CPSRA, with its open space and access to the Bay, is unique along San Francisco's industrialized eastern waterfront. The park's location on the Bay provides opportunities for expanding existing recreation activities, such as windsurfing, beach use, and fishing (Figure 3-2). The park also provides linkages to the ecological park along the south basin shoreline at Hunters Point (Figure 3-1). Over three miles of waterfront can accommodate new programs and facilities, such as non-motorized boating and swimming; however, the characteristics of the Bay will influence the locations of new facilities. For example, the protected waters of Jackrabbit Cove may allow for swimming, while tidal mudflats will limit non-motorized boating. In addition, CPSRA's location on the Bay creates a number of unique local conditions that affect user experience (Figure 3-3). Wind, expansive views, and enclosed areas, among other factors, help dictate appropriate programs for different areas of the park.

Access to Yosemite Slough

As shown in Figure 4-1, Draft General Plan Preferred Alternative, presented on page 4-5 of the CPSRA Preliminary General Plan and Draft Program EIR, the Draft General Plan Preferred Alternative would provide multiple access points around the perimeter of the park as well as an expanded trail system to improve public access to the park and the Bay shoreline. The Draft Concept Master Plan, which is presented in Appendix C of the CPSRA Preliminary General Plan and Draft Program EIR, identifies approximately 30 access points where visitors can enter the park. Access will also be provided via a walkway adjacent to the public parking at the administration facility.

State Parks supports the goals of the Yosemite Slough Restoration Project and will work with the California State Parks Foundation during detailed design and planning to ensure adequate and appropriate access is provided along the south side of Yosemite Slough to residents of the Alice Griffith Housing Project.

Access to CPSRA from the Surrounding Neighborhood

The CPSRA Preliminary General Plan would provide increased public access to the park in anticipation of the approximately 24,000 new residents that will live in the adjacent neighborhood following completion of the Candlestick Point-Hunters Point Shipyard Phase II Project. The CPSRA Draft Concept Master Plan, which is presented in Appendix C of the CPSRA Preliminary General Plan and Draft Program EIR, identifies approximately 30 access points where visitors can enter the park to help integrate CPSRA into the surrounding neighborhood. Every street that ends at the park will provide an entrance to the park.

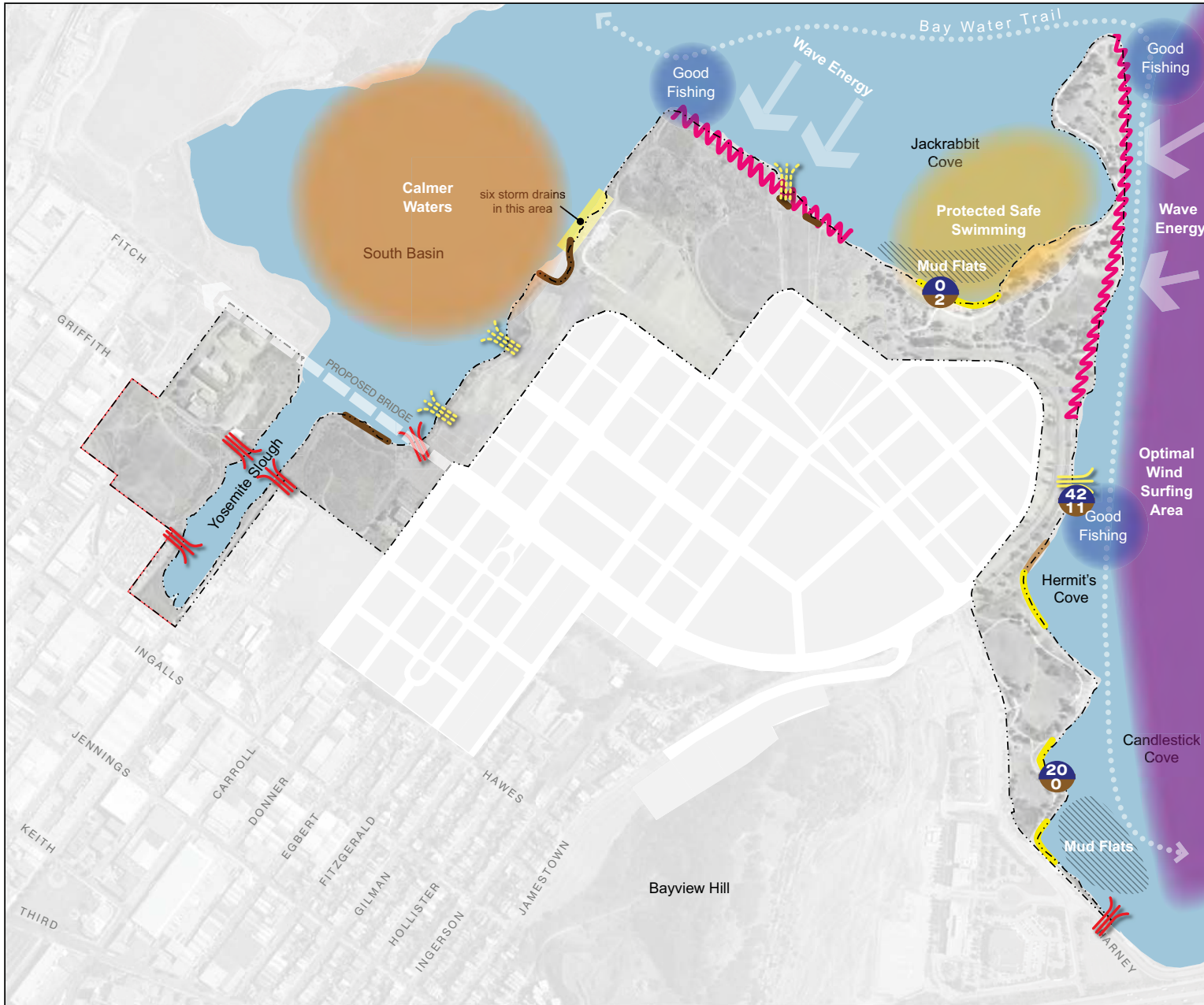












Figure 3-2
Opportunities + Constraints
THE BAY

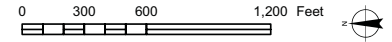
EXISTING

-  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

-  Highly Erosive Shoreline
-  Unprotected Shoreline (Marsh)
-  Rubble Beach
-  Sandy Beach

POTENTIAL

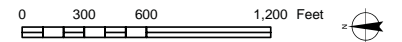
-  Potential Storm Drain



CANDLESTICK POINT STATE RECREATION AREA



Figure 3-3
 Opportunities + Constraints
 USER EXPERIENCE



11.28.2011



Access will also be provided via a walkway located adjacent to the public parking at the administration facility. In addition, wedge parks are planned within the adjacent Candlestick Point-Hunters Point Shipyard Phase II Project that will extend from planned residential areas to the park and will serve as gateways to CPSRA. The multiple park entrances will create a permeable park boundary that will encourage nearby residents to access CPSRA. The Preliminary General Plan also includes goals and guidelines to improve public access within the park to encourage visitors to access the Bay shoreline, natural areas such as Yosemite Slough, active recreation and group gathering areas, and the Bay Trail, as well as other facilities within the park. Please see Chapter 4, Park Plan.

Alternative Transportation

Access to CPSRA currently occurs primarily by vehicle. Despite its urban location, bus service to the park is limited, and few safe walking and biking routes exist from the surrounding neighborhood. The planned Candlestick Point-Hunters Point Shipyard Phase II Project includes a number of improvements that will increase access to the park via alternative transportation. The new street grid will create numerous opportunities for pedestrian access, and new bike paths and on-street bike lanes will designate safe bike routes to the park (Figure 3-4). The specific alignments of the new bike routes remain to be determined, and State Parks is coordinating with the City and County of San Francisco regarding their potential location within CPSRA. Expanded bus service will circulate through the neighborhood, and a new bus rapid transit (BRT) route will stop near Hermit's Cove and Yosemite Slough (Figure 3-5). These new routes to the park will result in multiple informal entries that will replace the existing single main entrance, which will no longer be located within CPSRA as a result of the boundary reconfiguration. The availability of numerous access points will also help to integrate CPSRA into the surrounding neighborhood.

Parking

Although opportunities exist to improve alternative transportation to CPSRA, the park must still provide adequate visitor parking. Parking must serve visitors from the greater region and the state, as well as local residents.

Certain program areas (i.e., windsurfing and picnicking) will require parking in strategic locations to facilitate the transportation of equipment. 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 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).

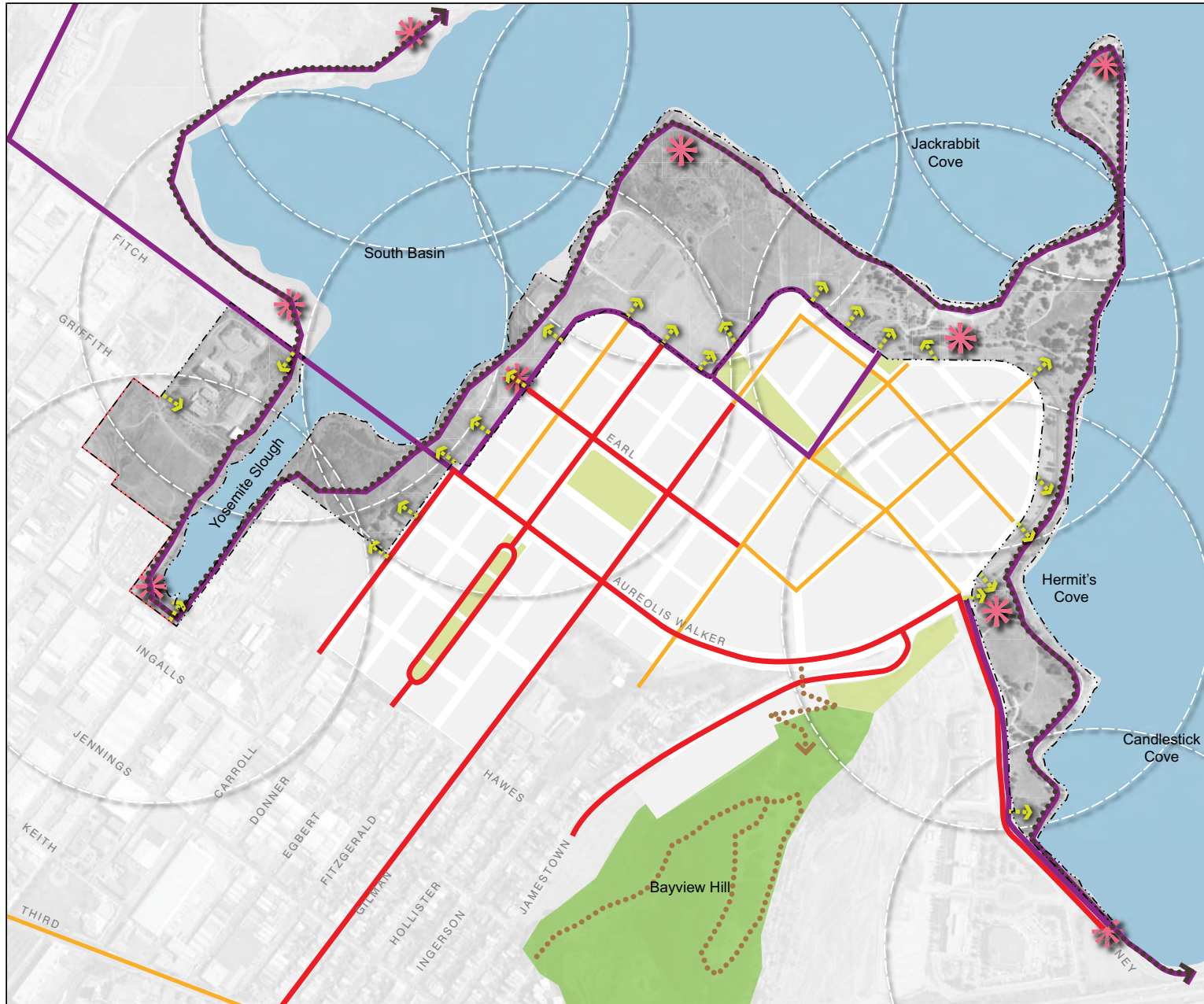
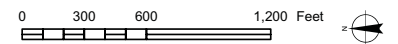


Figure 3-4
Opportunities + Constraints
PEDESTRIAN/BICYCLE CIRCULATION

- Proposed Parks
 - Potential Pedestrian Entries to Park
 - Bay Trail (Approx 3.3 mi within SRA)
 - Proposed Bayview Hill Park Access Trail
 - Key Waterfront Nodes
 - 1/4-Mile Radius (approx. 5 min walk)
- BICYCLE NETWORK (Proposed)**
- Class 1 - Bicycle Path
 - Class 2 - Bicycle Lane
 - Class 3 - Bicycle Route



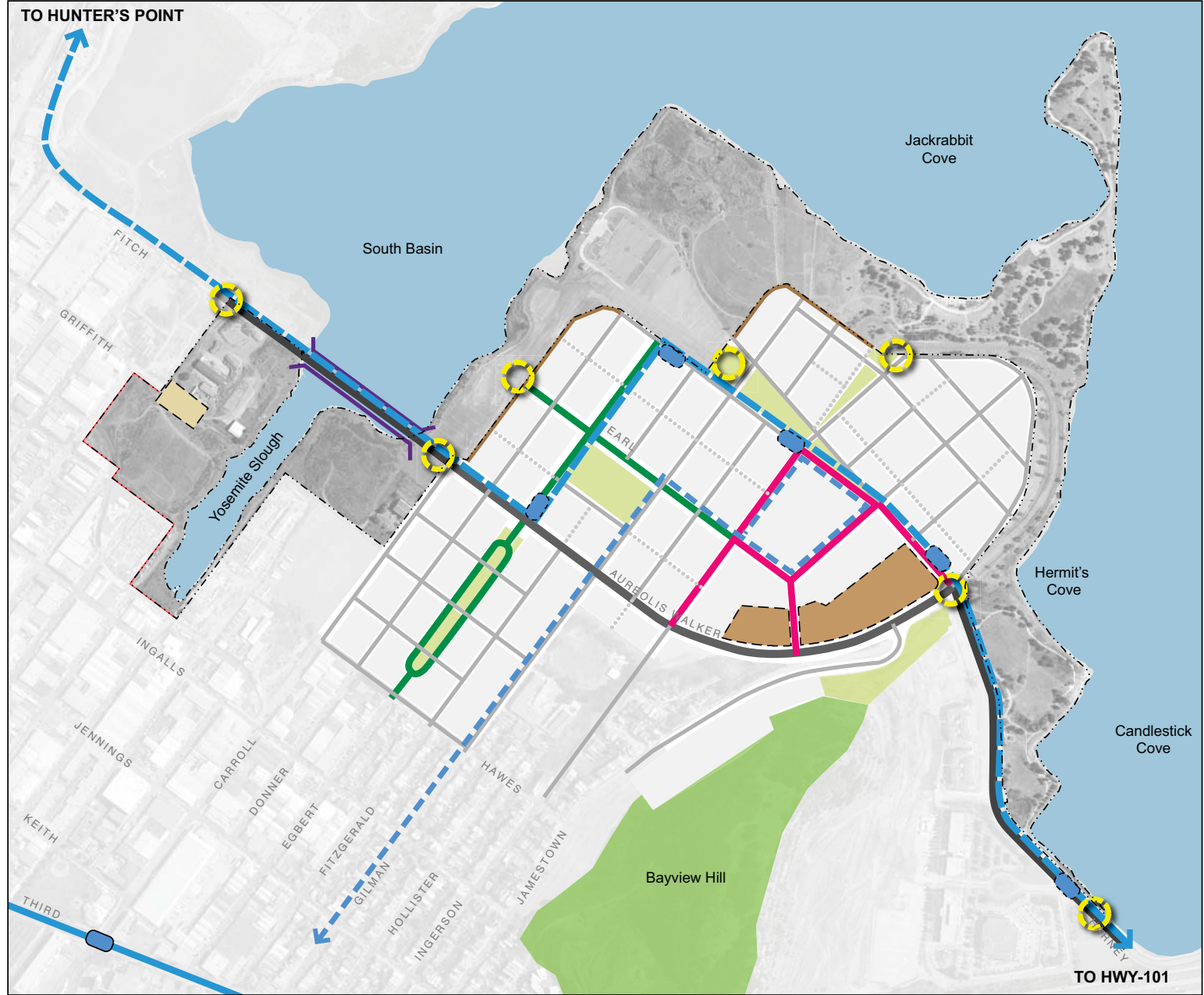
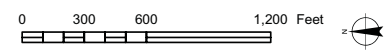


Figure 3-5
Opportunities + Constraints
STREETS + TRANSIT

- Proposed Parks
 - Key Gateways to SRA
 - Planned Parking Garage for Candlestick Center
 - Planned Surface Parking for Yosemite Slough
- STREETS (Proposed)**
- Primary Arterial
 - Retail Street
 - Boulevard "Park" Street
 - Local Street
 - Mid-Block Break (easement in private parcel)
 - Emergency Access / Public Pathway
 - Yosemite Slough Bridge
- TRANSIT (Existing)**
- Muni Light Rail
 - Muni Light Rail Stop
- TRANSIT (Proposed)**
- Proposed Bus Route
 - Proposed Bus Rapid Transit
 - Proposed Bus Rapid Transit Stop



Source: Design for Development, 03.17.10
 11.28.2011



TO HWY-101

TO HUNTER'S POINT

It is possible that future residents may forego purchasing or leasing off-street parking and use street parking instead, which will 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. Please refer to Section 4.5.4, Parking, for discussion of potential parking management options to ensure that adequate parking is available for park visitors.

Wayfinding

Tourists visiting San Francisco and arriving at San Francisco International Airport may not realize that CPSRA is conveniently located near US-101 as they enter the City. Park management should consider methods to increase the park's visibility, such as installing signage along US-101, and providing park brochures at the airport and at hotels and visitor information centers throughout the region and state.

Regional Trails

The Blue Greenway is an initiative to implement portions of the Bay Trail and the San Francisco Bay Area Water Trail (Water Trail) within San Francisco. Both of these trails include CPSRA, highlighting opportunities for coordination with other recreation planning efforts.

Plans to complete the Bay Trail call for extending it along the park's entire shoreline, with new segments planned for the unimproved and Yosemite Slough areas. The area along the western bank of Yosemite Slough within CPSRA is extremely narrow, posing design challenges related to visitor safety and trail stability, and highlighting the need for expansion of this area of the park. The Water Trail intends to traverse the waters off CPSRA and designate CPSRA's Windsurf Circle as a destination for non-motorized boats. Any plans to expand non-motorized boating at the park should coordinate with Water Trail planning efforts to determine how best to integrate the objectives of each.

3.2.3 Natural Resources

Habitat Enhancement

CPSRA contains a number of habitat types, which have developed either naturally or due to native planting activities (Figure 3-6). Preservation and enhancement of existing mixed canopy stands, low scrubland, wetlands, and shoreline habitat emerged as important issues to stakeholders involved in the CPSRA general planning process. The planned restoration of Yosemite Slough presents opportunities to expand the tidal marsh along CPSRA's South Basin shoreline. However, while Yosemite Slough was historically a tidal marsh, the remainder of CPSRA is reclaimed land.



Figure 3-6
Opportunities + Constraints
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)



Source: California State Parks, 2009;
 HT Harvey, 2009; PBS and J, 2009;
 California Natural Diversity Database 2009
 10.20.2011



The creation of new tidal marsh habitat on filled land involves uncertainties and potential challenges regarding fully successful outcomes. CPSRA also plays a role in the region's ecological network (Figure 3-7). Its proximity to nearby parks—specifically Bayview Hill and San Bruno Mountain—promotes connectivity for wildlife, such as raptors. The park's location on San Francisco Bay further connects it to a regional resource. CPSRA's natural resources present opportunities not only for enhancement but also for interpretation, education, and sustainable design.

Stormwater Management

A number of stormwater outfalls exist along the CPSRA boundary (Figure 3-8). Stormwater discharges during wet weather can result in elevated bacteria levels and limit water-based recreation at CPSRA. The planned Candlestick Point-Hunters Point Shipyard Phase II Project includes comprehensive infrastructure upgrades, including some for stormwater management. San Francisco's combined sewer system intends to treat most of the stormwater runoff generated by the redevelopment; however, several areas of CPSRA are also proposed to accommodate overland flow. While features such as swales and rain gardens improve water quality by slowing the flow of stormwater and filtering out impurities, siting them on CPSRA land presents issues related to functionality and maintenance.

In addition, while educational and interpretive programs can highlight green stormwater infrastructure, the use of CPSRA land to manage runoff from the adjacent development may ultimately reduce the space available for other programs. State Parks is collaborating with the City and County of San Francisco regarding the design of stormwater management infrastructure on CPSRA land.

Shoreline Treatment

Portions of the CPSRA shoreline are subject to strong erosive forces from waves, especially during winter storms. The southern shoreline east of the Windsurf Circle and the area east of Jackrabbit Beach are particularly exposed to wave action from the southeast. Riprap—including on a segment of the Bay Trail along the park's southern shoreline—limits visitor use in some areas and creates public safety risks. Although riprap (large boulders) armors much of CPSRA's highly erosive shoreline, many are in need of additional stabilization and repair.

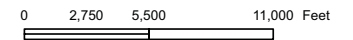


Figure 3-7
Opportunities + Constraints
REGIONAL ECOLOGY

- Site Area
- City / County Open Space
- Significant Natural Resource Area (City of San Francisco Designation)
- State Park

BIRD MIGRATION PATTERNS

- Primary
- Secondary
- San Bruno Mountain-McLaren Park-Bayview Hill-Candlestick low scrub open habitat corridor area



CANDLESTICK POINT STATE RECREATION AREA

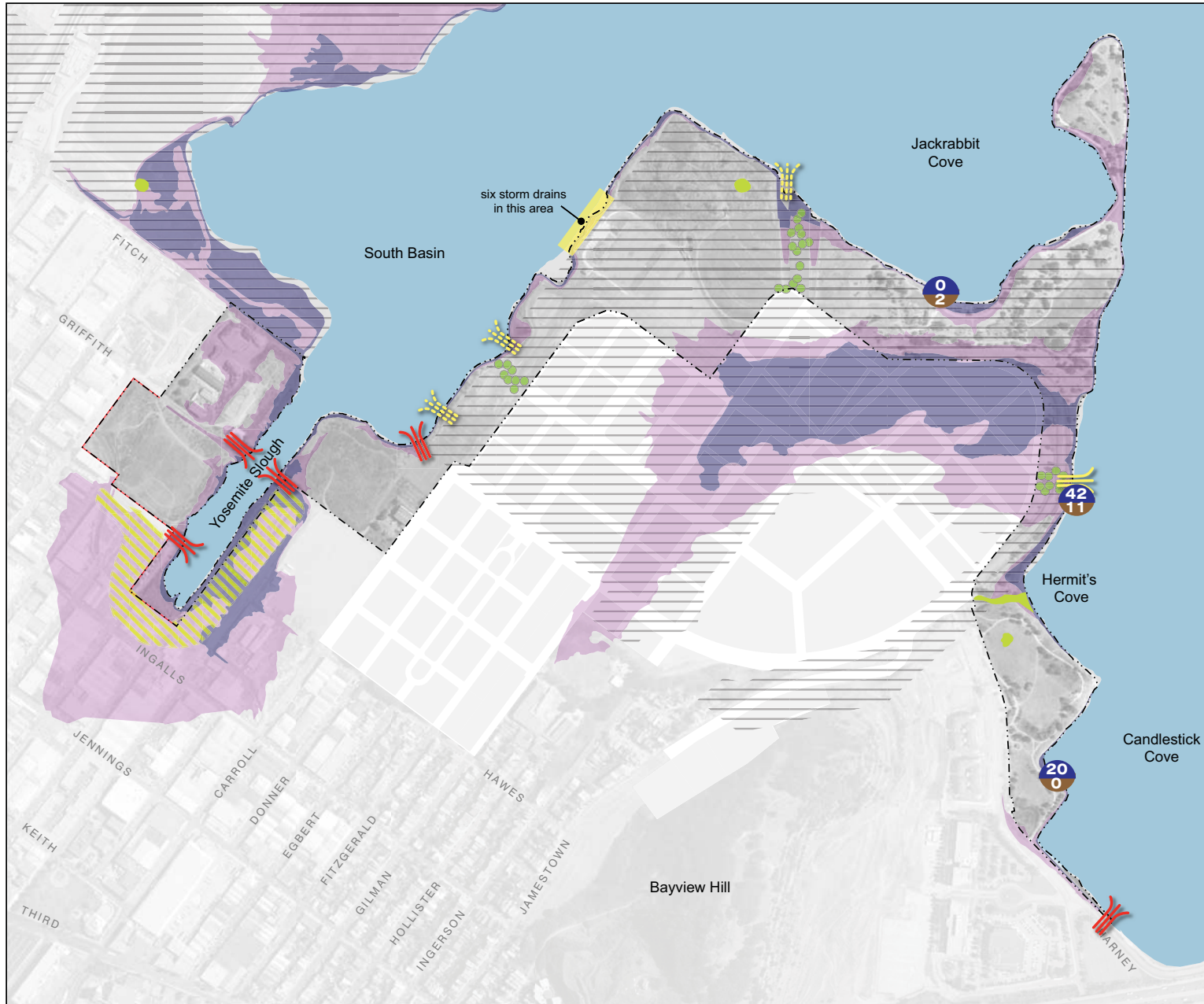







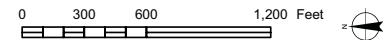
Figure 3-8
Opportunities + Constraints
HYDROLOGY

EXISTING

-  Combined Sewer / Stormwater Outflow
-  Stormwater Outfall
-  Storm Drains
-  Bacteriological Monitoring Station
 Instances bacteria exceeded "standard sample" quantities between 2004 and 2008
 in wet weather
 in dry weather
-  Existing Flood Zone
-  Flood Zone with 3' Sea Level Rise at Existing Site Elevation
-  Separate Storm Sewer Areas (drain to bay or local storm drains)
-  Freshwater Seasonal Wetlands
-  Potential Sea Level Rise Adaptive Management Zone

PROPOSED

-  Stormwater Outfall
-  Stormwater Discharge / Area of Impact (Lennar)



Sources: May 21, 2009 Draft HP-CSP EIR
 Appendix L (Prepared by ENGEO),
 RHAA 2009, Winzler & Kelly
 11.28.2011



Coastal Flooding

The lower elevations of CPSRA are subject to flooding when stormwater backs up over low-lying property during winter storms. The majority of flooding occurs around Windsurf Circle and north along Jamestown Avenue, extending well into the existing Candlestick Park stadium parking lot (Figure 3-8). The extent of flooding in this area restricts vehicle access along Jamestown Avenue, limiting the ability of both park staff and visitors to travel across the entire park. The shoreline surrounding Yosemite Slough also experiences considerable flooding, as do other low-lying areas of the shoreline, including Jackrabbit Beach. Flooding damages park facilities, which impairs recreational opportunities, requires additional maintenance, and poses safety risks to visitors and staff.

Sea Level Rise

The occurrence of sea level rise would increase the risk of coastal flooding associated with storms and extreme high tides at CPSRA. Future predictions regarding sea level rise are subject to debate, and the science related to climate change and sea level rise continues to evolve. The BCDC, which is charged with protecting, enhancing and encouraging responsible use of the Bay, has projected sea level rise of 16 inches by 2050, and 55 inches by 2100 (BCDC 2011). The Candlestick Point-Hunters Point Shipyard Phase II Final EIR cites a sea level rise estimate of 36 inches by approximately 2080, which takes recent measurements of ice cap melt into account (Rahmstorf, 2007; cited in San Francisco Redevelopment Agency and San Francisco Planning Department, 2009). The 100-year storm, coupled with a rising sea level, would increase the flooding that currently occurs around Windsurf Circle and Jamestown Avenue, inundating a large portion of the Neck as well as the Main Park (Figure 3-8). Sea level rise would also inundate other areas of CPSRA's shoreline, notably the thin strip of land between the Main Park and Sunrise Point, creating an island out of the far eastern tip of land. The area surrounding Yosemite Slough would also experience coastal flooding from sea level rise during a 100-year storm event.

The potential for sea level rise presents both opportunities and constraints for CPSRA. New facilities should be sited outside of those areas likely to experience the most substantial coastal flooding in the future. Shoreline treatments, including berms and levees, can also prevent flooding of areas requiring protection, such as those that experience heavy visitor use. However, other areas of the park may undertake softer strategies, such as the creation of tidal marsh to dampen storm surges and flooding. An adaptive management approach that maintains flexibility may be appropriate for some areas, such as Yosemite Slough, where the risk of flooding extends well beyond the CPSRA boundary. As part of the Yosemite Slough Restoration Project, led by the California State Parks Foundation, an adaptive management plan was developed to address sea level rise along the north shore of the slough (see Appendix E). State

Parks will continue to work with the California State Parks Foundation to address sea level rise issues within CPSRA. In addition, the planned Candlestick Point-Hunters Point Shipyard Phase II Project intends to elevate the grade of its footprint to withstand sea level rise, and State Parks is coordinating with the City and County of San Francisco and the San Francisco Redevelopment Agency regarding the transition between the development's edge and CPSRA.

3.2.4 Community Resources

Redevelopment

The planned Candlestick Point-Hunters Point Shipyard Phase II Project will dramatically alter the area surrounding CPSRA and transform one of San Francisco's least densely populated neighborhoods. New land uses—high-density residential and commercial development—will replace the existing Candlestick Park stadium, redefining CPSRA's edge and surrounding context. This adjacent development will make CPSRA feel much different than it does today, and planning for new programs and facilities must consider issues related to carrying capacity and land use compatibility, among others. The proximity to high-density housing and the associated increase in population will affect programming and facility planning, and coordination with the City and County of San Francisco and the San Francisco Redevelopment Agency will be essential to ensure integration of adjacent uses.

Local and Statewide Interests

CPSRA is the largest area of open space in San Francisco's Bayview Hunters Point neighborhood. With trails, exercise facilities, picnic areas, and access to the Bay, the park draws regular visitors from the local community. While local residents are an important visitor group, CPSRA is a unit of the State Parks System, whose mission is to "provide for the health, inspiration and education of the people of California." As such, planning for the future of the park will need to balance the interests of local users with those of visitors from across the state and beyond. This will help to expand CPSRA's user base and heighten its profile as one of California's premier urban state parks.

Environmental Justice

Bayview Hunters Point is predominantly a low-income community of color which has historically served as the dumping ground for San Francisco's most toxic industries. Thirty-four percent of community residents are African-American, 35 percent are Asian-Pacific Islander, 14 percent are Latino, and 22 percent are white (SFDPH 2009d). Twenty-one percent of the neighborhood's population was living below the poverty level in 2000 (SFDPH 2009d).

While one third of the Bayview's residential population is comprised of children — the highest rate in the city — there are over 325 toxic sites in this 6-square-mile community.

Two dozen schools and childcare centers are located within three miles of the Hunters Point Naval Shipyard, a federal Superfund site. Bayview Hunters Point residents are hospitalized more often than residents of other San Francisco neighborhoods for nearly every disease. Twenty percent of children have asthma, and the prevalence of chronic illness is four times the state average (Literacy for Environmental Justice, 2011).

Compounding these environmental health hazards, 15 to 20 percent of the Bayview's African American and Latino/a residents suffer from diabetes, 40 to 50 percent are obese, and 20 to 25 percent smoke. One of the major reasons for the community's poor health is the lack of access to fresh food. Corner stores are many people's primary food source, because of supermarket flight and lack of access to reliable public transportation. Primary environmental justice struggles in Bayview Hunters Point include:

- Cleaning up the Hunters Point Power Plant site;
- Remediation and redevelopment at the Hunters Point Shipyard; and
- Increasing healthy food access throughout the community (Literacy for Environmental Justice, 2011).

The proposed improvements at CPSRA would provide improved recreation opportunities and facilities as well as fitness and education opportunities to the Bayview Hunters Point community. These improvements would benefit the neighborhood.

Community Health and Safety

As stated above, San Francisco's Bayview Hunters Point neighborhood has some of the city's poorest public health outcomes. In keeping with the State Parks mission, CPSRA can offer programs that promote public health by emphasizing physical activity and healthy food options.

The neighborhood surrounding CPSRA has one of the highest crime rates in San Francisco, although crime in the park itself is generally low. Many visitors to CPSRA enjoy the feeling of solitude amidst urban and industrial surroundings. Areas such as Yosemite Slough and the Last Port are more isolated, a feeling often reinforced by the limited presence of park rangers. Visitor safety is an important part of the state park experience. Facility improvements and design elements can provide a sense of security while continuing to allow CPSRA visitors to connect to nature and the Bay.

Community Facilities

As stated above, CPSRA has a strong connection to the adjacent Bayview Hunters Point community, and many local residents visit the park regularly. CPSRA currently provides spaces for community gathering, primarily through group and individual picnic areas. Opportunities exist to provide new and expanded community-oriented facilities, such as a larger Community Garden or a boat-building facility. While CPSRA

occasionally hosts special events, additional community oriented events—such as farmers markets and small concerts—could expand cultural and recreation options in the park to serve both current and future park users.

3.2.5 Interpretation and Education

Interpretation Issues

Future Development Outside CPSRA

New developments in the areas surrounding CPSRA will significantly change both the demographics of the local community and of park visitors. Patterns of park use, the local context of CPSRA interpretive opportunities and the interpretive interests of visitors will also be altered.

Availability of Tangible Interpretive Resources

In interpretive programming tangibles refer to those resources at a park that a visitor can see or touch or otherwise experience with their senses during their visit. Examples of tangibles include wildlife and vegetation, geographical or geological features, buildings and artifacts.

Tangibles provide interpretive opportunities for linking what the visitor can experience on a site today with intangible aspects of the site, such as past events, people, unseen processes or systems, cultural beliefs and values. Tangibles are especially important in self-guided interpretation via wayside signage.

The absence or presence of tangible resources dictates many of the constraints and opportunities for interpretation at CPSRA.

Interpretation Opportunities

Interpretive School Programs

School group tours were the key component of CPSRA's educational programming in the past and could be so again in the future with adequate staffing and funding. Many resources of the park, including mudflats, Yosemite Slough wetlands and habitat restoration sites, lend themselves to guided walks.

More formalized environmental education programming could be provided at CPSRA via a new State Parks-staffed information center in the community or by partnering with other organizations and facilities such as Literacy for Environmental Justice's EcoCenter at nearby Heron's Head city park.

General Public Programs

Park-sponsored special events, such as cultural history days, fishing derbies, birding festivals, kayak clinics or windsurfing demonstrations, would also offer opportunities to connect visitors with park resources and interpretive themes.

Self-Guided Interpretation

A well-planned interpretive trail system, utilizing existing and future pedestrian pathways in CPSRA, could both enhance the quality of visitor experiences at Candlestick Point and encourage visitor stewardship of park resources. New interpretive signage along park trails could offer stories designed to stimulate trail visitors interest while challenging their imaginations and presenting Candlestick Point-specific perspectives on familiar interpretive topics.

Docent Program

Docents typically become involved with interpretive activities such as educational programs for school groups, tours, nature hikes, living history programs and demonstrations. A docent program at CPSRA could be a cost-effective, efficient means to significantly expand any future staff-provided interpretive and educational programming.

Recreation-based Interpretation

Existing recreational activities at CPSRA, such as fishing, windsurfing and fitness training, offer opportunities to interpret larger themes and stories. For example, new signage along the park's fitness course could offer both instruction and interpretive messages relating to healthy urban lifestyles. Windsurfing could be linked to themes related to San Francisco Bay weather or the area's sailing vessel history. Fishing, in particular, has proved effective at other parks in connecting visitors to important interpretive topics such as aquatic ecology and stewardship.

Fishing in The City, an urban fishing program managed by the California Department of Fish and Wildlife, works with park agencies, schools, service clubs and other interested partners to provide fishing opportunities and watershed stewardship interpretation to California's growing urban populations. Each individual Fishing In the City program is custom designed by and for the community it serves.

CPSRA's fishing pier and its location along San Francisco's urbanized southeastern shoreline make it a good candidate for partnership in a Fishing In The City program designed specifically for the surrounding Bayview - Hunters Point community.

FamCamp[®] is another recreation-based program with interpretive potential for CPSRA. Offered by California State Parks Foundation in conjunction with State Parks,

FamCamp® works in partnership with community organizations, schools, churches and other organizations to build family bonds and break down social and financial barriers for underprivileged families by providing a guided weekend group camping trip. Trips provide low-income families with necessary camping equipment, group activities, outdoor leadership, and skills training.

For many children of the Bayview-Hunters Point community, a FamCamp® program at CPSRA would provide a first opportunity to camp in a state park, explore the natural world with family members and gain environmental awareness and curiosity.

Kids in Parks

State Parks offers a number of programs for children that could use CPSRA as a venue, including Exploring Nature in Your Neighborhood, Litter Getters, Junior Lifeguards and Junior Rangers. The Junior Ranger program, in particular, offers a significant opportunity to connect young residents of the surrounding communities with the park's resources and interpretive themes through customized staff-led activities.

Remote Interpretation

The reach of CPSRA interpretation and education can be extended beyond the boundaries of the park via opportunities such as the PORTS program and an expanded set of interpretive webpages on the State Parks website.

The State Parks "Parks Online Resources for Teachers and Students" (PORTS) program is a collaborative effort between public schools and State Parks. By using the high-speed network that connects California schools, PORTS is able to deliver two-way videoconference presentations to classrooms from parks throughout the state. This programming is theme-based and addresses K-12 California academic content standards.

High demand for PORTS programming exists in schools across the State. At CPSRA, live PORTS teleconferencing equipment would allow students, regardless of their geographic location or economic status, to talk face to face with interpreters about wetlands ecology, Yosemite Slough restoration, urban impacts on the environment or any of the other interpretive resources available at the SRA. PORTS offers the potential of serving 10,000 students per year per each 1500 hours of interpreter time.

Interpretive Facilities

CPSRA lacks indoor interpretive facilities such as a visitor center or environmental education center, but a number of existing outdoor facilities offer opportunities for interpretation.

The existing fishing pier offers opportunities for both new interpretive signage and presented interpretive programs by staff or volunteers. It can also serve as a venue for interpretive/recreational programs presented in partnership with other groups and agencies, such as California Department of Fish and Wildlife's Fishing In The City program.

At the existing restrooms, the open air paved and covered area of the pavilion offers opportunities for both new interpretive signage and as a meeting place for interpretive programs.

Throughout the park, and especially along trails, at viewpoints and in adjacent picnic areas, there are numerous opportunities for new interpretive signage. Existing bulletin-board style kiosks and low profile trailside signs can be updated or replaced to meet current State Parks best practices and standards for interpretive signage.

The existing ranger office, while not suitable for a visitor center, offers a secure location from which boxes of interpretive props and informational material could be picked up by staff or volunteers for use in presented interpretive programs elsewhere in the park. These interpretive props could provide opportunities for visitors to interact with tangible elements of Candlestick Point-related themes and stories that might otherwise not be available in the SRA (e.g., objects related to Ohlone culture).

Tangible-based Interpretation

In spite of CPSRA's heavily disturbed, landfill-underlain terrain, many tangible resources exist in the park, or are viewable from the park, that can be linked to important interpretive stories.

These interpretive tangibles (in bold below), and some of the topics that can be interpreted through them, are listed below. Note that different tangible resources can often be linked to the same story, sometimes from different perspectives.

San Francisco Bay

- Geology of San Francisco Bay
- Hydrology of San Francisco Bay
- Human History of San Francisco Bay
 - Ohlone Culture
 - European Discovery
 - Portola Expedition
 - De Anza Expeditions
 - History of San Francisco
- Human Alterations of the Shoreline
 - Site History
 - Original Shoreline
 - Origin of Candlestick Name
 - Fill of Tidelands to Create Current Shoreline

- Stewardship of San Francisco Bay
 - Reasons to Care
 - Save the Bay Story
 - How Visitors Can Get Involved

Rip Rap/Exposed Fill Along Shoreline

- Natural History: Oysters, Crabs and Other Invertebrates
- Filling of Tidelands
- Site History
 - Original Shoreline
- San Francisco Bay History
 - Original Shoreline
- Impacts of Bay Fill
 - Loss of Wetlands, Wildlife Habitat
- San Francisco Bay Hydrology/Causes of Erosion
- Sea Level Change/Global Warming

“Rock Pile” Restoration Site

- Site History
- Native Plants
- Benefits of Restoration
 - Habitat and Wildlife Diversity
- Ohlone Use of Native Plants
- Community/Youth Involvement in Restoration

Yosemite Slough *(and any other wetlands restoration areas on site)*

- Wetlands Ecology
- Role of Wetlands in the Ecological Health of San Francisco Bay
- Importance of Wetlands to Fish, including Sport Fish Species
- Native American Use of Wetlands/Original Shoreline
- Stewardship of San Francisco Bay Wetlands
 - Why Visitors Should Care
 - Ways Visitors Can Get Involved.
- Site History/San Francisco History
- Restoration Story, including Youth/Community Involvement
 - Benefits of Restoration
- Impacts of Adjacent Urban Areas on Yosemite Slough Ecology

Shorebirds

- Shorebird Species and their Ecology
- Shorebirds and their Connections to the Bigger Story of San Francisco Bay Ecology
- Benefits of Wetlands Restoration for Shorebirds
- Birding
 - How to Enjoy Birding at CPSRA
- Mudflat Ecology
 - What Are the Shorebirds Doing on the Mudflats?

- What Lives in a Mudflat and Why It's Important

Tidal Mud Flats

- Mud Flat Ecology
 - What Lives in a Mud Flat
 - Shorebirds and Shorebird Foraging
- Tides and Hydrology of San Francisco Bay
- Tidelands Real Estate Story

Tidally Exposed Remains of Ship Hulks

- Ship Hulks Story
- Bay Fill Story
- Site History
- San Francisco History

Landscaped Areas/Park Entryway from Main Parking Area

- Site History
 - Story of Park Creation, Original Vision
 - First Urban State Park
 - First African-Americans in the State Parks System
 - Social Justice Story
- Recreation-related Interpretation
 - Value/Benefits of Park-related Health and Fitness Activities
- Songbird/Urban Wildlife Stories
 - Stopping Place on Flyways
 - Identification of Commonly Seen Birds in Landscaped Area
 - Bird Ecology

Ground Squirrel Burrows

- Urban Wildlife Ecology
- Predator/Prey Relationship
 - Hawks vs. Ground Squirrels
 - Where Do Hawks Nest?

Artwork installations

- Art in the Parks Story
- Art Appreciation/How to Experience a Particular Piece
- The Artwork and Its Artist

Bayview Hill

- Urban Wildlife Story
 - Importance of Wildlife Corridors
 - Value of Natural Habitat in Urban Settings
- Ecological Connection to CPSRA
- Site History
- Geology

Wind

- Windsurfing (Also Can Be Its Own Tangible)
 - What Are Those People Doing Out There?
 - How to Enjoy Windsurfing at CPSRA
- Sailing Ships
- How Wind Once Powered Shipping on the Bay, to and from San Francisco and the Rest of the World
- Ship Hulks of Candlestick
- History of San Francisco/California: European Development as Port
- Geography of San Francisco Bay
- Weather of San Francisco and San Francisco Bay
- Site History: Wind at the Stadium Was One Reason to Move Stadium
- Wind Tunnel Art Piece (*also can be a tangible—see art installations below*)

Re-gunning Crane Visible At Hunters Point

- US Navy Shipyard History
- World War II and San Francisco's Role
- Bay Fill Activities Associated with Shipyard and CPSRA
- Hunters Point – Bayview Workers Housing
 - Community's Story Related to Shipyard
 - Demographic Shifts Related to Housing
 - Italian to African-American, etc.
- Shipyard Influence on CPSRA History

Fishing Pier

- Sport Fish Species and Their Ecology
- Fish and Their Place in the Bigger Story of San Francisco Bay Ecology
- Stewardship of San Francisco Bay Aquatic Ecology
 - Why Visitors Should Care
 - Ways Visitors Can Get Involved
- History of San Francisco Bay Fishing/Aquatic Resource Utilization
 - Ohlone Uses of Bay Resources (past and present)
 - Chinese Fishing Camps
 - Italian/Azores Immigrant Influence on Bay Fishing Industry
 - Present Day Fishing (Commercial and Recreational)

Kayak Launching Site

- Non-powered Boat Recreation on San Francisco Bay
 - San Francisco Bay Area Water Trail
- Ohlone Use of Paddle Craft on San Francisco Bay
- Tips for Safe Wildlife Viewing From Your Boat
- Boating Safety

Community Gardens

- Value/Benefits of Urban Gardens
- Plant Ecology

- Community/Youth Involvement

Interpretation of Missing Resources

Some important interpretive stories connected with Candlestick Point have no tangible resources in the present-day SRA. These include the area's Native American history and the history of 19th century Chinese fishing camps along the original shoreline. Both of these subjects are desired by local educators to fulfill California Education Standards. They also rank high as desirable subjects for interpretation at Candlestick Point in public planning meetings for the park.

Opportunities for interpreting these topics could be enhanced with the acquisition of interpretive props—replicas of a Ohlone reed boat, Chinese shrimp junk, former shoreline dwellings and other cultural artifacts—or through living history events and presentations by present-day descendants.

Interpretation Constraints

Sensitive Wildlife Habitat

Wetlands and other restored habitat areas at CPSRA will be environmentally fragile areas. Some of the most important resources to interpret will be located these areas and in some cases and at some times of year may require limitations on interpretive walks and self-guided access.

Cultural Sensitivity

Interpretation of many of the cultural stories connected to CPSRA, including history and culture of the Bayview-Hunters Point community, Ohlone culture and 19th century Chinese fishing history, must be planned with input from the various cultural groups involved with these stories.

Absence Of Tangible Resources

Because the land area of CPSRA consists entirely of late 20th century land fill, the site lacks tangible evidence of the cultural history of the original shoreline. In order to interpret stories related to the area's Native American and Chinese fishing history, the SRA will have to utilize interpretive props or connect these cultural stories to existing resources in the park (e.g., the present-day fishing pier could serve as a tangible link to Chinese fishing in the bay in the 19th century).

Lack of Terrestrial Wildlife Habitat

Although “nature interpretation” is frequently cited as a desired interpretation subject in CPSRA public planning meetings, the park's current landscaping does not support the diversity of land birds, mammals and other wildlife commonly associated with State

Parks. Bayview Hill provides habitat for terrestrial wildlife but is inaccessible for tours and self-guided interpretation from the park. Future natural history interpretation will likely have to focus on wetlands habitat and aquatic wildlife.

3.2.6 Operations and Maintenance

Park Branding

Branding of individual state parks and the larger system is an important objective of State Parks. This is particularly salient in the urban setting of San Francisco, where many local residents use CPSRA regularly. Improvements resulting from the General Plan should highlight CPSRA as a state park with a specific mission and purpose, and therefore, as distinct from a city or neighborhood park. CPSRA can also serve as a gateway to the State Parks system, providing information about other state parks in the Bay Area and across California. Opportunities exist to apply this approach within CPSRA, as well as in the neighboring community, through development of a visitor information center or community “storefront.”

Partnerships

State Parks is currently involved in several partnerships that leverage volunteers and other community groups for various operations at CPSRA. Existing partnerships with groups such as the California State Parks Foundation and Literacy for Environmental Justice, should be continued and expanded upon to further implement natural resource management activities in the park. Additional partnerships should be pursued to expand programming, such as recreational equipment rental and other concessions. In addition, as stated above, the adjacent Candlestick Point-Hunters Point Shipyard Phase II Project will include a 330-acre open space network that includes CPSRA (but does not include Yosemite Slough), and opportunities exist for sharing responsibilities, such as maintenance and the provision of visitor information, with neighboring parks.

Funding and Implementation

Funding for improvements will be provided partly by the San Francisco Redevelopment Agency, which is leading the adjacent Candlestick Point-Hunters Point Shipyard Phase II Project. As part of the land exchange between the Agency and State Parks authorized under Senate Bill 792, the City will provide State Parks funding for CPSRA: \$40 million for park development and \$10 million for operations and maintenance. The funding will be provided in phases in conjunction with the phasing of the land exchange. While the City has guaranteed a long-term funding source for CPSRA, it will be important to ensure funding for both capital projects and ongoing maintenance. The Candlestick Point-Hunters Point Shipyard Phase II Project will be implemented in several phases over the next 20 years. As a result, the timing and location of this construction will affect the implementation of programs planned for CPSRA in this General Plan update.

State Parks will continue to work closely with the City and County of San Francisco and Lennar Urban (the developer for the planned Candlestick Point-Hunters Point Shipyard Phase II Project) to ensure appropriate timing and funding of improvements to CPSRA.

3.3 Area-Specific Issues

3.3.1 Yosemite Slough Restoration

The 1987 CPSRA General Plan called for restoration of Yosemite Slough, a former tidal marsh reduced by filling of San Francisco Bay. Once restored, Yosemite Slough will be the largest tidal marsh in the City and County of San Francisco. 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 (RMC and Jones & Stokes 2006). Restoration and remediation north of the slough was completed in 2011, and detailed design of Phase II (south of the slough) is scheduled for 2012. The CPSRA General Plan recognizes the Foundation's plans for Yosemite Slough to promote continued restoration of the area.

3.3.2 Yosemite Slough Bridge

The planned Candlestick Point-Hunters Point Shipyard Phase II Project includes a bridge that would extend over Yosemite Slough, connecting Arelious Walker Drive to Fitch Street. The bridge would be restricted to city buses, bicycles, and pedestrians. The bridge could potentially cause inconsistencies with the planned Yosemite Slough Restoration Project, which will expand public access and wildlife habitat, including islands for nesting birds. Two agreements that reference the bridge would minimize that potential. The Settlement Agreement and General Release (dated January 7, 2011) between the Sierra Club, Golden Gate Audubon Society, and CP Development Company (the developer of the Candlestick Point project, including the bridge), requires the developer to consider and implement various measures to reduce impacts. Similarly, the Candlestick Point State Recreation Area Reconfiguration, Improvement, and Transfer Agreement (dated April 6, 2011) between State Parks and the City and County of San Francisco, commits the City—acting as successor to the San Francisco Redevelopment Agency—to include the California State Parks Foundation and State Parks in the approval process for the bridge and to cooperate in ensuring that the bridge is consistent with the wetland, aquatic habitat, public access, and recreation objectives of the restoration project.

3.3.3 Bayview Hill Connections

Along with CPSRA, Bayview Hill is a valuable open space resource in the Bayview Hunters Point neighborhood. As its name indicates, it provides sweeping views of San Francisco Bay. Its high biodiversity and proximity to CPSRA highlight the potential for increased connectivity between the two parks that would benefit wildlife as well as visitors. Private development and the four-lane Harney Way currently separate CPSRA and Bayview Hill, although a pedestrian bridge allows access between the Last Port and Jamestown Avenue, which traverses Bayview Hill's western edge. Despite these physical obstacles, opportunities may arise in the future to further integrate the two open space resources, allow CPSRA's visitors to enjoy vistas from the hill, and improve wildlife connectivity.

3.4 Assumptions for Future Scenario without the Candlestick Point-Hunters Point Shipyard Phase II Project

The Candlestick Point-Hunters Point Shipyard Phase II Project was approved by the City of San Francisco Board of Supervisors on July 27, 2010. However, it is possible that changes in project funding, economic conditions, or other factors could potentially stall or halt the development. The following discussion addresses how CPSRA would be affected if the Candlestick Point-Hunters Point Shipyard Phase II Project were to be stalled or stopped.

The following assumptions would apply if the Candlestick Point-Hunters Point Shipyard Phase II Project were not to move forward:

1. The existing CPSRA boundary would remain in place, and the exchange of land between State Parks and the City and County of San Francisco for the Candlestick Point-Hunters Point Shipyard Phase II Project that was authorized under Senate Bill 792 would not occur. Consequently, the City and County of San Francisco would not provide State Parks the funding that would have been provided as part of the land exchange, which includes \$40 million for park development and \$10 million for operations and maintenance.
2. The Candlestick Park stadium would no longer be located at Candlestick Point. Consequently, State Parks would no longer provide stadium parking during stadium events, and would no longer receive parking revenue.
3. The Yosemite Slough Restoration Project currently underway would move forward through completion.

If circumstances change, and the scenario described above were to occur, State Parks would amend this General Plan to focus on Alternative 2, Community and Culture, which is described in Section 5.8, Alternatives Analysis. Alternative 2 is consistent with the Preferred Alternative, but it includes the original park boundary and does not include the funding that would be provided as part of the land exchange for the Candlestick Point-Hunters Point Shipyard Phase II Project. Because less funding would be available under Alternative 2, it includes fewer park improvements than the Preferred Alternative. Alternative 2 would be refined to include the same level of detail as the Preferred Alternative presented in this General Plan, with input from the public, and would be subject to further environmental review. Please refer to Section 5.8, Alternatives Analysis, for further discussion of Alternative 2.

4 Park Plan





This General Plan establishes a long-range purpose and vision for CPSRA. Specific management zones described in the plan clarify the management intent and desired visitor experiences at the various proposed facilities at CPSRA. The goals and guidelines in this General Plan provide guidance on how to achieve the purpose, vision, and management intent for CPSRA. The goals and guidelines were developed to address known planning issues while providing a foundation for resource protection, development, and interpretation of the park unit. The goals and guidelines also provide a framework for subsequent planning and development for the various elements of the CPSRA.

4.1 Purpose and Vision

4.1.1 Declaration of Purpose

The statement of purpose contained in a general plan is a unique statement of direction that is specific to the State Park it is intended to guide. The statement of purpose for CPSRA is as follows:

The primary purpose of the Candlestick Point State Recreation Area is to make available to the people the recreational opportunities, whether passive or active, that are offered by the shoreline and adjacent bay waters.

4.1.2 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.

4.2 Unit Classification

Park management and direction is also guided by the park unit's classification. In April 1977, CPSRA was classified by the California State Park and Recreation Commission 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):

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.

Once the Yosemite Slough Restoration Project is completed, State Parks should consider classifying the restored habitat as a natural preserve. The following is the classification definition for a Natural Preserve according to the public resources code:

PRC Section 5019.71: Natural Preserves consist of distinct nonmarine areas of outstanding natural or scientific significance established within the boundaries of other state park system units. The purpose of natural preserves shall be to preserve such features as rare or endangered plant and animal species and their supporting ecosystems, representative examples of plant or animal communities existing in California prior to the impact of civilization, geological features illustrative of geologic processes, significant fossil occurrences or geological features of cultural or economic interest, or topographic features illustrative of representative or unique biogeographical patterns. Areas set aside as natural preserves shall be of sufficient size to allow, where possible, the natural dynamics of ecological interaction to continue without interference, and to provide in all cases, a practicable management unit. Habitat manipulation shall be permitted only in those areas found by scientific analysis to require

manipulation to preserve the species or associations that constitute the basis for the establishment of the natural preserve.

4.3 Planning Zones

This section describes the planning zones within CPSRA. Each of the park's geographic areas (e.g., Heart of the Park, Candlestick Meadows) will likely have a combination of different programs and facilities related to recreation, natural and cultural resources, interpretation, and education. Because management activities will likely be most similar within specific landscape types (e.g., tidal marsh, grassland/coastal shrub), these form the basis for the designation of CPSRA's planning zones. The Draft General Plan Preferred Alternative (Figure 4-1) illustrates each of these planning zones.

4.3.1 Tidal Marsh Zone

The Tidal Marsh Zone should be managed to maximize ecological processes and opportunities for education. This zone contains several ecotones, which occur at different elevation zones, receive different degrees of tidal inundation, and support different plant communities. Each of these ecotones represents different vegetation types, primarily geared towards creating habitat for wildlife, with some opportunities for low-impact recreation, interpretation, and education. The Tidal Marsh Zone contains a total of approximately 12 acres in areas of Yosemite Slough, the South Basin Shoreline, the Heart of the Park, and The Point.

4.3.2 Grassland/Coastal Shrub Zone

The Grassland/Coastal Shrub Zone should be managed for upland habitat and low-impact, nature-based recreation. This zone is characterized by tall, perennial grasses with a mix of coastal scrub species, such as coyote brush and California sagebrush, which provide valuable habitat for small mammals and reptiles. Occasional groupings of small wind-tolerant trees, rocks, and woodpiles provide additional habitat value, but are not dominant. The Grassland/Coastal Shrub Zone is aesthetically pleasing, creating a wild, informal, and open character. Recreational uses would include seating areas, trails, viewing, and special events at the nature theater. The Grassland/Coastal Shrub Zone contains a Habitat Focus Area in the Candlestick Meadows, the largest area within this zone. The Habitat Focus Area promotes habitat value as the primary goal for this area of grassland/scrub to provide enhanced breeding, refuge, or feeding habitat, as well as opportunities for low-impact, nature-based recreation, interpretation, and education. The Grassland/Coastal Shrub Zone contains a total of approximately 40 acres in areas of Yosemite Slough, the South Basin Shoreline, and Candlestick Meadows.

CANDLESTICK POINT STATE RECREATION AREA



Figure 4-1
**GENERAL PLAN
 PREFERRED ALTERNATIVE**

PLANNING ZONES

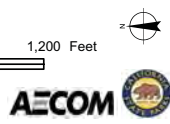
- tidal marsh zone
- grassland / coastal shrub zone
- coastal native zone
- active recreation zone
- community garden / plant nursery
- beach shoreline zone
- administration / maintenance zone
- planning area boundary

FEATURES

- visitor facility area
- coastal shoreline treatment
- bay trail
- muni bus rapid transit stop



11.28.2011



4.3.3 Coastal Native Zone

The Coastal Native Zone should be managed to create a transition between CPSRA and the adjacent neighborhood. This zone is an ornamental landscape primarily composed of native groundcovers, grasses, shrubs, and trees. The Coastal Native Zone serves aesthetic purposes, provides a buffer to the development, and allows opportunities for passive recreation, such as strolling and relaxing on paths and small paved seating and picnic areas. This zone would have some habitat value due to its inclusion of native species and a higher percentage of trees. The Coastal Native Zone contains a total of approximately 40 acres in areas of the South Basin Shoreline, Candlestick Meadows, the Heart of the Park, The Point, The Neck, and the Last Port.

4.3.4 Active Recreation Zone

The Active Recreation Zone should be managed for high levels of recreational activity and visitor use. This zone consists of grassy areas that promote a range of recreation activities. The Active Recreation Zone consists of two vegetation types—Active Lawn and Meadow Lawn—illustrated by the Draft Concept Master Plan presented in Appendix C. Active Lawn consists primarily of durable turf that is irrigated and manicured for high recreational use, such as picnicking, frisbee, and other play activities. Active Lawn also includes paths, paved picnicking areas, and other facilities suitable for more intense use areas. Meadow Lawn consists of native, scrubby grasses that can be mowed to be more inviting for informal recreational use. This landscape type would be non-irrigated and appear more natural than the typical urban lawn. The entire Active Recreation Zone would integrate trees, shrubs, and groundcovers from the coastal native landscape palette to soften buildings, provide shade, define spaces, and serve as ornamental design elements. The Active Recreation Zone contains a total of approximately 25 acres in the eastern portion of Yosemite Slough, the western portion of Candlestick Meadows, and throughout the Heart of the Park.

4.3.5 Community Garden/Plant Nursery Zone

The Community Garden/Plant Nursery Zone should be managed to facilitate programs related to gardening, horticultural demonstrations, native plant propagation, and ecological restoration. This zone includes the existing Community Garden and native plant nursery at CPSRA. Additional components of this landscape type may include new and expanded facilities and programs for agricultural education, food preparation, “farm-to-table” operations, and native plant propagation. The Community Garden/Plant Nursery Zone contains a total of approximately one acre in the southwestern portion of Yosemite Slough.

4.3.6 Beach Shoreline Zone

The Beach Shoreline Zone should be managed as a series of shoreline destinations that facilitate a range of visitor experiences. This zone is characterized by a sandy shoreline and access to the Bay for recreation. The scale of the Beach Shoreline Zone may range from the large, active Jackrabbit Beach in the Heart of the Park to the smaller, more respite-oriented beach at Candlestick Cove. This zone may include enhanced and expanded beaches to maximize opportunities for recreation. The Beach Shoreline Zone contains a total of approximately five acres in the Heart of the Park, The Point, The Neck, and the Last Port.

4.3.7 Administration/Maintenance Zone

The Administration/Maintenance Zone should be managed as a center of operations for CPSRA staff and volunteers. This zone includes CPSRA's existing administration and maintenance facilities, located adjacent to the Community Garden. The focus of the Administration/Maintenance Zone is on providing maintenance and administration facilities to serve the future operational needs of CPSRA. This zone may include new and enhanced facilities for park operations, maintenance, storage, and staff parking. The Administration/Maintenance Zone contains a total of approximately two acres in the western portion of Yosemite Slough.

4.4 Land Use Management

CPSRA includes seven distinct geographic areas, within which a mix of activities and facilities will occur. The Draft General Plan Preferred Alternative (Figure 4-1) illustrates the major features of each of these geographic areas. The Draft Concept Master Plan included in Appendix C presents one example of how these areas may be improved.

4.4.1 Yosemite Slough

This area consists of the portion of CPSRA surrounding Yosemite Slough, including the Community Garden/Plant Nursery and Administration/Maintenance zones. The Yosemite Slough Restoration Project stems from CPSRA's first General Plan. 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. Uses are primarily oriented around 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. Facilities in the Yosemite Slough area will include the existing Community Garden and native plant nursery, maintenance/administration facilities, and adjacent staff parking area; new facilities may include an information kiosk, iconic art, an interpretive area in an upland area on the north side of Yosemite Slough that could

include an enclosed structure or an outdoor pavilion, family gathering areas, public parking areas, and extension of the Bay Trail. Design of this area would include a key pedestrian access point to link Yosemite Slough with the nearby Alice Griffith housing development.



Yosemite Slough

4.4.2 South Basin Shoreline

The South Basin Shoreline extends easterly from Yosemite Slough along the Bay. This area would function as a “linear park” that provides access to the Bay shoreline buffering CPSRA from adjacent neighborhood development planned under the Candlestick Point-Hunters Point Shipyard Phase II Project. New programs and facilities in the South Basin Shoreline area would improve a portion of the area currently used as parking for San Francisco 49ers home games. Low-impact recreation (e.g., trail use, wildlife viewing, picnicking) and nature-based education and interpretation would be the predominant uses in this area. New facilities may include extension of the Bay Trail, paved and natural surface trails, a pedestrian access beneath the bridge, interpretive signage/art, family gathering areas, an overlook, an outdoor classroom and interpretive

facilities, and a new fishing and viewing pier. The South Basin Shoreline may also accommodate overland flow of stormwater in an area that may function as a raingarden during the wet season.



South Basin Shoreline

4.4.3 Candlestick Meadows

As with the adjacent South Basin Shoreline, the Candlestick Meadows area would transform an area of CPSRA that is largely unimproved. The northwesterly portion of Candlestick Meadows would interface with the large wedge park planned for the adjacent neighborhood and a BRT stop, creating an area of major activity. A variety of paved and natural-surface trails would create multiple access points, opportunities for a wide range of uses, and access to the Bay shoreline.

Facilities in the western portion of Candlestick Meadows, adjacent to the neighboring community, 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 focuses on creating and enhancing grass/scrub habitat for birds and small mammals. This area would also include low-impact recreational use, and additional facilities 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.



Candlestick Meadows

4.4.4 Heart of the Park

The Heart of the Park is the primary recreational hub of CPSRA, building upon the existing facilities and visitor use concentrated around Jackrabbit Beach and the nearby lawn areas. 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, and landforms that provide shelter from the wind. An information kiosk and interpretive signage/art may also provide a sense of entry into the Heart of the Park, where CPSRA and the small wedge park planned for the adjacent

neighborhood meet. Parking in appropriate locations, such as adjacent to boating facilities and gathering areas, would maximize recreational opportunities and may also provide locations for street food and other vendors.



Heart of the Park

4.4.5 The Point

The Point would provide enhanced access to the Bay, preserving the area's current character as a quieter area of the park. New facilities would improve opportunities to enjoy the sweeping Bay views and may include a new viewing area, boat-landing beach, bike or boat-in campsites that may also serve as day-use areas, family gathering areas, interpretive signage/art, and landforms to provide shelter from the wind. The existing pier would continue to provide fishing, sightseeing and birdwatching opportunities and views of the Bay.



The Point

4.4.6 The Neck

The Neck connects the Heart of the Park to the Last Port along CPSRA’s southern edge. The additional land resulting from the land exchange would widen this area, creating opportunities for additional visitor use and facilities. This area would focus on expanding active recreational opportunities and access to the Bay by 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 partial groyne to facilitate the accretion of sand and expansion of the beach at Hermit’s Cove, and an information kiosk may be constructed in the park 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.

4.4.7 Last Port

The Last Port serves as the southern gateway to CPSRA. Plans for improvement would 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, similar to the current configuration.



Last Port



4.5 Other Management Considerations

Planning and implementation of improvements at CPSRA must consider the effects of the redevelopment of the surrounding neighborhood and of sea level rise. These effects may require specific planning and design approaches, as described below.

4.5.1 Urban Integration

The Candlestick Point-Hunters Point Shipyard Phase II Project planned adjacent to CPSRA intends to elevate the grade of the development to withstand sea level rise of 36 inches. Much of CPSRA will likely remain at its current elevation, creating considerable grade changes near the Heart of the Park and between the park and the adjacent neighborhood. Grading may be required at specific locations along the park's urban edge to provide a seamless transition between CPSRA and the adjacent neighborhood and maximize access to the Bay. Grading may include areas of cut, fill, terracing and other treatments to create this transition.

4.5.2 Sea Level Rise

As a bayside park, CPSRA must consider the future effects of sea level rise. Where considered necessary to preserve park facilities, natural resources, and opportunities for visitor use, engineered solutions to sea level may be appropriate. This may include adding fill to increase the elevation of the park in certain locations, the construction of barriers (e.g., berms, levees), and/or grading at the shoreline edge. In other locations, the response may be to retreat and allow rising seas to overflow the shoreline or other low-lying portions of the SRA. This would change the landscape of the park and may in turn result in additional improvements. For example, sea level rise that inundates the area between the Heart of the Park from The Point may create an island and lead to subsequent construction of a bridge to continue visitor access. Addressing sea level rise at CPSRA may involve adaptive management, whereby State Parks determines an appropriate response, monitors its performance, and determines the need for any modifications or other next steps. Additional technical studies would be needed to understand how sea level rise will affect different areas of the park's shoreline. An adaptive management plan to address sea level rise was developed for the north side of Yosemite Slough as part of the Yosemite Slough Restoration Project, and it is expected that a similar adaptive management strategy will be developed for the south side of the slough (see Appendix E). State Parks will continue to work with the California State Parks Foundation during detailed design and planning to address sea level rise within CPSRA.

4.5.3 Grading

Improvements at CPSRA may include grading, in addition to that associated with integrating the park into the surrounding urban environment and adapting to sea level rise. The creation of tidal marsh along the South Basin Shoreline may involve cut and fill in areas in order to create the elevations necessary to support different vegetation communities. In addition, grading may occur along some areas of the shoreline to improve visitor access to the Bay. The creation of landforms to provide wind protection

and add spatial definition would also require earthmoving and grading. The extent of grading to be conducted will be determined during more detailed design phases of CPSRA.

4.5.4 Parking

Parking will be an important consideration at CPSRA. Visitors to the park can arrive by many transportation modes: walking from the adjoining neighborhoods, biking along the Bay Trail or a city bike route, riding public transit, or driving a car. 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 will 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 fees 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.

4.6 Parkwide Goals and Guidelines

Park unit goals and guidelines apply to the entire CPSRA property; they have been developed to address issues, needs, and opportunities for improvement, protection, or change. Goals and guidelines provide guidance for management of CPSRA to achieve its long term vision. Goals establish the purpose and define the desired future conditions, while guidelines provide directions that State Parks will consider to achieve the goals.

The parkwide goals and guidelines presented in this section are organized into the following categories:

- **Visitor Experience**, including Visitor Facilities and Visitor Management
- **Recreation**, including Trails/Routes and Aesthetic Resources
- **Natural Resources**, including Vegetation, Wildlife, Shoreline Management and Water Quality, Hazards and Hazardous Materials, and Geology
- **Community and Cultural Resources**, including Community Programs and Facilities, Community Health, and Cultural Resources
- **Interpretation and Education**
- **Operations**, including Staffing, Facilities and Maintenance, Neighborhood Integration, Access, Multi-Modal Transportation and Parking, Universal Access, Visitor Safety, Park Branding, Agreements and Concessions, and Energy, Water and Waste

Zone-specific guidelines are presented in Section 4.7 for the planning zones described Section 4.3.

As stated in Chapter 2, Existing Conditions, the City and County of San Francisco's HDMT 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, which is included in Appendix B, includes a list of policies and design strategies that can serve as recommendations to improve a proposed plan or project

(SFDPH 2009a). Many of the policies and design strategies identified in the HDMT are incorporated into the CPSRA goals and guidelines presented below. Goals and guidelines that incorporate HDMT information are designated with an asterisk (*).

4.6.1 Visitor Experience

CPSRA offers a wide range of experiences and recreational activities to visitors from nearby communities and throughout California.

Visitor Facilities

CPSRA is classified as a state recreation area and is intended to provide multiple outdoor recreational opportunities to the public. Visitor facilities support recreation by allowing the public to enjoy and benefit from the many resources and recreational opportunities provided by CPSRA. State Parks and concession-offered visitor services contribute to quality recreation opportunities for a wide range of visitors with respect to age, race, income, education, and physical ability. The following goals and guidelines are intended to enhance existing visitor facilities and to guide the development and implementation of new facilities within CPSRA.

Goal Visitor Facilities-1

Provide visitor facilities within the park as needed to facilitate the public's enjoyment of the natural setting and resources.

- **Guideline Visitor Facilities-1:** When planning for new visitor facilities, evaluate services provided by local entities, including existing and planned facilities in the Bayview Hunters Point neighborhood and surrounding region, to provide complementary facilities and programs.
- **Guideline Visitor Facilities-2:** Locate visitor facilities that are larger and/or provide more active recreational opportunities in areas that have convenient access and are suitable for higher intensities of use.
- **Guideline Visitor Facilities-3:** Concentrate group-sized gathering areas, park features and programs that tend to generate higher noise levels near each other, to provide a balance between areas of intense use and areas that are more quiet and conducive to nature-based activities.
- **Guideline Visitor Facilities-4:** Ensure that site facilities and spaces designed for more intense recreational use in areas of lesser habitat value.
- **Guideline Visitor Facilities-5:** Ensure that visitor facilities such as restrooms, water fountains, benches, picnic tables, and parking spaces are provided in convenient locations throughout the park.

- **Guideline Visitor Facilities-6:** Provide visitor facilities such as parking, restrooms, potable water, and staging areas that support aquatic recreation uses.
- **Guideline Visitor Facilities-7:** Ensure that visitor facilities and associated services reflect a balance between the need for resource protection, recreation, and interpretation and education.
- **Guideline Visitor Facilities-8:** Use vegetation, landforms or other design strategies to provide and enhance a variety of microclimates, offering the visitor a choice of protection or exposure to sun, shade, wind or rain.
- **Guideline Visitor Facilities-9:** Ensure that roads, parking and trails are clearly delineated to park visitors while not detracting from the visual aesthetics of the park. This will allow visitors to navigate easily and quickly through the park and will improve visitor experiences.

Goal Visitor Facilities-2

Expand opportunities for recreation that focus on San Francisco Bay and are consistent with the park unit classification of a State Recreation Area.

- **Guideline Visitor Facilities-10:** Enhance opportunities for the recreational use of Bay waters by kayakers, windsurfers, and other human-powered watercraft by providing safe and convenient Bay access facilities. Enhance windsurfing facilities in their current location to facilitate easier access to the Bay. Focus non-motorized boating in the Heart of the Park by creating a boat launch, boat rentals, and a boat-building center. Provide a new boat landing beach and boat-in camping at the Point.
- **Guideline Visitor Facilities-11:** Site facilities to avoid adverse affects on sensitive shoreline habitat and features. The character of access accommodations (e.g., ramps, steps, gravel/sand beach, etc.) and their design should be responsive to the site specific setting and the nature of the projected use. Design facilities to minimize dependence on extensive maintenance and repair operations.
- **Guideline Visitor Facilities-12:** Enhance existing beaches to expand recreational opportunities. Expand Jackrabbit Beach, and create a destination for more intensive recreation. Emphasize opportunities for solitude or quieter recreation at the beaches at Hermit's Cove and Candlestick Cove.
- **Guideline Visitor Facilities-13:** Maintain the existing pier at The Point, and provide additional fishing and viewing piers. Reconstruct the pier in The Neck to serve as a breakwater that shelters the beach at Hermit's Cove and provides access for persons with mobility challenges.
- **Guideline Visitor Facilities-14:** Use landforms and/or wind shelters to improve visitor experience and expand opportunities for recreation by the Bay.
- **Guideline Visitor Facilities-15:** Provide a nature theater for small-scale community events that captures sweeping views of the Bay. Design the facility for multiple uses

so that it may also serve as a destination to enjoy the Bay through more passive recreational activities. If needed, implement seasonal restrictions to protect wildlife species during breeding and nesting.

- **Guideline Visitor Facilities-16:** Provide an outdoor classroom along the South Basin Shoreline to facilitate education and interpretation of CPSRA's natural history. Design the facility to minimize new construction and ongoing maintenance needs. The outdoor classroom should also serve as a gathering area or special events space when not in use for educational or interpretive activities.
- **Guideline Visitor Facilities-17:** Provide an interpretive program area / pavilion on the upland north side of Yosemite Slough to facilitate education about the Yosemite Slough Restoration Project.

Visitor Management

This General Plan assumes that the substantial population increase resulting from the planned Candlestick Point-Hunters Point Shipyard Phase II Project and other planned development projects in the neighborhood would substantially increase park visitation rates over time. Park management must anticipate increases in visitation to the park and ensure that the number of visitors does not exceed the park's ability to accommodate public use without damaging its resources.

Goal Visitor Management-1

Establish and implement an adaptive management process for managing visitor capacity at CPSRA in support of the General Plan's purpose and vision. The adaptive management process should be tailored to address visitor capacity within each planning zone at CPSRA.

- **Guideline Visitor Management-1:** Develop measurable thresholds for CPSRA that will provide a baseline for monitoring of site conditions and implementation of adaptive management, as necessary.
- **Guideline Visitor Management-2:** Conduct regular monitoring of baseline conditions to document change over time, collect and analyze visitor data, and establish visitor capacity over time, based on analysis of visitor data. Monitor conditions to ensure visitors do not degrade resources and adapt park management as necessary.
- **Guideline Visitor Management-3:** If monitoring efforts reveal that conditions are approaching or exceeding thresholds, management should consider alternatives and take appropriate action; adjust management actions to direct resource and visitor experience conditions to the desired state; and continue to implement adaptive management.

- **Guideline Visitor Management-4:** Accommodate and enhance existing recreation and visitor opportunities and monitor use levels to ensure park resources protection. Evaluate visitor programs and facilities for effectiveness, efficiency, and sustainability. Evaluate new and emerging recreation activities and trends for safety, environmental impacts, and compatibility with existing uses prior to permitting the use in the park.
- **Guideline Visitor Management-5:** Seek opportunities to further serve regional recreational demand.
- **Guideline Visitor Management-6:** Periodically evaluate how California's changing demographics may be influencing park visitation patterns and intensities and implement management actions and create opportunities that respond to these trends.

4.6.2 Recreation

CPSRA provides the potential for a wide range of recreational activities, from the more passive nature appreciation to active play, and from water-oriented to land-oriented activities. CPSRA currently offers the only access to open space along San Francisco Bay in the Bayview Hunters Point neighborhood. However, the Candlestick Point-Hunters Point Shipyard Phase II Project will create an open space network with a variety of new parks and natural spaces throughout the neighborhood. Improvements proposed in this General Plan emphasize that CPSRA is a unit of the State Parks system, whose 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. Therefore, CPSRA has a much broader mission than the local urban parks in the neighborhood, which are intended to provide recreational opportunities for local residents. Recreation

Goal Recreation-1

Provide a variety of recreational opportunities that will allow visitors from neighboring communities and from throughout the region and the state to visit, appreciate, enjoy, and experience the natural, cultural, recreational and aesthetic resources of CPSRA, especially the San Francisco Bay shoreline.

- **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.
- **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.

Trails/Routes

Trails and recreational routes are important facilities within and adjacent to CPSRA and are in high demand by multiple user groups. The park's relatively large urban park size provides the potential to accommodate multiple routes for pedestrians and bicyclists. The park's location along San Francisco Bay offers public access to the shoreline and connections to both land and water trails/routes within the region.

Goal Trails/Routes-1

Provide a trail/route system that offers diverse experiences to visitors with access to the Bay shoreline and regional trail systems, including the San Francisco Bay Trail, the San Francisco Bay Area Water Trail, and the Blue Greenway.

- **Guideline Trails-1:** Enhance existing trails and introduce new trails and routes that offer a range of choices for enjoying pedestrian, bicycle, aquatic, aesthetic, and interpretive experiences in the park. Focus on providing trails/routes that access areas of natural, cultural, and scenic interest, reach the Bay shoreline, and that connect to regional trail systems. Use vegetation, signage, and other design strategies to protect adjacent natural resources, where necessary.
- **Guideline Trails-2:** Create a trail/route system that includes paved, multi-use trails for more intensive recreational activity and a finer network of natural surface trails/routes that provide opportunities for nature-based recreation. Design routes to give users options of short loops and longer distances. Link paved trails to major destinations and facilities within the park. Limit some natural surface trails to

pedestrians, and use low impact construction materials and methods to protect adjacent natural habitats.

- **Guideline Trails-3:** Coordinate trail/route planning, development, and use with the City and County of San Francisco, community and open space organizations, and adjacent landowners to encourage connections between CPSRA and other open space resources, such as Bayview Hill and the recreation areas planned as part of the Candlestick Point-Hunters Point Shipyard Phase II Project.
- **Guideline Trails-4:** Support the San Francisco Bay Trail, the San Francisco Bay Area Water Trail, and the Blue Greenway by providing shoreline access and low-impact bike-in/boat-in camping within the park.

Aesthetic Resources

CPSRA is an urban state recreation area that provides respite from the surrounding built environment. The park's landscape design should be a unique expression of these contrasting influences, reflecting the intermediary nature of CPSRA between urban and Bay edges. The landscape character should create the setting for experiences that make CPSRA a favorite destination. It should enhance the inherent qualities that give the park a unique spirit of place, providing it with a clear identity within the city, and in the State Park system.

Goal Aesthetic Resources-1

Integrate the park into its surroundings by creating a design framework and using building and design materials that respond to the urban context and provide a transition to the Bay's more natural environment.

- **Guidelines Aesthetic Resources-1:** Extend the design language of the surrounding urban environment into CPSRA, using the design framework of paths, plantings and other elements.
- **Guidelines Aesthetic Resources-2:** Use a palette of materials and designs that reflects the more refined nature of the urban environment and provides a transition between adjacent urban areas and the natural areas within the park.
- **Guidelines 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.
- **Guidelines Aesthetic Resources-4:** Use the coastal native zone, existing landforms, and other planning and physical strategies to create visual and sound buffers between the urban edge and the more open landscapes of the grassland/coastal shrub zone, tidal marsh zone and other more nature-focused areas of the park.

- **Guidelines Aesthetic Resources-5:** Use lighting that is directed downwards to minimize light spillage to protect dark night skies and allow for star viewing.
- **Guidelines Aesthetic Resources-6:** Use natural materials and a native-based plant palette in the tidal marsh zone, as well as in the grassland/coastal shrub and coastal native zones. Maintain landscapes in the grassland/coastal shrub and coastal native zones so that they appear natural and un-manicured.

Goal Aesthetic Resources-2

Protect and enhance scenic views of San Francisco Bay, the East Bay Hills, and San Bruno Mountain State Park that are available from the park and features such as beaches, piers and trails that contribute to CPSRA's setting, character and visitor experience.

- **Guideline Aesthetic Resources-7:** Protect, preserve and enhance positive aesthetic resources and remove or screen elements that have negative aesthetic qualities to preserve the park's scenic and recreation value. Use plantings and landscaped islands to mitigate the visual impact of parking areas, maintenance facilities, restrooms, and other structures, where appropriate.
- **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.

4.6.3 Natural Resources

Despite its development on artificial fill, natural resources at CPSRA are abundant and an important part of the park's identity. A rare open space resource along San Francisco's eastern waterfront, CPSRA's bayside and upland habitats are valuable in an otherwise developed area. The General Plan seeks to protect and enhance the park's natural resources by adapting to the challenges associated with increased urban growth and sea level rise.

Vegetation

CPSRA currently supports a variety of vegetation types, including plants native to California and planted ornamental species. Native plant communities are especially important, as they contribute to the region's biodiversity and provide habitat for the park's wildlife species. Plant species native to the San Francisco Bay Area are uniquely suited to the region's climate and require less water and maintenance than ornamental plants.

Goal Vegetation-1

Maximize the preservation and enhancement of existing native vegetation at CPSRA.

- **Guideline Vegetation-1:** Prioritize the use of locally native species in future plantings within planning zones. "Locally native" species are those that are indigenous to the San Francisco Bay Area and occur naturally in bayside settings. Plantings of non-native species that are non-invasive and do not conflict with wildlife habitat values may be acceptable in recreation areas.
- **Guideline Vegetation-2:** Expand the existing native plant nursery to increase its capacity for propagating native plants and providing related educational programs. Where possible, use the native plant nursery to propagate and supply native plants for use in future plantings within CPSRA.
- **Guideline Vegetation-3:** Where appropriate manage existing native plant communities for long-term health. Minimize impacts to existing native plants when planning and implementing park improvements. Where possible, transplant native plantings from areas planned for improvements to other areas of CPSRA.
- **Guideline Vegetation-4:** Enhance degraded areas that are characterized by invasive weeds and ruderal vegetation.
- **Guideline Vegetation-5:** Control and/or eradicate invasive non-native species present at CPSRA such as pampas grass, French broom, iceplant, fennel, and Atlantic cordgrass. Coordinate with the Bay Area Early Detection Network (BAEDN) and use the BAEDN target weed list as a resource for regional invasive species information.

Goal Vegetation-2

Create a tidal marsh zone that reflects prehistoric shoreline conditions at CPSRA.

- **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.

Goal Vegetation-3

Create sustainable landscapes suitable for the climate and soil conditions of CPSRA.

- **Guideline Vegetation-9:** Emphasize plants requiring minimum maintenance (i.e., pruning and watering). Consider plant species with low water requirements, and use drought tolerant plants for landscape planting in improved areas (e.g., picnic areas, plazas, around trails and structures).
- **Guideline Vegetation-10:** Ensure that species planted in the park are not on the California Invasive Plant Council's list of invasive species.

Wildlife

CPSRA is an important resource for both common and special-status wildlife species, given the limited availability of natural habitat in the surrounding region. San Francisco Bay provides an open migratory corridor for birds to move back and forth across the Bay to more secluded, better-suited nesting and loafing sites. Balancing the protection and enhancement of wildlife habitat with park improvements and the changes planned for the surrounding neighborhood should be an important focus of natural resource management at CPSRA.

Goal Wildlife-1

Maintain, protect and/or enhance habitat for wildlife species in CPSRA.

- **Guideline Wildlife-1:** Select native trees, shrubs, and herbaceous species for future planting that provide habitat for the wildlife species that currently use CPSRA. Consider the habitat needs of raptors, shorebirds, small mammals, and other wildlife. Enhance grassland/scrub habitat in the Candlestick Meadows area for upland wildlife species.
- **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-4:** Reduce and, where possible, eliminate 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.
- **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.
- **Guideline Wildlife-6:** Consider incorporating the San Francisco Planning Department's Standards for Bird-Safe Buildings¹ into any new structures that are built within the park. These standards include:
 - Use of bird-safe glazing treatments on windows of new structures so that there is no more than 10% untreated glazing within the Bird Collision Zone (the portion of buildings most likely to sustain bird strikes; this area begins at grade and extends upwards for 60 feet); and
 - Use of minimal lighting, shielding lighting, and avoiding the use of uplighting and event searchlights.

Shoreline Management and Water Quality

CPSRA's location on San Francisco Bay is one of its greatest assets, providing wildlife habitat and opportunities for visitor enjoyment. However, the park's bayside setting also brings challenges related to shoreline erosion, coastal flooding, water quality, and sea level rise. The park can do its part to minimize the risks to park staff, visitors, and facilities, but park managers should also plan to adapt to changing conditions in the natural environment.

An adaptive management plan to address sea level rise was developed for the north side of Yosemite Slough as part of the Yosemite Slough Restoration Project, and it is expected that a similar adaptive management strategy will be developed for the south side of the slough. State Parks will continue to work with the California State Parks Foundation during detailed design and planning to address sea level rise within CPSRA.

¹ Standards for Bird-Safe Buildings, San Francisco Planning Department, adopted July 14, 2011. Available at: http://www.sf-planning.org/ftp/files/publications_reports/bird_safe_bldgs/Standards%20for%20Bird%20Safe%20Buildings%20-%202011-30-11.pdf.

Shoreline Management

Goal Shoreline-1

Implement appropriate shoreline management measures, with preference for soft and natural shoreline restoration measures versus armoring where possible, to improve long-term stability and enhance shoreline appearance.

- **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.
- **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.

Goal Shoreline-2

Adapt to sea level rise to reduce impacts to CPSRA visitors, staff, facilities and resources while maximizing opportunities for visitor enjoyment.

- **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. 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-9:** Develop and adopt an adaptive management plan with the City and County of San Francisco to address the threat of sea level rise at CPSRA and especially around Yosemite Slough. Consider a range of alternatives to protect park facilities, visitor safety, and natural resources, such as re-grading, adding fill, expanding tidal wetlands, elevating facilities or retreating from the shoreline. Give priority consideration to natural adaptation where possible. Undertake pilot projects to refine the design of the most environmentally sensitive and experimental approaches. Monitor their performance to develop a responsive adaptive management plan, and consider opportunities for their implementation throughout the park.
- **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 (above 6 feet, 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.

Water Quality

Goal Water Quality-1

Manage stormwater through green infrastructure.

- **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-2:** Select appropriate vegetation so that green infrastructure elements are flexible and multi-purpose, allowing their use for other activities during the dry season.
- **Guideline Water Quality-3:** Use appropriate stormwater Best Management Practices (BMPs) for maximizing rainwater infiltration in green infrastructure elements.

Goal Water Quality-2

Pursue the continued improvement of water quality in San Francisco Bay to protect natural resources and minimize adverse impacts on water-based recreation.

- **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 Water Quality-5:** Collaborate with the City and County of San Francisco to minimize discharges at combined sewage outfalls located in CPSRA.

Hazards and Hazardous Materials

As stated in Chapter 2, Existing Conditions, the soils at CPSRA consist entirely of fill materials, primarily obtained from dune sands, quarried rock from local hillsides, and industrial refuse. The type of fill 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), some of which have been removed and the associated soil remediated, and the potential for unknown USTs (SFRA and SFPD 2009).

Extensive soil sampling was conducted throughout CPSRA as part of the 1998 investigation; 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 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 (SFRA and SFPD 2009).

Any hazardous materials that may be required during construction, maintenance and operations activities at CPSRA would be handled in accordance with Chapter 0800, Hazardous Materials, of the State Parks Operations Manual (State Parks, 2001).

Goal Hazardous Materials-1

Provide for public and park employee safety and prevent exposure to hazardous materials from construction activities, residual contaminated soil or groundwater, and park maintenance and operations in accordance with Chapter 0800, Hazardous Materials, of the State Parks Operations Manual (State Parks, 2001).

- **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;
- **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.

Geology

CPSRA's history of development on artificial fill poses unique challenges, and plans for park improvements would require future study of the quality of the underlying substrates. In addition, the park's location in the San Francisco Bay Area on a number of faults, including the San Andreas and Hayward faults, makes it susceptible to earthquakes. CPSRA management staff should plan to mitigate these risks while moving forward with implementing park improvements.

Goal Geology-1

Provide for public safety and minimize structural failures due to seismic activity and related geologic hazards.

- **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.
- **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.

4.6.4 Community and Cultural Resources

CPSRA is an integral element of the local community, and provides a key destination for the statewide community of current and potential visitors.

Community Programs and Facilities

CPSRA is an important open space resource for the surrounding community, currently providing areas for recreation, community gatherings, and special events. The park experiences high levels of visitor use from residents in the Bayview Hunters Point neighborhood. The adjacent planned redevelopment, coupled with current recreation trends, will likely increase CPSRA's popularity as a destination for local community members and regional visitors. The provision of adequate and appropriate public access to encourage visitors to easily enter and use all areas of the park will help to

integrate CPSRA into the neighborhood and maximize the community's involvement in community programs and facilities.

Goal Community-1

Create programs and spaces that promote community cohesion and engagement.*

- **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., school programming, senior activities).*
- **Guideline Community-2:** Develop a small watercraft facility to provide a center for community gathering, educational programs, and increased recreation on San Francisco Bay.*
- **Guideline Community-3:** Encourage community-oriented events, such as farmers markets near the Community Garden and small concerts in Candlestick Meadows, to build a sense of community at CPSRA.*
- **Guideline Community-4:** Provide programs that are intergenerational, meeting the unique needs of children, senior citizens, and families, such as boat building, community gardening and fitness programs.
- **Guideline Community-5:** Provide programs and spaces that promote “art in the park”. Create iconic art in the Last Port and Yosemite Slough areas to distinguish CPSRA at its edges and create a sense of arrival at the park.*
- **Guideline Community-6:** Expand the existing Community Garden and native plant nursery to provide greater opportunities for community gathering and programs related to gardening and environmental restoration.*

Goal Community-2

Encourage a variety of special events to foster a sense of community and ownership for CPSRA.

- **Guideline Community-7:** Provide spaces for special events that are multi-purpose and adaptable to a range of event types. Incorporate a range of amenities, and provide appropriate utilities to promote public use. Special events could be held at Candlestick Meadows, the Community Garden, and Heart of the Park, as well as at other locations within the park.
- **Guideline Community-8:** Explore partnerships with adjacent property and facility owners and managers to increase options for special events and share operational responsibilities.

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

- **Guideline Community-9:** Site special event facilities in locations accessible by a range of transportation modes. Provide access to flexible parking areas that accommodate cars and buses. Identify opportunities for special event parking.
- **Guideline Community-10:** Locate special event facilities to take advantage of scenic views, where appropriate. Minimize any negative visual impacts by screening undesirable views from inside or outside the park.
- **Guideline Community-11:** Determine the visitor capacity for sites planned for special events. Manage site and visitor activity to minimize adverse impacts from special events. Adapt to changing conditions, activities, and demographics to ensure a high-quality visitor experience that meets the purpose and vision of CPSRA.
- **Guideline Community-12:** Minimize site disturbance by considering rehabilitating existing disturbed or developed sites for event spaces. Protect sensitive natural resources through site design and appropriate use. If needed, implement seasonal restrictions for operations of the nature theater to minimize impacts to wildlife during breeding and nesting seasons. Monitor special events and adapt operations to ensure adequate resource protection.
- **Guideline Community-13:** Publicize event space with local and regional civic groups, recreation interests, and community organizations. Promote joint planning with regional partners to increase the visibility of CPSRA and support program planning and development.

Community Health

As one of the largest open spaces in the Bayview Hunters Point neighborhood, CPSRA plays an important role in the public health of the surrounding community. Park trails and lawn areas provide opportunities for active play, while the Community Garden increases access to healthy food options. By enhancing these facilities and expanding programs that emphasize healthy lifestyles, CPSRA provides an opportunity to help improve the health and well being of local residents in the adjacent neighborhood, and of park users from the Northern California region.

Goal Health-1

Offer programs that promote public health by emphasizing physical activity and healthy food options.

- **Guideline Health-1:** Encourage active recreation by providing a range of facilities, trails, and programs. Expand active play areas and upgrade the existing fitness circuit.
- **Guideline Health-2:** Provide a comprehensive trail system to encourage walking, biking, and other activities. Provide access to CPSRA via planned multi modal transportation nodes.

- **Guideline Health-3:** Continue Community Garden to broaden access to locally grown produce and provide programs on healthy food options and lifestyles.*
- **Guideline Health-4:** Create spaces for street food vendors, with a focus on providing a range of healthy food options. Provide appropriate facilities and utilities to promote public use.

Cultural Resources

Although CPSRA was created almost entirely on fill soils that were placed in the middle of the 20th century, several Native American shellmounds are known to exist in the vicinity of the park. In addition, the mudflats adjacent to CPSRA contain historic ship hulls. It is possible that additional resources from prehistoric and historic eras exist beneath CPSRA's fill soils. Furthermore, the Bay mud underlying portions of the fill soils may contain paleontological resources. As a result, State Parks should take all appropriate measures to protect cultural and paleontological resources potentially present in the park when implementing the General Plan.

Goal Cultural Resources-1

Protect known and potentially present prehistoric and historic resources and paleontological resources.

- **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.
- **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.

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

- **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.
- **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.

4.6.5 Interpretation and Education

Interpretation in a setting like CPSRA differs from the formal instruction of a school classroom. The goal of interpretation is not to “teach” visitors facts about the resources of CPSRA, but rather to help visitors find their own personal meanings in the resources and to inspire feelings of stewardship. Opportunities exist to increase the effectiveness, accessibility, and efficiency of interpretation at CPSRA.

Interpretation can make a visitor’s experience at CPSRA more enjoyable, while enhancing his or her understanding and appreciation of the park’s resources. Interpretation promotes recreational enjoyment, visitor safety, cultural and natural resource appreciation, and understanding of management and maintenance practices. It can also educate visitors about how to help preserve the resources they came to enjoy and how to reduce their impacts on the park’s resources, giving visitors a take-home message on the importance of resource protection in their daily lives.

While interpretation frequently leads to learning experiences, school groups visiting CPSRA typically need focused educational programming that aligns with their scholastic curriculum and meets specific learning objectives. State Parks plays a leadership role in providing education programs for California’s grade K-12 school groups. CPSRA holds the potential to offer a variety of curriculum-based education programs for local school groups, especially in partnership with other area interpretation and education providers.

Park Interpretive Significance

As California’s first State Park unit acquired to bring State Park System values to an urban environment, CPSRA provides a unique venue for interpreting the social justice and public benefit aspects of an urban State Park. The site’s transition from San Francisco Bay tidelands to an area entirely created on bay fill to today’s protected public

parkland represents a resource for interpreting changing societal values and better understanding of human impacts on Bay and wetlands ecology.

Skirting over three miles of the western shoreline of San Francisco Bay and including wetlands at the mouth of Yosemite Slough, CPSRA offers visitors opportunities to connect to diverse natural and cultural interpretive resources.

Important natural resources available for interpretation include habitat enhancement areas, tidal mudflats, Yosemite Slough wetlands, shorebirds, native plants, urban wildlife ecology, and resources related to San Francisco Bay, such as weather and wind patterns, marine ecology, geology, hydrology, climate change and sea level rise.

For cultural interpretation, CPSRA offers connections to a number of significant stories relating to the human history of San Francisco Bay. These include use of the shoreline by Native Americans past and present, EuroAmerican exploration and settlement (e.g., early 1900s Italian farmers), Chinese fishing camps, shipwrecks (“ghost ships”) of Candlestick Point, history of the City and County of San Francisco and the Bayview Hunters Point neighborhood, filling of San Francisco Bay tidelots, the protection of San Francisco Bay and development of CPSRA.

Current activities at CPSRA, such as windsurfing, fishing, community gardening, artwork installations, health and fitness exercising, and non-motorized boating also provide opportunities for integrating interpretation into recreation offerings.

From a regional perspective, interpretation at CPSRA offers opportunities to fill gaps and complement interpretive offerings at other San Francisco Bay shoreline parks and nature areas, as well as to bring programs, facilities and media available elsewhere to a currently underserved audience. (Please see Section 2.2: Existing Conditions- Interpretation and Education for an overview of interpretation offered at similar venues in the region.)

Park Interpretation Mission

The mission of interpretation at CPSRA is to create a positive connection between a diverse interpretive audience and the park’s natural, cultural and aesthetic resources, enhancing the visitor experience and increasing appreciation and stewardship of park resources.

Park Interpretation Vision

High-quality interpretation will give visitors to CPSRA enhanced enjoyment and understanding of the significant natural, cultural and aesthetic resources of the park, instilling in visitors a sense of place and the desire to preserve and protect those

resources. Knowledge of the geology, plants, animals, people and scenery of the San Francisco Bay coastal area will promote further understanding of, and interest in, broader science, history, and cultural concepts; will increase visitor safety at the park, and will lead to further protection of important cultural and natural resources both in and outside of the park.

Please refer to Appendix D, CPSRA Draft Concept Master Plan Interpretive Opportunities, which identifies interpretive opportunities within CPSRA.

Themes

Themes represent the “big ideas” or “key take-away messages” that interpretation should provide visitors to CPSRA. Themes express basic concepts about significant resources through single, complete, easily remembered statements. Using themes to guide interpretation engages visitors and helps them find meaning and relevance in diverse facts, experiences and activities. Research consistently shows that visitors remember themes long after they have forgotten facts.

Unifying Theme

The unifying theme of CPSRA provides a conceptual focus for interpretive programs, facilities, and media for the entire unit. The unifying theme also sets the overall interpretive tone and direction, and implies the desired result interpretation should have on visitors’ attitudes and perspectives. The unifying theme is presented through interpretation of primary and secondary themes.

Candlestick Point State Recreation Area Unifying Theme

CPSRA’s heavily altered landscape tells a story of how human activities have changed the San Francisco Bay shoreline, how the natural ecosystem has responded to those changes, and how the value society places on the Bay shoreline environment has changed over time with increased understanding of ecosystem functions, interconnections, and human benefits.

Primary Themes

San Francisco Bay Estuary Theme

Plate tectonics, the Pacific Ocean, global weather patterns, and other natural forces have created the San Francisco Bay Estuary and made it one of California’s most important ecosystems.

This theme covers the geologic formation of San Francisco Bay and its watershed (including the Delta and the watersheds of the Sacramento and San Joaquin Rivers) and the various natural forces and processes that make the estuary such an important ecological habitat. Included under this theme will be interpretation of the Bay's importance to migratory birds on the Pacific Flyway, as well as the Bay's role as a nursery for popular seafood species like Dungeness crab and salmon.

Natural Communities and Adaptations Theme

Although heavily altered by human activities, the shoreline and tidelands of CPSRA provide a protected home for a rich variety of natural communities and species that use well-honed relationships and adaptations to survive.

This theme covers the park's natural communities, from the wetlands of Yosemite Slough and the tidal mudflats extending out from the shoreline into the Bay, to the landscaped inland areas. Included will be the evolutionary adaptations of the plant and animal species that inhabit the various natural communities of the park, including shorebirds, native plants, fish and invertebrates.

Habitat Restoration/Enhancement and Future Challenges Theme

The natural communities at CPSRA have and will continue to benefit from restoration, but they also face challenges from global climate change and other stressors in the future.

This theme covers the extensive restoration/enhancement work by State Parks, volunteers and partners to transform the park's heavily disturbed landscape into productive natural habitat. However, rising sea levels and other impacts from global climate change present significant challenges to the future health of the park's natural communities.

Ohlone Cultural History Theme

The rich natural resources of San Francisco Bay, including the original shoreline area of Candlestick Point, supported the Ohlone people for thousands of years before the arrival of EuroAmerican settlers, and places like CPSRA now provide a setting for revitalization and celebration of Ohlone culture.

This theme covers the lifeways and traditions of the Ohlone people who inhabited the San Francisco peninsula and made extensive use of the natural resources of San Francisco Bay, including CPSRA's current location. Special emphasis will be placed on aspects of Ohlone culture related to shoreline habitat areas, such as wetlands and tidelands, preserved and enhanced at the present-day park. Also to be interpreted are

the impacts of EuroAmerican settlement on the Ohlone, as well as the continued connection to the tribe's cultural heritage maintained by present-day Ohlone.

Site History and Human Impacts on San Francisco Bay Theme

From pristine shoreline to filled-in dumping ground to landscaped parkland, the post-Gold Rush history of CPSRA serves as a microcosm of the human-caused changes to shoreline environments that have taken place throughout the San Francisco Bay Estuary.

This theme looks at CPSRA's site history from the perspective of the many major human-caused changes to San Francisco Bay, from the Gold Rush through the 20th Century to the present-day, including the filling in of vast areas of wetland and tideland habitat, and the decision to protect the Bay from additional fill. Also interpreted will be society's changing understanding and appreciation of San Francisco Bay resources.

Bayview Hunters Point Cultural History Theme

The evolution of the Bayview Hunters Point neighborhood since 1941 reflects the history of segregation in the United States, the 20th Century migration of African Americans from the rural South to the industrialized North, the negative social impacts of poverty and isolation, and the ongoing challenges of improving the quality of life in a stigmatized community without losing diversity and affordability.

This theme links the past and present history of the neighborhoods surrounding CPSRA—including the privately owned homes of Bayview and the housing projects of Hunters Point—to the larger stories and issues of racial segregation and social justice in America. An important aspect of interpreting this theme will be accommodating the multiple points of view and diverse meanings different people have for this subject matter.

California's First Urban State Park Theme

A movement to bring State Park recreational and interpretive opportunities to an underserved urban audience resulted in the creation of CPSRA as California's first urban state park.

This theme chronicles the efforts of State Parks, other agencies, political leaders, community groups and diverse citizens to bring State Park values and opportunities to an urban audience. Other aspects of this theme to be interpreted include the social justice aspects of providing State Park opportunities to the residents of the adjacent Bayview Hunters Point neighborhood and CPSRA's role in bringing African Americans into the State Parks system.

Benefits of Recreation Theme

From walking, jogging and bicycling to picnicking, wildlife viewing and community gardening, recreation at CPSRA offers opportunities for relaxation and enjoyment, time with friends or family, spiritual renewal and tangible benefits for health and fitness.

This theme covers the diverse recreational opportunities at CPSRA, describes the benefits of different types of recreational activities and provides tips for getting the most out of each activity.

Secondary Themes*Candlestick Wind Theme*

The interplay of local topography, proximity to the Pacific Ocean and Northern California’s Mediterranean climate frequently creates strong afternoon and evening winds at Candlestick Point; a natural attribute cursed by ball players and sports fans but celebrated by today’s windsurfers and kite board enthusiasts.

This theme examines the causes and effects of one of Candlestick Point’s most well-known natural features, providing opportunities to interpret present-day recreational windsurfing at CPSR, history of Candlestick Stadium, and San Francisco Bay Area geography, climate and meteorology.

Sailing Ship Graveyard Theme

The original shoreline of what was to become CPSRA once served as a popular “wrecking yard” for obsolete sailing vessels.

This theme covers the period in the late 1800s through the early years of the 20th Century when scores of vessels were run ashore at Candlestick Point, stripped of rope, sails and valuable metals, broken apart, burned, and left to sink onto the tidal mudflats. Interpretation of this theme could include the tangible evidence of “ghost ships” occasionally visible at low tide or unearthed in excavations and be linked to the role of wind powered vessels in the development of San Francisco. It can also complement interpretation of the Candlestick Point Wind Theme, which covers the area’s well-known wind patterns and the present-day use of wind power at CPSRA for windsurfing.

Chinese Fishing Camps Theme

Ethnic discrimination played a role in the establishment of a once-thriving Chinese shrimping and fishing industry in San Francisco Bay and in the industry’s demise.

This theme examines the period after the completion of the transcontinental railroad, when laid-off Chinese workers, barred from other lines of work, established fishing camps along the San Francisco Bay shoreline and harvested great quantities of fish and shrimp. Interpretation will look at the both the ecological impacts of this industry and the reasons many non-Chinese fishermen lobbied to end it. This theme may also be leveraged to interpret present-day recreational fishing opportunities at CPSRA as well as the ecology of today's San Francisco Bay fishery.

Art in Parks Theme

Public art installations at CPSRA enhance the visitor experience by adding interest to the landscape and encouraging exploration, contemplation and personal interaction with artistic expression.

This theme interprets the various public artworks (both existing and future) at CPSRA, provides guidance on how visitors can interact with and find personal meaning in each installation and, in cases where the art is inspired by a unique aspect of the area (e.g., the existing “Wind Tunnel” sculpture), encourages the visitor to experience a park attribute in a unique way.

Interpretive Periods

Interpretive periods define the specific time periods that interpretation at CPSRA will cover. A primary interpretive period focuses interpretation on the time period of greatest significance in the park's cultural history. The significance is determined by important events associated with the park site, or by notable existing historic or prehistoric resources at the site. Choosing the primary and secondary interpretive periods also involves considering what stories are best told in a particular park, the distinctiveness of the resources, the amount of information available to draw upon, and the relatable physical evidence available for visitors. A secondary interpretive period designates a time period that is worthy of interpretation but that should receive less emphasis than the primary period. Except for major natural phenomena, such as earthquakes or fire, interpretive periods are generally only set for cultural resource interpretation.

Primary Interpretive Periods

Native California Indian Period: Prehistory to 1850s

This period includes the prehistoric and post-European contact lifeways and histories of the Native California Indians who utilized the resources of the western shoreline of San Francisco Bay for thousands of years, and whose descendants still live in the San Francisco Bay Area.

EuroAmerican Exploration and Settlement Period: 1769 to the 1900s

Beginning with the Portolá expedition that passed near Candlestick Point in 1769, and the de Anza expedition that passed nearby in 1776, this period includes the settlement of San Francisco and the surrounding Bay Area by EuroAmerican immigrants before, during and after the Gold Rush.

Modern Site History Period: 1941 to the Present

This period includes major developments in the 20th and 21st centuries that have shaped CPSRA. The 1940s saw the rapid expansion of the Hunters Point Shipyard and accompanying filling of adjacent tidelands during World War II and the transformation of the semi-rural, predominately Italian, Hunters Point and Bayview neighborhoods into predominately African-American urban housing for wartime workers. The 1950s brought construction of Candlestick Stadium, and the 1960s saw construction of the Alice Griffith public housing project and the discriminatory housing policies of that era. In the 1970s, there was the movement to create California's first urban state park at Candlestick Point. The early 21st century has involved changes at CPSRA and in adjacent land use associated with the Candlestick Point-Hunters Point Shipyard Phase II Project and the on-going habitat restoration work at Yosemite Slough and elsewhere in CPSRA.

Secondary Interpretive Periods*Ship Graveyard Period: 1870s to 1910*

This period includes the years when a cove in the original shoreline at Candlestick Point served as a popular “wrecking yard” for obsolete sailing ships. Scores of vessels were run ashore, stripped of rope, sails and valuable metals, broken apart, burned and left to sink onto the tidal mudflats.

Chinese Fishing Camp Period: 1869 to 1939

This period covers the years when Chinese fishing camps dotted the western shoreline of San Francisco Bay near Candlestick Point. The most significant time span for the Chinese shrimp and fish industry in San Francisco Bay began when the completion of the transcontinental railroad in 1869 left Chinese worker unemployed and restricted from other industries. Chinese shrimping thrived in the area until restrictive tax measures in the 1880s, and the outlawing of the bag net in 1910 led most fishermen to abandon the industry.

Interpretive Collections

Collections of resource-related objects, whether for use as touchable interpretive props during interpretive programs or for display in exhibits, will be useful in future interpretation at CPSRA. Hands-on or displayed objects will be especially important for

interpreting themes that have no remaining tangible evidence at the park, such as themes related to Native American culture or 19th Century Chinese fishing camps. At this time, CPSRA lacks any interpretive collections. It is important to develop a Scope of Collections Statement for acquiring interpretive objects in the future.

As noted earlier in the Existing Conditions section, artifacts and reproduction objects related to cultural history themes at CPSRA may be available in the existing State Parks collections. Natural history specimens to aid interpretation of the park's ecology-related themes may be collected on-site or acquired from other State Park collections or the collections of non-State Park agencies doing similar interpretation.

Interpretation and Education Goals and Guidelines

Interpretation

Goal Interpretation-1

Interpretation will support park management goals, including public safety and resource protection, which will increase compliance to rules, visitor safety, and the public's enjoyment and appreciation of the park, and will inspire public support and adoption of resource protection behavior beyond their park visit.

- **Guideline Interpretation-1:** Use interpretive techniques to deliver wayfinding and park orientation information, and public safety messages, such as health advisories at fishing piers concerning potential contamination of certain Bay fish and water quality safety advisories at beaches.
- **Guideline Interpretation-2:** Interpret management programs to restore, enhance and preserve CPSRA's significant natural and cultural resources. This will include interpreting wetland restoration and/or enhancement projects at Yosemite Slough and the South Basin shoreline. Use interpretive techniques to inform visitors about the park's sensitive resources and ways in which to minimize adverse impacts to these resources.
- **Guideline Interpretation-3:** Interpret State Parks' measures to incorporate sustainability into park operations, reduce global warming, and adapt to climate change. Inspire park visitors to adopt similar measures in their daily lives.

Goal Interpretation-2

Interpretation at CPSRA will highlight the distinctive features of the park, and put them into a regional and statewide context.

- **Guideline Interpretation-4:** When developing interpretive programs and interpretation plans for CPSRA, focus on the exemplary values and stories of the

park and how they relate to the resources, programs, facilities, and stories of surrounding areas and to State Parks' statewide interpretation and education program. For example, interpretation of the lifeways of the area's early inhabitants can focus on the Ohlone people, which can then be put in the context of the other tribes in the region who used the resources of San Francisco Bay, and California Indians statewide.

- **Guideline Interpretation-5:** Research and develop opportunities to coordinate and partner with other shoreline interpretive facilities in the area and with nearby State Parks (including San Bruno Mountain State Park, China Camp State Park, Eastshore State Park and Angel Island State Park) to tell the regional story of cultural and natural resources. This can be done with joint programs, or by referring to interpretation in another facility where visitors can learn more about a certain topic. For example, interpretation of the Chinese fishing camp period along the Bay shoreline can refer visitors to China Camp State Park for more information on Chinese shrimping and fishing in San Francisco Bay. Interpretation of EuroAmerican exploration of the area can refer visitors to the programs and media available for nearby sections of the Portola and de Anza travel routes available through the National Park Service's Juan Bautista de Anza National Historic Trail. Interpretation of Yosemite Slough wetlands ecology can provide information on visiting other shoreline resource-based interpretive facilities in the area, such as the EcoCenter at nearby Heron's Head Park, Crissy Field Center on the northern shoreline of the San Francisco peninsula, and the San Francisco Bay Model in Sausalito. Each interpretive venue will tell its part of the larger story.

Goal Interpretation-3

CPSRA visitors will make connections between natural, cultural, aesthetic, and recreational resources, and understand individual natural and cultural resources at CPSRA as part of larger processes and relationships.

- **Guideline Interpretation-6:** Integrate natural, cultural, aesthetic, and recreational interpretation. Interpret wildlife, plants, and people (past, present, and future) in the context of CPSRA's ecology, and in the context of the varied cultural landscape components in the park.
- **Guideline Interpretation-7:** Demonstrate how perceptions of San Francisco Bay shoreline resources, particularly wetland and tideland areas, have changed over time, leading to vastly different approaches to using these areas. Include efforts to "reclaim" tidelands for agricultural and industrial use, former use of CPSRA as a dumping ground for urban waste, and present-day habitat restoration/enhancement and recreational activities.

- **Guideline Interpretation-8:** Interpret processes and relationships (patterns, cycles, interactions and adaptations) rather than isolated facts. For example, the various shorebirds that can be seen feeding on CPSRA’s mudflats at low tide can be used to discuss evolutionary adaptations that suit each shorebird species to its environment, and the threat that human impacts on any aspect of that environment pose to the species’ populations.

Goal Interpretation-4

Interpretation will be engaging, address multiple learning styles, reach a broad audience and be universally accessible.

- **Guideline Interpretation-9:** Emphasize tactile, auditory and object-related media that are dynamic and dramatic. For example, interpretation of the Native American heritage of CPSRA can be enhanced with touchable reproductions of Ohlone lifeway objects and audio of present-day Ohlone sharing stories and songs. Interpretation of CPSRA tidal marsh areas can be enhanced with touchable props related to shoreline and mudflat plants and wildlife, audio of commonly seen CPSRA shorebirds, and direct experience with the resource—for example, feeling the mud on a mudflat or the stem of a pickleweed plant.
- **Guideline Interpretation-10:** Use a well-designed mixture of media to make interpretation interesting and accessible to all. For example, personal interpretation such as guided interpretive mudflat and tidal marsh walks; self-guiding non personal interpretation such as wayside signs and exhibits; and other media such as demonstrations, audio-visual programs and brochures.
- **Guideline Interpretation-11:** Consider the use of remote interpretation techniques (e.g., interactive websites, live webcams, podcasts, downloadable/maillable activity books, State Parks’ PORTS program and other remote media) to reach a wider audience. Wetland restoration and/or enhancement activities at Yosemite Slough and the South Basin shoreline would be good candidates for remote interpretation. These techniques could reach students in area schools who could remotely access CPSRA educational resources for classroom activities, those visitors who would like a close-up look at sensitive wildlife habitats without adversely impacting the habitat, visitors with disabilities who cannot access certain park areas, and potential visitors interested in CPSRA and its resources.
- **Guideline Interpretation-12:** Continue to explore the possibilities of new technologies (e.g., social media, cell phone “apps”) to further enhance CPSRA’s interpretive presentations, and broaden the audience and venues for park interpretation.

Goal Interpretation-5

Use partnerships and cooperative relationships to expand interpretation resources and opportunities.

- **Guideline Interpretation-13:** Work with interested parties, especially with those in the Bayview Hunters Point neighborhood and other communities in southeast San Francisco, to provide environmental education, research, and restoration opportunities.
- **Guideline Interpretation-14:** Develop a cooperating association and volunteer programs to improve park interpretive resources, programs, and opportunities. This will include recruiting, training and managing volunteers/docents and providing them materials and props needed for hands-on interpretation. Outreach efforts should be made to ensure significant participation by nearby residents, especially of the Bayview-Hunters Point and other communities in southeast San Francisco.

Goal Interpretation-6

Provide respectful interpretation of the various cultures and ethnic groups associated with CPSRA, including the Ohlone, 1800s Chinese fishermen, early 1900s Italian farmers, World War II-era African-American shipyard workers and present-day residents of the Bayview Hunters Point neighborhood.

- **Guideline Interpretation-15:** Work with appropriate native California Indian groups to develop culturally respectful interpretation of CPSRA's connection to Ohlone lifeways pre and post EuroAmerican contact.
- **Guideline Interpretation-16:** Work with representatives of the San Francisco Bay Area's Chinese community to develop culturally respectful interpretation of CPSRA's connection to the late 1800s Chinese fishing industry in San Francisco Bay.
- **Guideline Interpretation-17:** Work with representatives of the San Francisco Bay Area's Italian community to develop culturally respectful interpretation of CPSRA's connection to the late 1800s – early 1900s Italian agriculture and settlement in the Bayview Hunters Point area.
- **Guideline Interpretation-18:** Work with representatives of the San Francisco Bay Area's African-American community to develop culturally respectful interpretation of CPSRA's connection to World War II-era African-American shipyard workers.
- **Guideline Interpretation-19:** Work with representatives of the present-day Bayview Hunters Point neighborhood to develop culturally respectful interpretation of CPSRA's connection to the adjacent community.

Goal Interpretation-7

Provide interpretation facilities in appropriate locations that effectively serve the interpretation goals and guidelines for CPSRA.

- **Guideline Interpretation-20:** Maximize the use of interpretive facilities to enhance visitor experiences with CPSRA's resources, climate, and the surrounding environment.
- **Guideline Interpretation-21:** Develop interpretive facilities that can serve as multi-use areas, such as an outdoor classroom along the South Basin shoreline, an interpretive area that could include an enclosed structure or an outdoor pavilion along the north side of Yosemite Slough, and a nature theater in a location offering sweeping views of the Bay.

Education

Goal Education-1

Create meaningful educational and interpretive opportunities to promote lifelong learning.

- **Education Guideline-1:** Develop programs and partnerships with local schools, youth groups, colleges, and universities that are in alignment with state educational standards and the Park's significant resources (e.g., access to the San Francisco Bay, restored tidal wetlands, Ohlone and European settlers).
- **Education Guideline-2:** Offer park programs that meet the diverse needs of students, parents, instructors, and schools. This includes programs such as in-school programs, after-school programs, remote learning programs, student internships, professional mentoring, and student service projects that serve both residents of the Bayview Hunters Point community and those farther afield in **California**.
- **Education Guideline-3:** Provide programs and facilities that educate visitors about CPSRA's natural resources, cultural history, and role as California's first urban state park.

Recommendations for Future Interpretation Planning Efforts

Additional interpretive planning will be required before CPSRA can implement programs, facilities and media based on the themes, periods, goals and guidelines defined in this General Plan. The next steps in CPSRA interpretive planning will guarantee that each interpretive service in the park will fit with and enhance other services, be inclusive of diverse audiences and stakeholders, be universally accessible and meet interpretive objectives. Well-thought-out future planning will also save money

by reducing false starts and unnecessary project work, organizing program management, and prioritizing interpretive services in order of need.

State Parks uses a four-level structure for interpretation planning, of which this General Plan is the first step. Subsequent planning steps, described below, should be undertaken as soon as feasible after adoption of this General Plan.

Below is an outline of State Parks' four-level planning process:

- General Plan interpretation sections, defined in the Planning Division's Planning Handbook, (2002, rev. April 2010) provide unifying primary and secondary themes, primary and secondary interpretive periods for historic interpretation, and interpretation goals and guidelines.
- Interpretation Master Plans (IMPs) translate the General Plan goals and guidelines into specific goals and measurable objectives to accomplish those goals, giving strategies to meet those objectives. IMPs also recommend new interpretive services as strategies.
- Interpretation Action Plans (IAPs) prioritize the strategies, list tasks that must be done to implement each strategy, and identify by position who will be responsible for each task.
- Interpretive Service Plans (ISPs) get down to the concrete level of detailed planning of projects and programs that are part of the strategies for the park. The timing of the ISP development is based on the tasks and priorities in the Interpretation Action Plan.

As soon as staff and funds become available, CPSRA should complete an Interpretation Master Plan (IMP) and Interpretation Action Plan (IAP) to more specifically define future park interpretation and to use as a tool to prioritize interpretation strategies and seek funding. The IMP and IAP can recommend any further planning needed for CPSRA.

4.6.6 Operations

Infrastructure and operations are at the core of a functional unit and integral to meeting the park's purpose and vision and managing resources and visitor uses.

Staffing

Well-managed park operations depend on adequate levels of staffing. This will be particularly important for CPSRA, as the park experiences increased visitor use as a result of park improvements and planned development in the surrounding neighborhood. The park will be a 24/7/365 operation and the staffing needs will have to address this operation. A larger on-site staff will be needed to expand educational and interpretive programs, enhance natural resource management, increase community

involvement, keep facilities clean and well maintained, and minimize safety concerns. CPSRA has a long history of partnering with volunteers and local organizations to increase its capacity. This General Plan builds on these relationships and seeks to identify new opportunities for collaboration within the community and beyond.

Goal Staffing-1

Provide adequate staffing between park, Sector, and District to serve the public and achieve the mission and purpose of CPSRA.

- **Guideline Staffing-1:** Provide the proper staffing balance for CPSRA's land management, infrastructure maintenance, resource preservation, and visitor services programs.
- **Guideline Staffing-2:** Develop and implement innovative strategies to supplement staffing needs and build on existing support programs such as volunteer programs and partnerships.
- **Guideline Staffing-3:** Continue community outreach efforts in partnership with neighborhood organizations and provide opportunities for community involvement in the operation of CPSRA. Improve community outreach through the creation and staffing of a State Parks information center in the adjacent neighborhood.

Facilities and Maintenance

Adequate maintenance of park facilities is essential to the provision of a high-quality visitor experience. Properly and regularly maintained facilities and grounds contribute to the safe and enjoyable use of recreational facilities, management of important park resources, and the aesthetic character of the park. Maintenance of CPSRA will be particularly important, given the anticipated volume of year-round visitors and the proximity of residential and commercial uses.

Goal Facilities-1

Provide maintenance and administration facilities that enable effective and efficient management of CPSRA.

- **Guideline Facilities-1:** Retain and upgrade the existing location of CPSRA's maintenance and administration facilities, and explore opportunities for sharing maintenance facilities and responsibilities with other local agencies and organizations, such as the San Francisco Recreation and Parks Department and the San Francisco Neighborhood Parks Council and new park and recreation areas planned in the Hunters Point Shipyard and at Candlestick Point.

- **Guideline Facilities-2:** Ensure that trails allow for service vehicle access throughout the park. Design park service roads so that maintenance vehicles and equipment can easily access all visitor serving areas.
- **Guideline Facilities-3:** Screen maintenance and storage areas and trash disposal facilities to the extent feasible so that they are not openly visible from public use areas.
- **Guideline Facilities-4:** Ensure adequate office space for rangers, maintenance staff, administrative staff, and volunteers to provide self-contained onsite management.
- **Guideline Facilities-5:** Ensure careful coordination with the City and County of San Francisco regarding the grading transition from the planned Candlestick Point-Hunters Point Shipyard Phase II Project to CPSRA. Manage this grade transition in a way that enhances visitor experience, allows for ADA accessibility, and considers stormwater management.

Neighborhood Integration, Access, Multi-Modal Transportation, and Parking

The planned Candlestick Point-Hunters Point Shipyard Phase II Project adjacent to CPSRA and the land uses proposed in this General Plan will increase integration of the park into the surrounding neighborhood. The creation of new, high-density residential and commercial areas adjacent to the park will also increase the permeability of the park's boundary. Multiple access points throughout the park will replace the existing main entrance station. Redevelopment and roadway, transit, bikeway and pedestrian improvements in the surrounding neighborhood will increase the level of activity at CPSRA. These changes will make CPSRA accessible via a variety of transportation modes, but they also highlight the need for the park to coordinate access, circulation, and parking to provide a high quality visitor experience and minimize impacts to park resources and character.

Neighborhood Integration

Goal Integration-1

Promote increased connectivity between CPSRA and the surrounding neighborhood.

- **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.*

- **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.

Goal Integration-2

Provide appropriate economic opportunities for the local community.

- **Guideline Integration-4:** Advertise opportunities for employment associated with constructing, operating and maintaining park programs and facilities, as well as business or concession opportunities (e.g., equipment rental, street food vendors, etc.) in adjacent neighborhoods to promote economic opportunities for the local community.

Access

Goal Access-1

Promote efficient access and circulation throughout the park for a variety of travel modes.

- **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.

Multi-Modal Transportation

Goal Multi-Modal-1

Promote improved multi-modal access to the park in concert with improvements planned in the surrounding neighborhood.

- **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.

* Developed using the City and County of San Francisco’s HDMT, in consultation with State Parks.

- **Guideline Multi-Modal-3:** Integrate the new Class 1 bikeway planned adjacent to and within the CPSRA with access points to the park.* 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.*
- **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.

Goal Multi-Modal-2

Improve access by promoting walking and biking to CPSRA.

- **Guideline Multi-Modal-7:** Provide a comprehensive and varied trail network to increase pedestrian and bicycle opportunities within CPSRA.*
- **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.

Parking

Goal Parking-1

Provide sufficient parking to meet the needs of local, regional and statewide users.

- **Guideline Parking-1:** Provide parking in strategic areas for programs requiring staging, such as windsurfing, non-motorized boating, and picnicking.*
- **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

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

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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, 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.

Universal Access

State Parks is committed to making parks accessible to people with a wide range of physical abilities, as identified in the California State Accessibility Guidelines (Accessibility Guidelines) (State Parks 2009). The Accessibility Guidelines state that accessibility is influenced by the location and type of park and that basic services and experiences need to be accessible to all people with disabilities, while maintaining the intrinsic qualities of the place.

CPSRA is located in an urban setting; park designers should consider specific park features and programming when designing the location and type of accessibility improvements. The accessibility guidelines below apply to restrooms, trails, boat launches, campsites, and other facilities that will be included in CPSRA.

Goal Universal Access-1

Provide universal access to park programs and facilities such as buildings, restrooms, trails, parking, and other common use facilities, including recreational areas.

- **Guideline Universal Access-1:** Consider accessibility in the design of visitor facilities, and provide access for visitors with limited mobility throughout the park to the greatest extent feasible.
- **Guideline Universal Access-2:** Develop all public access and facilities consistent with Americans with Disabilities Act requirements and the *State Parks Accessibility Guidelines*.
- **Guideline Universal Access-3:** Connect all major destinations in the park with the appropriate level of routes or provide access to persons with limited mobility, unless precluded by environmental factors identified at the time of design.

Visitor Safety

Visitor safety is an important concern at CPSRA. The park will be open 24 hours per day, 7 days per week, 365 days per year, and will have multiple access points that will further integrate CPSRA into the surrounding urban fabric and facilitate increased visitor use. These changes will place visitor safety at the forefront of CPSRA operations, as State Parks strives to deliver a safe and enjoyable visitor experience.

Goal Visitor Safety-1

Provide a safe and enjoyable experience for all park users.

- **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-2:** Coordinate with local law enforcement and other agencies and organizations managing urban parks to encourage communication about innovative security techniques and design.
- **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.

Goal Visitor Safety-2

Provide natural areas that balance solitude and safety.

- **Guideline Visitor Safety-6:** Accommodate an increase in visitor use resulting from development of the surrounding neighborhood to provide a sense of security through increased visitation and activity levels.*
- **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 Visitor Safety-8:** Use design strategies to enhance and maintain CPSRA landscapes to provide natural areas that also feel safe.*
- **Guideline Visitor Safety-9:** Give public safety a high priority when planning and designing specific locations and configurations of park plan elements to accommodate an increase in visitors and ensure that more isolated areas of the park are safe. Control access by creating both real and perceptual barriers to entry and

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movement, and use design to define ownership and encourage maintenance of territories (e.g., fences, tree lines, hedges, paths, gates, changes in elevation, signage). Take advantage of design to provide opportunities to see and be seen (e.g., lighting, building location and orientation, proper selection of trees and shrubs, and regular maintenance to ensure views are preserved).

Goal Visitor Safety-3

Develop a program that promotes the safety of park visitors, employees, and property as CPSRA evolves in response to changing neighborhood conditions.

- **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., closing at dusk, or 24/7 operation.

Park Branding

Goal Park Branding-1

Continue to distinguish and brand CPSRA as a state recreation area with a specific mission and purpose. Establish a clear identity for CPSRA that reflects its uniqueness, but that also brands it as part of the regional San Francisco Bay Trail, San Francisco Bay Area Water Trail and Blue Greenway and open space systems, and as a flagship for the California State Park system.

- **Guideline Park Branding-1:** Emphasize the State Parks brand to distinguish CPSRA from surrounding city or neighborhood parks through incorporation of signage, the State Parks logo, and other strategies.
- **Guideline Park Branding-2:** Make information on the larger State Parks system available to CPSRA visitors to encourage visitation to other units throughout the region and the state and to help visitors understand the mission of State Parks. Provide this information to the public at the State Parks information center planned within the adjacent Candlestick Point-Hunters Point Shipyard Phase II Project and at gateway kiosks located along the perimeter of CPSRA.

- **Guidelines Park Branding-3:** Enhance CPSRA's uniqueness and identity through authenticity in design, with a design framework and feature elements that relate to the historic, environmental, and cultural stories specific to this site. Create design guidelines that tie together different phases of park improvements and establish a comprehensive and cohesive design character through the use of similar styles and/or materials for paving, planting, pedestrian bridges, fencing, lighting, structures, trails, and other park facilities and improvements.
- **Guidelines Park Branding-4:** Work with planning partners to create design guidelines for wayfinding and identity signage that establish a unifying and coordinated approach to accommodating the State Parks, San Francisco Bay Trail, San Francisco Bay Area Water Trail and Blue Greenway brands.
- **Guidelines Park Branding-5:** Establish access points into the park, and develop design standards for these "gateway" areas that will create a sense of arrival and establish an initial identity and sense of place for CPSRA. Design standards and guidelines for access points should distinguish primary and secondary gateways.

Agreements and Concessions

CPSRA has entered into a number of agreements regarding the future development, operation and maintenance of the park, pertaining to the adjacent Candlestick Point-Hunters Point Shipyard Phase II Project. These agreements provide a unique opportunity for the park to implement this General Plan, and they will require continued collaboration with the City and County of San Francisco.

State Parks has a partnership agreement with the California State Parks Foundation to complete the final design, construction estimates and permitting phase of the Yosemite Slough Restoration Project. This project has received \$14.3 million from multiple funding 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. The restoration project provides mitigation credits for two of the funding sources, the City and County of San Francisco and BART.

The California State Parks Foundation has entered into an agreement with Lennar Urban that governs both the design and the process related to permitting the proposed bridge across the mouth of Yosemite Slough.

Opportunities also exist for CPSRA to enter into new agreements to allow for concessions that would expand the range of recreational opportunities possible at the park. It is important that all agreements respect the purpose and vision of CPSRA.

Agreements

Goal Agreements-1

Ensure that all easements, access agreements, or other legal arrangements are in the best interests of State Parks and consistent with CPSRA's purpose and vision.

- **Guideline Agreements-1:** Continue to collaborate with the City and County of San Francisco and the developers of adjacent neighborhoods to ensure that phasing, implementation, funding, and maintenance of improvements at CPSRA enhance park resources, and visitor experience.
- **Guideline Agreements-2:** Coordinate with the City and County of San Francisco to ensure adequate monitoring, maintenance, and operation of stormwater easements and infrastructure located within CPSRA.
- **Guideline Agreements-3:** Work with the City and County of San Francisco to plan for rising Bay levels around Yosemite Slough.
- **Guideline Agreements-4:** Work with the City and County of San Francisco to ensure that the design and operations of the Yosemite Slough Bridge minimize impacts to bicyclists and pedestrians accessing CPSRA via the new bridge.
- **Guideline Agreements-5:** Investigate and seek opportunities for securing easements or park additions that would improve the quality, character, functionality and resource buffer of CPSRA.
- **Guideline Agreements-6:** State Parks will manage its submerged lands to protect marine resources and encourage appropriate and safe water-based recreation”

Concessions

Goal Concessions-1

Develop appropriate concession agreements in CPSRA to expand and enhance visitor services and encourage healthy, active lifestyles.

- **Guideline Concessions-1:** Prioritize concessions that enhance access to San Francisco Bay, expand the range of recreation options at CPSRA, and promote healthy activity, such as non-motorized boat and bike rentals and a boating center.
- **Guideline Concessions-2:** Encourage concessions that promote healthy food choices, such as farmers markets and street food vendors.

- **Guideline Concessions-3:** Provide flexible spaces that offer a range of opportunities for concessions locations, while minimizing their impacts on park resources.

Energy, Water, and Waste

By minimizing the use of energy and water, and the generation of waste, CPSRA would help protect resources and reduce maintenance needs. Implementing the following guidelines in the design, improvements, operations, and maintenance of CPSRA would also demonstrate the principles of sustainability and their incorporation into an urban open space setting. This would also enhance environmental education and interpretive programs at the park and encourage park visitors to make sustainable choices as well.

Energy

Goal Energy-1

Enhance energy efficiency, and expand the use of renewable resources.

- **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.

Water

Goal Water-1

Implement conservation measures to minimize water use at CPSRA.

- **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.

Waste

Goal Waste-1

Minimize the generation of waste from park construction, operations, and maintenance.

- **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.*
- **Guideline Waste-5:** Consider implementing a monofilament recycling program to educate fishermen on the dangers of fishing line for many wildlife species and to provide opportunities to reduce monofilament waste in the environment.

4.7 Zone-Specific Goals and Guidelines

4.7.1 Tidal Marsh Zone

Goal Tidal Marsh-1

Create a Tidal Marsh Zone at CPSRA that promotes ecological processes and natural shoreline conditions characteristic of the San Francisco Bay.

- **Guideline Tidal Marsh-1:** Protect and enhance existing tidal wetlands at CPSRA. Minimize disturbance to existing wetlands, and implement any mitigation onsite, where possible.
- **Guideline Tidal Marsh-2:** 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.
- **Guideline Tidal Marsh-3:** Extend the Tidal Marsh Zone along the South Basin shoreline to connect to Yosemite Slough and improve habitat for shorebirds, small

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mammals, and other wildlife that depend on tidal marshes. Enhance existing pockets of tidal marsh at other points along the CPSRA shoreline.

- **Guideline Tidal Marsh-4:** Use natural materials and a native-based plant palette in the Tidal Marsh Zone to maximize ecological functions and minimize disturbance to sensitive resources.
- **Guideline Tidal Marsh-5:** Manage visitor use to provide opportunities for education and interpretation while protecting existing and enhanced tidal wetlands from degradation.
- **Guideline Tidal Marsh-6:** Adopt an adaptive management approach for the creation and enhancement of the Tidal Marsh Zone, given the uncertainties surrounding the restoration of wetlands on artificial fill. Coordinate with the Yosemite Slough Restoration Project during development of this adaptive management approach.

4.7.2 Grassland/Coastal Shrub Zone

Goal Grassland/Coastal Shrub-1

Manage the Grassland/ Coastal Shrub Zone with a focus on providing wildlife habitat and opportunities for low-impact recreation.

- **Guideline Grassland/Coastal Shrub-1:** Maximize the connectivity of Grassland/Coastal Shrub Zone across different geographic areas of CPSRA to preserve and enhance wildlife migration corridors and other important ecological functions.
- **Guideline Grassland/Coastal Shrub-2:** Provide opportunities for nature-based recreation (e.g., trail use and wildlife viewing), that are low-impact and minimize disturbance to wildlife. Small-scale facilities, such as family gathering areas, and natural surface trails are most appropriate in the Grassland/Coastal Shrub Zone. Create the nature theater as a flexible facility that provides opportunities for special events or quiet recreation, such as relaxing, when not in use. If necessary, implement seasonal restrictions regarding the nature theater to protect nesting and breeding wildlife.
- **Guideline Grassland/Coastal Shrub-3:** Monitor visitor use to ensure that it does not degrade sensitive resources, such as wildlife habitat, and adjust management, as necessary.
- **Guideline Grassland/Coastal Shrub-4:** Create a wildlife habitat focus area within the Candlestick Meadows area that preserves and enhances habitat for birds, small mammals, and other common wildlife known to occur at CPSRA. Manage the wildlife habitat focus area in a manner that may also support wildlife with a potential to occur at the park.

- **Guideline Grassland/Coastal Shrub-5:** Use natural materials and plant species native to the San Francisco Bay Area to maximize the habitat value of the Grassland/Coastal Shrub Zone. Select vegetation species to ensure that this zone serves as a transition area between the Tidal Marsh and Coastal Native Zones.
- **Guideline Grassland/Coastal Shrub-6:** Maintain landscapes in the Grassland/Coastal Shrub Zone so that they appear natural and un-manicured.

4.7.3 Coastal Native Zone

Goal Coastal Native Zone-1

Create an aesthetically pleasing area that serves as a transition area between the surrounding neighborhood and CPSRA.

- **Guideline Coastal Native Zone-1:** Select a planting palette for the Coastal Native Zone that is visually pleasing for both CPSRA visitors and residents in the surrounding neighborhood. Include a variety of trees, shrubs, and other plant species that are native to the San Francisco Bay Area or California.
- **Guideline Coastal Native Zone-2:** Create a transitional landscape that provides visual and sound buffers between the adjacent and quieter areas of CPSRA, such as the Candlestick Meadows and Last Port areas. Maintain landscapes in the Coastal Native Zone so that they appear natural and not overly landscaped.
- **Guideline Coastal Native Zone-3:** Manage the Coastal Native Zone as a “linear park” with trails to facilitate visitor movement throughout CPSRA.
- **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.

4.7.4 Active Recreation Zone

Goal Active Recreation Zone-1

Site facilities and spaces designed for more intense recreational use in the Active Recreation Zone.

- **Guideline Active Recreation Zone-1:** Locate visitor facilities that are larger and/or provide more active recreational opportunities in areas of the Active Recreation Zone. Ensure convenient access, suitable parking, and the appropriate provision of amenities, such as restrooms, to meet the needs and volumes of visitors in this zone.
- **Guideline Active Recreation Zone-2:** Concentrate group-sized gathering areas, park features and programs that tend to generate noise near each other, to provide

a balance between areas of intense use in the Active Recreation Zone and areas that provide more nature-based activities.

- **Guideline Active Recreation Zone-3:** Provide gathering areas for special events such as weddings and family gatherings in the Active Recreation Zone.
- **Guideline Active Recreation Zone-4:** Create and manage the Heart of the Park as the hub of activity in CPSRA and a destination for active recreation. Provide a range of facilities, trails, and recreational and interpretive programs geared around higher-impact activity and visitor use. Focus on opportunities for recreation that take advantage of the Bay, such as fishing and viewing piers, bike-in/boat-in camping, and a boating center.
- **Guideline Active Recreation Zone-5:** Site facilities expected to attract high levels of visitor use, such as the boating center, Jackrabbit Beach, and enhanced windsurf facilities, in the Active Recreation Zone.
- **Guideline Active Recreation Zone-6:** Provide visitor information kiosks within the Active Recreation Zone to maximize the interface with visitors to CPSRA.
- **Guideline Active Recreation Zone-7:** Use vegetation types and materials designed to handle high levels of visitor use. Create open lawn areas with irrigated turf that may serve multiple purposes, such as for group gathering, active play, or picnicking.

4.7.5 Beach Shoreline Zone

Goal Beach Shoreline Zone-1

Manage the Beach Shoreline Zone at CPSRA to provide for a range of recreational opportunities.

- **Guideline Beach Shoreline Zone-1:** Enhance existing beaches to expand recreational opportunities. Expand Jackrabbit Beach by selectively removing some revetment and/or adding sand, and create a destination for more intensive recreation. Emphasize opportunities for solitude or quieter recreation at the beaches at Hermit's Cove and Candlestick Cove.
- **Guideline Beach Shoreline Zone-2:** Conduct a study to explore creating a small beach on the north side of the point to increase access to the Bay and serve as a landing area for the boats to access the campground. Conduct technical, site-specific studies to determine the best approach to creating a beach that serves boaters over the long term.
- **Guideline Beach Shoreline Zone-3:** Use structures, such as groynes, to facilitate the accretion of sand and subsequent expansion of Jackrabbit Beach and the beach at Hermit's Cove. Create structures that serve multiple uses, such as fishing and viewing piers.

- **Guideline Beach Shoreline Zone-4:** Adopt an adaptive management approach regarding the long-term preservation of beaches at CPSRA, given the threat of sea level rise. Consider a range of options, including but not limited to, extending beaches inland and beach nourishment.
- **Guideline Beach Shoreline Zone-5:** Restrict dogs from the Beach Shoreline Zone to minimize user conflicts, maximize the visitor experience, and protect sensitive resources.

4.7.6 Community Garden/Plant Nursery Zone

Community Garden/Plant Nursery Zone-1

Expand the existing Community Garden/Plant Nursery Zone to provide greater opportunities for community gathering and programs related to urban farming and environmental restoration.*

- **Guideline Community Garden/Plant Nursery-1:** Expand the existing Community Garden to broaden access to locally grown produce and provide programs on healthy food options and lifestyles.
- **Guideline Community Garden/Plant Nursery-2:** Use the Community Garden for composting, and educate park visitors about the park's composting program
- **Guideline Community Garden/Plant Nursery-3:** Expand the existing native plant nursery to increase its capacity for propagating native plants and providing related educational programs. Where possible, use the native plant nursery to propagate and supply native plants for use in future plantings within CPSRA.
- **Guideline Community Garden/Plant Nursery-4:** Manage the Community Garden/Native Plant Nursery Zone in partnership with community groups and other stakeholders, building on existing relationships with organizations such as Literacy for Environmental Justice.

4.7.7 Administration/Maintenance Zone

Goal Administration/Maintenance Zone -1

Provide maintenance and administration facilities that enable effective and efficient management of CPSRA.

- **Guideline Administration/Maintenance-1:** Retain the existing location of CPSRA's maintenance and administration facilities, and explore opportunities for sharing

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maintenance facilities with new park and recreation areas planned in the Hunters Point Shipyard and at Candlestick Point.

- **Guideline Administration/Maintenance-2:** Screen maintenance and storage areas and trash disposal facilities, to the extent feasible, so that they are not openly visible from public use areas.
- **Guideline Administration/Maintenance-3:** Ensure adequate office space and parking for rangers, maintenance staff, administrative staff, and volunteers to provide self-contained onsite management.

4.8 Carrying Capacity

4.8.1 Methodology

State Parks is required to assess carrying capacity issues in drafting General Plans to comply with Section 5019.5 of the PRC. State Parks defines carrying capacity as a prescribed number and type of visitors that an area will accommodate given the desired natural/cultural resource conditions, visitor experiences, and management programs.

State Parks defines Visitor Capacity Management as “a methodology used to determine and maintain the desired resource and social conditions that fulfill the purpose and mission of a park. It includes establishing initial visitor capacities, then monitoring key indicators in order to identify appropriate management actions in response to unacceptable conditions.”

The variety of factors involved in damage to natural and recreational resources and the complexity of the interactions among the factors makes establishment of carrying capacity numbers difficult. Management policies and procedures are established to regulate capacity limits and land use, implement mitigation measures, educate the public, assist park managers, and ensure proper design of park land uses and facilities. Determination of resource location and significance allows management to create guidelines for future public use and access to CPSRA.

Adaptive Management

An adaptive management process recognizes that management actions will have uncertain outcomes and thus, it is important to adjust management and research decisions to better achieve management objectives. The steps that typically compose an adaptive management process for State Parks are presented below. Steps 1 through 3 were completed as part of the General Plan preparation process while steps 4 through 7 should be implemented over time, as the goals and guidelines identified in this General Plan are implemented.

Step 1. Identify Existing Opportunities and Constraints

Step 2. Determine Vision and Desired Conditions

Step 3. Identify Issues and Evaluate Alternatives

Step 4. Develop Measurable Indicators and Thresholds

Step 5. Establish Initial Visitor Capacities

Step 6. Monitor Use and Identify Changing Conditions

Step 7. Adjust Environmental or Social Conditions

Research, Investigations, and Monitoring

Data from research, pre-project site investigations, visitor impact assessments, post-project evaluations, and baseline resource monitoring can all be captured and used to ensure that the desired condition of the park is maintained. A program of continued research and site investigations provides information and documents updated data on resource conditions and new problems as they may occur. Periodic surveys provide a measure of visitor satisfaction and identify recreation trends and public opinions on the types of activities and experiences people are seeking. These ongoing efforts build the State Recreation Area unit data file for CPSRA for subsequent planning and analysis, and monitoring programs ensure that development actions achieve the desired outcomes.

Visitation, individual or group usage, time, and types and patterns of recreational use will all contribute to impacts on CPSRA natural and recreational resources. Due to the anticipated pressure from the adjacent planned Candlestick Point-Hunters Point Shipyard Phase II Project, implementation of steps 4 through 7 listed above are vital to the success of adaptive management for CPSRA. Furthermore, as future redevelopment occurs in the vicinity of CPSRA, ongoing adaptive management will assist the park manager in revisiting and adjusting the visitor carrying capacity for various parts of CPSRA.

Table 4-1 contains a sampling of indicators that are developed based on the management goals in this General Plan, which are related to carrying capacity. It should be noted that the carrying capacity indicators may be modified on a regular basis based on site-specific knowledge, ongoing observations in the field, and updates in scientific understanding.

Table 4-1: Carrying Capacity Desired Outcomes and Indicators

Goals	Planning Zones	Indicators	Potential Management Actions
<p>Visitor Facilities-1 Provide visitor facilities within the park as needed to facilitate the public's enjoyment of the natural setting and resources.</p>	All Planning Zones	<ul style="list-style-type: none"> • Visitors complain about lack of necessary facilities or overcrowding. • Evidence of destruction/damage to natural areas. 	<ul style="list-style-type: none"> • Limit access during peak times to natural areas. • Make necessary improvements to facilities to alleviate overcrowding/overuse.
<p>Vegetation-1 Maximize the preservation and enhancement of existing native vegetation at CPSRA.</p>	<ul style="list-style-type: none"> • Tidal Marsh • Grassland/Coastal Shrub • Coastal Native • Beach Shoreline 	<ul style="list-style-type: none"> • Evidence of destruction/damage to native vegetation. • Reduced occurrences of special-status species. • Presence of invasive species and/or evidence of dispersion. 	<ul style="list-style-type: none"> • Restore damaged areas. • Revegetate disturbed areas with native species. • Install temporary fencing. • Install signage to inform visitors of sensitive wetland areas and other native vegetation areas. • Increase or adjust removal program for invasive species. • Restrict use of affected areas. • Conduct periodic field surveys.
<p>Wildlife-1 Maintain, protect and/or enhance habitat for wildlife species in CPSRA.</p>	<ul style="list-style-type: none"> • Tidal Marsh • Grassland/Coastal Shrub • Coastal Native • Beach Shoreline 	<ul style="list-style-type: none"> • Evidence of destruction/damage to habitat. • Reduced occurrences of special-status species. • Wildlife is disturbed by visitors. 	<ul style="list-style-type: none"> • Close sensitive habitat areas during breeding and nesting seasons. • Conduct periodic field surveys. • Install signage to educate visitors and encourage them to stay on trails near sensitive habitats.

Table 4-1: Carrying Capacity Desired Outcomes and Indicators

Goals	Planning Zones	Indicators	Potential Management Actions
<p>Cultural Resources-1 Protect known and potentially present prehistoric and historic resources and paleontological resources.</p>	<p>All Planning Zones</p>	<ul style="list-style-type: none"> • Disturbance to discovered archaeological sites. • Observe evidence of cultural resources during excavation and grading activities 	<ul style="list-style-type: none"> • Limit visitor use in any sensitive areas that are discovered. • Provide interpretation and public education opportunities to assist with protection of cultural resources. • Consult Native American representatives and cultural resources specialists if cultural resources are discovered to direct management response.
<p>Staffing-1 Provide adequate staffing to serve the public and achieve the mission and purpose of CPSRA.</p>	<p>All Planning Zones</p>	<ul style="list-style-type: none"> • Existing staff cannot respond adequately to public concerns and overcrowding conditions. 	<ul style="list-style-type: none"> • Increase staff as appropriate and as feasible. • Evaluate facilities and adequate staffing. • Limit the number of special events held in the park. • Limit public access to certain areas of the park.

Table 4-1: Carrying Capacity Desired Outcomes and Indicators

Goals	Planning Zones	Indicators	Potential Management Actions
Parking-1 Provide sufficient parking to meet the needs of local, regional and statewide users.	All Planning Zones	<ul style="list-style-type: none"> • Lack of parking spaces during regular hours and conditions. • Visitor complaints about lack of parking. • Observed use of CPSRA parking by local residents (not park visitors). 	<ul style="list-style-type: none"> • Monitor parking lot use. • Close parking areas at night. • Impose parking fees. • Adjust parking fees as needed to ensure adequate spaces are available for park visitors. • Promote alternative modes of transportation.

4.9 General Plan Phasing Process

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, which was authorized under Senate Bill 792. The land exchange will occur in phases over the next 20 years, as construction of the Candlestick Point-Hunters Point Shipyard Phase II Project moves forward. As a result, the timing and location of this construction will affect the implementation of programs planned for CPSRA in this General Plan. State Parks will develop a list of park improvements following approval of the General Plan, and individual projects will be identified from that list and prioritized.

5 Environmental Analysis





5 Environmental Analysis

5.1 Introduction

The environmental impact analysis presented in this chapter is based on the information presented in the Candlestick-Hunters Point Shipyard Phase II Draft Environmental Impact Report (SFRA and SFPD 2009), which presented a detailed, project-level analysis of the proposed development of and adjacent to CPSRA. However, because this is a program-level EIR for a General Plan, that detailed project-level analysis is not presented in this document.

5.1.1 Purpose of the EIR

This General Plan for the Candlestick Point State Recreation Area (CPSRA) constitutes an environmental impact report (EIR), as required by Public Resources Code (PRC) Sections 5002.2 and 21000 et seq. The General Plan is subject to approval and the EIR is subject to certification by the California State Park and Recreation Commission (State Parks). State Parks has sole authority for the plan's approval and adoption. Following certification of the EIR and approval of the General Plan by State Parks, State Parks will prepare management and development plans as staff and funding become available. Future projects that implemented after approval of the General Plan for CPSRA may be subject to permitting requirements and approval by other agencies, such as the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and San Francisco Bay Conservation and Development Commission (BCDC).

5.1.2 Focus of the EIR

The Notice of Preparation for this General Plan was circulated to the appropriate federal, state, and local planning agencies. Comments received during the planning process were considered during preparation of this General Plan and EIR, which was prepared to address environmental impacts that may result from implementing the management goals and guidelines. Emphasis is given to significant environmental impacts that may result from future development and from operation of CPSRA consistent with these goals and guidelines.

5.1.3 Subsequent Environmental Review Process

The General Plan and EIR serve as a first-tier EIR, as defined in Section 15166 of the State CEQA Guidelines. Tiering in an EIR, particularly for a program-level project such as a general plan, allows agencies to consider broad environmental issues at the general plan stage. Additional parkwide or site-specific projects and appropriate CEQA compliance will follow the General Plan and EIR, when specific development and management programs are proposed. It should be noted that subsequent environmental documents will incorporate, by reference, the general analysis from the program-level EIR included here, and concentrate on the issues specific to the characteristics of subsequent projects (State CEQA Guidelines Section 15152).

5.1.4 Contents of the EIR

The EIR includes the following sections:

Introduction: This section includes a brief overview of the environmental review process, focus, and content of the EIR, and approach to the environmental analysis.

EIR Summary: This section includes a summary of environmental impacts associated with the proposed General Plan, and an overview of the environmental effects of alternatives considered to the preferred General Plan.

Project Description: This section provides an overview of the proposed General Plan, which is the focus of the program EIR, including a description of General Plan elements and proposed phasing related to the land exchange between State Parks and the City and County of San Francisco. The full description of the General Plan is presented in Chapter 4, Park Plan.

Environmental Setting: This section notes that the existing (baseline) conditions for environmental issues or resources that may be potentially affected by implementation of the General Plan are addressed in Chapter 2, Existing Conditions, which details the

environmental setting for this EIR. For some resource topics, additional environmental setting information is provided in this chapter, as needed.

Environmental Effects Eliminated from Further Analysis: This section describes the environmental topics that did not warrant detailed environmental analysis and the supporting rationale.

Environmental Impacts: This section provides a program-level analysis of the potential environmental impacts associated with implementing the General Plan.

Other CEQA Considerations: This section contains information on other CEQA-mandated topics, including significant and unavoidable impacts, significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts.

Alternatives to the Proposed Project: The section describes the alternatives to the General Plan (including the No Project Alternative) that are considered in this EIR and provides an analysis of the associated environmental effects of these alternatives relative to the General Plan.

5.2 EIR Summary

5.2.1 Summary of Impacts and Mitigation

The CPSRA General Plan reflects State Parks' dual mandates as a steward of natural and cultural resources and a provider of recreation opportunities. Chapter 4, Park Plan, identifies goals and guidelines for visitor experience, natural resources, community and cultural resources, interpretation and education, and operations. These goals and guidelines seek to minimize and/or avoid potentially significant adverse effects on the environment.

An evaluation of the potential for significant adverse environmental impacts—including 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—is provided in Section 5.6.

As discussed in Section 5.5, the following topics were eliminated from further analysis: agricultural and forestry resources, energy and mineral resources, population and housing, and recreation.

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, avoids potential significant effects or maintains them at less-than-significant levels.

5.2.2 Summary of Alternatives Considered

This EIR analyzes potential impacts of the General Plan (proposed project), the No Project Alternative, and three additional alternatives that present different development scenarios for CPSRA. The alternatives analysis is presented in Section 5.8.

5.3 Project Description

Chapter 4 of this General Plan includes the project description and presents the overall long-range purpose and vision for CPSRA. An overview of the proposed General Plan Preferred Alternative is presented below.

The General Plan provides a general overview of the proposed enhancements, including the following planning zones:

- Tidal Marsh Zone
- Grassland/Coastal Shrub Zone
- Coastal Native Zone
- Active Recreation Zone
- Community Garden/Plant Nursery Zone
- Beach Shoreline Zone
- Administration/Maintenance Zone

CPSRA includes seven distinct geographic areas, including Yosemite Slough, South Basin Shoreline, Candlestick Meadows, Heart of the Park, The Point, The Neck, and Last Port, within which a mix of activities and facilities will occur. Please refer to Figure 4-1 in Chapter 4, Park Plan, for the location and extent of the geographic areas and major features of the General Plan Preferred Alternative.

In addition, the General Plan Preferred Alternative identifies enhancements to the Bay Trail, additional piers and improvements to existing piers, areas proposed for coastal shoreline treatments, and water recreation facilities.

The management goals and supporting guidelines in Chapter 4, Park Plan, are designed to address the critical planning issues identified through the planning process and to mitigate any adverse environmental effects of development, management and uses that would be permitted at CPSRA.

5.4 Environmental Setting

Existing conditions that characterize CPSRA, including descriptions of the important resource values present and the regional planning context, are described in Chapter 2, Existing Conditions. Additional setting information is provided in the following discussion by specific resource topic, where necessary.

5.5 Environmental Effects Eliminated from Further Analysis

The following topics were eliminated from further analysis in the EIR because no potential exists for significant environmental effects related to these resources to result from implementation of the General Plan. A brief reason for their elimination is provided for each respective topic.

5.5.1 Agricultural and Forestry Resources

Implementation of the General Plan would not convert any “Important Farmland,” as identified by the California Department of Conservation Farmland Mapping and Monitoring Program, nor does the park contain any lands under Williamson Act contracts. Implementation of the General Plan would not result in the conversion of any agricultural land to non-agricultural uses or forestland to non-forest uses. The park’s Community Garden, which offers city residents individual garden plots to grow their own vegetables, will continue to operate under the proposed General Plan. Therefore, no significant effects would occur on agricultural and forestry resources and no further environmental analysis on the effects on agricultural and forestry resources is necessary.

5.5.2 Energy and Mineral Resources

CPSRA is not located within an area with existing or historic energy or mineral extraction land uses, and neither the California Department of Conservation nor the City of San Francisco designate it as an important mineral or energy resource. Therefore, implementing the General Plan would not result in the loss of availability of known mineral or energy resources that are or would be of value to the region and residents of the state, or result in the loss of a locally important site for recovering mineral or energy resources. No further discussion of mineral or energy resource impacts is required in this EIR.

5.5.3 Population and Housing

The CPSRA General Plan provides for recreational improvements and restoration of native plant communities at an existing State Recreation Area. CPSRA is currently

accessible to residents and visitors, and will also be available for use by future residents of the planned Candlestick Point-Hunters Point Shipyard Phase II Project. However, implementation of the General Plan would not facilitate additional development in nearby areas. Therefore, implementation of the CPSRA General Plan would not induce growth, either directly or indirectly, in the area and no further environmental analysis on the effects on population and housing is necessary.

It should be noted that the San Francisco Redevelopment Agency will reserve 11 workforce housing units within the Candlestick Point-Hunters Point Shipyard Phase II Project for State Parks staff. These housing units are reserved so State Parks staff can rent them at workforce housing rates; the City will not pay for these units.

5.5.4 Recreation

Implementation of the General Plan would expand recreational opportunities at CPSRA by developing new recreational facilities and enhancing existing facilities on the site. The General Plan would not result in increased deterioration of local or regional parks or the need to construct additional recreational facilities to serve additional demand. Therefore, further environmental analysis on the effects on recreation is not necessary.

5.6 Environmental Impacts and Mitigation

The following sections analyze potential impacts by resource topic. The criteria used to determine the significance of impacts in the following resource discussions were derived from Appendix G (environmental checklist) of the State CEQA Guidelines.

The General Plan has been developed to guide development and management of CPSRA in a way that is most appropriate to fulfill the park vision and the State Parks mission (Section 1.8.1, Planning Hierarchy). Through the application of the General Plan's goals and guidelines, the plan will be largely self-mitigating.

5.6.1 Land Use and Planning (LU)

Environmental Setting

Please refer to Section 1.1, Location and Regional Context, and Section 1.2.2, Existing Features and Land Uses within the Park, for descriptions of surrounding land uses and existing land uses within CPSRA.

Regulatory Setting

Refer to Section 2.6, Planning Influences, in Chapter 2, Existing Conditions, for a description of existing plans relevant to the proposed project.

The descriptions of the local land use plans in this section are intended to provide the planning context in which the project site is located.

Significance Criteria

Implementing the General Plan would have a significant impact related to land use and planning if it would:

- physically divide an established community;
- conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the General Plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or
- conflict with any applicable habitat conservation plan or natural community conservation plan.

Impact Analysis

Impact LU-1: Potential for the Project to Physically Divide an Established Community.

CPSRA is located along the shore of San Francisco Bay in the vicinity of existing neighborhoods and industrial areas, and immediately adjacent to the planned Candlestick Point-Hunters Point Shipyard Phase II Project Site. Implementation of the General Plan would result in restoration of coastal native vegetation and development of recreational facilities within the existing park boundaries, and would not divide the adjacent community. Therefore, the project would not create a barrier that would block connections between neighborhoods. As a result, the General Plan would have **no impact** related to the physical division of a community.

Impact LU-2: Conflict with Any Applicable Land Use Plan, Policy, or Regulation Adopted for the Purpose of Avoiding or Mitigating an Environmental Effect.

There are a number of federal, state and local plans, programs, policies, and initiatives that address environmental concerns for San Francisco Bay and adjoining land areas. Those plans that are applicable to CPSRA are discussed below, grouped by the environmental topics that are the focus of each plan. Refer to Section 2.6, Planning Influences, in Chapter 2 of this General Plan for a description of each plan listed below.

Trails Plans and Bicycle Plans

The following plans and initiatives generally promote a system of land and water trails and greenways, or seek to expand and improve the existing bicycle network and promote bicycling as an alternative form of transportation in San Francisco:

- California Recreational Trails Plan
- San Francisco Bay Trail Project
- Regional Bicycle Plan for San Francisco Bay 2009
- San Francisco Bike Plan
- San Francisco Bay Area Water Trail (Draft Plan)
- Blue Greenway

The General Plan would include completion, repair, and improvement of the Bay Trail, a portion of which has been completed at CPSRA. The General Plan would also provide opportunities for development of bike-in/boat-in camping facilities in CPSRA. Guideline Recreation-1 promotes planning for recreation opportunities within a regional context, including coordination with local agencies and integration of park facilities with regional trail systems. Therefore, the General Plan would generally be consistent with these plans.

Plans Promoting Expansion of Open Space

The following plans and policy documents generally promote a comprehensive open space network connected to residential areas, an increase in open space, or contain policies that focus on acquisition of new open space and recreation facilities in neighborhoods that lack open space and recreational resources in San Francisco:

- Open Space 2100
- San Francisco General Plan
- Recreation and Park Acquisition Policy

San Francisco's Recreation and Park Acquisition Policy, in particular, 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.

Reconfiguration of the park boundary as a result of the land exchange between State Parks and the City and County of San Francisco would remove land from some areas of the park and add land to others. The new boundary includes additional land north of Harney Way, resulting in relocation of the roadway and expansion of the narrowest portion of the park from a width of 20 feet to 200 feet. This expansion increases connectivity between the Main Park (Heart of the Park) and the Last Port, and creates

opportunities for improvements to the existing windsurf launch, the beach at Hermit's Cove, and Bay Trail. The new boundary also removes some areas of CPSRA, notably the area that contains the existing main entrance. The General Plan would relocate the main entrance and would develop new recreational facilities at CPSRA. The General Plan would improve recreational facilities and create new recreational facilities that would be accessible to residents in the vicinity of CPSRA, including areas that have been identified as being in need of open space and recreational resources. Implementation of Goal Visitor Facilities-2 would expand opportunities for recreation that focus on San Francisco Bay, and implementation of Goal Recreation-1 and its supporting guidelines (Guidelines Recreation-1 through Recreation-4) would provide a variety of recreational opportunities that would allow visitors from neighboring communities and from throughout the region and state to visit and enjoy CPSRA. Therefore, the General Plan would generally be consistent with these plans.

Plans Promoting Public Access to the Shoreline

The following plans and policy documents generally encourage the development of waterfront recreation facilities and linkages between existing shoreline parks, access to public trust lands, enhancement of existing shoreline open space, and recreational access to the Bay:

- San Francisco Bay Plan
- State Lands Commission Trust Doctrine
- San Francisco General Plan
- San Francisco Estuary Project Comprehensive Conservation and Management Plan

The proposed General Plan would include completion, repair and improvement of the Bay Trail, which has been partially completed on CPSRA. The proposed General Plan would also provide opportunities for development of bike-in/boat-in camping facilities in CPSRA. The proposed General Plan would improve recreational facilities and access to the shoreline of the Bay, and would restore habitat, including tidal salt marsh, grassland and coastal native shrub to the shoreline. Implementation of Goal Visitor Facilities-2 would expand opportunities for recreation that focus on San Francisco Bay. Therefore, the proposed General Plan would generally be consistent with these plans.

Plans Addressing Other Land Use Issues

The following plans generally address land use issues with a focus on revitalization and addressing conflicts between incompatible land uses:

- Bayview Hunters Point Area Plan

- San Francisco Estuary Project Comprehensive Conservation and Management Plan
- Candlestick Point-Hunters Point Shipyard Phase II Project
- Executive Park Neighborhood Plan

As previously described, the General Plan would remove land from some areas of the park and add land to others. However, the General Plan would not alter existing land uses within the park. Recreational land uses would remain the focus of CPSRA, with the addition of habitat restoration, which would enhance passive recreation on the site. The General Plan would improve existing and create new recreational facilities that would be accessible to residents near CPSRA, including areas identified as being in need of open space and recreational resources. Implementation of Goal Community-1 and supporting guidelines would create programs and spaces that promote community cohesion and engagement. Implementation of Goal Access-1 and supporting guidelines would promote increased connectivity between CPSRA and the surrounding neighborhoods. Implementation of Guideline Visitor Safety-3 would promote positive outreach to adjacent neighborhoods and communities to increase local visitation and foster a sense of ownership for CPSRA. Therefore, the proposed General Plan would generally be consistent with these plans.

With implementation of the goals and guidelines discussed above, this impact would be **less than significant**.

Impact LU-3: Project's Potential to Conflict with Any Applicable Habitat Conservation Plan or Natural Community Conservation Plan.

CPSRA is not located within the jurisdiction of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. Therefore, **no impact** would occur.

5.6.2 Geology and Soils (GEO)

Environmental Setting

Refer to Section 2.1.1, Physical Resources, in Chapter 2 of this General Plan for a description of existing conditions related to geology and soils.

Regulatory Setting

No federal, state, regional, or local plans, regulations, or laws related to geology and soils apply to the proposed General Plan.

Significance Criteria

Implementing the General Plan would have a significant impact related to geology, soils, and seismicity if it would:

- expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the state Geologist for the area or based on other substantial evidence of a known fault;
 - strong seismic ground shaking;
 - seismic-related ground failure, including liquefaction; and landslides.
- result in substantial soil erosion or the loss of topsoil;
- be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse;
- be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property; or
- have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

The General Plan for CPSRA does not include proposals to use septic tanks or alternative wastewater disposal systems. Therefore, this topic is not addressed further in this EIR.

Impact Analysis

Impact GEO-1: Risk of Exposure to Geologic and Seismic Hazards, Including Fault Rupture.

As described in Chapter 2, Existing Conditions, CPSRA is located in an area with a number of major active earthquake faults. The San Andreas, San Gregorio, and Hayward Faults are the closest to CPSRA and therefore, are most capable of producing strong ground-shaking (SFRA and SFPD 2009). No known faults cross the site; however, CPSRA would be exposed to groundshaking in the event of an earthquake. No structures for human habitation are planned for CPSRA and risk of exposure to seismic hazards would not be increased as a result of the project. Additionally, Goal Geology 1 and supporting guidelines direct State Parks to conduct design level geotechnical investigations to evaluate structural requirements for specific projects. Compliance with the recommendations of the geotechnical and engineering studies, along with compliance with the Seismic Hazards Mapping Act and the California

Building Code, would provide for design and construction methods that reduce risk related to seismic hazards. This impact would be **less than significant**.

Impact GEO-2: Adverse Effects Caused by Seismic-Related Ground Failure, Including Liquefaction, Landslides, and Expansive Soils.

Soils underlying CPSRA are Urban Land soils, which put the entire site at high risk for liquefaction hazards. The risk of slope failure is low within CPSRA because of the relatively level terrain. Goal Geology 1 and supporting guidelines direct State Parks to conduct professional geologic and engineering evaluations in order to reduce risk of exposure of visitors to seismic hazards.

Compliance with recommendations of the geotechnical and engineering studies, along with compliance with the California Building Code would provide for design and construction methods that reduce risk related to seismic-related ground failure. This impact would be **less than significant**.

Impact GEO-3: Soil Erosion or the Loss of Topsoil.

The erosion hazard rating for the local soils is slight to severe because of the variable nature of the deposits (SFRA 2009: III.I-8). Land disturbance, such as grading can accelerate soil erosion, especially in fragile shoreline areas. Goal Shoreline 1 and supporting guidelines promote appropriate shoreline protection measures and give high priority to shoreline protection in high activity areas. This impact would be **less than significant**.

5.6.3 Hydrology and Water Quality (WATER)

Environmental Setting

Refer to Section 2.1.1, Physical Resources, in Chapter 2 of this General Plan for a description of existing conditions related to hydrology and water resources.

Regulatory Setting

In addition to the regulation detailed below, please refer to the Section 2.6, Planning Influences, of this General Plan for more information on regulations related to hydrology and water quality:

- Section 404 of the CWA;
- Section 401 of the CWA;
- Porter-Cologne Water Quality Control Act;
- San Francisco Bay Regional Water Quality Control Board Basin Plan;
- San Francisco's NPDES permits; and

- Section 303(d) of the Clean Water Act (refer to Section 2.1.1, Physical Resources).

Significance Criteria

Implementing the General Plan would have a significant impact related to hydrology and water quality if it would:

- violate any water quality standards or waste discharge requirements;
- substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;
- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, or otherwise substantially degrade water quality;
- place within a 100-year flood hazard area structures which would impede or redirect flood flows; or
- result in inundation by seiche, tsunami, or mudflow.

The General Plan would not involve construction of housing within a flood hazard area; therefore, this topic is not discussed further in this section.

Impact Analysis

Impact WATER-1: Impacts to Groundwater Supplies or Groundwater Recharge.

Development of CPSRA would reduce the amount of impervious surface area in the park, which would assist groundwater recharge. New facilities and landscaping have the potential to adversely impact groundwater supplies. Implementation of Guidelines Water-1 through Water-3 would implement conservation measures to minimize water use at CPSRA. These guidelines would require the use of low-flow water fixtures, water-efficient irrigation, the use of reclaimed water where feasible, and planting indigenous vegetation. With implementation of these guidelines, this impact would be **less than significant**.

Impact WATER-2: Risk of Loss, Injury, or Death Involving Flooding.

The entire CPSRA shoreline is within SFHA Zone V because of the risk of coastal flooding. Areas adjacent to the shoreline and Yosemite Slough are also within SFHA Zone A, as is a large area along Hunters Point Expressway between the shoreline and Gilman Avenue. Implementation of Guidelines Shoreline-8 and 11, and Geology-2 would assist in minimizing impacts related to flooding at CPSRA. Guideline Shoreline-7 assists in locating new park facilities, considering FEMA flood zone areas and areas projected for coastal flooding from sea level rise. Guideline Shoreline-10 further protects CPSRA from flooding due to anticipated sea level rise, by maintaining a 20-foot-wide adaptive management zone along the shoreline and along the park's inland boundary. Lastly, Guideline Geology-2 requires geotechnical and engineering evaluations to assist in locating and designing park improvements to avoid damage from flooding and other related hazards. With implementation of these guidelines, the impact would be **less than significant**.

Impact WATER-3: Temporary Impacts on Water Quality from Stormwater Runoff, Erosion, or Spills.

As stated in Chapter 2, Existing Conditions, most of the City and County of San Francisco is served by a combined stormwater and wastewater sewer system. The culverted Yosemite Creek carries stormwater runoff from the area surrounding Yosemite Slough to San Francisco's Southeast Water Pollution Control Plant (SWPCP). 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 (SFRA and SFPD 2009; SFPUC 2009a). Most of CPSRA drains directly to the Bay, either as direct runoff or through an outfall located west of Windsurf Circle (The Neck) (SFRA and SFPD 2009).

Project implementation would include ground-disturbing activities during construction, near local drainages and waterways that could become contaminated by soil or construction substances. Development related to the proposed General Plan would not substantially alter the existing drainage pattern of the site or area. The creation of tidal marsh along the South Basin Shoreline would improve erosion and siltation in that area of the park.

Construction activities have the potential to temporarily impair water quality if disturbed and eroded soil, petroleum products, or construction-related wastes (e.g., cement and solvents) are discharged into receiving waters or onto the ground where they can be carried into receiving waters. Soil and associated contaminants that enter receiving waters through stormwater runoff and erosion can increase turbidity, stimulate algae

growth, increase sedimentation of aquatic habitat, and introduce compounds that are toxic to aquatic organisms. Accidental spills of construction-related substances such as oils and fuels can contaminate both surface water and groundwater. The extent of potential impacts on water quality would depend on the following:

- tendency for erosion of soil types encountered,
- types of construction practices,
- extent of the disturbed area,
- duration of construction activities,
- timing of particular construction activities relative to rain events, and
- proximity to receiving water bodies.

The potential for release of soil or construction-related materials into local waterways could adversely affect water quality in these locations. These waterways include Yosemite Slough, South Basin and San Francisco Bay. South Basin receives stormwater discharges from separate drainage systems located in Candlestick Point and the Hunters Point Shipyard, as well as surface drainage from three wet weather overflow points that discharge into Yosemite Slough. Because of South Basin's location and reduced exposure to tidal action, circulation is limited, which in turn can adversely affect contamination levels (SFRA and SFPD 2009). However, State Parks (or their designated contractors) would implement Guideline Water Quality-4, which requires implementation of Project Requirements and BMPs for sediment control and stormwater runoff. In addition to Project Requirements and BMPs, preparation and implementation of a Stormwater Prevention Pollution Plan (SWPPP), filing of a Notice of Intent (NOI) with the San Francisco RWQCB prior to construction activities requiring an NPDES permit, and compliance with NPDES permit conditions would prevent the release of soil or construction-related materials into local waterways.

The SFPUC conducts weekly sampling year round from Jackrabbit Beach and Windsurf Circle (The Neck) within CPSRA and from Sunnydale Cove to the south of the park (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). The causes of elevated bacteria levels 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 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). The proposed General Plan would not substantially affect bacteria contaminant levels in discharges to the Bay.

Implementation of Guideline Water Quality-4, implementation of a SWPPP, and compliance with NDPEs permit would ensure water quality impacts from temporary construction activities associated with the General Plan would be **less than significant**.

Impact WATER-4: Impacts on San Francisco Bay Caused by Stormwater Runoff from Operation of the Project Site.

Long-term degradation of runoff water quality can be caused by changes in land use, introduction of new pollutant sources, and increases in impervious surfaces such as parking lots, walkways, or structures. The proposed General Plan contains Guidelines Water Quality-1 and 3, which require the installation of green infrastructure to capture and treat stormwater runoff and the use of BMPs to maximize rainwater infiltration in green infrastructure elements. Guideline Shoreline-1 prioritizes shoreline improvements in areas of observed erosion to safeguard water quality. Guideline Shoreline-6 requires the design and construction of all shoreline enhancements and facilities after site-specific environmental analysis of hydrology and water quality have been completed. Implementation of these guidelines related to stormwater runoff would reduce impacts to **less-than-significant** levels.

Impact WATER-5: Impacts Related to Inundation By Seiche, Tsunami, or Mudflow.

Development related to the General Plan would not substantially increase the exposure of people or structures to inundation by tsunami or seiche. Implementation of Guideline Geology-2 would require geotechnical and engineering evaluations when locating and designing park improvements to avoid or reduce potential damage to people and property from seismically induced damage, including inundation by tsunamis and seiches.

The West Coast/Alaska Tsunami Warning Center in Palmer, Alaska, which is operated by the National Oceanic and Atmospheric Administration (NOAA), issues tsunami watches and warnings as well as tsunami information bulletins for Alaska, British Columbia and Washington, Oregon and California, including the San Francisco Bay Area. Upon receipt of tsunami watches and warnings, coastal NOAA'S Weather Service (NWS) offices such as the San Francisco Bay Area office in Monterey will activate the Emergency Alert System (EAS) via NOAA/All Hazards Weather Radio. All broadcasters (TV, AM/FM radio, cable TV) receive the tsunami EAS message simultaneously as well as those with weather radio receivers in homes, businesses, schools, health care facilities, etc. Upon receipt of tsunami watch and warning messages, local emergency management officials can decide to activate EAS to evacuate low-lying coastal areas in

advance of the initial tsunami wave. Broadcasters and weather radio receivers, who can provide widespread dissemination of these messages, also receive these EAS messages.

CPSRA is relatively flat with no steep slopes in the vicinity of the park; thus, it is not subject to mudflows. Impacts related to inundation by seiche, tsunami, or mudflow would be **less than significant**.

5.6.4 Hazards and Hazardous Materials (HAZ)

Environmental Setting

Refer to Section 2.1.1, Physical Resources, in Chapter 2 of this General Plan for a description of existing conditions related to hazards and hazardous materials.

Significance Criteria

Implementing the General Plan would have a significant impact related to hazards and hazardous materials if it would:

- create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment;
- for a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area;
- for a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area;
- impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Impact Analysis

Impact HAZ-1: Risk of Public Exposure to Hazardous Materials during Transport, Use, Disposal, or Accidental Release during Project Construction and Operation.

Construction activities may require the use of certain potentially hazardous materials, such as fuels, oils, and solvents for construction equipment. Hazardous materials spills may occur, including into the Bay. Transportation of hazardous materials on area roadways is regulated by the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans), and use of these materials is regulated by the California Department of Toxic Substances Control (DTSC), as outlined in Title 22 of the California Code of Regulations. State Parks and their contractors would be required to use, store, and transport hazardous materials in compliance with federal state, and local regulations during project construction and operation. Because the project would implement and comply with existing hazardous materials regulations, it is unlikely that impacts related to creation of significant hazards to the public through routine transport, use, disposal, or accidental release of hazardous materials related to construction or operational activities would be caused by development of the project. Therefore, this impact would be **less than significant**.

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.

As described in Chapter 2, Existing Conditions, CPSRA has been the site of historic dumping, fill, and industrial activities that have resulted in soil and subsurface water contamination, and contamination in the sediments around Yosemite Slough. Additionally, investigations at the nearby former Hunters Point Shipyard site have revealed PCBs in portions of the South Basin and areas bordering the shoreline of CPSRA. The Navy is currently considering remediation alternatives for the shipyard areas. A human health risk evaluation conducted in 1998 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 (SFRA 2009:III.K-7).

There are no known releases of hazardous materials requiring remediation on CPSRA. However, the detection of low levels of hazardous materials in 1998 along with the general knowledge of the types of material that can be in bay fill, lead to the conclusion that there is a potential for exposure to hazardous materials from development activity in the park. Existing federal and state Occupational Safety and Health Administration (OSHA) regulations require State Parks to prepare a Health and Safety Plan (HASP) prior to development activities involving subsurface disturbance. Guideline Hazardous Materials 1 requires State Parks to prepare a contingency plan to address unknown

contaminants encountered during development activities. This plan would 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. Additionally, Guideline Hazardous Materials 2 requires State Parks to identify lands where additional environmental investigation is needed in order to identify contaminated areas and plan for appropriate cleanup actions.

State Parks uses pesticides and herbicides where appropriate in the park to help control pests and vegetation. Staff will follow State Parks policies and other state and federal requirements for herbicide and pesticide application, incorporating all safety measures and recommended concentrations. Only chemicals that are appropriate for use near water will be used in areas near the water. Guideline Hazardous Materials 3 promotes best management practices for maintenance and management that discourage the use of environmentally-damaging or hazardous materials. Therefore, with the implementation of the referenced guidelines, this impact would be **less than significant**.

Impact HAZ-3: Risk of Exposure of Schools to Hazardous Materials during Project Construction and Operation.

Bret Harte Elementary school is located within .25 mile of CPSRA, at the intersection of Gilman Avenue and Griffith Street. Construction activities would involve an increase in truck traffic on local roadways, increasing exposure of students to diesel exhaust (see Section 5.6.2, Air Quality, above). Alternate routes are available that would allow construction truck traffic to avoid the school. Compliance with existing regulations and Guideline Hazardous Materials 4, which requires construction traffic management to avoid residential streets and schools, would reduce this impact to a **less-than-significant** level.

Dust generated from soil disturbance at CPSRA could potentially be carried over the school site. Some locations in Candlestick Point are known to contain low levels of contaminants in soil from historic uses; however, there are currently no sites within Candlestick Point requiring remediation. Nonetheless, if a contaminated site is identified during construction, the required Unknown Contaminant Contingency Plan (Guideline Hazardous Materials 1) would specify the necessary dust control requirements, and the required Health and Safety Plan would specify procedures to be protective of workers, which would also help minimize risks to off-site locations. Therefore, the impact would be **less than significant**.

Impact HAZ-4: Interference with an Adopted Emergency Response Plan or Emergency Evacuation Plan.

The existing street grid provides ample access for emergency responders and egress for residents and workers, and the General Plan would neither directly nor indirectly result in changes to access to the surrounding area. Guideline Visitor Safety 4 promotes management of park service roads to allow easy and rapid access to CPSRA by public safety personnel and access for emergency vehicles throughout the park. This impact is **less than significant**.

Impact HAZ-5: Adverse Effects Related to Wildland Fires.

CPSRA is located in a Local Responsibility Area (LRA) and is in a fire hazard severity zone rated “moderate” (CALFIRE 2007). As described in Chapter 2, Existing Conditions, the San Francisco Fire Department (SFFD) provides fire protection services to CPSRA. The nearest SFFD Station 17 is located two blocks north of Yosemite Slough (at the intersection of Shafter Avenue and Ingalls Street). The estimated response time to the CPSRA vicinity is 1 minute¹ (SFRA 2009:III.O-15).

The project would restore grassland/coastal shrub and coastal native plants on CPSRA, which would be located adjacent to areas planned for urban development (redevelopment area), creating an interface between natural vegetation and developed uses. Compliance with Guideline Coastal Native Zone-4, which requires that the landscape design for CPSRA buffer areas between coastal native zone and adjacent developed areas contain fire resistant plantings and landscape features, which would reduce this impact to a **less-than-significant** level.

5.6.5 Noise (NOISE)

Environmental Setting

Refer to Section 2.1.1, Physical Resources, in Chapter 2 of this General Plan for a description of existing conditions related to noise.

Regulatory Setting

The *State of California General Plan Guidelines*, published by the Governor’s OPR, provide guidance for the acceptability of projects within specific CNEL/L_{dn} contours (Governor’s Office of Planning and Research 2003:250).

¹ Response times to CPSRA are based on the estimated travel time to the corner of Hawes Street and Carroll Avenue.

The state of California has adopted noise standards in areas of regulation not preempted by the federal government. State standards regulate noise levels of motor vehicles, sound transmission through buildings, and occupational noise, as well as noise insulation.

For the protection of buildings from groundborne vibration, Caltrans recommends a limit of 0.5 in./sec. peak particle velocity (PPV) for new residential buildings and 0.25 in./sec. PPV for older or historically significant buildings. To avoid human annoyance, Caltrans recommends that vibration levels at sensitive land uses be limited to 0.04 in./sec. PPV for transient vibration and 0.01 in./sec. PPV for continuous vibration (Caltrans 2004:27).

Significance Criteria

Implementing the General Plan would result in significant impacts related to noise if it would:

- cause exposure of persons to or generation of noise levels in excess of standards established in the local General Plan or noise ordinance, or applicable standards of other agencies,
- cause exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels,
- cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, or
- cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

Impact Analysis

Impact NOISE-1: Short-Term Noise Levels Related to Project Construction.

Short-term noise from construction would result from implementation of the General Plan. Noise levels would vary at different areas of CPSRA because of the different levels of activity and development phases. Specific projects that would result in constructing new facilities, recreation areas, and the restoration of the tidal marsh in the South Shoreline Basin would undergo additional environmental review before they are implemented. At that time, the level of noise that would be generated by the specific activity would be determined based on the construction equipment required and the sensitive receptors present. If subsequent project-level environmental review results in a determination that anticipated noise levels may exceed state standards or adversely affect sensitive receptors, including wildlife, project-specific mitigation would be adopted and implemented.

Typically, construction noise is exempt from local noise standards as long as construction activities take place during the day and equipment has all manufacturer-recommended noise control devices installed and functioning properly. These regulatory exemptions reflect the local jurisdictions' acknowledgement that construction noise is a necessary part of new development and does not create an unacceptable public nuisance when conducted within the least noise sensitive hours of the day.

Implementation of the General Plan project-specific construction would also result in short-term increases in traffic volumes on the local roadway networks. Increased construction traffic would include trips by worker vehicles, construction equipment, and material delivery vehicles, as well as any potential demolition and excavation hauling trips to and from the site. Trips by workers to and from CPSRA would be expected to be nominal when added to existing traffic volumes. During the noise-sensitive nighttime hours, trips associated with demolition and construction activities would increase existing ambient noise levels because engine noise would be generated during ingress and egress, idling, and revving during materials offloading. Construction noise impacts would be evaluated under project-level analysis during project-specific CEQA documentation, and thus, do not require further discussion at the program level. Short-term construction noise at the program level would be **less than significant**.

Impact NOISE-2: Long-Term Noise Levels Related to Project Operations.

Potential sources of noise associated with future operational activities within CPSRA would include motor vehicle use, park administrative operations, maintenance activities, outdoor events, and active recreational activities. Noise associated with these activities could include vehicle noise (e.g., tires, brakes, engine acceleration); heating, ventilation, and air conditioning system operations; trail maintenance equipment (e.g., hand and power tools); sound amplification of performances and events; and visitor-related noise (e.g., opening and closing of doors, talking, yelling, music playing).

Operational noise related to maintenance, equipment operations, visitors, and associated traffic noise would occur throughout the park. Noise originating from operations and maintenance activities would be minimal and would mainly occur during less-sensitive daytime hours, when CPSRA is open for day use. Noise from mechanical equipment would be mitigated according to the mitigation measures identified during specific project-level review.

Development of Candlestick Meadows would include a nature theater for community events. If subsequent project-level environmental review results in a determination that anticipated noise levels may exceed state standards or adversely affect sensitive

receptors, including wildlife, during events held at the theater, project-specific mitigation would be adopted and implemented.

Noise produced by long-term traffic and operational activities would be attenuated by future park facilities, vegetation, and by existing traffic on local roadways, and would occur mostly during less-sensitive daylight hours. This impact would be **less than significant**.

Impact NOISE-3: Incompatible Land Uses.

Surrounding land uses to the north and west are primarily industrial, and the Baylands—a former rail yard and landfill—is located to the south. Because the surrounding land uses are currently proposed to be redeveloped with a mixed-use community, land uses would transition in the immediate area from industrial to mixed-uses. The proposed mixed-used community would be compatible with CPSRA, and access to the park would be developed with consideration to the new development. As stated above, CPSRA construction and operation activities would take place during less-sensitive daylight hours. If any specific noise conflicts between CPSRA and adjacent land uses are identified during project-level analysis, specific mitigation measures would be required at that time under CEQA. This impact would be **less than significant**.

Impact NOISE-4: Short- and Long-Term Sources of Vibration.

Implementing the General Plan is not expected to include any major sources of vibration. However, construction activities could result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and operations involved. Vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. Using the Federal Transit Administration's (FTA) recommended procedure (FTA 2006:12-11 to 12-13) for applying a propagation adjustment to these reference levels, predicted worst-case vibration levels would exceed 80 VdB (FTA's maximum-acceptable vibration standard with respect to human annoyance for sensitive uses) within 60 feet of vibration-sensitive receptors. It is not anticipated that sensitive receptors would be located adjacent to active construction projects. If subsequent project-level environmental review results in a determination that anticipated vibration levels may exceed standards or adversely affect sensitive receptors, including wildlife, project-specific mitigation would be adopted and implemented. Thus this impact would be **less than significant**.

5.6.6 Biological Resources (BIO)

Environmental Setting

Refer to Section 2.1.2, Biological Resources, in Chapter 2 of this General Plan for a description of existing conditions related to biological resources.

Regulatory Setting

Federal Plans, Policies, Regulations, and Laws

Federal Endangered Species Act

Pursuant to the federal Endangered Species Act (ESA), the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) have regulatory authority over federally listed species. Under the ESA, a permit to “take” a listed species is required for any action that may harm an individual of that species. Take is defined under Section 9 of the ESA as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct” (Title 16, Section 1532 of the U.S. Code; Title 50, Section 17.3 of the Code of Federal Regulations). Under federal regulation, take is further defined to include habitat modification or degradation where it would be expected to result in death or injury to listed wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. If a project would result in take of a federally listed species, the project applicant must either acquire an incidental-take permit under Section 10(a) of the ESA or complete a federal interagency consultation under Section 7 of the ESA before the take occurs. Such a permit typically requires various types of mitigation to compensate for or minimize the take.

Section 404 of the Clean Water Act

Section 404 of the CWA establishes a requirement for a project proponent to obtain a permit from the USACE before engaging in any activity that involves any discharge of dredged or fill material into “waters of the United States,” including wetlands. Waters of the United States include navigable waters of the United States, interstate waters, all other waters where the use or degradation or destruction of the waters could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries. Wetlands are defined as those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Jurisdictional wetlands must meet three wetland delineation criteria: hydrophytic vegetation, hydric soil types, and wetland hydrology. Many surface

waters and wetlands in California meet the criteria for waters of the United States, including intermittent streams and seasonal lakes and wetlands.

Section 401 of the Clean Water Act

Under Section 401 of the CWA, an applicant for a Section 404 permit must obtain a certificate from the appropriate state agency stating that the intended dredging or filling activity is consistent with the state's water quality standards and criteria. In California, the authority to grant water quality certification is delegated by the SWRCB.

Magnuson-Stevens Fishery Conservation and Management Act

The Pacific Fishery Management Council (PFMC) has designated San Francisco Bay, the Delta, and Suisun Bay as Essential Fish Habitat (EFH) to protect and enhance habitat for coastal marine fish and macroinvertebrate species that support commercial fisheries such as Pacific salmon. The amended Magnuson-Stevens Fishery Conservation and Management Act, also known as the Sustainable Fisheries Act (Public Law 104-297), requires that all federal agencies consult with the Secretary of Commerce (through NMFS) on activities or proposed activities authorized, funded, or undertaken by that agency that may adversely affect EFH of commercially managed marine and anadromous fish species. The EFH provisions of the Sustainable Fisheries Act are designed to protect fishery habitat from being lost due to disturbance and degradation. The act requires that EFH must be identified for all species federally managed by the Pacific Fishery Management Council, which is responsible for managing commercial fishery resources along the coasts of Washington, Oregon, and California. Three fishery management plans cover species that occur in the project area and designate EFH within the entire Bay-Delta estuary:

- Pacific Groundfish Fishery Management Plan: starry flounder,
- Coastal Pelagic Fishery Management Plan: northern anchovy and Pacific sardine, and
- Pacific Salmon Fishery Management Plan: Chinook salmon.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA), first enacted in 1918, implements domestically a series of treaties between the U.S. and Great Britain (on behalf of Canada), Mexico, Japan, and the former Soviet Union that provide for international migratory bird protection. The MBTA authorizes the Secretary of the Interior to regulate the taking of migratory birds; the act provides that it shall be unlawful, except as permitted by regulations, "to pursue, take, or kill any migratory bird, or any part, nest or egg of any such bird..." (U.S. Code Title 16, Section 703). This prohibition includes both direct and indirect acts, although harassment and habitat modification are not included unless they

result in direct loss of birds, nests, or eggs. The current list of species protected by the MBTA includes several hundred species and essentially includes all native birds.

State Plans, Policies, Regulations, and Laws

California Endangered Species Act

Pursuant to the California Endangered Species Act (CESA) of the California Fish and Game Code, a permit from the CDFW is required for projects that could result in the “take” of a species which is state listed as threatened or endangered (i.e., species listed under CESA), except that plants may be taken without a permit pursuant to the terms of the California Native Plant Protection Act (California Fish and Game Code Section 1900 et seq.). Pursuant to Section 2080, take of a listed species is prohibited without an incidental-take permit. Take of a species under CESA is defined as an activity that would directly or indirectly kill an individual of the species. Unlike the definition in the federal ESA, the CESA definition of take does not include harm or harass. As a result, the threshold for take under CESA is generally considered higher than under ESA.

California Fish and Game Code Section 1600 et al—Streambed Alteration

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife or fishery resources are subject to regulation by CDFW under Section 1600 et al. of the California Fish and Game Code. Under Section 1602, it is unlawful for any person, governmental agency, or public utility to do the following without first notifying CDFW: substantially divert or obstruct the natural flow of, or substantially change or use any material from, the bed, channel, or bank of any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. A stream is defined as a body of water that flows at least periodically or intermittently through a bed or channel that has banks and supports fish or other aquatic life. This definition includes watercourses with a surface or subsurface flow that supports or has supported riparian vegetation. CDFW’s jurisdiction within altered or artificial waterways is based on the value of those waterways to fish and wildlife. A CDFW streambed alteration agreement must be obtained for any project that would result in an impact on a river, stream, or lake.

Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Act, “waters of the state” fall under the jurisdiction of the appropriate RWQCB. The RWQCB must prepare and periodically update water quality control plans (basin plans). Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to control nonpoint and point sources of pollution to achieve and maintain these standards. 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 CWA.

More recently, the appropriate RWQCB has also generally taken jurisdiction over “waters of the state” that are not subject to USACE jurisdiction under the CWA, in cases where USACE has determined that certain features do not fall under its jurisdiction. Mitigation requiring no net loss of wetland functions and values of waters of the state is typically required.

Regional and Local Plans, Policies, Regulations, and Laws

San Francisco Bay Conservation and Development Commission

San Francisco Bay is within the jurisdiction of the San Francisco Bay Conservation and Development Commission (BCDC). BCDC is composed of appointees from local government and state and federal agencies, and is responsible for regulating a number of activities within and adjacent to the Bay. Any dredging or disposal activity in the Bay, marshes, and some creeks requires a permit from BCDC; most work (including grading) on land within 100 feet of the Bay shoreline also requires a permit.

Significance Criteria

Implementing the proposed General Plan would have a significant impact on biological resources if it would:

- have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS;
- have a substantial adverse effect on federally protected wetlands (e.g., marsh, vernal pool, coastal) as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means;
- interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

CPSRA does not include migratory wildlife corridors or native wildlife nursery sites due to the urban nature of the park. Therefore, this impact is not discussed further in this EIR. The proposed General Plan would not conflict with any local policies or ordinances protecting biological resources because the project would restore, create, and enhance habitat and provide educational and interpretive resources, promoting the protection of biological resources. Furthermore, CPSRA is state-owned property and as such is not subject to local policies and ordinances. CPSRA is not located within the jurisdiction of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. Therefore, these topics are not addressed further in this EIR.

Impact Analysis

Impact BIO-1: Adverse Effects on Special-Status Plants.

Based on a CNDDDB database search, literature review, and a field visit to confirm the habitats present in the planning area, 16 special-status plant species were determined to have potential to occur in CPSRA based on the presence of suitable habitat. These species are associated with valley and foothill grassland, coastal scrub, coastal salt marsh, and freshwater seasonal wetland. However, as noted in Table A-1, Special-Status Plant Species With Potential to Occur in the Vicinity of CPSRA, in Appendix A of this General Plan, none of these species are likely to occur in the park due to the disturbed nature of the site, the fact that the park is located on fill material placed in the bay, and the absence of the unique environmental conditions such as native soils, specific salinity and moisture regimes that typically support these species. Furthermore, past surveys performed within and around CPSRA in support of other projects did not document the presence of any special-status plants. Therefore, special-status plants are assumed to be absent from CPSRA at this time. While it is not impossible that special-status plants may become established at CPSRA over the lifetime of the General Plan, it is unlikely that they would become established in significant numbers that would subsequently be subject to disturbance. Because the site currently does not support special-status plants, and because it is unlikely that over the lifetime of the General Plan extensive populations of special-status plants would become established in the park and subsequently be subject to adverse effects, implementation of the proposed General Plan would result in **less-than-significant** impacts to special-status plants.

Impact BIO-2: Adverse Effects on Special-Status Wildlife and Fish Species.

CPSRA contains potentially suitable habitat for 25 special-status wildlife species. Table A-2, Special-Status Wildlife Species With Potential to Occur in the Vicinity of CPSRA in

Appendix A includes information on the habitat requirements and distribution of these species. Special-status wildlife species known to occur, or that could occur, at CPSRA include short-eared owl, western burrowing owl, northern harrier, white-tailed kite, saltmarsh common yellowthroat, and California brown pelican. None of these species are known to nest on the property due to the disturbed nature of the site and its urban setting; however, it is possible they may in the future. Similarly, CPSRA does not provide important foraging habitat for any special-status wildlife species. Construction of visitor facilities and anticipated increased visitor use of the site following implementation of the General Plan is not expected to substantially affect any special-status wildlife species, with implementation of the guidelines included in Goal Wildlife-1.

Special-status fish or wildlife species that currently utilize aquatic habitat adjacent to the park also would not be adversely affected because limited development is proposed and would not interfere with the movement of species in the bay. As described in Section 5.6.8, construction activities have the potential to temporarily impair water quality, and associated aquatic habitats and organisms, as a result of discharge of disturbed and eroded soil, petroleum products, or construction-related wastes (e.g., cement and solvents) into adjacent waters, with potential adverse effects to fish and other aquatic organisms. Implementation of Guideline Water Quality-4 along with implementation of a Stormwater Prevention Pollution Plan and compliance with a National Pollutant Discharge Elimination System permit would avoid or minimize these potential water quality impacts from construction activities.

Additional visitor use of near shore and open water areas would be similar to existing used and would not adversely affect aquatic habitats and/or species using the bay. Generally, wildlife habitat at CPSRA is expected to be improved by implementation of the General Plan. General Plan Goal Wildlife-1 aims to maintain, protect and/or enhance wildlife habitat at CPSRA. Associated Guideline Wildlife-2 seeks to maximize connectivity between vegetation communities in the park to facilitate movement of wildlife. Implementation of Guideline Wildlife-3 would create vegetative buffers between trails and habitat areas to minimize disturbance between wildlife and visitors. In addition, implementation of Guideline Wildlife-5 would monitor and control non-native pests to protect wildlife species. With implementation of these guidelines, wildlife habitat, including habitat for special-status species, should improve with implementation of the General Plan. Impacts on special-status wildlife resulting from implementation of the General Plan would be **less than significant**.

Impact BIO-3: Loss of Special-Status Wildlife and Fish Species.

CPSRA does not contain any riparian habitat, but two sensitive habitat types, coastal salt marsh and freshwater seasonal wetland, are present.

The coastal salt marsh and the freshwater seasonal wetland are located in the Yosemite Slough area, and coastal salt marsh is also found in the South Basin Shoreline, east of the slough. The Yosemite Slough Restoration Project stems from CPSRA's first general plan and has already been permitted. 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. The proposed General Plan includes elements that would complement and support the Yosemite Slough Restoration project, including restoration of the coastal salt marsh and freshwater seasonal wetland of the Yosemite Slough and facilities at the South Basin Shoreline that would provide low-impact recreation opportunities (e.g., trail use, wildlife viewing, picnicking) and nature-based education and interpretation. The tidal and freshwater wetlands would be restored, protected, and enhanced through implementation of Guidelines Vegetation-6 and Vegetation-8, and Guideline Vegetation-7, which would require an adaptive management approach to the creation and enhancement of tidal wetlands. With implementation of these guidelines, the impact to sensitive natural communities would be **less than significant**.

Impact BIO-4: Impacts to Wetlands and Other Waters of the United States.

The General Plan includes facilities and improvements that could potentially affect the shoreline and wetlands and other waters of the U.S., which are subject to jurisdiction of the USACE, CDFW, and BCDC. These proposed facilities and improvements include new fishing and viewing piers, boat launching facilities, windsurfer launching facilities, and beach and coastal habitat enhancements.

Impacts to the bed and banks of tidal marsh and wetland habitat would be considered significant. In addition, BCDC's jurisdiction includes all marshlands up to the 5-foot contour, and extends 100-feet inland from the 5-foot contour. State Parks would obtain necessary permits prior to implementing park improvements that may affect wetlands or other waters of the U.S. In addition, State Parks would coordinate with CDFW regarding the need for a Streambed Alteration Agreement (SAA) as needed to obtain an SAA and abide by any required mitigation requirements. It is also anticipated that USACE would require a Section 404 permit under the CWA and that a BCDC permit would be necessary as well. Other permits and agency coordination, including the potential for consultations under the ESA and/or Magnuson-Stevens Act, would be determined at the time of project-specific environmental documentation. Thus, impacts related to streambed alteration and any coastal salt marsh and freshwater seasonal wetland areas would be **less than significant**.

5.6.7 Cultural Resources (CUL)

Environmental Setting

Refer to Section 2.1.3, Cultural Resources, in Chapter 2 of this General Plan for a description of existing conditions related to cultural resources.

Regulatory Setting

Cultural resources are defined as buildings, sites, structures, or objects, each of which may have historical, architectural, archaeological, cultural, and/or scientific importance. The following discussion summarizes the pertinent cultural resource regulatory framework.

Federal Laws

National Historic Preservation Act

The CPSRA General Plan would be subject to compliance with Section 106 of the National Historic Preservation Act (NHPA) because it requires a Section 404 permit from USACE, pursuant to the CWA. Section 106 of the NHPA, as amended, and its implementing regulations found in 36 CFR Part 800, require federal agencies to identify historic properties that may be affected by actions involving federal land, funds, approval or permitting. If a resource is determined to be a historic property, Section 106 of the NHPA requires that effects of a proposed project on the resource be determined. If a historic property would be adversely affected by undertaking a project, then prudent and feasible measures to avoid or reduce adverse impacts must be taken. The State Historic Preservation Officer (SHPO) must be provided an opportunity to review and comment on these measures prior to project implementation.

National Register of Historic Places

The National Register of Historic Places (NRHP) was authorized by the NHPA and serves as the nation's official list of cultural resources worthy of preservation. Moreover, the NRHP forms a core element of a coordinated national effort to identify, evaluate, and protect resources that meet the criteria of historic properties, as defined below.

The criteria for listing on the NRHP, defined in 36 CFR 60.4, are as follows:

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, association, and:

- A. That are associated with events that have made a significant contribution to the broad patterns of our history;
- B. That are associated with the lives of persons significant in our past;
- C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. That have yielded, or may be likely to yield, information important to prehistory or history.

In addition to meeting at least one of the criteria listed above, a resource must also retain enough integrity to enable it to convey its historic significance. The National Register recognizes seven aspects or qualities that, in various combinations, define integrity. These seven elements of integrity are: location, design, setting, materials, workmanship, feeling, and association. To retain integrity, a property will always possess several, and usually most, of these aspects.

While most historic buildings and many historic archaeological properties are significant because of their association with important events, people, or styles (criteria A, B, and C), the significance of most prehistoric and some historic-period archaeological properties are usually assessed under criterion D (above). This criterion stresses the importance of the information contained in an archaeological site, rather than its intrinsic value as a surviving example of a type or its historical association with an important person or event.

State Regulations

California Environmental Quality Act and Public Resource Code

CEQA requires that, for projects financed by, or requiring the discretionary approval of public agencies in California, the effects that a project has on historical and unique archaeological resources must be considered (PRC Section 21083.2). Historical resources are defined as buildings, sites, structures, or objects, each of which may have historical, architectural, archaeological, cultural, or scientific importance (PRC Section 50201).

The State CEQA Guidelines (Section 15064.5) define three cases in which a property may qualify as a historical resource for the purpose of CEQA review (A through C):

- A. The resource is listed in or determined eligible for listing in the California Register of Historical Resources (CRHR). The CRHR is a statewide list of Historical Resources with qualities assessed significant in the context of the state's heritage. The CRHR functions as an authoritative guide that is intended to be used by state and local

agencies to indicate types of cultural resources that require protection, to a prudent and feasible extent, from project-related substantial adverse changes. Properties that are listed in the NRHP, or are eligible for listing, are considered eligible for listing in the CRHR, and thus are significant historical resources for the purpose of CEQA (PRC Section 5024.1(d)(1)).

Section 5024.1 defines eligibility requirements and states that a resource may be eligible for inclusion in the CRHR if it:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

As with the NRHP, properties must retain integrity to be eligible for listing on the CRHR.

- B. The resource is included in a local register of historic resources, as defined in section 5020.1(k) of the PRC, or is identified as significant in a historical resources survey that meets the requirements of section 5024.1(g) of the PRC (unless the preponderance of evidence demonstrates that the resource is not historically or culturally significant).
- C. The lead agency determines that the resource may be a historical resource as defined in PRC section 5020.1(j), 5024.1, or significant as supported by substantial evidence in light of the whole record.

PRC Section 21083.2 governs the treatment of unique archaeological resources, which must be afforded consideration in the assessment of impacts under CEQA. A unique archaeological resource is defined as "an archaeological artifact, object, or site about which it can be clearly demonstrated" as meeting any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
2. Has a special and particular quality such as being the oldest of its type or the best example of its type; or
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

As defined by the California State Health and Safety Code, Section 7050.5, and PRC Section 5097.98, the inadvertent discovery of human remains requires cessation of project work relative to the find until an assessment of the remains, including determination of origin and deposition, is completed by the County Coroner, in consultation with the Native American Heritage Commission (NAHC) and/or appropriate Tribal representative(s). In the event of inadvertent discoveries, an ongoing program of Native American consultation provides an opportunity for such groups to participate in the identification, evaluation, and mitigation of impacts to human remains and funerary objects.

When a project will affect state-owned historical resources, as described in PRC Section 5024, and the lead agency is a state agency, the lead agency will consult with the California SHPO prior to approval of a proposed project (14 California Code of Regulations [CCR] Section 15064.5(b) (5)).

Executive Order W-26-92

As of June 30, 2007, State Parks controls and administers 258 classified units and 20 major unclassified properties for a total of 278 areas, which collectively contain thousands of historic resources. Executive Order W-26-92 requires all state agencies, including State Parks, in furtherance of the purposes and policies of the state's environmental protection laws and historic resource preservation laws, to the extent prudent and feasible within existing budget and personnel resources, to preserve and maintain the significant heritage (cultural and historical) resources of the state. Each state agency, including State Parks, is directed to:

- Administer the cultural and historic properties under its control in a spirit of stewardship and trusteeship for future generations;
- Initiate measures necessary to direct its policies, plans, and programs in such a way that state-owned sites, structures, and objects of historical, architectural, or archeological significance are preserved, restored, and maintained for the inspiration and benefit of the people;
- Ensure the protection of significant heritage resources are given full consideration in all of its land use and capital outlay decisions; and
- Institute procedures to ensure that state plans and programs that contribute to the preservation and enhancement of significant non-state owned heritage resources in consultation with OHP (Executive Order W-26-92 Section 1).

Significance Criteria

Implementing the General Plan would have a significant impact on cultural resources if it would:

- cause a substantial adverse change in the significance of historical resources as defined in State CEQA Guidelines Section 15064.5;
- cause a substantial adverse change in the significance of an archaeological resource
- pursuant to State CEQA Guidelines Section 15064.5;
- directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- disturb any human remains, including those interred outside of formal cemeteries.

Historical Resources

Section 15064.5 of the State CEQA Guidelines states that a project would result in a significant impact if it would cause a substantial adverse change in the significance of a historical resource based on the following criteria:

- (b) A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.
- (1) Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration in the resource or its immediate surroundings such that the significance of a historic resource would be materially impaired.
- (2) The significance of a historical resource is materially impaired when a project:
- (A) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the California Register of Historical Resources; or
- (B) Demolishes or materially alters in an adverse manner those physical characteristics [of a historical resource] that account for its inclusion in a local register of historical resources (pursuant to section 5021.1(k) of the PRC), or its identification in a historical resources survey meeting the criteria in section 5024.1(g) of the PRC, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
- (C) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance

and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

- (3) Generally, a project that follows the Secretary of the Interior's *Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* or the Secretary of the Interior's *Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* (Weeks and Grimmer 1995), shall be considered as mitigated to a level of less than a significant impact on the historical resource.

Archaeological Resources

CEQA protects archeological resources in the following manner:

- When a project will impact an archaeological site, a lead agency shall first determine whether the site is a historical resource (Section 15064.5[a] of the State CEQA Guidelines).
- If a lead agency determines that the archaeological site is a historical resource, the lead agency shall refer to the provisions of Section 21084.1 of the PRC and Section 15126.4 of the State CEQA Guidelines, and the limits contained in Section 21083.2 of the PRC do not apply.
- If an archaeological site does not meet the criteria defined in Subsection (a), but does meet the definition of a unique archeological resource in Section 21083.2 of the PRC, the site shall be treated in accordance with the provisions of Section 21083.2.

Impact Analysis

Impact CUL-1: Adverse Effect on Significant Prehistoric and Historic-Era Resources.

Although CPSRA was created almost entirely on fill soils that were placed in the middle of the 20th century, several Native American shellmounds are known to exist in the park vicinity. In addition, the mudflats adjacent to CPSRA contain shipwrecks. It is possible that additional resources from prehistoric and historic eras exist beneath the fill soils that cover the site. Based on the Cultural Resources Guidelines provided in Chapter 4, a phased identification process would be implemented as part of the design process for area-specific projects. Specifically, Goal Cultural Resources-1 and associated Guidelines Cultural Resources-1 through Cultural Resources-5 require record reviews and necessary fieldwork, designing and planning to avoid any identified cultural resources, consultation with a qualified cultural resource professional to identify appropriate measures where disturbance to resources are unavoidable, monitoring during excavation activities, consulting with the Native American community for discovered resources, and maintaining sensitivity of any Native American resources.

Mitigation measures for potentially significant impacts on cultural resources at CPSRA would be implemented, as required, according to procedures identified in Section 106 of the NHPA (36 CFR 800.6, and PRC 5024.5(b) and its implementing regulations. CEQA requires lead agencies to adopt feasible mitigation measures for significant impacts on historic resources and unique archeological resources. Mitigation measures would be developed through a consultation process involving the federal agencies, SHPO, state agencies, and interested members of the public. Mitigation measures also would be required for potentially significant impacts on cultural resources caused by implementation of the CPSRA General Plan. State CEQA Guidelines (15126.4) provide guidance regarding the preference for strategies to mitigate impacts on historic resources. The State CEQA Guidelines indicate that preservation in place is the preferred approach and enumerate other mitigation options. Limits on potential costs of mitigating unique archeological resources are presented in PRC 21083.2.

Cultural resources are fragile, finite, and nonrenewable. Any type of physical damage results in a permanent loss of information. The importance of any given resource is closely related to its structural or depositional integrity. Once a site is disturbed, it may be stabilized and protected from further deterioration, but it cannot be restored to its original condition. Even the application of data recovery techniques involves some loss because data recovery is necessarily selective. Although the construction or development phase of a proposed project may be of relatively short duration, adverse effects on NRHP-eligible or important cultural resources could be long term and permanent. The application of data recovery techniques can recover physical objects and mitigate the loss of data, but the site is nonetheless lost to posterity and future in-situ research. Cultural resources that are affected during the implementation of any alternative would be lost for posterity. Data recovery techniques ameliorate this loss somewhat. Cultural resources cannot be replaced or reproduced once they are lost, regardless of mitigation activities.

Implementing Goal Cultural Resources-1 and associated Guidelines Cultural Resources-1 through Cultural Resources-4 would protect cultural resources, including undiscovered resources at CPSRA, and reduce any potential impacts caused by implementation of the CPSRA General Plan to **less-than-significant** levels.

Impact CUL-2: Adverse Effect on Unique Paleontological Resources.

Bay Mud deposits were created by fluctuating sea levels and erosion-deposited estuarine sediments from the Holocene and Pleistocene periods (0 to 1.8 million years ago). Young Bay mud may potentially contain local occurrences of shell fragments and plant remains (State Parks 1978, SFRA, and SFPD 2009). The presence of Bay mud under the artificial fill throughout the Candlestick Point and South Basin area indicates

the potential for paleontological resources at CPSRA. Implementing Goal Cultural Resources-1 and associated Guideline Cultural Resources-5 would protect paleontological resources, and reduce any potential impacts caused by implementation of the CPSRA General Plan to **less-than-significant** levels.

5.6.8 Aesthetic Resources (AES)

Environmental Setting

Refer to Section 2.1.4, Aesthetic Resources and the lighting discussion in Section 2.3.1, Utilities, in Chapter 2 of this General Plan for a description of existing conditions related to aesthetic resources and lighting, respectively.

Regulatory Setting

Refer to Section 2.6, Planning Influences, of Chapter 2 of this General Plan for a description of the following plans relevant to the proposed project:

- Public Resources Code
- Bay Conservation and Development Commission, San Francisco Bay Plan
- Bay Conservation and Development Commission, Shoreline Spaces: Public Access Design Guidelines for the San Francisco Bay

Significance Criteria

Implementing the General Plan would have a significant impact on aesthetics if it would:

- have a substantial adverse effect on a scenic vista;
- substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- substantially degrade the existing visual character or quality of the site and its surroundings; or
- create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

The project site is not within or near a state scenic highway (Caltrans 2011); therefore, this topic is not addressed further in this EIR.

Impact Analysis

Impact AES-1: Adverse Effects on a Scenic Vista.

Implementation of the General Plan would result in the development of new facilities and infrastructure at CPSRA that would be visible to park visitors and viewers from San Francisco Bay. Currently, due to the configuration of the property and the extent of

shoreline, few areas within CPSRA contain obstructed views of the open Bay. As stated in Chapter 4 of this General Plan, CPSRA includes seven distinct geographic areas, within which a mix of activities and facilities would occur with implementation of the General Plan. Potential new facilities in these seven geographic areas would include, but would not be limited to: information kiosks, interpretive signage, art, interpretive pavilions, gathering areas, parking areas, trails, boardwalks, an overlook, outdoor classrooms, interpretive center and plaza, piers, restrooms, picnic areas, nature theater, boat landing, and concession stands. All six geographic areas of CPSRA would continue to maintain views of the Bay, with designated and unofficial viewing areas. New facilities would be developed in accordance with Guideline Aesthetic Resources-8, which requires that new facilities be located to minimize impacts on views from key viewpoints, particularly views of San Francisco Bay. In addition, implementation of this guideline would incorporate the use of vegetative screening, land contouring, and other methods to minimize visual impacts from structures and outdoor facilities. Furthermore, implementation of the General Plan would increase public access and enhance opportunities for the public to experience newly created scenic vistas from CPSRA. Therefore, with implementation of Guideline Aesthetic Resources-8, impacts on scenic vistas would be **less than significant**.

Impact AES-2: Degradation of the Existing Visual Character or Quality of the Site and Its Surroundings.

Implementation of the General Plan would alter the current visual character of the site and surrounding area. Adverse impacts may result from the construction of visually incompatible structures within or around CPSRA. As noted in Section 2.1.4, Aesthetic Resources, in Chapter 2 of this General Plan, none of the buildings located in the vicinity of CPSRA are identified as scenic resources or features of the built environment that contribute to a scenic public setting.

Implementation of the General Plan may result in the development of structures that are not compatible with the surrounding natural and urban environment. In particular, the CPSRA visitor information center would be developed outside of the park area in the adjacent neighborhood. Guideline Aesthetic Resources-1 aims to extend the design language of the surrounding urban environment into CPSRA and Guideline Aesthetic Resources-2 aims to use a palette of materials and designs that reflects the more refined nature of the urban environment, while providing a transition between the urban and natural areas. Implementation of Guideline Park Branding-3 would enhance CPSRA's visual character with a design framework and feature elements that relate to the historic, environmental, and cultural aspects specific to the project site; through implementation of this guideline, more detailed design guidelines would be created to extend a cohesive design character throughout the park and tie it into the surrounding

urban areas. Within the park, Guideline Aesthetic Resources-6 would require the use of natural materials and a native-based plant palette in certain planning zones for continuity of the visual character within the site. Design and development of facilities within CPSRA would be compatible with the surrounding city streets and parks through coordination with the City and County of San Francisco, as specified in Guideline Aesthetic Resources-3.

Overall, implementation of the proposed General Plan would enhance the visual character of the park and surrounding area. Impacts related to changes to visual character would be **less than significant** with implementation of the guidelines identified above.

Impact AES-3: Light and Glare.

Implementation of the General Plan would introduce night lighting as security lighting on building exteriors and in parking areas, and potentially along the Bay Trail and other trails/boardwalks. In addition, night lighting would be used for special events held in the evening hours. Light and glare from CPSRA would potentially have an adverse effect on nearby existing and future residential areas, in particular along Harney Way and in the Alice Griffith Public Housing project. New parking lots located throughout CPSRA would potentially be a source of daytime glare from cars and nighttime glare from lighting in the parking lots.

However, the General Plan includes specific guidelines to minimize adverse effects from light and glare. Specifically, Guideline Aesthetic Resources-5 calls for lighting to be directed downward to minimize light spillage to protect dark night skies. Guideline Visitor Safety-7 calls for the use of design strategies to increase natural surveillance, including lighting. Furthermore, Guideline Energy-1 aims to ensure the lighting is kept to the levels needed to address night use and security concerns. Together, these guidelines aim to ensure that exterior lights would be placed to minimize glare, obtrusive light spillage, and light trespass, and to provide minimum acceptable levels of lighting. Implementation of these guidelines combined with thoughtful placement of parking and other facilities would maintain potential impacts resulting from light and glare at **less-than-significant** levels.

5.6.9 Utilities and Service Systems (UTIL)

Environmental Setting

Refer to Section 2.3.1, Utilities and Services, in Chapter 2 of this General Plan for a description of existing conditions related to utilities and service systems.

Regulatory Setting

No federal, state, regional, or local plans, regulations, or laws related to utilities apply to the General Plan.

Significance Criteria

Implementing the General Plan would have a significant impact related to public services and utilities if it would:

- exceed wastewater treatment requirements of the Central Valley Regional Water Quality Control Board;
- require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- have insufficient water supplies available to serve the project from existing entitlements and resources, or require new or expanded entitlements;
- result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- not comply with federal, state, and local statutes and regulations related to solid waste.

Impact Analysis

Impact UTIL-1: Increase Demand on Utilities and Service Systems.

Potable Water, Wastewater Collection, and Storm Drainage

Implementation of the General Plan would require extension, upgrade, and modification of some service infrastructure on the site to serve new facilities such as restrooms and landscape irrigation systems. It is not anticipated that the General Plan would result in a substantial increase in demand for potable water, wastewater collection or treatment capacity, or storm drainage management, and all facilities would be designed and managed per applicable standards. However, specific requirements for utilities would be determined at the time that project-level designs are developed. Implementation of Goal Energy-1, Goal Water-1, and Goal Waste-1, along with their supporting guidelines, as well as Guideline Wildlife-4, would provide for energy efficiency, implement

conservation measures to minimize water use at CPSRA, and minimize generation of solid waste. Therefore, the General Plan would have a less-than-significant impact on utility demand and on service systems.

5.6.10 Public Services (PS)

Environmental Setting

Refer to Section 2.3.2, Security and Emergency Services, in Chapter 2 of this General Plan for a description of existing conditions related to public services.

Regulatory Setting

No federal, state, regional, or local plans, regulations, or laws related to public services apply to the proposed General Plan.

Significance Criteria

Implementing the General Plan would have a significant impact related to public services if it would:

- cause substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service rations, response times, or other performance objectives for any of the public services, including police or fire services or other public facilities.

The proposed General Plan would not involve construction of housing, and would not create a demand for additional school capacity or for additional parks; therefore these topics are not discussed further.

Impact Analysis

Impact PS-1: Adverse Effects on Police and Fire Services.

Implementation of the General Plan, which would improve and expand recreation opportunities at CPSRA, would result in an increase in visitors to the park. It is not anticipated that the increase in visitors due solely to park improvements would result in a substantial increase in demand for public safety services. Visitor Safety Goals-1 and -3 address public safety. Supporting guidelines (Guidelines Visitor Safety-1 through Visitor Safety-5 and Guidelines Visitor Safety-10 through Visitor Safety-12) give high priority to public safety and require engagement and coordination with local law enforcement agencies, positive outreach to adjacent neighborhoods, and safety planning for special events, among other measures. In particular, Goal Visitor Safety-3

requires that the CPSRA safety program be developed to respond to changing neighborhood conditions, and its supporting Guidelines Visitor Safety-10 through Visitor Safety-12 ensure sufficient staffing to implement the safety program, require engagement with surrounding neighborhoods regarding safety, and require nighttime security lighting.

With implementation of these goals and guidelines, impacts to public services would be **less than significant**.

5.6.11 Transportation and Traffic (TRANS)

Environmental Setting

Refer to Section 2.4, Transportation and Circulation, in Chapter 2 of this General Plan for a description of existing conditions related transportation and circulation.

Regulatory Setting

State Parks is not subject to local land use regulations, however, State Parks will design and operate CPSRA in a manner that is compatible with the surrounding area. The following local land use plans guide transportation and circulation in the area surrounding CPSRA.

San Francisco General Plan

The Transportation Element of the San Francisco General Plan is composed of objectives and policies that relate to the eight aspects of the citywide transportation system: General Regional Transportation, Congestion Management, Vehicle Circulation, Transit, Pedestrian, Bicycles, Citywide Parking, and Goods Management. The Transportation Element contains objectives and policies that are directly pertinent to consideration of the project.

The following objectives and policies are relevant to the CPSRA General Plan:

- Encourage the use of transit and other alternative modes of travel to the private automobile through the positioning of building entrances and convenient location of support facilities that prioritizes access from these modes (Transportation Element Objective 14, Policy 147).
- Provide secure and convenient parking facilities for bicycles (Transportation Element Objective 28).
- Improve the city's pedestrian circulation system to provide for efficient, pleasant, and safe movement (Transportation Element Objective 23).

San Francisco Bay Trail Plan

The San Francisco Bay Trail Project (Bay Trail) is an initiative led by ABAG to construct a 500-mile loop trail for hiking and bicycling around the perimeter of San Francisco Bay. Three Bay Trail segments would cross CPSRA land—one in the short-term (within 5 years) and two in the mid-term (6 to 10 years). Refer to Section 2.6, Planning Influences, in Chapter 2 for a more detailed description of the San Francisco Bay Trail Plan.

Significance Criteria

The proposed project would have a significant impact related to transportation and circulation if it would:

- Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections);
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses; or
- 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.

Impact Analysis

Impact TRANS-1: Cause an Increase in Traffic that is Substantial in Relation to the Existing Traffic Load and Capacity of the Street System.

Implementation of the General Plan would result in a decrease in the size of CPSRA; however it would also provide improved recreational facilities, which would attract additional visitors to CPSRA. Annual visitation for CPSRA was 193,397 in fiscal year 2008/2009 (CSPS 2010). It is assumed that visitation will expand substantially above current use levels due primarily to the adjacent planned Candlestick Point-Hunters Point Shipyard Phase II Project, which will construct over 10,500 residential units. This development also includes a number of improvements that will increase access to the park via alternative transportation modes. The new street grid will create numerous opportunities for pedestrian access, and new bike paths and on-street bike lanes will designate safe bike routes to the park. The specific alignments of the new bike routes remain to be determined, and State Parks is coordinating with the City and County of San Francisco regarding their potential location within CPSRA. Expanded bus service

will circulate through the neighborhood, and a new bus rapid transit (BRT) route along portions of the park will stop near Hermit's Cove and Yosemite Slough.

With the improved and expanded facilities on the site, it is anticipated that implementation of the General Plan would result in some increase in automobile traffic in the area. As described in Section 2.4, Transportation and Circulation, during weekday a.m. and p.m. peak hours, most intersections in the vicinity of CPSRA operate at acceptable levels (LOS D or better) (SFRA 2009: III.D-1). According to traffic projections prepared for the Candlestick Point-Hunters Point Shipyard Phase II Project, during weekday a.m. and p.m. peak hours, the park would generate one and four vehicle trips, respectively. A total of 127 vehicle trips per day would occur on weekdays. During the Sunday a.m. peak hour, 198 vehicle trips would occur (Womeldorff 2011). Peak hour traffic associated with CPSRA would not necessarily coincide with peak hour traffic on streets adjacent to CPSRA; therefore, traffic associated with the General Plan improvements is not expected to result in a substantial increase in traffic congestion at intersections. Additionally, the General Plan provides goals and supporting guidelines that promote increased connectivity between CPSRA and the surrounding neighborhood (Goal Integration-1); promote efficient access and circulation throughout the park for a variety of travel modes (Goal Access-1); require coordination with local and regional transportation agencies and organizations to provide multi-modal access to the park (Goal Multi-Modal-1); create safe, quality environments to promote walking and biking to CPSRA (Goal Multi-Modal-2); and provide sufficient parking to meet the needs of local, regional and statewide users (Goal Parking-1).

CPSRA is accessible by a variety of transportation modes, and the General Plan will further promote connectivity with surrounding neighborhoods and promote access to CPSRA by alternate transportation modes. For these reasons, it is not anticipated that implementation of the proposed improvements would cause a substantial increase in traffic volumes on roadways or a substantial decrease of intersection LOS in the vicinity of CPSRA when compared to existing traffic loads on the roadways. This impact would be **less than significant**.

Impact TRANS-2: Substantially Increase Hazards Due to a Design Feature (e.g., Sharp Curves or Dangerous Intersections) or Incompatible Uses.

CPSRA would not construct new roadways external to the project, but would provide internal circulation for pedestrians and bicycles and parking for automobiles within the boundaries of the park. These facilities would be designed and constructed according to accepted design standards. The General Plan contains goals and supporting guidelines that provide for universal access to park programs and facilities such as buildings, restrooms, trails, parking, and other common use facilities, including recreational areas.

General Plan Goal Access-1 and supporting guidelines provide for efficient access and circulation throughout the park and development of an access and circulation plan that would accommodate the anticipated increase in traffic from adjacent neighborhoods, minimize trail user conflicts, and require coordination with the City and County of San Francisco, Caltrans, and other relevant public agencies regarding the management of vehicle, bicycle, and pedestrian traffic. For these reasons, it is not anticipated that implementation of the General Plan would result in a substantial increase in hazards due to project design or incompatible uses. This impact would be **less than significant**.

Impact 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.

The vicinity of CPSRA is served by a variety of public transit modes; however, despite its urban location, bus service to the park is limited, and few safe walking and biking routes exist from the surrounding neighborhood (see Chapter 3, Issues and Analysis). It is assumed that increased visitation above current levels would result primarily from the planned Candlestick Point-Hunters Point Shipyard Phase II Project. This development includes a number of improvements that will increase access to the park via alternative transportation modes. The new street grid will create numerous opportunities for pedestrian access, and new bike paths and on-street bike lanes will designate safe bike routes to the park. Goal Multi-Modal-1 provides for State Parks to work with local and regional transportation agencies and organizations to provide multi-modal access to the park. Supporting guidelines require State Parks to coordinate with the City and County of San Francisco regarding alignments of new pedestrian and bicycle routes, connection with new and planned alternative transportation modes, and integrating the new Class I bikeway with access points to the park.

Goal Multi-Modal-1 and Goal Multi-Modal-2, along with the supporting guidelines (Guidelines Multi-Modal-1 through Multi-Modal-9), would also be consistent with San Francisco General Plan's Transportation Element. These goals are consistent with Transportation Element Objective 23, to improve San Francisco's pedestrian circulation system to provide for efficient, pleasant, and safe movement, and Transportation Element Objective 147, to encourage the use of transit and other alternative modes of travel and to conveniently locate support facilities that prioritize access from these modes.

Therefore, it is not anticipated that implementation of the General Plan would result in a substantial increase in transit demand that cannot be accommodated by planned transit capacity or alternative travel modes or that would conflict with adopted policies, plans,

or programs supporting alternative transportation. This impact would be **less than significant**.

5.6.12 Air Quality (AQ)

Environmental Setting

Existing Air Quality

CPSRA is located in the City and County of San Francisco, within the San Francisco Bay Area Air Basin (SFBAAB). The SFBAAB also comprises all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara Counties, and the southern half of Sonoma County. The ambient concentrations of air pollutant emissions are determined by the amount of emissions released by pollutant sources and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transportation and dilution include terrain, wind, atmospheric stability, and the presence of sunlight. Therefore, existing air quality conditions in the area are determined by such natural factors as topography, meteorology, and climate, in addition to the amount of emissions released by existing air pollutant sources. Each factor is discussed separately below.

Climate, Topography, and Meteorology

The dominant features of the SFBAAB are the mountains of the Coast Range and proximity to San Francisco Bay and the Pacific Ocean. The Coast Range runs from north to south and creates a barrier to moisture and wind for areas on the east side of the crest.

Climate within the SFBAAB varies depending on proximity to the Pacific Coast. Inland climate in the SFBAAB includes hot, dry summers and cool, wet winters. Coastal SFBAAB climate includes cool summers and rainy winters. Winds vary seasonally with predominant winds from north to northwest in the summer and from the south in the winter.

The predominant wind direction and speed, measured at the closest meteorological station to CPSRA—San Francisco International Airport in South San Francisco, —is from the west at 10 miles per hour (mph) (WRCC 2011).

Climate data from South San Francisco covering the period of July 1996 through December 2008 (WRCC 2011) indicate the following:

- Average maximum monthly temperatures range from 56°F in January to 73°F in September

- Average minimum monthly temperatures range from 45°F in January to 57°F in August
- Average annual rainfall is approximately 21 inches, occurring mostly from November through April

Criteria Air Pollutants

Concentrations of the following air pollutants are used as indicators of ambient air quality conditions: ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), respirable and fine particulate matter (PM₁₀ and PM_{2.5}), and lead. Because these are the most prevalent air pollutants known to be deleterious to human health, and extensive health effects criteria documents are available, they are commonly referred to as “criteria air pollutants.” This section provides a brief description of the main criteria air pollutants of concern—ozone, PM₁₀, and PM_{2.5}.

Ozone

Ground-level ozone, often referred to as smog, is not emitted directly, but rather, forms in the atmosphere through complex chemical reactions between nitrogen oxides (NO_x) and reactive organic gases (ROG) in the presence of sunlight. The principal sources of NO_x and ROG, often termed ozone precursors, are combustion processes (including automobiles) and evaporation of solvents, paints, and fuels. Exposure to ozone can cause eye irritation, aggravate respiratory diseases, and damage lung tissue, as well as damage vegetation and reduce visibility. Emissions of ROG and NO_x have decreased in the SFBAAB since 1975, and are projected to continue declining through 2020, due to controls on emissions from motor vehicles, oil refineries, and industrial coating and solvent operations (SFRA and SFPD 2009).

Particulate Matter (PM₁₀ and PM_{2.5})

Particulate matter includes a wide range of solid or liquid particles, including smoke, dust, aerosols, and metallic oxides. The many sources of particulate matter emissions include combustion, industrial processes, construction, and motor vehicles. Road-suspended dust generates the majority of motor vehicle particulate matter emissions, although emissions also result from tailpipe and tire-wear. Wood burning in fireplaces and stoves is a significant source of particulate matter, especially during cold, stagnant wintertime episodes, when levels are highest. Health effects of particulate matter depend on the type and size of the particle, among other factors. Research has demonstrated a correlation between respirable particulate matter (PM₁₀) concentrations and increased mortality rates. Elevated levels of PM₁₀ also aggravate chronic respiratory illness, such as bronchitis and asthma. Fine particulate matter (PM_{2.5}) is a concern because it can bypass the body’s natural filtration system more easily than larger particles and can lodge deep in the lungs.

Both the California Air Resources Board (CARB) and U.S. Environmental Protection Agency (EPA) use monitoring data to designate areas as attainment or nonattainment for ambient air quality standards. Both CARB and EPA have established ambient air quality standards for various pollutants that are considered the maximum concentration levels to maintain healthy air quality for the general public. Table 5-1 presents the California and federal ambient air quality standards, which are referred to as the California Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality Standards (NAAQS), respectively, and the attainment status of the SFBAAB (SFRA and SFPD 2009). The purpose of these designations is to identify those areas with air quality problems and initiate planning efforts for improvement. SFBAAB is currently designated nonattainment for the state PM_{10} , state and federal $PM_{2.5}$, and state and federal ozone ambient air quality standards (AAQS). The SFBAAB is either in attainment or unclassified for all remaining state and federal AAQS (ARB 2011a).

The SFBAAB is in attainment for all state and federal standards except those for ozone, PM_{10} , and $PM_{2.5}$. Ozone and $PM_{2.5}$ levels exceed both state and federal standards, while PM_{10} exceeds only California's standards. The Bay Area Air Quality Management District (BAAQMD) regulates stationary sources of air pollution in the SFBAAB and operates numerous air quality monitoring stations throughout the Bay Area. Ozone, PM_{10} , and $PM_{2.5}$ concentrations are measured at the Arkansas Street, San Francisco station. Other criteria pollutants are not currently monitored because of their attainment status. In general, the ambient air quality measurements from this station are representative of the air quality in the project area. As shown below in Table 5-2, the state and federal ozone standards were exceeded in each year from 2005 to 2009. In addition, the PM_{10} and $PM_{2.5}$ standards were exceeded in nearly every year during the same period. As discussed previously, the SFBAAB is designated as nonattainment for ozone, PM_{10} , and $PM_{2.5}$, and therefore, BAAQMD's air quality plans are focused on measures and programs to reduce these pollutants and their precursors (i.e., ROG and NO_x).

Table 5-1: Pollution Standards and Attainment in the SFBAAB

Pollutant	Averaging Time	State Standard (Attainment)	Federal Standard (Attainment)
Ozone	1-hr	0.09 ppm (N)	None
	8-hr	0.070 ppm (N)	0.075 ppm (N)
Carbon Monoxide	1-hr	20 ppm (A)	35 ppm (A)
	8-hr	9.0 ppm (A)	9 ppm (A)
Nitrogen Dioxide	1-hr	0.18 ppm (A)	0.100 ppm (U)
	Annual	0.030 ppm	0.053 ppm (A)
Sulfur Dioxide	1-hr	0.25 ppm (A)	0.075 ppm (A)
	24-hr	0.04 ppm (A)	0.14 ppm (A)
	Annual	None	0.030 ppm (A)
Respirable Particulate Matter (PM ₁₀)	24-hr	50 µg/m ³ (N)	150 µg/m ³ (U)
	Annual	20 µg/m ³ (N)	None
Fine Particulate Matter (PM _{2.5})	24-hr	None	35 µg/m ³ (N)
	Annual	12 µg/m ³ (N)	15.0 µg/m ³ (A)
Sulfates	24-hr	25 µg/m ³ (A)	None
Lead	30-day	1.5 µg/m ³ (A)	None
	Quarterly	None	1.5 µg/m ³ (A)
Hydrogen Sulfide	1-hr	0.03 ppm (U)	None
Vinyl Chloride (chloroethene)	24-hr	0.010 ppm*	None
Visibility Reducing Particles	8-hr	Extinction coefficient of 0.23/km (U)	None
<u>Notes</u> A: Attainment N :Nonattainment U: Unclassified (insufficient data; generally indicates low concern) *Attainment information not available ppm: parts per million µg/m ³ : micrograms per cubic meter			
Source: BAAQMD 2010, CARB 2009			

Table 5-2: Ambient Air Quality near CPSRA, 2005-2009

Pollutant	Standard	Days Standard Exceeded In:				
		2005	2006	2007	2008	2009
Ozone	State 1-hr	9	18	4	9	11
Ozone	State 8-hr	9	22	9	20	13
Ozone	Federal 8-hr	1	12	1	12	8
Respirable Particulate Matter (PM ₁₀)	State 24-hr	6	15	4	5	1
Fine Particulate Matter (PM _{2.5})	Federal 24-hr	0	10	14	12	11
Notes: hr= hour Source: BAAQMD 2009						

Toxic Air Contaminants

Toxic air contaminants (TACs), or in federal terms, hazardous air pollutants, are defined as air pollutants that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations.

Odors

Odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The occurrence and severity of odor impacts is subjective and depend on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the presence of sensitive receptors. Although offensive odors rarely cause any physical harm, they still can be unpleasant, leading to considerable distress and often generating citizen complaints to local governments and regulatory agencies. There are no major odor sources (e.g., wastewater treatment plants, landfills, or confined animal operations) within 2 miles of CPSRA. There are no odor generators as a part of this project.

Sensitive Receptors

Sensitive receptors are identified land uses that would be occupied by people most sensitive to the effects of air pollution, including the very young, the elderly, or people

weak from illness or disease. These receptors are generally residential land uses, schools, hospitals, and retirement homes. Sensitive receptors located in and around CPSRA would include recreational users and any permanent staff residences (e.g., campground hosts). CPSRA is currently surrounded by the Candlestick Park stadium parking area and associated parking lots. The nearest sensitive receptors are residences located to the south on Harney Way and in the Alice Griffith Public Housing project.

Regulatory Setting

Criteria Air Pollutants

At the federal level, the EPA implements national air quality programs. EPA's air quality mandates are drawn primarily from the Federal Clean Air Act (CAA), which was enacted in 1970 and was most recently amended in 1990. The ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA).

CPSRA is located in the City and County of San Francisco, which is under the local jurisdiction of the BAAQMD. BAAQMD is the local agency that regulates sources of air pollution within the SFBAAB. BAAQMD attains and maintains air quality standards in San Francisco County through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean air strategy of BAAQMD includes the preparation of plans and programs for the attainment of AAQS, adoption and enforcement of rules and regulations, and issuance of permits for stationary sources. BAAQMD also inspects stationary sources, responds to citizen complaints; monitors ambient air quality and meteorological conditions, and implements other programs and regulations required by the CAA, CAAA, and CCAA. All projects are subject to adopted BAAQMD rules and regulations in effect at the time of construction. Specific rules applicable to the construction of the proposed project may include, but are not limited to: Regulation 6, Rule 1 "Particulate Matter Emission General Requirements."

Odors

Neither the state nor the federal governments have adopted any rules or regulations for the control of odor sources. However, the BAAQMD CEQA Guidelines state that for a plan to have a less than significant determination with regard to odor impacts, all odor sources within the plan area must be identified along with policies to minimize potential impacts from odors.

Thresholds

The air quality analysis uses criteria from State CEQA Guidelines Appendix G. According to these criteria, implementation of the CPSRA General Plan would have a significant air quality impact if it would:

- Conflict with or obstruct implementation of the applicable air quality plan.
- Violate any air quality standards or contribute substantially to an existing or projected air quality violation.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).
- Expose sensitive receptors to substantial pollutant concentrations.
- Create objectionable odors affecting a substantial number of people.

Impact Analysis

Impact AQ-1: Short-Term Construction-Generated Criteria Air Pollutant Emissions.

Construction-related emissions are described as short term or temporary in duration and have the potential to represent a significant impact with respect to air quality. Implementation of the General Plan would take place over time, with the implementation of various projects and plans (e.g., specific management plans). Most projects require minor construction activity—including trail construction, road management, or vegetation management—and would not result in substantial temporary emissions. A limited number of projects could involve more extensive construction, such as development of the boating center area. Earth movement would be associated with certain aspects of General Plan implementation such as shoreline stabilization and construction of the nature theater—these activities would occur within the 132.5-acre area over the next 20 years. BAAQMD recommends using the land use development screening sizes, included in the BAAQMD CEQA Air Quality Guidance, for analysis of projects such as the CPSRA General Plan (Kirk, pers. comm., 2011). Based on available information, construction would likely be amortized over the life of the plan, yielding 6.6 acres of construction per year. This annual disturbed acreage is well below the BAAQMD screening level of 67 acres of construction per year (BAAQMD 2011) for the “City Park” category. Sixty-seven acres represents approximately half of the acreage of CPSRA and it is highly unlikely that half of the park area would be disturbed in a single year over the lifetime of the General Plan. For specific projects that would be implemented under the General Plan, State Parks would include standard control measures to limit emissions to less-than-significant levels. Each individual project would be subject to subsequent environmental review to ensure that the necessary standard

control measures are included and implemented as part of the project. Therefore, implementation of the General Plan would not result in significant short-term construction-generated impacts to air quality. This impact would be **less than significant**.

Impact AQ-2: Long-Term Operational Criteria Air Pollutant Emissions.

Implementation of the General Plan is not expected to result in a significant increase in vehicle traffic on local and regional roadways. Currently, it is anticipated that a majority of the visitors to CPSRA would be from the planned Candlestick Point-Hunters Point Shipyard Phase II Project location immediately adjacent to the park and would arrive at the park by means other than personal automobile. The BAAQMD has established their screening level for air quality impacts related to parks as 2,613 acres. CPSRA is approximately 132 acres in size and therefore well under the BAAQMD screening level. It should be noted that while CPSRA-related vehicle trips would be expected to increase area roadway volumes compared to current peak levels as a result of General Plan implementation, the increase would not be expected to alter general traffic patterns on local roadways and would not be expected to generate trips from a substantial number of miles away. Thus, implementation of the project would not substantially increase vehicle miles traveled. Emissions associated with any changes to traffic patterns due to the Candlestick Point-Hunters Point Shipyard Phase II Project were evaluated as part of the environmental review for the development. It is also recognized by State Parks that fugitive dust issues associated with driving on unimproved roads would be addressed through implementation of interim measures for fugitive dust management. Because the General Plan would not generate a substantial number of vehicle trips or substantially alter existing traffic conditions, implementation of the General Plan would not result in a substantial increase in long-term regional ROG, NO_x, PM₁₀, or CO emissions associated with increases in vehicle trips. Consequently, implementation of the General Plan would not conflict with or obstruct implementation of BAAQMD's air planning efforts. As a result, this impact would be **less than significant**.

Impact AQ-3: Exposure to Toxic Air Contaminants.

Implementation of the land uses in the General Plan would not result in the generation of TAC emissions. Implementation of the General Plan would not result in long-term operational TAC emissions when compared to existing conditions. Specifically, implementation of the General Plan would not result in a substantial increase in the number of heavy duty vehicle trips when compared with current conditions. The overall number of heavy duty vehicles travelling to CPSRA is expected to remain similar to existing conditions. Furthermore, implementation of the General Plan would not result in the operation of any new major stationary emission sources that could be a source of

TACs. Thus, implementation of the General Plan would not expose sensitive receptors to substantial pollutant concentrations. As a result, this impact would be **less than significant**.

Impact AQ-4: Objectionable Odors.

Implementation of the General Plan would result in temporary diesel exhaust emissions from on-site construction equipment. Diesel exhaust emissions would be intermittent and temporary, and would dissipate rapidly from the source. No other existing odor sources are located in the vicinity of CPSRA and the General Plan does not call for the long-term operation of any new potential sources of odors. Thus, implementation of the General Plan would not result in exposure of sensitive receptors to objectionable odors. As a result, this impact would be **less than significant**.

5.6.13 Climate Change (GHG)

Introduction

Emissions of greenhouse gases (GHGs) have the potential to adversely affect the environment because such emissions contribute, on a cumulative basis, to global climate change.

Legislation and executive orders on the subject of climate change in California have established a statewide context and process for developing an enforceable cap on GHG emissions. Given the nature of environmental consequences from GHGs and global climate change, CEQA requires that lead agencies evaluate the cumulative impacts of GHGs, even relatively small additions, on a global basis. Therefore, this section discusses global climate change and existing GHG emission sources; summarizes applicable federal, state, and local regulations; and analyzes potential short-term and long-term GHG impacts resulting from development of the CPSRA General Plan.

Environmental Setting

Global Climate Trends and Associated Impacts

Global warming is the name given to the increase in the average temperature of the Earth's near-surface air and oceans since the mid-20th century, and its projected continuation. Warming of the climate system is now considered to be unequivocal (IPCC 2007) with global surface temperature increasing approximately 1.33 degrees Fahrenheit (°F) over the last 100 years. Continued warming is projected to increase global average temperature between 2 and 11°F over the next 100 years. Rising temperatures could have a variety of impacts, including increasing emissions of greenhouse gases and criteria pollutants associated with energy generation.

Higher temperatures also contribute to sea level rise by expanding ocean water, melting mountain glaciers and small ice caps, and causing portions of Greenland and the Antarctic ice sheets to melt (U.S. Environmental Protection Agency 2011). The California Resources Agency (CRA) states that sea level rise can cause damage to coastal communities and loss of land. BCDC has prepared maps for areas inundated by 16 inches of sea level rise by 2050 and 55 inches of sea level rise by 2100 (BCDC 2009). Extrapolating these projections to the 2075 mid-point, sea level rise would be about 36 inches (3 feet), although some studies have concluded this rise would not occur until after the year 2100 (Risien 2009).

The principal GHGs are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), perfluorocarbons (PFC), hydrofluorocarbons (HFC), and water vapor. Each of the principal GHGs has a long atmospheric lifetime (1 year to several thousand years). In addition, the potential heat trapping ability of each of these gases vary significantly from one another. CH₄ is 23 times as potent as CO₂, while SF₆ is 22,200 times more potent than CO₂. Conventionally, GHGs have been reported as CO₂ equivalents (CO₂e). CO₂e takes into account the relative potency of non-CO₂ GHGs and converts their quantities to an equivalent amount of CO₂ so that all emissions can be reported as a single quantity.

The primary man-made processes that release these gases include the following: burning of fossil fuels for transportation, heating, and electricity generation; agricultural practices that release CH₄, such as livestock grazing and crop residue decomposition; and industrial processes that release smaller amounts of high global warming potential gases such as SF₆, PFCs, and HFCs. Deforestation and land cover conversion have also been identified as contributing to global warming by reducing the Earth's capacity to remove CO₂ from the air and altering the Earth's albedo or surface reflectance, allowing more solar radiation to be absorbed.

Regulatory Setting

CEQA Guidelines

State CEQA Guidelines Section 15064.4, Determining the Significance of Impacts from Greenhouse Gas Emissions, encourages lead agencies to consider the following three factors to assess the significance of GHG emissions: (1) will the project increase or reduce GHGs as compared to baseline; (2) will the project's GHG emissions exceed the lead agency's threshold of significance; and (3) does the project comply with regulations or requirements to implement a statewide, regional, or local GHG reduction or mitigation plan. State CEQA Guidelines Section 15064.4 also recommends that lead agencies

make a good-faith effort, based on available information, to describe, calculate or estimate the amount of GHG emissions associated with a project.

State CEQA Guidelines Section 15126.4, Consideration and Discussion of Mitigation Measures Proposed to Minimize Significant Effects, includes considerations for lead agencies related to feasible mitigation measures to reduce GHG emissions, including but not limited to project features, project design, or other measures that are incorporated into the project to substantially reduce energy consumption or GHG emissions; compliance with the requirements in a previously approved plan or mitigation program for the reduction or sequestration of GHG emissions, which plan or program provides specific requirements that will avoid or substantially lessen the potential impacts of the project; and measures that sequester carbon or carbon-equivalent emissions. In addition, amended State CEQA Guidelines Section 15126.4 includes a requirement that where mitigation measures are proposed for reduction of GHG emissions through off-site measures or purchase of carbon offsets, these mitigation measures must be part of a reasonable plan of mitigation that the relevant agency commits itself to implementing.

In addition, a new set of environmental checklist questions (VII. Greenhouse Gas Emissions) have been added to the State CEQA Guidelines Appendix G. The new questions ask whether a project would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- Conflict with an applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

California Air Resources Board (CARB)

The California Air Resources Board (CARB) is the agency responsible for coordination and oversight of state and local air pollution control programs. The CARB Scoping Plan (December 2008) (“The Scoping Plan”) states that local governments are “essential partners” in the effort to reduce GHG emissions. The Scoping Plan also acknowledges that local governments have “broad influence and, in some cases, exclusive jurisdiction” over activities that contribute to significant direct and indirect GHG emissions through their planning and permitting processes, local ordinances, outreach and education efforts, and municipal operations. Many of the proposed measures to reduce GHG emissions rely on local government actions. The Scoping Plan encourages local governments to reduce GHG emissions by approximately 15% from current levels (i.e., year 2002 to 2004 average) by 2020 (CARB 2008b).

Bay Area Air Quality Management District

In May 2011, BAAQMD released an update to its previously adopted guidelines document. This CEQA Air Quality Guidelines document (BAAQMD 2011) is an advisory document that provides lead agencies, consultants, and project applicants with methods for analyzing and reviewing air quality and GHG impacts from land use development projects being considered within BAAQMD jurisdiction. The handbook contains guidance for quantifying GHG emissions from land use projects and provides guidance and analysis expectations for the evaluation of GHG emissions. The BAAQMD guidance was used to perform the GHG impact assessment in this analysis and is described further below.

Impact Analysis

Significance Criteria

The following thresholds of significance are based on Appendix G of the State CEQA Guidelines. The project would result in a significant impact related to global climate change if it would do either of the following:

- Generate GHG emissions, either directly or indirectly, that may have a significant cumulative impact on the environment, or
- Conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

As stated in Appendix G, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the above determinations. Therefore, the following BAAQMD thresholds are used for determining significance in correlation to the Appendix G thresholds. The project would have a significant impact to GHG emissions if it would:

- Exceed screening criteria for GHG impacts established by BAAQMD; or
- Generate operational emissions exceeding 1,100 MT CO₂e per year.

Impact GHG-1: Greenhouse Gas Emissions Exceeding BAAQMD Established Screening Criteria.

Implementation of the General Plan is expected to result in GHG emissions from short-term construction equipment exhaust. Construction equipment numbers, specific activities, and their associated GHG emissions are unknown at the General Plan level. However, BAAQMD requires that all construction activities incorporate emission reduction measures (i.e., basic construction mitigation measures) prior to project approval (BAAQMD 2011). The basic construction mitigation measures are focused on air quality impacts, but also reduce GHG emissions as they relate to exhaust emissions. Implementation of the General Plan would involve construction activities including trail

enhancements, pier improvements and additions, and water recreation facilities, among others. Most of the proposed elements envisioned under the General Plan would not require long term (i.e., more than 1 year) or highly intensive construction activities. Because implementation of specific projects envisioned in the General Plan would incorporate and implement all required emission reduction measures in accordance with BAAQMD requirements, and because of the low intensity of construction activities of any particular projects, and the short-term nature of the construction activities, implementation of the General Plan would not generate substantial GHG emissions—either directly or indirectly—that may have a significant cumulative impact on the environment or conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. This impact would be **less than significant**.

Impact GHG-2: Operational Greenhouse Gas Emissions Exceeding 1,100 MT CO₂e per year.

GHG emissions would also be generated by mobile and area sources associated with long-term operation of the project. Mobile-source emissions of GHGs would include employee and visitor trips to the park in passenger vehicles. Stationary-source emissions would result from indirect energy use and any on-site fixed emission sources (e.g., generators). BAAQMD has established significance screening criteria for GHGs for various project types. Per BAAQMD screening criteria, city parks measuring less than 600 acres would not generate levels of GHG emissions that cause a significant impact to global climate change (BAAQMD 2011).

Therefore, because the project is less than 600 acres in size (CPSRA is approximately 132.5 acres), it would not exceed BAAQMD screening criteria for significance. Thus, the project would not generate GHG emissions—either directly or indirectly—that may have a significant cumulative impact on the environment or conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. This impact would be **less than significant**.

5.7 Other CEQA Considerations

5.7.1 Unavoidable Significant Environmental Effects

No significant and unavoidable impacts resulting from adopting and implementing the General Plan were identified.

5.7.2 Significant Irreversible Environmental Changes

No significant irreversible changes to the physical environment are anticipated from the adoption and implementation of this General Plan. Facility development—including structures, roads and trails—may be considered a long-term commitment of resources; however, the impacts can be reversed through removal of the facilities and discontinued access and use. Ongoing adverse effects on the environment, if any, can be monitored by park staff through adaptive management and consideration of carrying capacity issues. State Parks does remove, replace, or realign facilities—such as trails and campsites—where impacts have become unacceptable either from excessive use or from a change in environmental conditions.

The construction and operation of facilities may require the use of non-renewable resources. This impact is anticipated to be minor based on considerations of sustainable practices in site design, construction, maintenance, and operations that are generally practiced by State Parks. Sustainable principles used in design, construction, and management—such as the use of non-toxic materials and renewable resources, resource conservation, recycling, and energy efficiency—emphasize environmental sensitivity.

5.7.3 Growth-Inducing Impacts

State CEQA Guidelines Section 15126.2(d) requires that an EIR evaluate the growth-inducing impacts of a proposed project. Specifically, an EIR must discuss the ways in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Growth inducement itself is not an environmental effect, but may lead to environmental effects. Such environmental effects may include increased demand on other community and public services and infrastructure, increased traffic and noise, degradation of air or water quality, degradation or loss of plant or wildlife habitats, or conversion of agricultural and open space land to urban uses.

Implementing the General Plan would not foster additional population growth or the construction of additional housing. Economic growth would be limited to CPSRA facilities and concessions, which would provide a limited number of jobs that are expected to be filled by the local workforce. Therefore, the proposed project would not result in growth-inducing impacts.

5.7.4 Cumulative Impacts

Cumulative impacts are defined in State CEQA Guidelines Section 15355 as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” A cumulative impact occurs from

“the change in the environment, which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor, but collectively significant, projects taking place over a period of time” (State CEQA Guidelines Section 15355[b]). By requiring an evaluation of cumulative impacts, CEQA seeks to ensure that large-scale environmental impacts will not be ignored.

As stated in Section 4.15, General Plan Phasing Process, specific park improvements that would be implemented under the proposed 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. As a result, the timing and location of this construction and the phasing of the land exchange will affect the implementation of facilities and programs planned for CPSRA. Therefore, the implementation schedule for proposed facilities at CPSRA is not known at this time.

Cumulative projects include development and construction projects within close proximity to CPSRA. As discussed in Section 2.6, Planning Influences, extensive redevelopment is planned in the vicinity of the park. Relevant land use plans and development proposals that contribute to cumulative impacts include the following:

- Candlestick Point-Hunters Point Shipyard Phase II Project
- Executive Park Neighborhood Plan
- Visitation Valley Redevelopment Project
- Brisbane Baylands

Descriptions of these redevelopment projects are presented in Section 2.6, Planning Influences. The Candlestick Point-Hunters Point Shipyard Phase II Project, in particular, will substantially change the neighborhood surrounding CPSRA. As stated in Section 2.6, 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 EIR that was prepared for the development determined that it would have considerable contributions to cumulative traffic and air quality impacts that would be significant and unavoidable (SFRA and SFPD 2009). The development would also have significant and unavoidable noise and historical resources impacts.

Implementation of the General Plan, in conjunction with other development projects and land use plans, could result in cumulatively considerable adverse impacts on the environment. However, the goals and guidelines included in the General Plan and presented in Chapter 4, Park Plan, require management actions and measures be implemented that would preserve, protect, restore, or otherwise minimize adverse

effects related to aesthetic resources, air quality, biological resources, cultural resources, energy, hazards and hazardous materials, light and glare, seismic hazards, water quality, flood risk, recreation, traffic and parking, and utilities. With the implementation of these actions, the General Plan's contribution to cumulative impacts would be less than considerable, and cumulative impacts associated with implementing the General Plan would be less than significant.

5.8 Alternatives to the Proposed Plan

The guiding principles for the analysis of alternatives in this EIR are provided in State CEQA Guidelines Section 15126.6, which requires that the alternatives analysis: (1) describe a range of reasonable alternatives to the project that could feasibly attain most of the basic objectives of the project; (2) consider alternatives that could reduce or eliminate any significant environmental impacts of the proposed project, including alternatives that may be more costly or could otherwise impede the project's objectives; and (3) evaluate the comparative merits of the alternatives. State CEQA Guidelines Section 15126.6(d) permits the evaluation of alternatives to be conducted in less detail than is done for the proposed project. A description of the project alternatives, including the No Project Alternative, is provided below and summarized in Table 5-3 at the end of this section to allow for a meaningful evaluation, analysis, and comparison of these alternatives with the Preferred Alternative (proposed project)—the General Plan as described in Chapter 4. Alternatives 2, 3, and 4 each focus on different foundational goals of CPSRA. In accordance with the 1987 General Plan Amendment, the Yosemite Slough Restoration Plan was developed, and construction of Phase I (north of the slough) began in 2011. Detailed design of Phase II (south of the slough) will occur in the future. All four alternatives considered in this EIR assume implementation of the Yosemite Slough Restoration Project.

5.8.1 Alternative 1 No Project Alternative (Existing General Plan)

Description

CEQA requires an evaluation of a “no project” alternative and its impact (State CEQA Guidelines Section 15126.6[e][1]). The purpose of describing and analyzing the No Project Alternative is to allow decision makers to compare the impacts of approving the proposed General Plan with the expected impacts of not approving the General Plan. In the case of the CPSRA General Plan, the No Project Alternative, Alternative 1, assumes that State Parks would continue to follow the direction presented in the 1987 General Plan Amendment. The adjacent Candlestick Point-Hunters Point Shipyard Phase II Project and the related land exchange are assumed not to occur.

The 1987 General Plan Amendment is currently only partially implemented. Elements that have not been developed include a Nature Education Center associated with wetland restoration at Yosemite Slough; group camping sites and an associated boat dock/fishing pier along the South Basin shoreline; a cultural center with concessions just north of Jackrabbit Beach; improved windsurfer facilities and shoreline access along the area now known as The Neck; and a cafe with associated parking area in the Last Port area (Figure 5-1).

Elements that have been only partially implemented include a complete hiking, jogging, and bicycle trail network through the entire CPSRA, and group picnic sites at all developed areas. Additionally, the 1987 General Plan Amendment calls for a motorized boat access facility along the South Basin shoreline and a fishing pier along The Neck. The motorized boat access facility was built, but failed, and was subsequently removed. The associated parking area and restroom facilities remain but are used only on game days at the adjacent Candlestick Park Stadium. Similarly, the fishing pier was built, but was vandalized, and is currently closed. Implementation of Alternative 1 would require following the 1987 General Plan Amendment, without a further amendment, and would limit new projects to those already identified. The Heart of the Park would contain an active grassy area that would be the focus of the majority of recreational activities, while the remaining areas of the park would be passive natural areas. The trail network would remain largely unchanged and would contain a mix of paved and natural surface trails throughout the park. It should be noted that the Yosemite Slough Restoration Project outlined in the 1987 General Plan has advanced, and construction of Phase 1 began in June 2011.

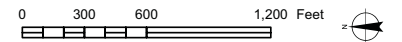
Evaluation

If a new General Plan were not adopted, the existing conditions would remain the same as they were analyzed under the 1987 General Plan Amendment, limiting the implementation of improvements beyond those planned. The primary differences in the development of Alternative 1 compared to the Preferred Alternative are the offering of fewer recreational opportunities and facilities, and the maintenance of the existing park boundary. While some park improvements in Alternative 1 are similar to those in the Preferred Alternative, the former would result in fewer proposed facilities and active recreation areas. Facilities proposed in Alternative 1 that differ from those in the Preferred Alternative include a group camping area along the South Basin shoreline, a café in the Lost Port area, and a cultural center at Jackrabbit beach. Facilities proposed in the Preferred Alternative include a pier along the South Basin shoreline, nature theater in Candlestick Meadows, boating center and pier at Jackrabbit Beach, bike/boat-in camping at The Point, enhanced windsurf facilities at The Neck, and an information center in the neighboring community.

CANDLESTICK POINT STATE RECREATION AREA



Figure 5-1
Alternative 1
NO ACTION ALTERNATIVE
(EXISTING GENERAL PLAN;
KEEP EXISTING PARK BOUNDARY)



07.14.2010



Alternative 1 would not include the pedestrian underpass proposed in the Preferred Alternative, because the vehicular bridge would not be constructed over Yosemite Slough.

Visitor use trends have changed since the 1987 General Plan Amendment was drafted, and are likely to continue to change in the future. The Preferred Alternative considers current and future visitation trends and therefore, is better suited than Alternative 1 to adapt park management to meet visitor needs over the long term.

Alternative 1 puts less emphasis on the protection and enhancement of natural resources at CPSRA than the Preferred Alternative. Although both alternatives include the restoration of Yosemite Slough, the Preferred Alternative would also create additional tidal marsh along the South Basin shoreline, enhance wildlife habitat in the Candlestick Meadows area, and incorporate green infrastructure elements for stormwater management. Alternative 1 does not address the challenge of sea level rise as does the Preferred Alternative, hindering the protection and adaptation of CPSRA's natural resources and visitor facilities.

Without the funds provided by the land exchange proposed under the Preferred Alternative, and given the current funding constraints of State Parks, implementation of additional improvements included in the 1987 General Plan Amendment is likely to be a challenge. Overall, Alternative 1 would likely have fewer construction-related impacts (e.g., construction traffic, air quality, and noise impacts) related to park improvements compared to the Preferred Alternative, because the planned development is less than the Preferred Alternative. However, implementation of the Goals and Guidelines included in Chapter 4, Park Plan, would serve to mitigate the majority of impacts associated with the Preferred Alternative.

5.8.2 Alternative 2 Community and Culture

Description

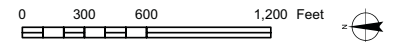
The focus of Alternative 2 is on cultural, interpretive/educational and community resources (Figure 5-2). Like Alternative 1, Alternative 2 assumes that the adjacent Candlestick Point-Hunters Point Shipyard Phase II Project and related land exchange would not occur. Similarly, Alternative 2 includes the Yosemite Slough Restoration Project called for in the 1987 General Plan.

Alternative 2 proposes to enhance CPSRA by focusing on the creation of cultural and community oriented programs and facilities. Cultural programs would be structured around revenue-generating facilities, which would ideally be financially self-sustaining or even raise funds for CPSRA overall.

CANDLESTICK POINT STATE RECREATION AREA



Figure 5-2
Alternative 2
COMMUNITY AND CULTURE
 (EXISTING GENERAL PLAN + NEW DEVELOPMENT;
 KEEP EXISTING PARK BOUNDARY)



07.14.2010



Alternative 2 would create a hub of community oriented activity in the Heart of the Park and Candlestick Meadows areas that would include group gathering areas, outdoor pavilions, and an active grassy area for a range of recreation activities. The remaining areas of the park would be passive natural areas; however, they would also allow for recreational programs and facilities. The existing Community Garden and native plant nursery would be expanded, as would their role in helping plant and maintain native landscapes in the park. Alternative 2 also proposes establishing a non-motorized boat launch and boat interpretive center along the South Basin shoreline and rebuilding the fishing pier in The Neck.

Alternative 2 would enhance the role of art and culture in the park through the creation of features, such as a sculpture garden in the Heart of the Park and art pieces along trails. Programs including art and dance workshops, community theater, or other performances would further strengthen CPSRA's cultural offerings.

Partnerships would be an important tool for developing, administering, and maintaining the cultural and community oriented programs and facilities proposed under Alternative 2. These cultural program partnerships would include, for example, building on the existing relationship with Literacy for Environmental Justice to expand community agriculture programs. The boat interpretive center could potentially be run in affiliation with a community, City, or university partner. The establishment of strong partnerships with local artist groups would facilitate the development of art features and programs at CPSRA. If the private operators of the Candlestick RV Park, which is adjacent to CPSRA, do not renew their lease, CPSRA could potentially provide RV camping as a revenue generation option.

Evaluation

As stated in Section 3.4, Assumptions for Future Scenario without the Candlestick Point-Hunters Point Shipyard Phase II Project, if circumstances change and the Candlestick Point-Hunters Point Shipyard Phase II Project were not constructed, State Parks would prepare a General Plan amendment that focuses on Alternative 2.

Alternative 2 includes fewer park improvements than the Preferred Alternative, because less funding would be available without the land exchange. Alternative 2 differs from the Preferred Alternative primarily by focusing on cultural and community oriented programs and facilities, with less emphasis on active recreation and natural resource protection. The two alternatives share some similar park improvements, and the main difference is the focus on art in the park under Alternative 2. For example, the Preferred Alternative would not include the sculpture garden proposed in the Heart of the Park. Facilities proposed in the Preferred Alternative that are excluded from Alternative 2 include the pier along the South Basin shoreline, nature theater in Candlestick Meadows, bike/boat-

in camping at The Point, enhanced windsurf facilities at The Neck, and the information center in the neighboring community. The non-motorized boat launch and boat interpretive center proposed under Alternative 2 would likely be smaller and offer fewer recreational and educational programs than the boating center proposed under the Preferred Alternative.

Alternative 2 focuses less on the protection and enhancement of natural resources than the Preferred Alternative. While both alternatives include the Yosemite Slough Restoration Project, Alternative 2 would not create additional tidal marsh along the South Basin shoreline. Instead, Alternative 2 would locate the non-motorized boat launch and boat interpretive center along the South Basin shoreline, which may have greater impacts on sensitive natural resources in this area compared to the boat center located in the Heart of the Park in the Preferred Alternative. Alternative 2 would also extend the active grassy area into Candlestick Meadows, likely increasing the construction-related and operational impacts to wildlife in this area relative to the Preferred Alternative. In addition, Alternative 2 does not include green infrastructure elements, such as raingardens, or address the threat of sea level rise, as does the Preferred Alternative.

Alternative 2 would likely result in fewer construction-related impacts (e.g., traffic, air quality, and noise impacts), because fewer new facilities would be constructed over the lifetime of the General Plan; however, implementation of the Goals and Guidelines included in Chapter 4, Park Plan, would mitigate the majority of impacts associated with the Preferred Alternative. As with Alternative 1, the lack of funding associated with the land exchange proposed under the Preferred Alternative, coupled with State Parks' current funding constraints, may hinder implementation of improvements included in Alternative 2.

5.8.3 Alternative 3 Nature in the City

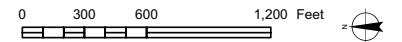
Description

Alternative 3 focuses on CPSRA's natural resources—both their enhancement and the provision of nature-based recreation (Figure 5-3). Unlike Alternatives 1 and 2, this alternative assumes that the adjacent Candlestick Point-Hunters Point Shipyard Phase II Project and associated land exchange would occur. The main concept behind Alternative 3 is to create an urban refuge that highlights nature in the city. Habitat restoration, quiet recreation, and spaces that allow a sense of respite and retreat from the surrounding urban environment are the emphasis of this alternative.

CANDLESTICK POINT STATE RECREATION AREA



Figure 5-3
Alternative 3
NATURE IN THE CITY



07.14.2010



Under Alternative 3, the majority of CPSRA would consist of natural areas, with nature-based recreational facilities such as a nature center and interpretive play area on the South Basin shoreline, and a viewing dock in the Candlestick Meadows area. The fishing pier in The Neck would be reconstructed to expand opportunities beyond the fishing that occurs at the existing pier at The Point. Active recreation would be concentrated around Jackrabbit Beach. In addition to an active grassy area, facilities in this area would include a cultural center, bike/kayak concessions, and a non-motorized boat launch pier. The park's trail system would consist of a finely branched network of smaller paths, dispersing the pedestrian circulation and allowing for the ability to walk in solitude, with many potential routes to wander. Gathering areas would be scattered and small in scale, suitable for individuals or family sized groups.

In addition to nature-based recreation, Alternative 3 emphasizes the enhancement of CPSRA's natural resources. As with the other alternatives, Alternative 3 would implement the Yosemite Slough Restoration Project. This alternative would also extend the creation of tidal wetlands along the South Basin shoreline. In addition, Alternative 3 would focus on the enhancement of wildlife habitat in the Candlestick Meadows area, limiting recreational opportunities to trail use and wildlife viewing with few new facilities.

Evaluation

Alternative 3 emphasizes the protection and enhancement of natural resources and the provision of nature-based recreation at CPSRA through facility siting, uses, and design. Alternative 3 proposes a similar level of park improvements compared to the Preferred Alternative. However, the focus on nature-based recreation and natural resource protection under this alternative would result in fewer facilities and programs for active recreation. The cultural center and non-motorized boat launch proposed for the Heart of the Park in Alternative 3 would likely have similar construction-related and operational impacts as the boating center proposed in the same area under the Preferred Alternative. Similarly, the viewing dock proposed under Alternative 3 would likely have equivalent impacts to the pier proposed in the Preferred Alternative. However, the Preferred Alternative would not include the nature center and interpretive play area proposed along the South Basin shoreline. Facilities proposed in the Preferred Alternative that are excluded from Alternative 3 include the pier along the South Basin shoreline, nature theater in Candlestick Meadows, bike/boat-in camping at The Point, enhanced windsurf facilities at The Neck, and the information center in the neighboring community.

Alternative 3 would provide a similar level of natural resource protection and enhancement as the Preferred Alternative. Both alternatives include the creation of additional tidal marsh along the South Basin shoreline and the enhancement of wildlife

habitat in the Candlestick Meadows area. However, Alternative 3 does not include raingardens for stormwater management or address the threat of sea level rise, as the Preferred Alternative does.

Overall, Alternative 3 would likely result in similar construction-related impacts (e.g., traffic, air quality, and noise impacts) as the Preferred Alternative, which, for the latter, would be minimized through the implementation of the Goals and Guidelines outlined in Chapter 4, Park Plan. Funding for park improvements and operations under both Alternative 3 and the Preferred Alternative would result in similar levels of natural resource enhancement.

5.8.4 Alternative 4 Recreation by the Bay

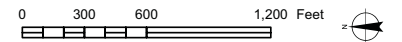
Description

Alternative 4 focuses on CPSRA as a vibrant recreational waterfront park that promotes active, healthy lifestyles (Figure 5-4). Like Alternative 3, this alternative assumes that the adjacent Candlestick Point-Hunters Point Shipyard Phase II Project and associated land exchange would occur. Under Alternative 4, large areas of CPSRA would be active grassy areas composed of turf that could be used for a variety of activities and events. The areas for active recreation would extend from The Neck to the South Basin shoreline. Alternative 4 would include a range of recreation facilities, including group-scale picnic and other gathering areas. The path system would concentrate people on a simplified system of wide, promenade-like trails, allowing for active people-watching and a sense of vibrancy. A non-motorized boat launch and fishing pier would be located along the South Basin shoreline. In the Candlestick Meadows area, a large event lawn and amphitheater would host events such as concerts, festivals, or firework displays. A State Parks storefront and cultural center would be located in the adjacent neighborhood and serve as a gateway to connect CPSRA to the redeveloped area. A concession area and café near Jackrabbit Beach would provide an energizing amenity for an expanded beach area. In the quieter zone at The Point, low-impact boat-in/bike-in camping sites would be provided. In The Neck area, a new fishing pier would provide access over the water and serve as a breakwater to protect the beach at Hermit's Cove. It would also encourage the build-up of sand while creating a protected area for swimming, wading, and windsurfing launch access. A windsurfing and sailing center and a café with bike rental facilities would be located at the intersection of Arelious Walker Drive and Harney Way, an important entrance to CPSRA, and adjacent to the Candlestick Point-Hunters Point Shipyard Phase II Project's largest parking garage.

CANDLESTICK POINT STATE RECREATION AREA



Figure 5-4
Alternative 4
RECREATION BY THE BAY



07.14.2010



Although not its primary focus, Alternative 4 would provide for the protection and enhancement of CPSRA's natural resources. The alternative would continue the implementation of the Yosemite Slough Restoration Project. Tidal wetland restoration areas would be incorporated along the South Basin and eastern shorelines, but in small nodes expanded around existing wetland areas. The Point and the Last Port would remain more passive and natural, in order to preserve existing natural resources in these areas.

Evaluation

Alternative 4 focuses on active recreation and would likely result in a greater level of facility and program development than the Preferred Alternative. The fishing pier and non-motorized boat launch along the South Basin shoreline, concessions and café in the Heart of the Park, low-impact boat-in/bike-in camping sites at The Point, and fishing pier along The Neck proposed under Alternative 4 would be similar to facilities included in the Preferred Alternative. However, the addition of the event space, and cultural center in Candlestick Meadows and the windsurf and sailing center and café in the Last Port area in Alternative 4 would likely result in greater construction-related impacts. In addition, Alternative 4 distributes active recreational facilities throughout the park rather than concentrating them around a central hub, as the Preferred Alternative does, which would likely result in greater construction and operational impacts to wildlife and other biological resources.

The increase in recreational facilities proposed under this alternative would also likely encourage greater visitation to the park and, therefore, the potential for increased operational impacts, such as those related to noise, traffic, and biological resources.

Alternative 4 would provide a lower level of natural resource protection and enhancement than the Preferred Alternative. The active grassy areas proposed in Alternative 4 would likely increase water consumption compared to the Preferred Alternative, which includes more native and drought-tolerant plants. In addition, while Alternative 4 includes implementation of the Yosemite Slough Restoration Project, it proposes isolated pockets of tidal wetlands, which would reduce the amount of continuous and functioning habitat compared to the Preferred Alternative. Furthermore, Alternative 4 does not incorporate green stormwater infrastructure, such as raingardens, or address the threat of sea level rise.

Overall, construction-related and operational impacts would likely be greater under Alternative 4 than the Preferred Alternative, given the increased levels of recreational facility development. In addition, the Preferred Alternative would provide greater protection and enhancement of CPSRA's natural resources, and implementation of the

Goals and Guidelines included in Chapter 4, Park Plan, would serve to mitigate environmental impacts.

5.8.5 Identification of the Environmentally Superior Alternative

State CEQA Guidelines Section 15126(d)(2) state that if the environmentally superior alternative is the no project alternative, the EIR shall also identify an environmentally superior alternative from among the other alternatives. Under the No Project Alternative, the proposed General Plan management goals and guidelines for preserving and restoring natural resources would not be implemented, however, this alternative would be environmentally superior compared to the other alternatives discussed above because development of facilities and other park improvements would be limited to the 1987 General Plan Amendment. In accordance with State CEQA Guidelines Section 15126(d)(2), the other alternatives evaluated in the EIR are considered for the environmentally superior alternative. Alternatives considered in this Draft EIR include the Preferred Alternative (the proposed General Plan), the No Project Alternative (Alternative 1), the Community and Culture Alternative (Alternative 2), the Nature in the City Alternative (Alternative 3), and the Recreation by the Bay Alternative (Alternative 4).

Under the Preferred Alternative and Alternatives 2 through 4, CPSRA would be developed with variations on the number and location of facilities and improvements. Of those four alternatives, Alternative 3 would be the environmentally superior alternative. Alternative 3 includes fewer park facilities and improvements than the Preferred Alternative and Alternative 4, and therefore it would have fewer construction-related impacts than those alternatives. While Alternative 2 would have fewer construction-related impacts, Alternative 3 includes a greater level of natural resources preservation and enhancement than Alternative 2. Therefore, Alternative 3 is the environmentally superior alternative.

Table 5-3: Alternatives Comparison

	Preferred Alternative*	Alternative 1 Existing General Plan	Alternative 2 Community and Culture	Alternative 3 Nature in the City	Alternative 4 Recreation by the Bay
Yosemite Slough	<ul style="list-style-type: none"> • Passive natural area • Yosemite Slough Restoration Project • Expanded Community Garden/native plant nursery • Pedestrian underpass 	<ul style="list-style-type: none"> • Passive natural area • Yosemite Slough Restoration Project • Community Garden/Nature Center • Administration/Maintenance 	<ul style="list-style-type: none"> • Passive natural area • Yosemite Slough Restoration Project • Expanded Community Garden/native plant nursery • Administration/Maintenance 	<ul style="list-style-type: none"> • Passive natural area • Yosemite Slough Restoration Project • Community Garden/native plant nursery • Administration/Maintenance 	<ul style="list-style-type: none"> • Passive natural area • Yosemite Slough Restoration Project • Community Garden/native plant nursery • Administration/Maintenance
South Basin Shoreline	<ul style="list-style-type: none"> • Passive natural area • Fishing/viewing pier 	<ul style="list-style-type: none"> • Passive natural area • Group camping sites • Boat dock/fishing pier 	<ul style="list-style-type: none"> • Passive natural area • Non-motorized boat launch • Boat interpretive center 	<ul style="list-style-type: none"> • Passive natural area • Nature Center + interpretive play area • Tidal wetland creation along shoreline 	<ul style="list-style-type: none"> • Large active grassy area with smaller passive natural areas • Tidal wetland restoration around existing wetlands • Non-motorized boat launch • Fishing/viewing pier
Candlestick Meadows	<ul style="list-style-type: none"> • Large passive natural area with smaller active grassy areas • Wildlife habitat enhancement • Tidal wetland restoration around existing wetlands • Nature theater 	<ul style="list-style-type: none"> • Passive natural area • Motorized boat launch (removed) 	<ul style="list-style-type: none"> • Active grassy area • Group gathering areas • Outdoor pavilions 	<ul style="list-style-type: none"> • Passive natural area • Wildlife habitat enhancement • Viewing dock 	<ul style="list-style-type: none"> • Large active grassy area with smaller passive natural areas • Tidal wetland restoration around existing wetlands • Large event lawn + amphitheater

	Preferred Alternative*	Alternative 1 Existing General Plan	Alternative 2 Community and Culture	Alternative 3 Nature in the City	Alternative 4 Recreation by the Bay
Heart of the Park	<ul style="list-style-type: none"> • Active grassy area • Enhanced Jack Rabbit beach • Non-motorized boat launch/pier • Boating center • Bike/boat concessions • Storefront + cultural center (adjacent neighborhood) 	<ul style="list-style-type: none"> • Active grassy area • Jack Rabbit beach • Cultural center with concessions 	<ul style="list-style-type: none"> • Active grassy area • Jack Rabbit beach • Group gathering areas • Outdoor pavilions • Sculpture garden 	<ul style="list-style-type: none"> • Active grassy area • Jack Rabbit beach • Cultural Center • Bike/kayak concessions • Non-motorized boat launch/pier 	<ul style="list-style-type: none"> • Active grassy area • Expanded Jack Rabbit beach • Concessions • Café • Storefront + cultural center (adjacent neighborhood)
The Point	<ul style="list-style-type: none"> • Passive natural area • Fishing/viewing pier • Bike-in/boat-in camping sites 	<ul style="list-style-type: none"> • Passive natural area • Fishing/viewing pier 	<ul style="list-style-type: none"> • Passive natural area • Fishing/viewing pier 	<ul style="list-style-type: none"> • Passive natural area • Fishing/viewing pier • 	<ul style="list-style-type: none"> • Passive natural area • Fishing/viewing pier • Bike-in/boat-in camping sites
The Neck	<ul style="list-style-type: none"> • Passive natural area with small active grassy area • Enhanced Hermit's Cove beach • Enhanced windsurf facilities • New fishing/viewing pier + breakwater • Habitat terraces 	<ul style="list-style-type: none"> • Passive natural area • Hermit's Cove beach • Windsurf launch • Reconstructed fishing/viewing pier 	<ul style="list-style-type: none"> • Passive natural area • Hermit's Cove beach • Windsurf launch • Reconstructed fishing/viewing pier 	<ul style="list-style-type: none"> • Passive natural area • Hermit's Cove beach • Windsurf launch • Reconstructed fishing/viewing pier 	<ul style="list-style-type: none"> • Active grassy area • Hermit's Cove beach • Windsurf launch • New fishing/viewing pier + breakwater • Protected swimming/wading area
Last Port	<ul style="list-style-type: none"> • Passive natural area • Enhanced Candlestick Cove beach 	<ul style="list-style-type: none"> • Passive natural area • Candlestick Cove beach • Café 	<ul style="list-style-type: none"> • Passive natural area • Candlestick Cove beach • 	<ul style="list-style-type: none"> • Passive natural area • Candlestick Cove beach 	<ul style="list-style-type: none"> • Passive natural area • Candlestick Cove beach • Windsurf/sailing center • Café • Bike rental

	Preferred Alternative*	Alternative 1 Existing General Plan	Alternative 2 Community and Culture	Alternative 3 Nature in the City	Alternative 4 Recreation by the Bay
Parkwide		<ul style="list-style-type: none"> • Complete hiking, jogging and bicycling trail network • Extended Bay Trail • Group picnic sites at all developed areas • Interpretive panels 	<ul style="list-style-type: none"> • Complete hiking, jogging and bicycling trail network • Extended Bay Trail • Art pieces along trails 	<ul style="list-style-type: none"> • Finely branched network of smaller trails - pedestrian focus • Extended Bay Trail • Small, scattered picnic areas for families and individuals 	<ul style="list-style-type: none"> • Wide, promenade-like paths – active recreation focus • Extended Bay Trail • Variety of group picnic areas
<p>*Note: More detail has been developed for the Preferred Alternative. Please see Chapter 4, Park Plan, for a discussion of the possible facilities and elements in each geographic area.</p>					

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Appendix A: Special-Status Plant and Wildlife Species With Potential to Occur in the Vicinity of CPSRA

Table A-1: Special-Status Plant Species With Potential to Occur in the Vicinity of
CPSRA

Species	Status ¹			Habitat and Blooming Period	Potential for Occurrence ²
	USFWS	CDFG	CNPS		
Bent-flowered fiddleneck <i>Amsinckia lunaris</i>	--	--	1B	Coastal bluff scrub, cismontane woodland, valley and foothill grassland; 10–1,600 feet elevation Blooming period: March–June	Unlikely to occur; no suitable habitat is present on CPSRA; species not found during 2006, 2007, or 2008 botanical surveys (CCSF 2007, SFRA 2008)
Coastal marsh milk-vech <i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i>	--	--	1B	Coastal dunes (mesic), coastal scrub, marshes and swamps (coastal salt, streamside); 0–100 feet elevation Blooming period: April – October	Unlikely to occur; coastal salt marsh habitat on CPSRA is degraded and not likely to support this species; not found during 2006, 2007, or 2008 botanical surveys (CCSF 2007, SFRA 2008)
Round-leaved filaree <i>California macrophylla</i>	--	--	1B	Cismontane woodland, valley and foothill grassland; clay soils; 50–4,000 feet elevation Blooming period: March–May	Unlikely to occur; no suitable habitat is present on CPSRA; species not found during 2006, 2007, or 2008 botanical surveys (CCSF 2007, SFRA 2008)
Pappose tarplant <i>Centromadia parryi</i> ssp. <i>parryi</i>	--	--	1B	Chaparral, coastal prairie, meadows and seeps, marshes and swamps (coastal salt), valley and foothill grassland (vernally mesic); often alkaline; 10–1,400 feet elevation Blooming period: May—November	Unlikely to occur; coastal salt marsh habitat on CPSRA is degraded and not likely to support this species; not found during 2006, 2007, or 2008 botanical surveys (CCSF 2007, SFRA 2008)

Species	Status ¹			Habitat and Blooming Period	Potential for Occurrence ²
	USFW S	CDFG	CNPS		
San Francisco spineflower <i>Chorizanthe cuspidata</i> var. <i>cuspidata</i>	--	--	1B	Coastal bluff scrub, coastal dunes, coastal prairie, coastal scrub; sandy; 10–700 feet elevation Blooming period: April—October	Unlikely to occur; no suitable habitat is present on CPSRA; species not found during 2006, 2007, or 2008 botanical surveys (CCSF 2007, SFRA 2008)
Robust spineflower <i>Chorizanthe robusta</i> var. <i>robusta</i>	--	--	1B	Chaparral, cismontane woodland (openings), coastal dunes, coastal scrub; mesic; 10–1,000 feet elevation Blooming period: April–September	Unlikely to occur; no suitable habitat is present on CPSRA; species not found during 2006, 2007, and 2008 botanical surveys (CCSF 2007, SFRA 2008)
Franciscan thistle <i>Cirsium andrewsii</i>	--	--	1B	Broadleaf upland forest, coastal bluff scrub, coastal prairie, coastal scrub; mesic; 0–500 feet elevation Blooming period: –July	Unlikely to occur; no suitable habitat is present on CPSRA; species not found during 2006, 2007, or 2008 botanical surveys (CCSF 2007, SFRA 2008)
Point Reyes bird's-beak <i>Cordylanthus maritimus</i> ssp. <i>palustris</i>	--	--	1B	Marshes and swamps (coastal salt); 0–30 feet elevation Blooming period: June—October	Unlikely to occur ; coastal salt marsh on CPSRA is degraded and not likely to support this species; not found during 2006, 2007, or 2008 surveys (CCSF 2007, SFRA 2008) but reportedly observed near Yosemite Slough in 2005 (SFRA 2008); not documented in CNDDDB in vicinity of CPSRA since 1917

Species	Status ¹			Habitat and Blooming Period	Potential for Occurrence ²
	USFW S	CDFG	CNPS		
Blue field gilia <i>Gilia capitata</i> ssp. <i>chamissonis</i>	--	--	1B	Coastal dunes, coastal scrub: 10–660 feet elevation Blooming period: April–July	Unlikely to occur; no suitable habitat is present on CPSRA; species; not found during 2006, 2007, or 2008 botanical surveys (CCSF 2007, SFRA 2008)
San Francisco gumplant <i>Grindelia hirsutula</i> var. <i>maritima</i>	--	--	1B	Coastal bluff scrub, coastal scrub, valley and foothill grassland; sandy or serpentine; 50–1,310 feet elevation Blooming period: June–September	Unlikely to occur; no suitable habitat is present on CPSRA; species typically found on sandy or serpentinite slopes or bluffs; not found during 2006, 2007, or 2008 botanical surveys (CCSF 2007, SFRA 2008)
Rose leptosiphon <i>Leptosiphon rosaceus</i>	--	--	1B	Coastal bluff scrub; 0–330 feet elevation Blooming period: April–July	Unlikely to occur; no suitable habitat is present on CPSRA; single CNDDB occurrence from 1885 in Twin Peaks; not found during 2006, 2007, or 2008 botanical surveys (CCSF 2007, SFRA 2008)
Coast lily <i>Lilium maritimum</i>	--	--	1B	Broad-leaved upland forest, closed-cone coniferous forest, coastal prairie, coastal scrub, marshes and swamps (freshwater); north coast coniferous forest; sometimes roadside; 15–115 feet elevation Blooming period: May–July	Unlikely to occur; no suitable habitat is present on the CPSRA; no CNDDB occurrences, single occurrence in CNPS is questionable; species not found during 2006, 2007, or 2008 botanical surveys (CCSF 2007, SFRA 2008)

Species	Status ¹			Habitat and Blooming Period	Potential for Occurrence ²
	USFW S	CDFG	CNPS		
Choris's popcorn-flower <i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i>	--	--	1B	Chaparral, coastal prairie, coastal scrub; mesic; 50–530 feet elevation Blooming period: March–June	Unlikely to occur; no suitable habitat is present on the CPSRA; single CNDDB occurrence is from 1890, near Oakland; not found during 2006, 2007, or 2008 botanical surveys (CCSF 2007, SFRA 2008)
San Francisco campion <i>Silene verecunda</i> ssp. <i>verecunda</i>	--	--	1B	Coastal bluff scrub, chaparral, coastal prairie, coastal scrub, valley and foothill grassland; sandy; 100–2,100 feet elevation Blooming period: March–August	Unlikely to occur; ; no suitable habitat is present on the CPSRA; two CNDDB occurrences in region are on rocky slopes; not found during 2006, 2007, or 2008 botanical surveys (CCSF 2007, SFRA 2008)
California seablite <i>Suaeda californica</i>	E	--	1B	Marshes and swamps (coastal salt); 0–50 feet elevation Blooming Period: July–October	Unlikely to occur; coastal salt marsh habitat on CPSRA is degraded and not likely to support this species; only recent occurrence is near Port of SF from restoration effort; not found during 2006, 2007, or 2008 surveys (CCSF 2007, SFRA 2008)
Moss <i>Triquetrella californica</i>	--	--	1B	Coastal bluff scrub, coastal scrub; soil: 30–330 feet elevation Blooming Period: None Listed	Unlikely to occur; no suitable habitat is present on CPSRA; species not found during 2006, 2007, or 2008 botanical surveys (CCSF 2007, SFRA 2008)

Species	Status ¹			Habitat and Blooming Period	Potential for Occurrence ²
	USFW S	CDFG	CNPS		
¹ Legal Status Definitions <u>U.S. Fish and Wildlife Service (USFWS):</u> E = endangered (legally protected). -- = no status.					
<u>California Native Plant Society (CNPS)</u> <u>Listing Categories:</u> 1B = plants rare, threatened, or endangered in California and elsewhere. -- = no status.					
² Potential Occurrence Definitions ² Unlikely to occur – None of the species’ life history requirements are provided by habitat on the site and/or the site is outside of the known distribution for the species. Any occurrence would be very unlikely. Could Occur – Suitable habitat is available at CPSRA; however, there are few or no other indicators that the species might be present Likely to occur – Habitat conditions, behavior of the species, known occurrences in the project vicinity, or other factors indicate a relatively high likelihood that the species would occur at CPSRA. Known to occur – The species, or evidence of its presence, was observed at CPSRA during reconnaissance-level surveys or was reported by others.					
Source: CNDDB 2010; CNPS 2010; USFWS 2010; CCSF 2007; SFRA and SFPD 2008; data compiled by AECOM 2010.					

Table A-2: Special-Status Wildlife Species With Potential to Occur in the Vicinity of CPSRA

Species	Listing Status ¹		Habitat	Potential for Occurrence ²
	Federal	State		
Invertebrates				
Mission blue butterfly <i>Icaricia icarioides missionensis</i>	E	--	Hills and ridgetops, as well as slopes with south exposure with caterpillar food plants, <i>Lupinus</i> spp.	Unlikely to occur; coastal, urban setting is not suitable for species and no host food plants on CPSRA; not observed on CPSRA during wildlife surveys in 2003 and 2004 (GGAS 2004)
Callippe silverspot <i>Speyeria callippe callippe</i>	E	--	Open hillsides where wild pansy (<i>Viola pendunculata</i>) grows; larvae feed on Johnny jump-up plants, adults feed on native mints and nonnative thistles	Unlikely to occur; outside of species range; not observed on CPSRA during wildlife surveys in 2003 and 2004 (GGAS 2004)
Myrtle's silverspot butterfly <i>Speyeria zerene myrtleae</i>	E	--	Inhabits coastal terrace prairie, coastal bluff scrub, and associated non-native grassland habitats where the larval food plant, <i>Viola</i> sp. occurs	Unlikely to occur; coastal scrub is limited and no host larval plants are present; not observed on CPSRA during wildlife surveys in 2003 and 2004 (GGAS 2004)
Birds				
Short-eared owl <i>Asio flammeus</i>	--	SSC	Freshwater and salt marshes, lowland meadows, and irrigated alfalfa fields; needs dense tules or tall grass for nesting and daytime roosts	Known to occur; observed on CPSRA property (GGAS 2004); not likely to nest on CPSRA property due to disturbance
Western burrowing owl <i>Athene cunicularia hypugea</i>	--	SSC	Level, open, dry, heavily grazed or low stature grassland or desert vegetation with available burrows	Known to occur; observed on CPSRA property (GGAS 2004); not likely to nest on CPSRA property due to disturbance, could forage in open areas

Species	Listing Status ¹		Habitat	Potential for Occurrence ²
	Federal	State		
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	T	SSC	Coastal beaches above the normal high tide limit in flat, open areas with sandy or gravelly substrate for nesting; vegetation and driftwood are usually sparse or absent	Unlikely to occur; limited sandy areas on CPSRA property and not documented during wildlife surveys in 2003 and 2004 (GGAS 2004)
Northern harrier <i>Circus cyaneus</i>	--	SSC	Grasslands, meadows, marshes, and seasonal and agricultural wetlands	Could occur; salt marsh habitat in Yosemite Slough and coastal scrub provides potential foraging habitat and has been documented around the Bay; not documented during wildlife surveys in 2003 and 2004 (GGAS 2004)
White-tailed kite <i>Elanus /eucurus</i>	--	FP	Low foothills or valley areas with valley or live oaks, riparian areas, and marshes near open grasslands for foraging	Known to occur; observed on CPSRA property during wildlife surveys in 2003 and 2004 (GGAS 2004); not likely to nest on or near CPSRA due to disturbance
Peregrine falcon <i>Falco peregrinus anatum</i>	--	E/FP	Nests on cliffs, ledges, or tall structures and typically near open wetlands, lakes, rivers, other water bodies, hillsides, or open areas where it forages	Unlikely to occur; observed from CPSRA (GGAS 2004); no nesting habitat on CPSRA property; may forage along shorelines
Saltmarsh common Yellowthroat <i>Geothlypis trichas sinuosa</i>	--	SSC	Freshwater marshes in summer and salt or brackish marshes in fall and winter; requires tall grasses, tules, and willow thickets for nesting and cove	Known to occur; observed on CPSRA property during wildlife surveys in 2003 and 2004 (GGAS 2004) around Yosemite Slough; not likely to nest due to disturbed habitat
California black rail <i>Laterallus jamaicensis coturniculus</i>	--	T	Tidal salt marshes associated with heavy growth of pickleweed; brackish or freshwater marshes at low elevations	Unlikely to occur; limited marsh habitat on CPSRA and tidal zone is very narrow; not observed during wildlife surveys in 2003 and 2004 (GGAS 2004)

Species	Listing Status ¹		Habitat	Potential for Occurrence ²
	Federal	State		
Alameda song sparrow <i>Melospiza melodia pusillula</i>	--	SSC	Brackish marshes associated with pickleweed; may nest in tall vegetation or among the pickleweed	Unlikely to occur; coastal salt marsh degraded and limited; out of this subspecies range; <i>Melospiza melodia</i> observed during wildlife surveys in 2003 and 2004 (GGAS 2004)
California brown pelican <i>Pelecanus occidentalis californicus</i> (nesting colony)	E	E	Typically in littoral ocean zones, just outside the surf line; nests on offshore islands	Known to occur; outside of species breeding range but foraging and loafing habitat is present; observed during wildlife surveys in 2003 and 2004 (GGAS 2004)
California clapper rail <i>Rallus longirostris obsoletus</i>	E	E	Restricted to salt marshes and tidal sloughs; usually associated with heavy growth of pickleweed; feeds on mollusks removed from the mud in sloughs	Unlikely to occur; non-native cordgrass has invaded Yosemite Slough and degrades clapper rail habitat; tidal marsh habitat is limited and highly fragmented; closest occurrence is over 2.5 miles south of CPSRA; not observed during wildlife surveys in 2003 and 2004 (GGAS 2004) or in 2006 (SCC 2006).
Black skimmer <i>Rynchops niger</i>	--	SSC	Nests on gravel bars and sandy beaches; forages in shallow, calm waters	Unlikely to occur; potential foraging habitat in and near Yosemite Slough. No breeding habitat within CPSRA; not observed during wildlife surveys in 2003 and 2004 (GGAS 2004)
California least tern <i>Sterna antillarum browni</i>	E	E	Nests on sandy, upper ocean beaches, and occasionally uses mudflats; forages on adjacent surf line, estuaries, or the open ocean	Unlikely to occur; limited foraging habitat and no nesting habitat within CPSRA; not observed during wildlife surveys in 2003 and 2004 (GGAS 2004)

Species	Listing Status ¹		Habitat	Potential for Occurrence ²
	Federal	State		
Fish³				
North American green sturgeon, Southern DPS <i>Acipenser medirostris</i>	T	SS C	Requires cold, freshwater streams with suitable gravel for spawning; rears in seasonally inundated floodplains, rivers, tributaries, and Delta	Could Occur ; could potentially forage in waters around CPRSA, migratory route to fresh water spawning areas
Steelhead – Central California Coast DPS <i>Oncorhynchus mykiss</i>	T	SS C	Spawns in cool, clear, well-oxygenated streams. Juveniles remain in freshwater for one or more years before migrating to ocean.	Could Occur ; could use CPSRA vicinity as a migratory corridor during adult (upstream) and/or juvenile (downstream) life stages.
Steelhead – Central Valley DPS <i>Oncorhynchus mykiss</i>	T	SS C	Spawns in cool, clear, well-oxygenated streams. Juveniles remain in freshwater for one or more years before migrating to ocean.	Could Occur ; could use CPSRA vicinity as a migratory corridor during adult (upstream) and/or juvenile (downstream) life stages.
Chinook Salmon – Central Valley fall - / late fall-run <i>Oncorhynchus tshawytscha</i>	SC, EFH	SS C	Spawns in cool, clear, well-oxygenated streams. Juveniles typically remain in freshwater for less than one year before migrating to ocean.	Could Occur ; could use CPSRA vicinity as a migratory corridor during adult (upstream) and/or juvenile (downstream) life stages.
Chinook Salmon – Central Valley spring-run <i>Oncorhynchus tshawytscha</i>	T, EFH	SS C	Spawns in cool, clear, well-oxygenated streams. Juveniles typically remain in freshwater for less than one year before migrating to ocean.	Could Occur ; could use CPSRA vicinity as a migratory corridor during adult (upstream) and/or juvenile (downstream) life stages.
Chinook Salmon – Sacramento River winter-run <i>Oncorhynchus tshawytscha</i>	E, EFH	E	Spawns in cool, clear, well-oxygenated streams. Juveniles typically remain in freshwater for less than one year before migrating to ocean.	Could Occur ; could use CPSRA vicinity as a migratory corridor during adult (upstream) and/or juvenile (downstream) life stages.
Longfin smelt <i>Spirinchus thaleichthys</i>	--	T	Salt or brackish estuary waters with freshwater inputs for spawning.	Known to Occur ; occurs seasonally in South San Francisco Bay.

Species	Listing Status ¹		Habitat	Potential for Occurrence ²
	Federal	State		
Northern anchovy <i>Engraulis mordax</i>	EFH	--	Larvae and post-larvae swim near the surface and are most abundant in San Francisco Bay and San Pablo Bay. The juveniles use inshore bays and estuaries as their nursery ground, whereas adults are typically found in offshore waters.	Known to Occur ; occurs in South San Francisco Bay.
Starry flounder <i>Platichthys stellatus</i>	EFH	--	The species is found over sand, mud, and gravel bottoms in coastal ocean waters, bays, sloughs, and occasionally freshwater.	Known to Occur ; occurs in South San Francisco Bay.
Pacific sardine <i>Sardinops sagax</i>	EFH	--	Sardines are pelagic species. Spawning areas are off the coast of southern California.	Known to Occur ; occurs seasonally in South San Francisco Bay.
Mammals				
Big free-tailed bat <i>Nyctinomops macrotis</i> (= <i>Tadarida m.</i> , <i>T. molossa</i>)	--	SSC	Inhabits arid, rocky areas; roosts in crevices in cliffs	Unlikely to occur ; likely out of species range
Salt marsh harvest mouse <i>Reithrodontomys raviventris</i>	E	E/FP	Salt marshes with a dense plant cover of pickle-weed and fat hen; adjacent to an upland site	Unlikely to occur ; small mats of pickleweed adjacent to seasonal wetlands; habitat very limited; has not been recorded north of the Foster City area for decades.
Salt marsh wandering shrew <i>Sorex vagrans halicoetes</i>	--	SSC	Mid-elevation salt marsh habitats with dense growths of pickleweed; requires driftwood and other objects for nesting cover	Unlikely to occur ; small mats of pickleweed adjacent to saltmarsh fringe; habitat very limited. Nearest known population: Blair Island in southeast San Mateo County

Listing Status ¹			
Species	Federal State	Habitat	Potential for Occurrence ²
¹ Legal Status Definitions: <u>U.S. Fish and Wildlife Service (USFWS):</u> T = threatened (legally protected) E = endangered (legally protected) -- = no status.			
<u>California Department of Fish and Game (CDFG):</u> E = endangered FP = fully protected (legally protected) SSC = species of special concern (no formal protection) T = threatened (legally protected) -- = no status.			
² Potential Occurrence Definitions: Unlikely to occur – None of the species' life history requirements are provided by habitat on the site and/or the site is outside of the known distribution for the species. Any occurrence would be very unlikely. Could Occur – Suitable habitat is available at CPSRA; however, there are few or no other indicators that the species might be present. Likely to occur – Habitat conditions, behavior of the species, known occurrences in the project vicinity, or other factors indicate a relatively high likelihood that the species would occur at CPSRA. Known to occur – The species, or evidence of its presence, was observed at CPSRA during reconnaissance-level surveys or was reported by others.			
³ EFH = Essential Fish Habitat (designated under Magnuson-Stevens Fishery Conservation and Management Act)			
Source: CNDDDB 2010; USFWS 2010; NMFS 1997 and 1999; GGAS 2004; SCC 2006; data compiled by AECOM in 2010.			

Appendix B: Application of the City and County of San Francisco Healthy Development Measurement Tool to CPSRA

The San Francisco Department of Public Health created the Healthy Development Measurement Tool (HDMT) to evaluate the effects of urban development plans and projects on public health and improve health outcomes. The HDMT applies over 100 indicators of social, environmental and economic conditions to neighborhood demographic data, much of which is spatial, to evaluate baseline conditions. Indicators are organized under broader objectives within the four categories of Environmental Stewardship, Sustainable Transportation, Community Cohesion, and Public Infrastructure. Each indicator has a corresponding development target to assess a plan or project's effects on existing public health conditions and a set of recommended policy and design strategies to guide improvements. The table below compiles baseline data, development targets, and suggested strategies for indicators identified by California State Parks as most relevant to development of the Candlestick Point State Recreation Area General Plan/EIR. Bolded text identifies those strategies addressed by the draft preferred alternative at this time, which correspond to related plan elements proposed for inclusion in the updated general plan. Additional program elements will be incorporated in the goals and guidelines included in the general plan, as well as during the site design or project-specific stages.

	Indicator	Bayview Hunters Point	Citywide	Development Target (Y, N, N/A)	Suggested Design/Policy Strategies	Related Plan Elements
Environmental Stewardship	Objective ES.2 - Restore, Preserve and Protect Healthy Natural Habitats					
	a. Miles of accessible shoreline (Bay Trail)	3.5	11	Is the project located at a distance greater than 100 feet from existing shorelines of water bodies--seas, lakes, rivers, streams and tributaries--and wetlands?	<ul style="list-style-type: none"> Construct green roofs on new buildings Maintain natural stormwater flows through low-impact design (LID) Reuse stormwater for non-potable uses (e.g., irrigation, toilets) Improve pedestrian, bike, and transit access to parks and the shoreline Minimize the construction of new parking on open space 	<ul style="list-style-type: none"> Create rain gardens to manage stormwater runoff + educate visitors about LID + regional links (3 miles) Extend + improve the Bay Trail to provide continuous shoreline access Create new gateways from wedge parks and bus rapid transit stops to enhance access + connect to the adjacent neighborhood Reuse existing parking areas + locate new parking areas to support specific programs Preserve, enhance + restore habitats native to the region Ensure that 50-75% of the SRA remains as natural areas/open space
	b. Acres of significant natural areas	52	1,022	If the project develops or alters land deemed to be significant natural resource areas, does the project preserve or restore 20% of the development parcel area to a natural condition with regard to flora?		
	c. Acres of public open space per 1,000 population	12	9	Does the project meet or achieve a standard of 10 acres of publicly accessible open space per 1,000 population in the planning area?		
	d. Number of trees (per acre)	3	7	Does the project provide a continuous row of appropriately spaced trees at all streets adjacent to the project?		
Objective ES.5 - Maintain Safe Levels of Community Noise						
	a. Average daytime and nighttime outdoor noise levels (dB)	66	62	Is the project consistent with the SF General Plan's noise-land use compatibility guidance?	<ul style="list-style-type: none"> Maintain vehicles and travel surfaces to minimize noise Use site planning, building orientation and design to minimize noise Incorporate noise insulation materials in new construction 	<ul style="list-style-type: none"> Locate visitor facilities in the SRA interior and along the shoreline to minimize roadway noise Create opportunities for quiet, nature-based recreation through new trails, enhanced habitat + interpretive programs
Sustainable Transportation	Objective ST.1 - Decrease Private Motor Vehicle Trips and Miles Traveled					
	a. Proportion of households without a motor vehicle	23%	29%	Does the project incorporate strategies that would significantly reduce its contribution to new regional vehicle miles traveled through parking pricing or transportation demand management policies and programs?	<ul style="list-style-type: none"> Provide no-cost shuttles to public transit Establish minimum parking prices that exceed transit fares Provide a dedicated central space to display information about public transit and other alternative transportation options Provide secure, covered bicycle parking and changing facilities Ensure all employees have access to tax incentives for mass transit 	<ul style="list-style-type: none"> Provide info kiosks near new bus rapid transit stops in the adjacent neighborhood to direct riders to the SRA Provide parking in strategic areas for programs requiring staging – i.e., windsurfing and picnicking
g. Number of motor vehicle collisions	1,376	22,296	Does the project incorporate strategies that would result in a significant increase in trips made by walking and reduce or prevent pedestrian injury collisions in the area?			

	Indicator	Bayview Hunters Point	Citywide	Development Target (Y, N, N/A)	Suggested Design/Policy Strategies	Related Plan Elements
Sustainable Transportation	Objective ST.2 - Provide Affordable and Accessible Transportation Options					
	a. Proportion of commute trips made by public transit	25%	33%		<ul style="list-style-type: none"> • Improve walking environments to and around public transit stops • Build bike lanes and transit amenities (e.g., lighting, shelter, and seating) • Display real-time transit information 	<ul style="list-style-type: none"> • Create clear pedestrian and bicycle pathways to the SRA from new bus rapid transit stops • Create gateways to the SRA around new bus rapid transit stops • Extend the Bay Trail to provide continuous pedestrian and bicycle opportunities between transit stops • Integrate new, adjacent Class 1 bikeways with access points to the SRA
	b. Proportion of households with 1/4 mile access to local bus or rail link	100%	100%	Does the project incorporate strategies that would result in a significant increase in trips made by public transportation?		
	d. Proportion of households within 1/2 mile of regional public transport	0%	22%			
	g. Proportion of households within 1/2 mile of a location selling Muni Lifeline Fast Passes	0%	7%	Is the project within 1/2 mile of a location selling Muni Lifeline Fast Passes?		
	Objective ST.3 - Create Safe, Quality Environments for Walking and Biking					
	a. Ratio of miles of bike lanes and paths to miles of road	N/A	0.06	Does the project incorporate strategies that would significantly reduce bicycle collisions in the area by including bike lanes and improving bike safety?	<ul style="list-style-type: none"> • Improve bike pedestrian and bicyclist safety through design strategies (e.g., traffic calming, lighting) • Provide attractive and effective signage to promote public safety, accessibility, and wayfinding • Install pedestrian/bicycle pathways to increase street connectivity • Provide safe, convenient bicycle parking 	<ul style="list-style-type: none"> • Extend the Bay Trail to provide continuous off-street pedestrian + bicycle opportunities • Create an information center and info kiosks to direct visitors to the SRA • Extend the urban grid into the SRA along new pathways to enhance pedestrian + bicycle access • Create a comprehensive trail network to increase pedestrian + bicycle opportunities
	c. Number of bicycle collisions	35	1,460			
d. Proportion of commute trips made by walking	3%	10%	Does the project incorporate strategies that would significant increase trips made by walking and reduce or prevent pedestrian injury collisions by improving the pedestrian environment?			
e. Number and rate of pedestrian injury collisions (per 100,000)	84	104				
Objective SC.1 - Promote Socially Cohesive Neighborhoods, Free of Crime and Violence						
Social Cohesion	a. Number of violent crimes (rapes/sexual assaults per 100,000)	2.4	1.7	Does the project include environmental design elements and community programs that protect and enhance public safety?	<ul style="list-style-type: none"> • Distinguish public spaces through design elements (e.g. landscape plantings, gateway treatments) • Increase natural surveillance using through design strategies (e.g., pedestrian-friendly sidewalks, nighttime lighting) • Increase the use of and care for green landscaping to reduce violence help individuals and families flourish • Increase social connection and sense of community through appealing and active open spaces • Provide space for social programs (e.g., afterschool programming, senior activities) • Create community centers where people can gather and mingle 	<ul style="list-style-type: none"> • Create an information center + info kiosks to direct visitors to the SRA • Create gateways from new wedge parks and bus rapid transit stops to enhance access • Create iconic art in the Last Port + Yosemite Slough areas distinguish the SRA at its edges • Provide opportunities for additional visitor use to provide a sense of security through activity • Enhance + maintain SRA landscapes to create natural areas that also feel safe • Expand the existing community garden + native plant nursery • Create a new boat building center with educational programs • Create an outdoor classroom for nature-based education programs • Expand opportunities for family + group picnicking
	e. Proportion of population within 1/2 mile from community center	86%	85%	Is the project within 1/2 mile of a community center AND does it contribute funding (via impact fee or community benefits agreement) towards an existing community center or to the construction of a new community center?		
	f. Density of off-sale alcohol outlets (per square miles)	6.1	18.1	If the project includes retail or commercial uses and is within 1,000 feet of a sensitive use (such as a school, licensed day care center, public park or playground, churches, senior citizen facility, or licensed alcohol or drug treatment facilities), does it disallow off-sale alcohol outlets?		
	g. Number of neighborhood block party permits	1	73	<i>No identified development target</i>		
	h. Number of spiritual and religious centers (per 10,000)	19.2	9.8	<i>No identified development target</i>		

	Indicator	Bayview Hunters Point	Citywide	Development Target (Y, N, N/A)	Suggested Design/Policy Strategies	Related Plan Elements
	Objective SC.2 - Increase Civic, Social, and Community Engagement					
	b. Active neighborhood watch groups	5	178	Does the project provide funding or physical space for the creation and/or continued programming of a neighborhood clean-up committee, a neighborhood crime prevention committee, or other neighborhood-oriented committee that seeks to promote social engagement and healthy communities?	<ul style="list-style-type: none"> • Support the organization of shared events (e.g., community festivals, sports events) to promote community cohesion and engagement • Promote information sharing and social interaction 	<ul style="list-style-type: none"> • Create an amphitheater for community + other special events • Expand active lawn areas to increase group recreation opportunities • Provide new interpretive + educational programs
	Objective PI.2 - Assure Accessible and High Quality Educational Facilities					
	a. Proportion of households within ½ mile of a public elementary school	89 %	91%	For residential uses, is the project within ½ mile of a public elementary school AND does it create safe routes to school?	<ul style="list-style-type: none"> • Promote innovative community uses (e.g., afterschool programs, job skills trainings, community arts and cultural events) • Promote walking/biking to school and greater enforcement of traffic laws • Support community partnerships that promote continuing education, high quality education, and life-long learning • Site educational facilities more than 500 feet from busy roadways and stationary sources of air pollution 	<ul style="list-style-type: none"> • Expand the existing community garden + native plant nursery • Create a new boat building center with educational programs • Create an outdoor classroom for nature-based education programs • Locate visitor facilities in the SRA interior and along the shoreline to minimize roadway noise
	b. Proportion of children attending neighborhood public schools (K-5)	30 %	36%	Does land use siting ensure public school students' public transit commute is less than 30 minutes?		
	f. Number of public schools with a school garden	3	52	If the project is a new, remodeled, or expanded school facility, does the school provide green space equal to 30% of the project's site area for a school garden?		
	Objective PI.3 - Assure Spaces for Libraries, Performing Arts, Theatre, Museums, Concerts and Festivals for Personal and Educational Fulfillment					
Public Infrastructure	c. Proportion of population within 1 mile of a public library	96%	97%	Is the project located within ½ mile of a public library AND does it contribute funding (via impact fee or community benefits agreement) towards construction of a new library facility, expansion of an existing library facility, and/or programming and materials for the library?	<ul style="list-style-type: none"> • Design parks to be accessible and usable for arts and cultural activities • Encourage the use of schools and park facilities for low to no cost art and cultural activities • Promote the creation of a neighborhood cultural centers for use by local community organizations, afterschool programs, etc. 	<ul style="list-style-type: none"> • Provide new interpretive programs + signage • Create iconic art in the Last Port + Yosemite Slough areas distinguish the SRA at its edges • Expand the existing community garden + native plant nursery • Create a new boat building center with educational programs • Create an outdoor classroom for nature-based education programs
	Objective PI.5 - Increase Park, Open Space and Recreation Facilities					
	a. Proportion of population within ¼ mile of a neighborhood or regional park	98%	88%	Is the project within ¼ mile access of a neighborhood or regional park (a park larger than ½ acre) AND does the project contribute funding (via impact fee or community benefits agreement) towards existing open space or to the construction of new open space or parks facilities?	<ul style="list-style-type: none"> • Create safe, continuous, and functional bicycle and pedestrian routes to parks/recreation facilities through well-defined crosswalks, sidewalks, etc. • Consider designs that improve visibility of green and open space • Develop park perimeter trails with lighting/mileage markers to encourage regular community use, increase safety, and extend evening hours • Prioritize acquiring parkland in high-density, low-income and/or minority neighborhoods • Establish a regular evaluation of community park and recreation needs, especially for youth and seniors • Encourage sustainable sources of funding for park facility maintenance and programming 	<ul style="list-style-type: none"> • Extend the Bay Trail to provide continuous off-street pedestrian + bicycle opportunities • Create a comprehensive trail network to increase pedestrian + bicycle opportunities • Create an information center and info kiosks to direct visitors to the SRA • Create iconic art in the Last Port + Yosemite Slough areas distinguish the SRA at its edges • Provide opportunities for additional visitor use to provide a sense of security through activity • Enhance + maintain SRA landscapes to create natural areas that also feel safe
b. Proportion of population within 1/4 mile of a recreation facility	96%	86%	Is the project within ¼ mile of a recreational facility AND does the project contribute funding (via impact fee or community benefits agreement) towards an existing recreational facility or to the construction of a new recreational facility?			
c. Proportion of public parks receiving a Park Evaluation Score of 95% or more	88%	87%	Does the project contribute funding (via impact fee or community benefits agreement) towards parks maintenance and/or programming to improve park accessibility and quality?			

	Indicator	Bayview Hunters Point	Citywide	Development Target (Y, N, N/A)	Suggested Design/Policy Strategies	Related Plan Elements
	Objective PI.2 - Assure Accessible and High Quality Educational Facilities					
	b. Street tree population (see mapped data)			Does the project provide a continuous row of appropriately spaced trees at all streets adjacent to the project?	<ul style="list-style-type: none"> • Replace trees removed through public and private development • Provide adequate space and growing conditions to ensure tree survival and development 	<ul style="list-style-type: none"> • Preserve, enhance + restore habitats native to the region • Create areas of coastal native habitat to transition between programs areas + the development edge
	Objective PI.8 - Promote Affordable and High-Quality Food Access and Sustainable Agriculture					
Public Infrastructure	d. Retail food environment index score (lower is healthier: ratio of fast-food restaurants and convenience stores to supermarkets and produce vendors)	3.5	3.18	If the project is located in an area with a Retail Food Environment Index higher than the city index (3.18), does the project analyze the potential impact that eliminating a healthy food supply and contributing an unhealthy food supply may have on the food system?	<ul style="list-style-type: none"> • Ensure that farmers' markets are sufficiently served by public transit • Identify and utilize publicly-owned vacant land suitable for community gardening • Promote healthier foods and beverages and reasonably-sized portions in restaurants • Require food vendors to accept food stamps/EBT and WIC vouchers 	<ul style="list-style-type: none"> • Expand the existing community garden + native plant nursery • Extend the Bay Trail alongside the community garden + native plant nursery • Provide programs + opportunities for group events related to healthy eating • Provide a parking area for street food vendors along the Bay Trail
	e. Proportion of households within ½ mile of a farmer's market	49%	35%	Is the project within ½ mile of a weekly farmer's market?	<ul style="list-style-type: none"> • Acquire/convert underutilized or vacant land for food market development 	
	f. Proportion of households with ½ mile access to a community-supported agriculture (CSA) drop-off site	5%	39%	Does the project provide a community supported agriculture drop-off site?	<ul style="list-style-type: none"> • Connect neighborhoods to healthy food outlets via improvements to bike routes and pedestrian amenities • Include small food markets/sidewalk produce carts in neighborhood revitalization projects 	
	g. Proportion of households within ¼ mile access to a community garden	11%	25%	Does the project create and maintain a community garden on-site or provide safe access to off-site community garden resources within ¼ mile?	<ul style="list-style-type: none"> • Encourage food retailers to carry culturally-appropriate food for the neighborhood population • Provide an easily accessible area for collection and storage of non-hazardous materials for recycling and composting 	

Appendix C: CPSRA Draft Concept Master Plan

CPSRA Draft Concept Master Plan

The need to convey more graphic detail than the General Plan Preferred Alternative (Page 4-5) for purposes of stakeholder input and integration with the surrounding proposed development has led to the preparation of the following Draft Concept Master Plan. The Draft Concept Master Plan depicts an option of park development that could be implemented remaining consistent with the planning zones and uses identified in the General Plan Preferred Alternative. As referenced in Chapter 4 of this document, the Draft Concept Master Plan identifies potential locations and size of facilities and improvements that can support the resource enhancement or recreational activity identified. This Draft Concept Master Plan shall not be construed as the General Plan Preferred Alternative or any other alternative related to this planning process document.



CONCEPT MASTER PLAN

LANDSCAPE TYPES

- tidal marsh zones
- meadow lawn
- grassland / coastal shrub
- coastal native landscape
- active lawn
- community garden / plant nursery
- beach
- paving
- parking
- seasonal raingarden
- landforms
- coastal shoreline treatment

GATHERING AREA

- family
- group

PATH TYPES

- class 1 bike commuter connector
- class 1 (outside SRA)
- bay trail (service access)
- hard trail
- soft trail

FACILITIES

- buildings
- restrooms
- interpretive program area / pavillion
- interpretive signage / art
- info kiosk
- muni bus rapid transit stop
- overland flow point

0 300 600 1,200 Feet

1 inch = 600 feet as 11x17 print

Appendix D: CPSRA Draft Concept Master Plan Interpretive Opportunities

CANDLESTICK POINT STATE RECREATION AREA



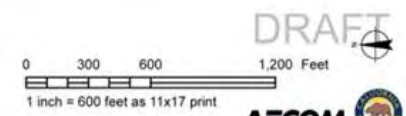
Draft
INTERPRETIVE OPPORTUNITIES

LANDSCAPE TYPES

- tidal marsh zones
- mowed grassland
- grassland / coastal shrub
- coastal native landscape
- active lawn
- community agriculture / native plant nursery
- beach
- paving
- parking
- seasonal raingarden
- landforms
- armored shoreline

INTERPRETIVE FEATURES

- Self-Guided Tour (T1 to T7)
- T1 Yosemite Slough**
 - a. Restoration Story
 - b. Role of slough in urban context
- T2 South Basin**
 - a. Tidal mud flat ecology and shorebirds
 - b. Role of wetlands in shoreline/flooding protection
- T3 Candlestick Meadows**
 - a. Shipyard history (view to crane)
 - b. Reclamation of rubble area
- T4 Heart of the Park**
 - a. Site history (first urban state park)
 - b. Bayview Hill
- T5 Point**
 - a. Fighting
- T6 Neck of the Park**
 - a. Sea level rise/flooding
- T7 Last Port**
 - a. Neighborhood re-development
- Interpretive Program Area
- Art in the Park Program
- School Groups / Kids in the Park
- SRA Information Center



11.01.2010



CPSRA Draft Concept Master Plan
Interpretive Opportunities
October 4, 2010

Primary Theme

“An understanding of this urban state park is found in the interface between urban development and the natural world.”

Venue 1: Self-guided Tour along Bay Trail

- T1 Yosemite Slough**
 - a. Restoration story
 - b. Role of slough in urban context
- T2 South Basin**
 - a. Tidal mud flat ecology and shorebirds
 - b. Role of wetlands in shoreline/flooding protection
- T3 Candlestick Meadows**
 - a. Shipyard History (view to crane)
 - b. Reclamation of rubble area
- T4 Heart of the Park**
 - a. Site history (first urban state park)
 - b. Bayview Hill
- T5 Point**
 - a. Fishing
- T6 Neck of the Park**
 - b. Sea-level rise/flooding
- T7 Last Port**
 - a. Neighborhood re-development

Venue 2: Interpretive Program Areas

Yosemite Slough (base of bridge)

- Transit and circulation at the Park

Yosemite Slough (near visitor parking)

- San Francisco Bay story

Arelious Walker

- Community Gardens

Wedge Park

- Water-based recreation (kayaking, water trail, beach)

Point

- Sweeping views

Venue 2: Interpretive Program Areas (continued)

Windsurf Launch

- Wind

Last Port (Interpretive Plaza)

- Shipwreck remains

Last Port (Harney Way entry)

- Tidelots and Park transformation

Venue 3: Group Camping Program (Point Camping Area)

The proposed bike/boat-in camping area could also provide an opportunity for groups within the neighborhood or other youth/family groups to have access to a camping experience. These programs could be in addition to other park users that would reserve the campsites, however would not conflict with peak user periods for camping.

Venue 4: School Groups/Kids in the Park (Outdoor Classroom at South Basin)

Utilize outdoor classroom area for hosting and staging a variety of school groups and activities.

Venue 5: Art in the Park

Use iconic art locations to reveal in depth information about local artists, their medium and the placement of these in the park as a means to orient and provide identity of the park within the urban context.

Venue 6: Volunteer Program

Volunteers can use the community garden site, outdoor classroom, amphitheater or select internal trail loops to provide visitors with a guided tour of some of the themes noted above or to discuss and engage visitors in specific programs such as native plantings, trail maintenance and grooming, park stewardship and communications. Volunteers can also provide outreach during park special events such as kayak clinics, birding outings, etc.

Venue 7: SRA Information Center

This could provide a staffed park hub where visitors can meet with Park staff or take virtual tours to learn about the park before they arrive. This could also provide virtual information on the entire State Park system and how this location is unique because of its urban setting. Other virtual tours given here could be based on the themes provided above but could be for mobility impaired visitors who may not be able to take a walking tour.



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