National Park Service • U.S. Department of the Interior



Golden Gate National Recreation Area
Muir Woods National Monument

Draft General Management Plan/Environmental Impact Statement

Volume I

August • 2011

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United States Department of the Interior

NATIONAL PARK SERVICE
Golden Gate National Recreation Area
Fort Mason, San Francisco, California 94123

IN REPLY REFER TO:
D18 (GOGA-PLAN)

JUN 27 2011

Dear Park Friend:

We are pleased to present the Draft General Management Plan and Environmental Impact Statement for the Golden Gate National Recreation Area and Muir Woods National Monument for your review and comment. This plan is intended to guide management of the park over the next 20 years. We invite you to review the draft and share your thoughts with us, and to let us know how it addresses your aspirations for the future of the park.

Prepared over the last five years, the draft plan contains various ideas for future management of the park. Some of these came from the public and park partners, and others build upon earlier successes or from lessons learned by day-to-day management of the park since 1972 as directed by the 1980 General Management Plan. We employed a rigorous planning process to explore a range of alternatives and create the National Park Service's preferred alternative which encompasses what we believe are the best ideas. The preferred alternative is described in chapters four (for Alcatraz), five (for Marin, San Francisco and San Mateo Counties) and six (for Muir Woods). We hope you will give those chapters special attention.

We think you might be interested in a sample of some actions the draft plan identifies. Please bear in mind that implementation of the final general management plan will depend on many factors, including future National Park Service funding, service-wide priorities, and partnership funds, time, and effort.

In Marin County:

- Renovations to outdated visitor facilities at Stinson Beach and Tennessee Valley that will also incorporate restoration of the natural landscape.
- Improvements to the entrance of Muir Woods National Monument, including reorganizing parking and pedestrian paths, repurposing a historic building for use as an education center, and formalizing continued operation of the successful shuttle with development of an off-site intercept facility.
- Improvements to better serve visitors in the Marin Headlands, such as a visitor facility combining information and food service at Rodeo Beach.
- Solutions to long-standing inadequacies for park operations, including construction of a centralized maintenance facility in the Marin Headlands and dedication of a public safety office at Fort Baker.

In the City and County of San Francisco:

- Enhanced connections for visitors along the San Francisco Bay Trail between Aquatic Park (San Francisco Maritime National Historical Park) and Fort Mason Center.
- A course of action on Alcatraz Island that highlights its rich history, rehabilitates the Main Prison and historic barracks (which could include new exhibits and modest dorm-like overnight accommodations for volunteers) and opens the parade ground that overlooks the San

Francisco Bay. It also expresses the park's ongoing commitment to protect nesting water bird colonies, including the shoreline and offshore area.

- Collaboration with the City of San Francisco, California State Coastal Conservancy, and others to create and implement a long-range master plan for the Ocean Beach corridor—looking beyond the park's narrow boundary.
- Consolidation of museum collections into historic buildings in the Presidio.

In San Mateo County:

- Management guidance and improvements for new parklands, including a broad concept for Rancho Corral de Tierra that retains equestrian uses, restores habitat, and looks to create a sustainable system of public trails and trailheads that will serve future visitors.
- Partnerships to explore a shared multi-agency visitor center.
- New areas to be added to the park boundary, which include important small parcels and larger areas, such as the tidal zone along existing park sites, will enhance our ability to cooperate with other agencies in resource conservation and management.

We invite you to take this opportunity to help shape the future of the park by sending us your comments. You can do that online at *http://parkplanning.nps.gov*, by regular mail to the address above, or at one of the open houses we will host in communities around the park. These will be announced shortly. Your thoughtful comments are important to us and will make a difference as we finalize the plan in the coming year.

Thank you for your support and interest in this special place.

Frank Dean
General Superintendent

Enclosures (1)
Draft GMP/EIS, Golden Gate National Recreation Area and Muir Woods National Monument

ABSTRACT

Draft General Management Plan / Environmental Impact Statement
Golden Gate National Recreation Area and Muir Woods National Monument
Marin County, San Francisco City and County, and San Mateo County, California

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Established in 1972, Golden Gate National Recreation Area has been operating under its first general management plan, approved in 1980. Since the park's establishment, it has doubled in size and a better understanding of the park's natural and cultural resources and recreational uses has been gained. Muir Woods was declared a national monument in 1908 and is currently managed as part of Golden Gate National Recreation Area. A new management plan is needed to guide these two parks for the next 20 years. This *Draft General Management Plan / Environmental Impact Statement* describes three action alternatives for managing Golden Gate National Recreation Area and Muir Woods National Monument.

The no-action alternative consists of the existing park management and serves as a basis for comparison in evaluating the other alternatives. Alternative 1, "Connecting People with the Parks," would further the founding idea of "parks to the people," and would engage the community and other potential visitors in the enjoyment, understanding, and stewardship of the park's resources and values. Park management would focus on ways to attract and welcome people, connect people with the resources, and promote understanding, enjoyment, preservation, and health. **Alternative 1 is the National Park Service's preferred alternative for park lands in Marin, San Francisco, and San Mateo counties**. Alternative 2, "Preserving and Enjoying Coastal Ecosystems," would place an emphasis on preserving, enhancing, and promoting the dynamic and interconnected coastal ecosystems in which marine resources are valued and prominently featured. Recreational and educational opportunities would allow visitors to learn about and enjoy the ocean and bay environments, and gain a better understanding of the region's international significance and history. Alternative 3, "Focusing on National Treasures," would place an emphasis on the park's nationally important natural and cultural resources. The fundamental resources of each showcased site would be managed at the highest level of preservation to protect the resources in perpetuity and to promote appreciation, understanding, and enjoyment of those resources. Visitors would have the opportunity to explore the wide variety of experiences that are associated with many different types of national parks—all in this park and monument. All other resources would be managed to complement the nationally significant resources and associated visitor experiences. **Alternative 3 is the National Park Service's preferred alternative for Alcatraz Island and Muir Woods National Monument.**

The impacts of implementing the various alternatives were analyzed. Potential impacts were analyzed in six broad topic areas: natural resources; cultural resources; visitor use and experience; the social and economic environment; transportation; and park management, operations, and facilities. Natural resources included both physical and biological resources. Cultural resources included archeological, ethnographic, and cultural landscape resources; historic structures; and park collections.

This *Draft General Management Plan / Environmental Impact Statement* has been distributed to other agencies and interested organizations and individuals for their review and comment. The public comment period for this document will last for 60 days after the Environmental Protection Agency's notice of availability has been published in the *Federal Register*.

HOW TO COMMENT ON THIS PLAN

Comments on the *Draft Golden Gate National Recreation Area and Muir Woods National Monument General Management Plan / Environmental Impact Statement* (*GMP/EIS*) are welcome and will be accepted during the 60-day public review and comment period. The easiest way to submit your comments is via the online form at http://www.parkplanning.nps.gov/goga (click on "General Management Plan" and then "Open for Public Comment"). We also accept written comments at the following address:

Superintendent
Golden Gate National Recreation Area
Attention: Draft GMP/EIS
Fort Mason, Building 201
San Francisco CA 94123

Comments will be accepted for 60 days after the publication of the Environmental Protection Agency's notice of availability in the *Federal Register*.

Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you may ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Golden Gate National Recreation Area
Muir Woods National Monument

Draft General Management Plan/
Environmental Impact Statement

EXECUTIVE SUMMARY

PURPOSE AND NEED

The last general management plan for Golden Gate National Recreation Area was completed over thirty years ago.

Generally, the overall need for a new general management plan includes the following:

- The park has significantly expanded in size and includes many new lands in San Mateo County. This planning process takes a comprehensive parkwide approach that will help ensure that the management of the natural and cultural resources and visitor experiences are consistent and thorough across all park areas.
- There is an increased public demand for access to, and use of, open spaces within the San Francisco Bay region. The general management plan provides a regional collaborative approach to open space preservation and recreation use.
- The changing demographics in the Bay Area are bringing notable shifts in park visitation, uses, and trends. The general management plan provides desired conditions that will guide the decision making needed to manage the anticipated visitation growth.
- Through research and park management that have occurred since the 1980 plan, the park staff has gathered a considerable amount of new information and knowledge regarding resources and visitor use. This new awareness is reflected in the desired conditions, proposed management actions, and policies of this general management plan.
- Since the 1980 plan, climate change has become better understood and its effects more evident on both ecological systems and cultural resources. The general management plan looks at the potential impacts of climate change to park operations and visitor use, and identifies direction and management actions to guide efforts to minimize the park's carbon footprint.
- How visitors access the park continues to evolve as the local transportation infrastructure changes. Strategies that were identified in 1980 continue to be explored. New ideas and techniques are also identified to help address sustainable options to reach the park, and strategies to reduce traffic congestion around and within the park.
- To comply with federal law, the plan indicates the types and intensities of projected development, including anticipated costs. This is important, as the availability of federal funds may be limited over time.

The implementation of the approved plan, no matter which alternative, will depend on future NPS funding levels and servicewide priorities, and on partnership funds, time, and effort. The approval of a general management plan does not guarantee that the funding and staffing needed to implement the plan will be forthcoming. Full implementation of the plan could be many years in the future.

THE PLANNING AREA

This general management plan addresses NPS-administered lands within the legislative boundaries of Golden Gate National Recreation Area and Muir Woods National Monument. The new general management plan will provide park management guidance for the following park sites: 1) those park lands that are not covered by recent land use management plans and agreements; 2) those lands that are newly acquired or in the process of acquisition; and 3) lands and waters that are leased to the National Park Service or are under other management arrangements or easements, such as the San Francisco Public Utilities Commission Peninsula Watershed. The total area of land and water addressed in this plan is approximately 50,000 acres.

Specifically these areas include the following:

- Alcatraz Island and the surrounding bay environment
- park lands in Marin County, including Stinson Beach north to the Bolinas-Fairfax Road; Slide Ranch; Muir Beach; Lower Redwood Creek; Golden Gate Dairy; Tennessee Valley; Marin Headlands; and the offshore ocean environment
- park lands in San Francisco, including Upper Fort Mason, China Beach, Lands End, Fort Miley, Ocean Beach, Fort Funston, and the offshore ocean and bay environments
- park lands in San Mateo County, including the coastal area bluffs extending south from Fort Funston to Mussel Rock; Milagra Ridge; Shelldance Nursery Area; Sweeney Ridge, including Cattle Hill and Picardo Ranch; Mori Point; San Pedro Point; Devil's Slide coastal area; Rancho Corral de Tierra; Montara Lighthouse; Phleger Estate; San Francisco Public Utilities Commission Watershed Easements; and the offshore ocean environment
- Muir Woods National Monument

Park sites with recent management plans are not addressed in this plan. In this category are the Presidio of San Francisco (including the Main Post, Crissy Field, and Baker Beach), Fort Point National Historic Site, Sutro Heights Historic District, Fort Baker (Cavallo Point), Lower Fort Mason (the Fort Mason Center), and the park's northern district (north of Bolinas-Fairfax Road) that is managed by Point Reyes National Seashore.

FOUNDATION STATEMENTS AND GUIDING PRINCIPLES

Golden Gate National Recreation Area

Park Purpose

The purpose of Golden Gate National Recreation Area is to offer national park experiences to a large and diverse urban population while preserving and interpreting the park's outstanding natural, historic, scenic, and recreational values.

Key Interpretive Themes and Associated Resources and Values

Recreational and Educational Opportunities: The park provides for diverse recreational and educational opportunities from contemplative to active pursuits, including participation in stewardship and volunteer activities. Its proximity allows an urban population to connect with nature and history.

Fundamental resources and values associated with the recreational and educational opportunities include the diverse settings found within the park and access to the park that is supported by a system of trails and scenic park roads.

Coastal Corridor: In a world of diminishing biological diversity and threatened natural resources, the Golden Gate National Recreation Area preserves islands of biodiversity within and near a large urban area. The accelerating rate of global climate change threatens even these remnants.

Fundamental resources and values associated with the coastal corridor are the ocean and bay environment, the rich variety of coastal ecosystems, large numbers of threatened and endangered species, and fresh and salt water resources.

Military Installations and Fortifications: Coast defense posts are at the heart of park lands and are a major reason the park is preserved today. Although no hostile shot was ever fired, every major type of military fortification and architecture represented here demonstrates evolving defense technology. War, peace, and the nature of protection have shaped and will continue to shape the country.

The cultural landscapes, features, structures, and museum collections are the fundamental resources and values associated with military installations and fortifications.

Alcatraz Island: The layers of history so evident on the island present visitors with a chance to understand the 155-year span of Alcatraz history—from the U.S. Army period, through the federal penitentiary era and the Native American occupation to the current NPS management of the island. As a site of international notoriety, Alcatraz provides a powerful opportunity to provoke visitors to confront their personal views on crime and punishment, the judicial system, and freedom.

The cultural landscapes, historic structures, museum collections, and stories associated with the use of the island as a Civil War period fort, military prison, and federal penitentiary, and as the site of the Indian Occupation of 1969 to 1971 are the fundamental resources and values associated with Alcatraz Island.

Scenic Beauty: The powerful positive influences that park land and undisturbed open space can exert on urban settings—and residents—constitute a critical interpretive

message. The scenic beauty of the park's historic and natural undeveloped landscapes inspired a grassroots movement that led to their protection. Proposed development that would have destroyed these lands sparked Bay Area community members to organize and ultimately preserve the open spaces that contribute so much to their quality of life.

The fundamental resources and values associated with the scenic beauty of the park include the dramatic setting that provides a contrast between urban environments and undeveloped spaces and the compelling historical stage that contributes to understanding the history of the area.

Physical Landforms: The park's underlying natural geologic systems and processes, and the resulting effects on people and the environment, link the park to the highly visible and significant geologic forces around the world.

Geologic resources are the fundamental resources and values associated with this theme.

Ohlone and Miwok People: The natural features and resources of the park, along with its location on the San Francisco Bay estuary, sustained the Ohlone and Miwok people who lived on the lands now comprising the park for thousands of years before Europeans arrived. Archeological sites in the park link to these pre-European inhabitants and to their descendants who retain a vibrant culture to this day.

Archeological sites in the park document the traditional homelands of the Coastal Miwok and Ohlone people and are fundamental resources and values.

Muir Woods National Monument

Park Purpose

The purpose of Muir Woods National Monument is to preserve the primeval character and ecological integrity of the old-growth redwood forest for scientific values and inspiration.

Key Interpretive Theme and Fundamental Resources and Values

The majestic, primeval old-growth redwoods of Muir Woods National Monument invite visitors, in the words of namesake John Muir, to "come to the woods, for here is rest." The forest ecosystem of these towering trees and the creek beneath them supports an abundance of life. This remnant of the Bay Area's once abundant redwood forests inspires visitors through its seminal conservation story, today welcoming travelers from around the world to have what is, for many, their first wildlands experience.

The fundamental resources and values associated with Muir Woods National Monument are old growth forests and their associated processes and the conservation movement, including both the initial preservation of the redwood forests and ongoing actions.

Guiding Principles

Some principles, forged through daily management of this new kind of national park over the last 40 years, are deeply rooted, distinctive, and will continue to provide direction and focus future park management. They include the park's commitments to

- sustainability
- community-based stewardship
- civic engagement
- partnerships
- regional collaboration
- inclusion

ISSUES ADDRESSED IN THE PLAN

Planning issues identified during the public and internal scoping and analysis stages include the following:

- Visitor Access: Transportation and Trails
- Recreation Opportunities and Conflicts
- Sustainable Natural Resource Preservation and Management
- Sustainable Cultural Resource Preservation and Management
- Climate Change
- Land Acquisition
- Reaching New Audiences
- Operational Facilities
- Scenic Beauty and Natural Character
- Regional Cooperation
- National Park Service Identity
- Partnerships
- American Indian Values

ELEMENTS COMMON TO ALL ACTION ALTERNATIVES

In the process of developing the management alternatives described in the next section, the planning team identified several elements as being appropriate for all of the action alternatives. Some of these elements are required by National Park Service policy, such as Ocean Stewardship. Others, like Native American Engagement, reflect an effective long-standing park practice. In other cases, alternatives were explored but were eliminated from further consideration for various reasons.

Key Elements

- Boundary Adjustments: Proposed adjustments are predominantly in San Mateo County. They consist of 4 undeveloped parcels (approximately 900 acres) and a strip of offshore areas, adjacent to lands already within the park boundary. They present opportunities to preserve critical resources and habitat links, aid in management, and

expand recreational opportunities in the park. Bolinas Lagoon, one of Marin County's most significant natural areas, is also proposed to be included in the park's authorized boundary.

- Climate Change: Guidance on managing resources and visitation in the face of climate change builds upon NPS policy, current science, and the park's "Climate Change Action Plan." The goals are to 1) reduce CO_2 emissions, 2) educate and interpret the processes for visitors, and 3) assess the impacts and respond to changing conditions.
- Facilities Not Directly Related to the Park Mission: This summarizes analyses of facilities that can be removed from the park, generating substantial savings in annual operational and maintenance costs. Proposed actions are estimated to reduce costs by almost $7,000,000.
- Facilities for Park Maintenance, Public Safety, and Collection Storage: Through an extensive focused planning effort the park identified the need for new maintenance facilities (at Kent Canyon shared with Mount Tamalpais State Park, in the Capehart housing area of the Marin Headlands, and in the Presidio), a single hub for park law enforcement (at Fort Baker), a network of multifunctional satellite offices (most of which is in place), and a central facility for the majority of the park's museum collection (in the Presidio).
- Native American Engagement: This section documents established commitments to working with Coast Miwok and Ohlone communities to 1) survey, identify and inventory archeological and ethnographic sites, 2) develop interpretive and educational activities for visitors, and 3) support the revitalization of native communities and their traditions.
- Ocean Stewardship: This policy addresses the park's responsibilities for managing its extensive offshore—ocean—resources. It focuses on four goals: supporting a seamless network of protected area, inventorying and mapping in the service of protection, engaging the public in stewardship, and increasing the park's technical capacity.
- Park Collections: Primary goals are to connect people with the park's extensive collection (the fourth largest collection in the national park system), and to strengthen, preserve, and maintain the collection.
- Partnerships: Distills the key goals employed by the park in developing powerful and successful partnerships.
- Trails: Broad goals and management strategies for the creation and maintenance of the extensive trails network which is one of the most important ways that visitors experience and enjoy the park. It includes brief summaries of future efforts in each county.
- Transportation: Broad goals and management strategies are identified for pursuing sustainable, multimodal access to park sites in partnerships with other organizations. The strategies include regional ferry access, ferry access to Alcatraz, trip planning and wayfinding, congestion management, the Muir Woods shuttle, intelligent transportation systems, and development of a long-range transportation plan.

- User Capacity: The park's proposed commitments for managing user capacity, also known as carrying capacity, is described in the appendix. Indicators and standards are identified for Alcatraz and Muir Woods.

THE MANAGEMENT ALTERNATIVES

No-action Alternative

Under this alternative, Golden Gate National Recreation Area and Muir Woods National Monument would continue to be managed as outlined in the 1980 *General Management Plan.*

Key Elements

Park Lands in Marin County
In Marin County, Golden Gate National Recreation Area forms the southern core of a large network of regional, state, and federal protected lands and waters (many of which are recognized as part of the UNESCO Golden Gate Biosphere Reserve). Under the no-action alternative, the park would continue to manage this large expanse of preserved natural landscape, with scattered concentrations of developed facilities, to provide visitors with multiple opportunities for recreation; miles of trails, preserved historic military fortifications, and scenic and historic landscapes.

The county features some of the most varied landscapes in Golden Gate National Recreation Area, including lush woodlands, rugged coasts, sandy beaches, meadows, marshes, grasslands, and coastal shrubs. As a result, visitors can experience an array of wildlife and several different habitats in one brief hike.

Much of this area has been managed as part of Golden Gate National Recreation Area since the park was established in 1972. Management of this land would continue to be guided by the park's 1980 general management plan and subsequent, more detailed, implementation plans.

A diverse set of park partners—many housed in historic structures—would continue to provide programs and facilities for visitors' education and enjoyment. These facilities and programs currently include a hostel, environmental education and arts programming, equestrian facilities, and a marine mammal rehabilitation center. Park-managed visitor facilities would continue to include a visitor center, scenic overlooks, trails, campsites, and parking areas at recreational beaches.

National Park Service maintenance facilities, collections, staff housing, administrative offices, and various partner offices would also continue to operate where currently located in the park.

Park Lands in San Francisco
Park lands in San Francisco ring the northern and western shores of the City of San Francisco, preserving a coastal greenbelt next to dense urban neighborhoods. These lands would continue to be major attractions to tourists and central to the quality of life for local citizens. They offer city dwellers places to recreate, rejuvenate, and learn about the

fascinating natural and cultural history of the region. Management of these lands and marine/bay waters would continue to focus on preserving natural, cultural, and scenic resources, and providing for a variety of recreational uses in the varied settings along San Francisco Bay and the Pacific coast.

Park Lands in San Mateo County
Stretching along the San Mateo coast to Rancho Corral de Tierra and inland to the Phleger Estate, the southern park lands feature a remarkable wealth of natural and historic resources. These lands support an abundance of plants and wildlife and tell the story of the people who have shaped this peninsula over generations.

Park lands in San Mateo County serve a large and diverse local population and present many opportunities for visitors to explore and appreciate these park lands.

Currently, the National Park Service's presence in San Mateo County is limited, sites are not always well identified, and there are few basic facilities to support access. Management of park lands in San Mateo County is guided by the park's authorizing legislation and the management policies common to units of the national park system. This management approach would continue under the no-action alternative, with the exception of Sweeney Ridge—for which a general management plan amendment was approved in 1985 to provide specific management guidance—and Mori Point—for which a detailed landscape restoration plan was recently executed.

Site planning for enhancing visitor facilities, such as the planning recently completed at Mori Point, would continue.

The park would also continue to consult with other agencies to achieve fundamental park goals regarding the San Francisco Public Utilities Commission Peninsula Watershed, where the park holds scenic and recreational easements.

Alcatraz Island
Under the no-action alternative, the island would continue to be managed to preserve historic and natural resources, and provide public access to a variety of settings and experiences where appropriate and safe. The primary visitor experience would be day use, beginning with a ferry ride from San Francisco. The island experience would continue to be centered on the federal penitentiary; however, other periods of the island history and bird life would also be interpreted. Scheduled evening tours of Alcatraz Island would continue to provide visitors with this unique opportunity.

The deterioration of buildings and landscapes (accelerated by the harsh island environment) and the protection of areas for bird nesting habitat would continue to limit visitor access to much of the island. Rehabilitation of historic buildings and landscaped areas would continue to be somewhat piecemeal and subject to available funding.

Many areas of the island would continue to be closed during breeding season to protect waterbird colonies from human disturbance. In areas open to the public, western gulls would continue to be managed under an existing agreement with the U.S. Fish and Wildlife Service in accordance with the Migratory Bird Treaty Act, through the use of bird exclusion measures and other deterrents to protect visitor health and safety. Education and stewardship opportunities would inform visitors about the importance of the island to nesting birds, and what the public can do to help protect them.

Muir Woods National Monument
Under the no-action alternative, Muir Woods National Monument would continue to be managed to protect the primeval redwood forest in the larger Redwood Creek watershed, and to interpret the monument's natural history, as well as the establishment of the monument, which had a major role in the early American conservation movement.

Muir Woods National Monument would remain a popular international destination and ecological treasure, supporting a diversity of flora and fauna, in addition to *Sequoia sempervirens*, the old growth redwoods.

The park staff would continue to balance preservation of the redwood ecosystem with providing access to hundreds of thousands of visitors annually. For many visitors, Muir Woods National Monument would continue to provide their initial experience with the national park system. Overall management of the monument would continue to be guided by the 1980 general management plan. Key park objectives would include fostering a conservation ethic among visitors, preserving and restoring habitat for threatened and endangered species, supporting public transportation as a way to reduce congestion, and promoting a watershed perspective in land management that includes Mount Tamalpais State Park, two water districts, an organic farm, equestrian stables, and local communities.

Some Potential Impacts of the No-action Alternative

- Current conditions would continue to cause loss of habitat integrity; however, restoration efforts and educational activities would result in some beneficial impacts.
- Continued piecemeal approach to preservation and maintenance of historic buildings and structures would result in long-term, minor to moderate, adverse impacts on those structures.
- Continuation of current conditions would result in long-term, moderate, adverse impacts on park collections.
- Continuation of existing opportunities would result in long-term, minor to moderate, beneficial impacts to the visitor experience; however, minor to moderate, adverse impacts would continue from congestion, use conflicts, and limited access to some areas.
- Existing transit service would have a long-term, minor to major, adverse impact on access to popular sites, and minor impacts to transportation in other areas.
- Existing staffing levels would result in continued long-term, moderate, adverse impacts to park operations; volunteer programs would continue to have beneficial impacts to operations.
- Existing funding would result in long-term, major, adverse impacts to park facilities; existing facilities would result in long-term, moderate, adverse impacts to operations.

Alternative 1: Connecting People with the Parks

Alternative 1 is the National Park Service's preferred alternative for park lands in Marin, San Francisco, and San Mateo counties. The preferred alternative for Alcatraz Island and Muir Woods National Monument is alternative 3.

Concept

The emphasis of this alternative is to reach out and engage the community and other visitors in the enjoyment, understanding, and stewardship of the park's resources and values. Park management would focus on ways to attract and welcome people, connect people with the resources, and promote enjoyment, understanding, preservation, and health—all as ways to reinvigorate the human spirit. Visitor opportunities would be relevant to diverse populations now and in the future.

Goals

Visitor Experience

- Actively seek opportunities to respond to the needs and interests of the diversity of visitors.
- Encourage visitors to engage in a wide range of opportunities and experiences in a diversity of settings.
- Enhance outreach and access to and within park lands and make them welcoming places to visit.
- Foster the visitor's deep personal connection to the park and discovery of the values and enjoyment of the natural environment.
- Encourage hands-on stewardship through visitor opportunities that promote personal health and responsibility.

Cultural Resources

- Maximize adaptive reuse and rehabilitation of cultural resources (structures, landscapes, and archeological sites) to support visitor enjoyment, understanding, and community connections.
- Work with interested groups and populations to preserve and protect cultural resources.
- Preserve and protect cultural resources so that visitors can connect with and appreciate these resources and their stories.

Natural Resources

- Maintain the integrity and diversity of natural resources and systems.
- Enhance public access to natural resources to promote visitor understanding and appreciation.

- Integrate natural resource preservation and concepts with visitor stewardship opportunities to deepen visitor understanding.

Key Elements

Park Lands in Marin County (Preferred Alternative)
Park managers would preserve the qualities that are enjoyed today and would improve access to the park for all visitors. They would work to preserve and restore interconnected coastal ecosystems through collaborative partnerships with other land management agencies in the region. A stronger national park identity and message would welcome people as they arrive, and improved orientation and information services would inform them of the variety of experiences available in the park. Important park operational uses would remain in the Marin Headlands, and the facilities at these sites would be improved.

Sustainable approaches to rehabilitating the visitor facilities that are in place today would improve trailheads and trails, as well as roads, parking lots, campsites, picnic areas, restrooms, and other structures at popular destinations. Some new facilities would be developed to improve visitor services and support the growing stewardship programs. Park partners would continue to have an important role in preserving resources and offering programs and services to visitors in support of the park's mission. Public transportation and multimodal access to park sites would be improved.

Park Lands in San Francisco (Preferred Alternative)
The park lands in San Francisco would be managed to preserve and enhance a variety of settings, and improve and expand the facilities that welcome and support visitors.

The identity of these diverse park sites as part of the national park system would be strengthened. Visitors would be introduced to the park and the national park system through facilities, informational media, and programming at popular arrival nodes and recreational destinations.

This alternative would emphasize the importance of education, civic engagement, and healthy outdoor recreation, including offering nature experiences to city children and their families. Existing and new facilities, including a state-of-the-art museum collection facility, would support visitor enjoyment, learning, and community-based natural and cultural resource stewardship. Recreational and stewardship opportunities would promote healthy parks and healthy communities. This alternative would engage the community to revitalize coastal park areas such as Ocean Beach, Fort Funston, and Lands End, incorporating measures to address sustainability and climate change.

The park staff would continue to improve trails and trailheads throughout the San Francisco park lands to make the park accessible to the broadest array of visitors. Sites would be connected to each other and to communities by the trail system and the city's transit and multimodal access systems.

Park Lands in San Mateo County (Preferred Alternative)
Park lands and ocean environments in San Mateo County would be managed as part of a vast network of protected lands and waters, some recognized as part of the UNESCO Golden Gate Biosphere Reserve. Park managers would emphasize connectivity, preservation, and restoration of the area's vital ecosystems through collaborative

partnerships with other land management agencies. Strategic adjustments to the park's boundary would enhance the long-term preservation of ecological values.

This alternative would focus on the importance of improving access and community engagement in these newest park lands. Key efforts would include improving the visibility and identity of National Park Service sites. Park trails would be improved to create a sustainable system that provides opportunities to enjoy park sites, connects with local communities, and contributes to an exceptional regional trail network. Equestrian facilities would continue to have an important role in recreation and stewardship. A comprehensive trail plan would be prepared to help achieve these goals. Park managers would work with county transit providers to improve transit connections to local trailheads and east–west transit between bayside communities and State Route 1.

The addition of signs and trailheads would help visitors find their way to various park sites and help them gain an understanding of the park's diverse natural and cultural resources. Equestrian needs would be incorporated in trailhead and trail design.

There could be additional facilities that welcome visitors to the park. This alternative would promote visitor information and orientation centers in Pacifica and in coastside communities. These facilities could be shared with San Mateo County Department of Parks, California State Parks, Monterey Bay National Marine Sanctuary, local governments, and other organizations.

Alcatraz Island
Alcatraz Island would be managed to provide an expanded variety of settings and experiences that would connect visitors to the greater breadth of the island's resources and stories. The park would seek to enrich the scenic, recreational, and educational opportunities in the heart of San Francisco Bay.

Visitors would have access to the majority of the island's historic structures and landscapes to experience the layers of island history and its natural resources and settings. Many of the indoor and outdoor spaces currently inaccessible to visitors would be reopened to expand the range of available activities.

All historic structures would be preserved; most would be rehabilitated and adaptively reused for visitor activities and park operations. Food service, meeting and program space, and overnight accommodations (possibly including a hostel or camp site) would be provided.

Sensitive wildlife areas, such as the shoreline, would be protected. Park managers would provide visitors with opportunities to see wildlife and nesting waterbirds and to participate in resource stewardship activities. Gulls would be managed to reduce conflicts in visitor use areas.

Muir Woods National Monument
The park would offer visitors the opportunity to experience and enjoy the primeval forest ecosystem and understand the monument's place in American conservation history through a variety of enhanced programs, facilities, and trails that access the forest and connect local communities to the park and surrounding open space.

While much of the present system of trails through the forest would be retained, some existing facilities and use areas, such as the entrance area and parking lots, would be

modified or relocated to reduce their impacts on the ecosystem and improve the park experience.

The monument would continue to welcome a diversity of visitors and support a range of experiences, better serving as a gateway or stepping stone to understanding the national park system.

An offsite welcome center for the shuttle system, with parking and visitor services, would be an important first point for orientation and a key to providing sustainable access to the monument.

Collaboration with other public land managers would continue to address watershed restoration and stewardship needs.

Some Potential Impacts of Alternative 1

- Elimination of unneeded roads and removal of unneeded structures would result in long-term beneficial impacts on vegetation and wildlife; some construction activities would have short-term adverse impacts; education and stewardship programs would result in long-term, minor to moderate, beneficial impacts both locally and parkwide.
- Strengthening the integrity and adaptive use of historic structures would result in general overall long-term, beneficial impacts, although some localized loss of historic fabric would occur.
- Establishing a curatorial and research facility would have a long-term, beneficial impact on park collections.
- New facilities, increased diversity of opportunities, and purposeful effort to engage more diverse audiences would result in long-term, moderate, beneficial impacts to visitor services.
- Improved access to park sites, increased transit services, and improved trails would result in long-term, minor to major, beneficial impacts to transportation.
- An increase in park staffing would result in long-term, moderate, beneficial impacts to park operations.
- Activities that address deferred maintenance issues and proposed changes to facilities would result in long-term, moderate, beneficial impacts to park operations.

Alternative 2: Preserving and Enjoying Coastal Ecosystems

Concept

The emphasis of this alternative is to preserve, enhance, and promote dynamic and interconnected coastal ecosystems in which marine resources are valued and prominently featured. Recreational and educational opportunities would allow visitors to learn about and enjoy the ocean and bay environments, and gain a better understanding of the region’s international significance and history. Facilities and other built infrastructure could be removed to reconnect fragmented habitats and to achieve other ecosystem goals.

Goals

Visitor Experience

- Connect visitors with resources and the park through expanded and diverse science and stewardship programs that are focused on preservation and restoration of coastal and marine resources and address the implications of climate change.
- Provide greater opportunities for visitors to explore wild areas and immerse themselves in nature.
- Manage low-impact visitor use that enhances the qualities of solitude, quiet, and naturalness in sensitive natural resource areas, and accommodate active recreational pursuits in other areas.
- Increase visitor understanding, awareness, and support for coastal resources through participation in stories and programs about human interaction with, and dependency on, natural resources.

Cultural Resources

- Incorporate the history of conservation and the collections related to natural resources to raise awareness of ongoing efforts to conserve marine ecosystems.
- In park interpretation and education programs, emphasize sites and stories connected to coastal resources, including shipwrecks, archeological sites, agricultural lands and uses, coastal defense, and lighthouses, so visitors can connect with those resources.
- Maximize adaptive reuse and rehabilitation of cultural resources to support visitor enjoyment, understanding, and community connections.
- Work with interested groups and populations to preserve and protect cultural resources.
- Preserve and protect cultural resources so that visitors can connect with and appreciate these resources and their stories.

Natural Resources

- Reconnect fragmented habitat within and adjacent to the park to strengthen the integrity and resiliency of the coastal ecosystem to respond to climate change and urban pressures.
- Optimize recovery of special status species and survival of wide-ranging wildlife.
- Restore natural processes and/or allow these processes to evolve unimpeded to the greatest degree feasible.
- Promote partnerships to help the park become a center for innovative coastal science, stewardship, and learning.

Key Elements

Park Lands in Marin County

In this alternative, management would strive to further preserve and restore the dynamic, interconnected coastal ecosystems at the core of protected lands through collaborative

regional partnerships. Partners would work on common goals to sustain the area's native biodiversity, reconnect fragmented habitats and migration corridors, minimize the impact of invasive species, manage for changing fire regimes, protect threatened and endangered species, and restore naturally functioning ecosystems. Proactive management would work to build resiliency to climate change into the natural environment.

Marin County's park lands and waters would be highlighted as living laboratories, engaging visitors in participatory science, education, and stewardship to nurture personal connections with nature and inspire advocacy.

Opportunities to explore trails and beaches would further highlight the park's coastal natural and cultural resources. Cultural resource sites and stories would emphasize human occupation of the coastal environment, as reflected in lighthouses, coastal defense structures, archeological sites, and agricultural land uses.

Park Lands in San Francisco

While welcoming visitors to the park, this alternative would focus on engaging visitors, local communities, and partners in participatory science, education, and stewardship focused on the coastal environment.

Park management, in collaboration with community partners, would demonstrate leadership in proactive adaptation and management in the face of climate change and accelerated sea level rise. Interpretive messages would reach visitors enjoying the coastal environment along the San Francisco Bay Trail and the California Coastal Trail. Cultural resource sites and stories would also highlight the human connection to the coastal environment; sites and stories would include archeological sites, European exploration, maritime history, and coastal defense.

Park Lands in San Mateo County

As in the other alternatives, park lands and ocean environments in San Mateo County would be managed as part of a vast network of protected lands and waters. In this alternative, however, park managers would emphasize work to preserve and restore these interconnected coastal ecosystems through collaborative partnerships with other land management agencies in the region. Together these groups would work to sustain the area's native biodiversity, reconnect fragmented habitats and migration corridors, minimize the impact of invasive species, manage for changing fire regimes, and restore naturally functioning ecosystems. Proactive management would build into the environment greater resiliency to climate change.

Park lands in San Mateo County provide an extensive wildlife corridor that includes habitat for threatened and endangered species. These lands would serve as living laboratories, engaging visitors in participatory science, education, and stewardship—activities that nurture personal connections with nature and inspire advocacy.

Exploration along the vast network of trails would further highlight the park's diverse ecosystems and rich cultural resources. Cultural resource sites and stories—archeological sites, European exploration, agricultural land uses, coastal defense sites, and the lighthouse—would emphasize human occupation of the coastal environment. Most cultural resources would be stabilized if not in conflict with natural resource restoration.

Land protection strategies would seek to reconnect fragmented endangered species habitat and strive to remove features that impede movement or migration of species, or disrupt ecological function.

Alcatraz Island

The island's inhospitable and isolated—yet strategic—location at the entry to the Golden Gate and San Francisco Bay would be highlighted. The island's past and present significance to colonial nesting birds and its layers of human history—the Civil War fortress, the lighthouse, the prison and penitentiary—all derive from its position in the bay.

The island's changing natural and built landscape would continue to evolve, further enhancing habitat for nesting birds. Only those buildings and features necessary to maintain the island's national historic landmark status would be preserved; the natural elements would reclaim other features as part of the wilding of Alcatraz Island.

Visitors would be immersed in opportunities that showcase the island's isolation, its natural resources, and all the layers of history that can be found at the Main Prison Building. Visitor experiences would include outdoor learning, and natural and cultural resource stewardship programming delivered in partnership with Bay Area nonprofits.

While access would be managed to protect sensitive resources, visitors would be able to more freely explore, discover, and experience nature reclaiming Alcatraz Island, and understand the role the island plays in the broader marine ecosystem (reaching from San Francisco Bay to the Farallon Islands) as a result of its strategic location.

Muir Woods National Monument

Park management would seek to restore the primeval character of the old-growth redwood forest. Visitors would be immersed in the forest, and could experience the natural sounds, smells, light, and darkness of the forest. The experience would be more primitive than it is today; the majority of the built environment—buildings, parking lots, paved trails—would be removed, and all visitors would arrive by shuttle, bicycle, or on foot. The landscape would be "messier" than it is today, but the forest would function more naturally: Redwood Creek would be allowed to meander across the floodplain, flooding the valley bottom, uprooting trees, and opening gaps in the canopy.

Where not in conflict with natural resource goals, historic trails and structures could be retained or adapted for contemporary uses. A light-on-the-land, accessible trail would reach into the heart of the forest. Visitors would engage in participatory stewardship, education, and science that further the preservation of the forest and all its parts—the creek, salmon, spotted owls, bats, natural sounds—as part of the continuing history and evolution of the land preservation and conservation movement.

An offsite welcome center for the shuttle system, with parking and visitor services, would be an important first point for orientation and a key to providing sustainable access to the monument.

Restoration of the Redwood Creek watershed would be accelerated in collaboration with other land managers. Actions would include the removal of unneeded management roads, stabilization of sediment sources, and removal of invasive vegetation, as well as removal of streambank stabilization structures in Redwood Creek, removal and possible relocation of some pedestrian bridges, and restoration of natural floodplain function.

Some Potential Impacts of Alternative 2

- Elimination of unneeded roads and removal of unneeded structures would result in long-term beneficial impacts on vegetation and wildlife; some construction and restoration activities (such as the removal of structures) would have short-term adverse impacts; education and stewardship programs would result in long-term, minor-to moderate, beneficial impacts both locally and parkwide.
- Actions could result in impacts to historic structures that range from long term and beneficial (because of improved treatment) to permanent and adverse because of adaptive use and potential for coastal erosion.
- This alternative would result in both beneficial and adverse, long-term, moderate impacts to the cultural landscape at Alcatraz Island
- Establishing a curatorial and research facility would have a long-term, beneficial impact on park collections.
- Regulation and restrictions on some visitor activities and access to some areas might have a long-term, moderate, adverse impact on the visitor experience. On Alcatraz Island, increased conflicts between visitors and an expanding bird population could result in long-term, moderate, adverse impacts to the visitor experience. At Muir Woods, exclusive access by shuttle could restrict the number of visitors to the monument.
- A reduction in parking at Stinson Beach could have a long-term, major, adverse impact or a long-term, moderate, beneficial impact on transportation, depending on concurrent efforts.
- An increase in park staffing would result in long-term, moderate, beneficial impacts to park operations.
- Activities that address deferred maintenance issues would result in long-term, moderate, beneficial impacts to park operations; difficulty for public safety personnel to reach more primitive areas would result in long-term, minor, adverse impacts to operations.

Alternative 3: Focusing on National Treasures

Alternative 3 is the National Park Service's preferred alternative for Alcatraz Island and Muir Woods National Monument. The preferred alternative for park lands in Marin, San Francisco, and San Mateo counties is alternative 1.

Concept

The emphasis of this alternative is to focus on, or showcase, the park's nationally important natural and cultural resources. The fundamental resources of each showcased site would be managed at the highest level of preservation to protect the resources in perpetuity and to promote appreciation, understanding, and enjoyment of those resources. Visitors would have the opportunity to explore the wide variety of experiences that are associated with many different types of national parks—all in Golden Gate National Recreation Area and Muir Woods National Monument. All other resources would be

managed to complement the nationally significant resources and associated visitor experiences.

Goals

Visitor Experience

- Provide visitors with opportunities to explore, learn, and enjoy the park's unique resources and stories.
- Allow the park's distinctive resources and associated stories to shape recreational opportunities.
- Emphasize active public participation in stewardship programs at the showcased sites.
- Provide visitors with opportunities for understanding and enjoying national park experiences.

Cultural Resources

- Emphasize the preservation of fundamental cultural resources that contribute to the national significance of the park, including national historic landmarks. Manage all other resources to complement the significant resources and visitor experiences.
- Tie associated cultural resources, museum collections, and stories to the showcased sites.
- Preserve and protect cultural resources to highlight the interpretive and educational values and provide, wherever possible, direct contact with the resources.

Natural Resources

- Emphasize the preservation of fundamental natural resources that contribute to the significance of each park unit. Manage all other resources to complement the distinctive resources and experiences.
- Protect or restore the integrity of fundamental natural resources and processes that support the significance of each park unit.
- Manage distinctive natural resources to ensure their ecological integrity while providing opportunities to engage the visitors in hands-on stewardship and exploration.

Key Elements

Park Lands in Marin County

The park would be a welcoming place with a vast network of open space that protects natural and cultural resources and offers many forms of recreation in a setting of national importance. The park would highlight several nationally important sites, including Muir Woods, the Golden Gate, the coastal setting of the State Route 1 National Scenic Byway, and the historic Army posts on the Marin Headlands.

Although this alternative shares many characteristics of alternatives 1 and 2, the management of the Marin Headlands' historic core would be very different. Sheltering the best-preserved collection of seacoast fortifications in the country, the Marin Headlands tell the story of two centuries of evolving weapons technology and the nation's unwavering efforts to protect the Golden Gate. As a result, this alternative would focus on immersing visitors in its compelling sites and history, actively using and interpreting preserved structures and landscapes ranging from Battery Townsley to the Nike Missile Launch Site.

Other important nonmilitary landmarks, such as the Point Bonita Lighthouse, also would be preserved and interpreted for visitors.

Park Lands in San Francisco
The focus would be on the collection of historic sites and the dynamic coastal landscape that defines San Francisco's edge, from Fort Mason to Fort Funston. Visitors would be welcomed to the park, with a focus on the nationally important sites that are connected by the San Francisco Bay Trail and California Coastal Trail, thus creating a scenic and historic corridor.

Park lands in San Francisco encompass a significant collection of historic sites, ranging from the Civil War era at Black Point in Fort Mason to the World War II era military coastal fortifications at Fort Funston. These sites are located amid a windswept coastal environment, featuring rocky bluffs, acres of dunes, sandy beaches, and fragile native habitat.

Under this alternative, the park staff would expand interpretive programs and visitor services at these popular destinations to enable residents and visitors to further appreciate the significant landmarks and landscapes at the Golden Gate.

Park Lands in San Mateo County
As in the other alternatives, park lands and ocean environments in San Mateo County would be managed as part of a vast network of protected lands and waters. This alternative, however, would highlight how this "quilt" of undeveloped land has been protected by numerous organizations. Over the past 25 years, the National Park Service, local governments, private land trusts, and dedicated individuals have worked together to acquire and preserve this "wilderness" next door.

Today, these lands are a national treasure of recreational, natural, and cultural resources. Several nationally significant historic sites are in San Mateo County, along with habitat for numerous endangered species. Many of these important resources are managed by other agencies on nearby sites. This alternative would focus on protecting resources in the park while developing recreational and interpretive connections between sites managed by other land managers.

Park management would also look beyond the immediate park lands to explore the potential to stimulate regional landscape management and enhance heritage tourism. To do so, park managers would work with communities between Pacifica and Santa Cruz to support strategies such as national scenic byway designation for the Pacific Coast Highway (State Route 1). The highway is one of the distinguishing and unifying features of the rural coast that is characterized by forested hills, small-scale agriculture, and seaside communities.

Alcatraz Island (Preferred Alternative)
This is the preferred alternative for Alcatraz Island. This alternative would immerse visitors extensively in all of Alcatraz Island's historic periods, including the Civil War military fortifications and prison, federal penitentiary, and American Indian occupation. Alcatraz Island's history would be interpreted, first and foremost with tangible and accessible historic resources, including the structures, cultural landscape, archeology, and museum collection. These resources contribute to the island's national historic landmark status and its recognition as an international icon.

The visitor's immersion in Alcatraz Island history would begin on a ferry from one or more embarkation points that could be expanded to include the original Alcatraz dock at Fort Mason. Passing a line of warning buoys, the experience would continue at the island's arrival dock area, where visitors would have greater access to restored portions of Building 64, the historic barracks. Visitors would ascend to the Main Prison Building through a landscape of preserved historic structures and features. While the primary visitor experience would focus on the federal penitentiary, visitors also would be exposed to other periods of history, literally and programmatically.

This alternative would require extensive stabilization, rehabilitation, and restoration of historic buildings and small-scale landscapes features, as well as creative interpretative and educational programs and visitor services. It would create additional opportunities for cultural resource stewardship programs.

Visitors would have opportunities to learn about the natural history of San Francisco Bay. The colonial waterbird habitat that has grown in regional importance would be protected, enhanced, and interpreted. Visitors could explore the island perimeter, managed to protect sensitive bird populations while providing opportunities to observe them or participate in stewardship activities. The large population of gulls would be managed to reduce conflicts in primary visitor use areas like the Parade Ground.

Muir Woods National Monument (Preferred Alternative)
This is the preferred alternative for Muir Woods National Monument. This alternative would present the monument as a contemplative outdoor museum where visitors would discover the primeval redwood forest and the monument's place in the early United States conservation movement.

A system of trails would lead visitors into the forest to feel, see, and learn, in different ways, about the essential qualities of the forest. These qualities include its giant trees, the ecology of Redwood Creek, and William Kent's generous donation of the forest to the American public. Rather than continue to concentrate visitation along a main trail, visitors would be encouraged to take different thematic interpretive trails, some new and some existing, to experience the different parts of the park. Other trails would link the monument with the surrounding Mount Tamalpais State Park.

Some existing facilities and use areas, such as the entrance area and parking lots, would be modified or relocated to reduce their impacts on the ecosystem and improve the park experience.

An offsite welcome center for the shuttle system, with parking and visitor services, would be an important first point for orientation and a key to providing sustainable access to the monument.

Visitors would continue to be drawn to the monument to see the trees, but they would leave with a richer understanding of this precious ecosystem and how the saving of these few acres helped spark conservation across the United States. They would be motivated to return and learn more of the story.

The National Park Service would continue to collaborate with the public and other land managers to address watershed restoration, stewardship, and recreation.

Some Potential Impacts of Alternative 3

- Because nationally significant buildings would be rehabilitated and showcased, this alternative would have comprehensive, long-term, beneficial impacts to historic structures.
- There would be some loss of cultural landscape features, but historically significant cultural landscapes with integrity would be rehabilitated and showcased; this would result in long-term, beneficial impacts to cultural landscapes.
- Elimination of unneeded roads and removal of unneeded structures would result in long-term beneficial impacts on vegetation and wildlife; some construction activities would have short-term adverse impacts; education and stewardship programs would result in long-term, minor to moderate, beneficial impacts both locally and parkwide.
- Establishing a curatorial and research facility would have a long-term, beneficial impact on park collections.
- Establishing a preservation stewardship workshop on Alcatraz Island would have a long-term, beneficial impact on cultural resources.
- Improved access and connectivity and increased opportunities for visitors to understand, appreciate, and help preserve fundamental resources would result in long-term, moderate, beneficial impacts to the visitor experience; some changes to existing opportunities would result in long-term, minor to moderate, adverse impacts on those who use those areas now.
- Additional ferry embarkation points would have a long-term, moderate, beneficial impact on transportation to Alcatraz Island; trail expansion and improvement on the island would also have a long-term, beneficial impact.
- An increase in park staffing would result in long-term, moderate, beneficial impacts to park operations.
- Activities that address deferred maintenance issues and changes to facilities would result in long-term, moderate, beneficial impacts to park operations

ESTIMATED COSTS OF THE ALTERNATIVES

The costs of the proposals within each alternative are summarized in the following table. The last column, titled “Total, Preferred Alternative” represents the costs associated with the implementation of the preferred alternative: alternative 3 for Alcatraz Island and Muir Woods National Monument and alternative 1 for park lands in Marin, San Francisco, and San Mateo Counties, as well as the costs common to all alternatives.

The alternatives describe the maximum potential capital improvements; lesser improvements may be implemented, or built in phases if necessary. The implementation of the approved plan will depend on future funding. The approval of this plan does not guarantee that the funding and staffing needed to implement the plan will be forthcoming. Full implementation of the actions in the approved general management plan could be many years in the future. Additionally, some of the future long-term funding needed to implement the various actions called for in the alternatives is anticipated to come from nonfederal partners, consistent with the park's current practices.

Summary of Costs Associated with the Implementation of the Alternatives

	No-action Alternative	Alternative 1	Alternative 2	Alternative 3	Total, Preferred Alternative
Recurring Costs					
Annual Operating Costs	$28,030,000	$32,000,000	$31,090,000	$31,630,000	$32,000,000
Muir Woods Shuttle Operations	$340,000	$600,000-$1,400,000	$4,000,000-$9,500,000	$600,000-$1,400,000	$600,000-$1,400,000
Staffing (additional FTE)	334 (+0)	380 (+46)	369 (+35)	377 (+43)	380 (+46)
One-time Capital Costs					
Alcatraz Island	$4,260,000	$61,190,000	$37,440,000	$54,380,000	$54,380,000
Park Lands in Marin, San Francisco, and San Mateo Counties	$5,280,000	$46,710,000	$47,250,000	$78,210,000	$46,710,000
Muir Woods National Monument	$920,000	$15,900,000	$16,870,000	$17,790,000	$17,790,000
Common To All Action Alternatives	$0	$31,020,000	$31,020,000	$31,020,000	$31,020,000
Total One-time Capital Costs	$10,460,000	$154,820,000	$132,580,000	$181,400,000	$149,900,000

All costs in 2009 dollars

NOTES REGARDING SUMMARY OF COSTS TABLE:

1 Annual operating costs are the total costs per year for maintenance and operations associated with each alternative, including utilities, supplies, staff salaries and benefits, and leasing.

2 The total number of FTEs (full-time equivalents) is the number of person-years of staff required to maintain the assets of the park at a good level, provide acceptable visitor services, protect resources, and generally support the park's operations. The FTE number indicates ONPS-funded NPS staff only, not volunteer positions or positions funded by partners. (ONPS funds are funds designated for the "Operation of the National Park Service.") FTEs are from the 2010 Green Book, adjusted to reflect loss of 32 structural fire positions.

3 One-time costs for the no-action alternative only include costs associated with projects already approved and fully funded.

4 Total includes costs for both Essential/Priority and Desirable/Lower Priority Projects. Essential/Priority projects are required to preserve fundamental resources and experiences and would likely require federal funding. Desirable/Lower Priority projects are important to full implementation of the alternative but may be accomplished with nonfederal funds or in later phases.

5 Acquisition costs for proposed boundary adjustments are not included in this presentation of costs.

Essential/Priority* One-time Capital Costs for the Preferred Alternative

	Facility Rehabilita-tion	Historic Preserva-tion	Natural Resource Restoration	Facility Removal	New Construc-tion	Total
Alcatraz Island	$0	$38,300,000	$0	$0	$0	$38,300,000
Park Lands in Marin, San Francisco, and San Mateo Counties	$11,500,000	$8,430,000	$4,470,000	$250,000	$980,000	$25,630,000
Muir Woods National Monument	$9,150,000	$340,000	$4,700,000	$720,000	$2,230,000	$17,140,000
Common to All Action Alternatives	$0	$12,560,000	$0	$0	$0	$12,560,000
Total One-time Capital Cost	$20,650,000	$59,630,000	$9,170,000	$970,000	$3,210,000	$93,630,000

*Essential/Priority projects are required to preserve fundamental resources and experiences and would likely require federal funding.

Desirable/Lower Priority* One-time Capital Costs for the Preferred Alternative

	Facility Rehabilitation	Historic Preservation	Natural Resource Restoration	Facility Removal	New Construction	Total
Alcatraz Island	$0	$16,080,000	$0	$0	$0	$16,080,000
Park Lands in Marin, San Francisco, and San Mateo Counties	$8,980,000	$8,730,000	$0	$0	$3,370,000	$21,080,000
Muir Woods National Monument	$0	$650,000	$0	$0	$0	$650,000
Common to All Action Alternatives	$0	$1,830,000	$0	$0	$16,630,000	$18,460,000
Total One-time Capital Cost	$8,980,000	$27,290,000	$0	$0	$20,000,000	$56,270,000

*Desirable/Lower Priority projects are important to full implementation of the alternative but may be accomplished with nonfederal funds or many years in the future.

THE NEXT STEPS

After the distribution of the *Draft General Management Plan / Environmental Impact Statement*, there will be a 60-day public review and comment period. The National Park Service welcomes comments on the draft plan and will host a series of public meetings to facilitate public involvement in refining the draft plan. After this comment period, the planning team will evaluate comments from other federal agencies, tribes, organizations, businesses, and individuals regarding the draft plan and incorporate appropriate changes into a final plan. The final plan will include a summary of any substantive comments received and the National Park Service's responses to those comments.

Following distribution of the *Final General Management Plan / Environmental Impact Statem*ent and a 30-day no-action period, a record of decision approving a final plan will be signed by the National Park Service, Pacific West Regional Director. The record of decision will document the selection of an alternative for implementation. With the signing of the record of decision, the plan can then be implemented.

Once the planning process is completed, the selected alternative will become the new management plan for the park and will be implemented over the next 20 years. It is important to note that all of the actions in the selected alternative will require more detailed study and implementation planning.

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INTRODUCTION

Over 30 years ago, the National Park Service (NPS) adopted a plan outlining the future of Golden Gate National Recreation Area, then a new and different park that brought the national park system to a large urban area. Because of the size and diversity of the San Francisco Bay Area community and the National Park Service's commitment to a pioneering public involvement process, it took five years to prepare the plan. This diligence paid off and the final plan won the unanimous support of the community. This plan, along with several amendments, has firmly guided the preservation and enhancement of Golden Gate National Recreation Area for three decades.

It is not unusual for many long-range plans to just sit on the shelf and gather dust—usually as a result of inadequate funding to implement the dreams they offer, but also because of changing conditions and fading public support. When the future of the Presidio's Crissy Field was being discussed early in the planning process, one member of the park's advisory commission confided that the National Park Service would never get the funds to improve it, especially considering demolition and toxic cleanup costs. Today Crissy Field stands as an international standard for waterfront restoration and is a top tourist destination.

Success stories like Crissy Field happen because of the appeal and popularity of the park's resources, enhanced by the efforts of the Golden Gate National Parks Conservancy, and the resultant financial support of generous members of the community.

When considering the transformational expectations offered by the 1980 general management plan, it has been a remarkable success. The visions for Alcatraz Island, Fort Mason, Crissy Field, the Cliff House, Fort Baker, and much of the Marin Headlands have been achieved.

Today, Golden Gate National Recreation Area constitutes one of the largest urban national parks in the world, extending north of the Golden Gate Bridge to Tomales Bay in Marin County and south to Half Moon Bay in San Mateo County. These lands are coastal preserves that encompass many miles of bay and ocean shorelines.

The park contains an abundance of historical and cultural assets, including sites such as early fortifications on Alcatraz Island, Forts Cronkhite and Barry in the Marin Headlands, Fort Mason, Fort Point, and the Presidio of San Francisco. These contain a variety of archeological resources, military batteries, and other historic structures that present a rich history. Chronicles of Native American settlements, the Spanish Empire frontier, the Mexican Republic, evolution of American coastal fortifications, maritime history, 19th century and early 20th century agriculture and ranching, the U.S. Army in World Wars I and II, the California Gold Rush, Buffalo Soldiers, and the growth of San Francisco are told in the settings in which they occurred.

Golden Gate National Recreation Area is also rich in natural resources. The park is comprised of 19 types of ecosystems in numerous distinct watersheds and is home to over 1,200 known plant and animal species. The park provides habitat for many sensitive, rare, threatened, or endangered species, including the mission blue butterfly, northern spotted owl, and California red-legged frog. Coho salmon and steelhead trout inhabit the clean waters of Redwood Creek as it flows through Muir Woods National Monument.

Each year 16 to 20 million visitors explore the park, with over 1.4 million touring Alcatraz Island and approximately 750,000 visiting Muir Woods National Monument. Trips to the park account for nearly 50% of all visits to the 29 national park system units in California.

In looking back at the 1980 general management plan and where the park is today, there appears to be only one major goal yet to be accomplished—the ambitious transportation proposals contained in the document. Lack of funding and jurisdictional issues have hindered their accomplishment. However, one of the principal goals of this element of the plan was to provide access to the park to under-represented populations—other strategies have apparently made progress in reaching that goal.

General observations indicate that increasing numbers of young people—many of them minorities—have been visiting the park. It can be safely assumed that this apparent trend is strengthened by the many educational and volunteer programs managed by the park and park partners.

It is our goal to continue this trend. Golden Gate National Recreation Area and Muir Woods National Monument are situated in one of the most demographically diverse regions in America. In addition, demographic trends forecast a dramatic increase in the diversity of the statewide population and in the number of residents who are less than 18 years of age. As a result, the park is uniquely situated to reconnect people with their national parks, with a goal of reaching a 21st century audience—more diverse and younger than today's national park visitor—and sustaining their engagement.

Even before the 1980 plan was approved, the park was growing. Legislation for a boundary expansion was passed by Congress in 1978 and since then various acts of Congress have added many additional acres to the park. Research and management activities have revealed new resource values, both cultural and natural. Visitation has increased and new activities have put pressures on park resources not anticipated in the original plan. In short, today's park is quite different from the one covered in the 1980 plan. The first plan served to shape a new park and reach a consensus on the definition of its identity. This new document will serve to fine tune and expand the vision for an already mature national park and will shape and define new areas coming into the park. Although different in many ways, the new plan will follow the same basic directive outlined for the 1980 plan by the park's first Superintendent, Bill Whalen, "Our job is just to polish the jewels."

PURPOSE AND NEED

The purpose of this general management plan is to guide planning and decision making at Golden Gate National Recreation Area and Muir Woods National Monument for the next 20 years. The first general management plan, completed in 1980, is now more than 30 years old. Since the completion of that first plan, the issues, opportunities, and challenges associated with the park and monument have significantly changed. In addition, park managers have had 30 years to better understand the natural and cultural resources of the park and monument and the changing needs of park visitors.

This new general management plan will serve as a foundation and framework for the management of these park lands. The plan articulates the desired future conditions for park resources and visitor experiences that will best fulfill the legislative and presidential mandates that established these units as part of the national park system.

This plan has been developed by an interdisciplinary team in consultation with NPS offices; park partners; tribal, federal, state, and local agencies; and other interested parties. There has been substantial input and participation from the general public. These public involvement and consultation efforts helped to ensure that the decisions made through this planning process are widely supported and sustainable over time. A completed general management plan represents an agreement with the citizens of the United States about how these lands and facilities will be managed. The plan will be a blueprint for the future.

The "Planning Issues" section of this general management plan provides details of these issues, opportunities and challenges. Generally, the overall need for a new general management plan has arisen because of the following:

- The park has significantly expanded in size and includes many new lands in San Mateo County. This planning process is based on a comprehensive look at the park as a whole rather than its individual pieces. This comprehensive parkwide approach will help ensure that the management of the natural and cultural resources and visitor experiences are consistent across all park areas.
- There is an increased public demand for access to and use of open spaces within the ever-growing urban development of the San Francisco Bay region (Bay Area). The general management plan provides a regional collaborative approach to open space preservation.
- The changing demographics in the Bay Area are bringing notable shifts in park visitation, uses, and trends. The general management plan provides desired conditions that will guide the decision making needed to manage the anticipated increase in visitation.
- Through research and park management over the years the park staff has gathered a considerable amount of new information and knowledge regarding resources and visitor use. This new awareness is incorporated into the desired conditions, proposed management actions, and policies of this general management plan.
- In recent years, climate change has become better understood and its effects more evident on both ecological systems and cultural resources. The general management

plan looks at the potential impacts of climate change to park operations and visitor use, and identifies direction and management actions to guide efforts to minimize the park's carbon footprint.

- Visitor access to the park continues to evolve as the local transportation infrastructure changes. The strategies that were identified in 1980 continue to be explored; new ideas and techniques are also identified to help address sustainable options to reach the park, and strategies to reduce traffic congestion around and within the park.
- To comply with federal law, the plan indicates the types and intensities of projected development, including anticipated costs. This is important, as the availability of federal funds may be limited over time.

This general management plan addresses these overall issues and the detailed issues identified in the "Planning Issues" section; the alternatives suggest ways to address these issues over the next 20 years.

The implementation of the approved plan, no matter which alternative, will depend on future NPS funding levels and servicewide priorities, and on partnership funds, time, and effort. The approval of a general management plan does not guarantee that the funding and staffing needed to implement the plan will be forthcoming. Full implementation of the plan could be many years in the future.

GUIDING PRINCIPLES FOR PARK MANAGEMENT

In addition to the many laws, policies, and directives that govern management of all units of the national park system, the leadership at Golden Gate National Recreation Area and Muir Woods National Monument has highlighted some of the principles that are most deeply rooted and distinctive at this park. These originate from the 1916 act that established the National Park Service to "*…promote and regulate the use of the Federal areas known as national parks, monuments, and reservations…by such means and measures as to… conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.*"

SUSTAINABILITY

We will continue to learn about and use practices that help sustain the resources of our park. Sustainability will be fundamental to the facilities, projects, programs, and operations of the park, using sound environmental management practices. We will seek opportunities to promote sustainability and stewardship to park visitors, neighboring communities, and the stakeholders we serve.

COMMUNITY-BASED STEWARDSHIP

We are committed to ongoing involvement of individuals and organizations in understanding, caring for, and preserving the park's natural habitats, historic places, and trails. This community stewardship brings the commitment to preserve our common heritage and public lands—national treasures that can best be sustained with the efforts of many.

CIVIC ENGAGEMENT

We are dedicated to ongoing, dynamic conversations about the contemporary relevance of park resources. We will also provide opportunities for meaningful involvement to promote better understanding and communication, discuss concerns, and express values and preferences when park decisions and policies are being developed and implemented.

PARTNERSHIPS

We will continue to build on the legacy of the many partnerships that have enhanced our ability to protect resources and serve the public since the park was established. Through mutual collaboration, shared values, and learning, these partnerships have created outcomes beyond any one organization's individual capacity. Partnerships will continue

to be an important way to accomplish the park's mission and build a community of stewardship.

REGIONAL COLLABORATION

In working to preserve our park's resources unimpaired for future generations, we will establish and maintain cooperative relationships with managers of adjacent public lands and watersheds; tribal, state, and local governments; community organizations; and private landowners. We will collaborate with others to ensure that watersheds, ecosystems, viewsheds, and trail and transportation systems that extend beyond park boundaries are considered holistically, in order to best preserve important park resources, provide equitable and sustainable access, and advance the goal of creating a seamless network of protected lands.

INCLUSION

Recognizing the special opportunities and obligations resulting from our location within a region of great demographic and socioeconomic diversity, we will strive to assure that Golden Gate National Recreation Area is a "park for all." Working *with*, rather than *for*, various community partners, we will undertake proactive strategies that make the park welcoming and accessible to those at every economic strata, people with disabilities, and ethnic and cultural communities who have not traditionally visited national parks in numbers proportionate to the changing demographics of California and the nation.

THE PLANNING AREA

This new general management plan addresses the lands administered by the National Park Service within the legislative boundaries of Golden Gate National Recreation Area and Muir Woods National Monument. Over the last 15 years, the park staff has completed numerous land use and site plans for areas in Golden Gate National Recreation Area. These plans and associated environmental impact documents are current and therefore these areas are not included in the planning area for this updated general management plan.

The new general management plan will provide park management guidance for the following park sites: 1) those park lands that are not covered by recent land use management plans and agreements; 2) those lands that are newly acquired or in the process of acquisition; 3) lands and waters that are leased to the National Park Service or are under other management arrangements or easements (such as the San Francisco Public Utilities Commission Peninsula Watershed). The total area of land and water addressed in this plan is approximately 50,000 acres.

Specifically these areas are the following:

- Alcatraz Island and the surrounding bay environment
- park lands in Marin County, including Stinson Beach to Bolinas-Fairfax Road; Slide Ranch; Muir Beach; Lower Redwood Creek; Golden Gate Dairy; Tennessee Valley; Marin Headlands; and the offshore ocean and bay environment
- park lands in San Francisco, including Upper Fort Mason, China Beach, Lands End, Fort Miley, Ocean Beach, Fort Funston, and offshore ocean and bay environment
- park lands in San Mateo County, including the coastal area extending south from Fort Funston to Mussel Rock; Milagra Ridge; Shelldance Nursery Area; Sweeney Ridge, including Cattle Hill and Picardo Ranch; Mori Point; San Pedro Point; Devil's Slide coastal area; Rancho Corral de Tierra; Montara Lighthouse; Phleger Estate; San Francisco Public Utilities Commission Peninsula Watershed easements; and the offshore ocean environment
- all lands within Muir Woods National Monument

The following are Golden Gate National Recreation Area sites that have recently completed new land use management plans, and therefore are not included in the GMP planning area. These park areas will not be revisited in this plan.

- Presidio of San Francisco and Crissy Field
- Baker Beach
- Lobos Creek Valley
- Fort Point National Historic Site
- Sutro Historic District, including the Cliff House, Sutro Heights Park, Sutro Baths, and Lands End

- Fort Baker
- Lower Fort Mason (Fort Mason Center)
- Golden Gate National Recreation Area Northern District, north of Bolinas-Fairfax Road—(These lands are managed by Point Reyes National Seashore and are being addressed in the *Point Reyes National Seashore/Golden Gate National Recreation Area Northern District General Management Plan*.)

The park staff is currently working on a variety of detailed project and program implementation plans. The implementation plans cover topics such as detailed actions for natural and cultural resource restoration and preservation, visitor use, transportation, and park operations. There are several major project and program implementation plans that are in the process of being prepared or implemented. In the preparation of this general management plan, the planning team coordinated with the development of these plans to ensure consistency. Ongoing planning efforts include the following:

- Marin Headlands and Fort Baker Transportation Infrastructure and Management Plan Final Environmental Impact Statement
- Wetland and Creek Restoration at Big Lagoon, Muir Beach Final Environmental Impact Statement
- Marin Equestrian Plan / Environmental Assessment
- Headlands Institute Campus Improvement and Expansion Plan
- Dog Management Plan for Golden Gate National Recreation Area / Environmental Impact Statement
- Doyle Drive – South Access to the Golden Gate Bridge
- Point Reyes National Seashore General Management Plan


San Pablo Bay
San Rafael
Golden Gate Northern Lands
(Managed by Point Reyes NS)
Marin Municpal
Water District
Audubon
Canyon
Ranch
Muir Woods
National Monument
Mill Valley
Stinson Beach
Mount Tamalpais
State Park
Gulf of the
Farallones National
Marine Sanctuary
Marin City
Marin County
Tiburon
Richmond
Rosie the Riveter NHP
Angel Island
State Park
Berkeley
Sausalito
Marin Headlands
Muir Beach
Fort Baker
Alcatraz
Island
San Francisco Maritime
National Historical Park
Rodeo Beach
Fort Mason
Oakland
Monterey Bay
National Marine Sanctuary
Fort Point
National Historic Site
Presidio of
San Francisco
Lands End
Ocean Beach
City of
San Francisco
San Francisco Bay
Pacific Ocean
City and County of San Francisco
San Mateo County
Fort Funston
Daly
City
Milagra Ridge
Sharp
Park
Sweeney Ridge
San Francisco
International Airport
Mori
Point
San Pedro
Point
Pacifica
San Mateo
County
Devil's
Slide
San Mateo
Peninsula Watershed
(San Francisco Public
Utilities Commission)
NPS Easements
Rancho Corral
de Tierra
Fitzgerald
Marine Reserve
Pillar Point Bluff
Half Moon Bay
State Beach
Half
Moon
Bay
Phleger Estate
Monterey Bay
National Marine
Sanctuary
GMP Planning Area
GMP Planning Area*
GGNRA Legislative Boundary
Other Open Space
0 1 2 4
Miles
N
* The planning area includes an off shore distance of approximately 1/4 mile.
U.S.Department of the Interior · National Park Service
DSC · December 29, 2009 · XXX / XXXXX

Foundation Statements: Guidance for Planning

In 1916, with the passage of the National Park Service Organic Act, Congress established the National Park Service to oversee and manage the national parks of the United States. Individual national parks continue to be established by Congress or by presidential proclamation. The legislation that authorizes a new national park system unit guides its management. (See appendix A for legislation related to the National Park Service, Golden Gate National Recreation Area, and Muir Woods National Monument.)

The following pages present foundation statements for Golden Gate National Recreation Area and Muir Woods National Monument, respectively, as they are two distinct units of the national park system.



PARK PURPOSE

The park purpose is a statement that summarizes why Congress and/or the president established the area as a unit of the national park system. It is based on the enabling legislation and the legislative history of the unit. The purpose statement provides the most fundamental criteria against which the appropriateness of all plan recommendations, operational decisions, and actions are tested.

PARK SIGNIFICANCE

Statements of park significance define what is *most important* about a park's many resources and values. In developing these significance statements, the planning team was guided by the park's legislation and knowledge acquired through management, research, and civic engagement. The significance statements focus on the attributes that make the area's resources and values important enough to be included in the national park system. Each unit in the national park system contains many significant resources, but not all of these resources contribute to the purpose for which the park or monument was established as a unit of the national park system.

The park purpose and significance statements are used to guide all planning and management decisions. This ensures that the resources and values that Congress and the president wanted preserved are understood and are the park's first priority.

FUNDAMENTAL RESOURCES AND VALUES

The National Park Service works to ensure the conservation and public enjoyment of those resources and values that are fundamental to the park significance. Fundamental resources and values are those resources and values that directly contribute to the significance for which the park was established.

PRIMARY INTERPRETIVE THEMES

Primary interpretive themes describe the key stories and concepts of the park that help visitors understand and appreciate the park purpose and significance. The development and interpretation of primary interpretive themes provide the foundation on which the park's educational and interpretive program is based.

Foundation Statements for Golden Gate National Recreation Area

The founders of Golden Gate National Recreation Area, established in 1972, intended to bring national park experiences to urban populations. The park's extensive collection of natural, historic, and scenic resources and diverse recreational opportunities fulfill the purpose of bringing "parks to the people"—particularly to the 7 million people who live in the Bay Area. Today, however, the resources of Golden Gate National Recreation Area are nationally and internationally recognized as well, extending their value to all of America and beyond.

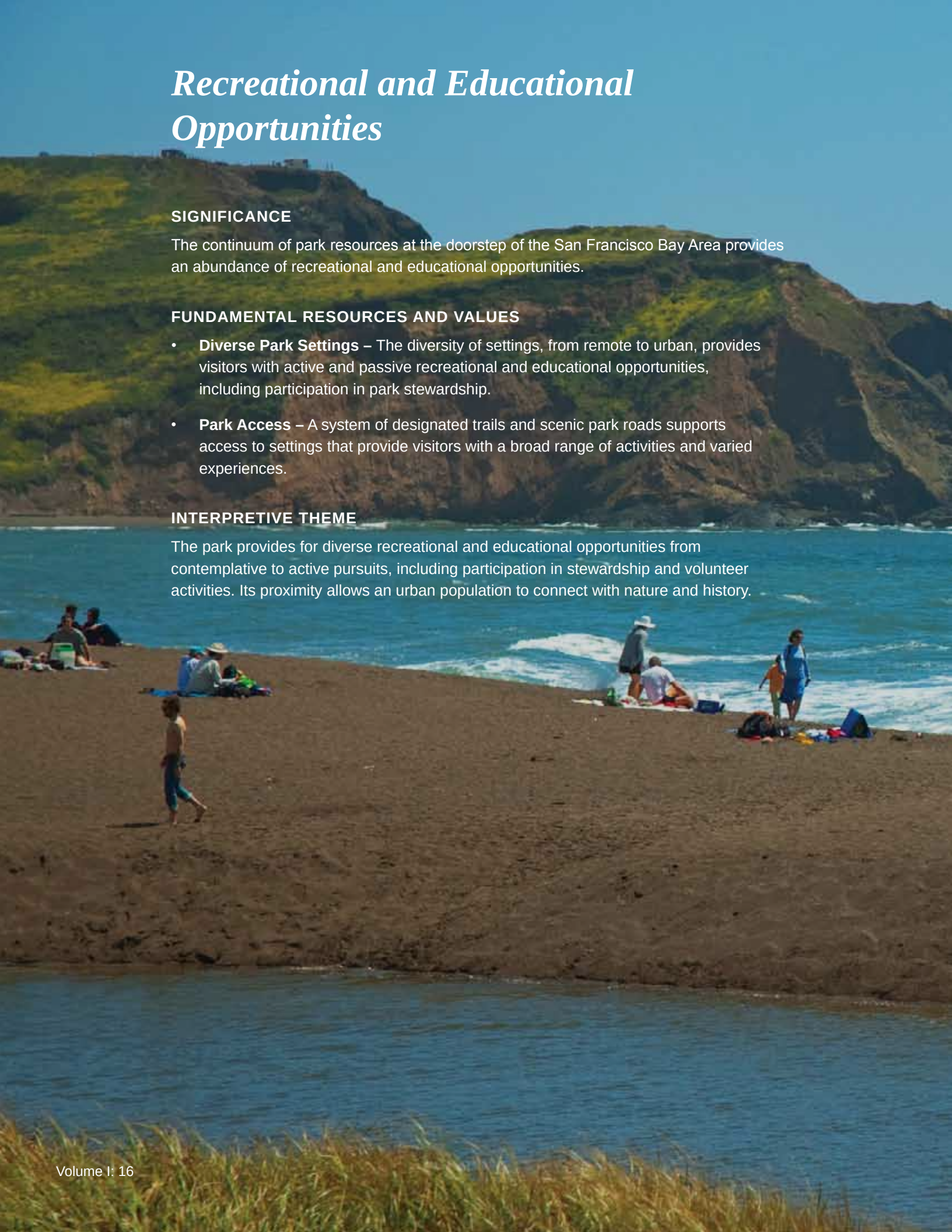
PARK PURPOSE

The purpose of Golden Gate National Recreation Area is to offer national park experiences to a large and diverse urban population while preserving and interpreting the park's outstanding natural, historic, scenic, and recreational values.



Photo credit: Robert Campbell / Chamois Moon

Recreational and Educational Opportunities



SIGNIFICANCE

The continuum of park resources at the doorstep of the San Francisco Bay Area provides an abundance of recreational and educational opportunities.

FUNDAMENTAL RESOURCES AND VALUES

- **Diverse Park Settings –** The diversity of settings, from remote to urban, provides visitors with active and passive recreational and educational opportunities, including participation in park stewardship.
- **Park Access –** A system of designated trails and scenic park roads supports access to settings that provide visitors with a broad range of activities and varied experiences.

INTERPRETIVE THEME

The park provides for diverse recreational and educational opportunities from contemplative to active pursuits, including participation in stewardship and volunteer activities. Its proximity allows an urban population to connect with nature and history.

Coastal Corridor

SIGNIFICANCE

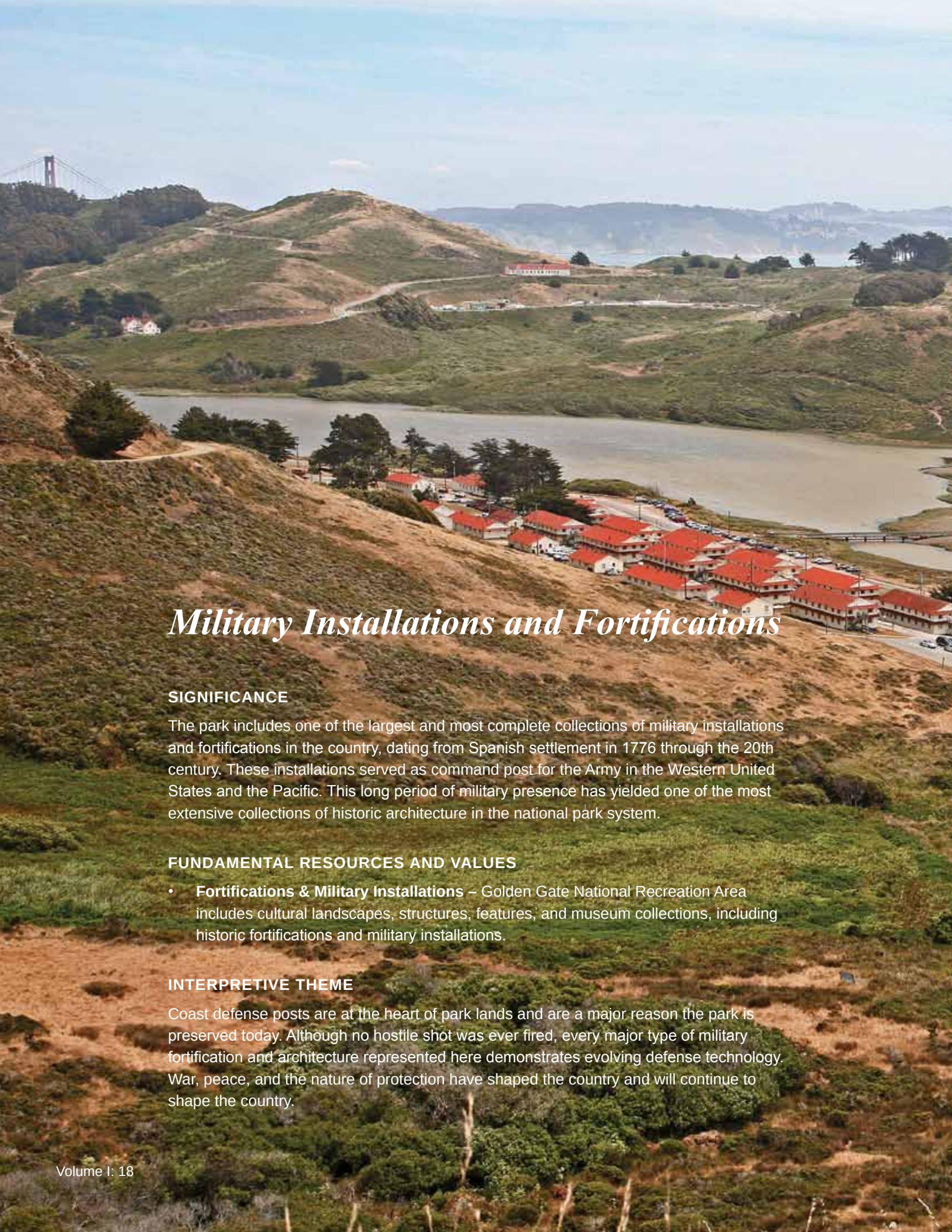
The remnant undeveloped coastal corridor of marine, estuarine, and terrestrial ecosystems supports exceptional native biodiversity and provides refuge for one of the largest concentrations of rare, threatened, and endangered species in the national park system.

FUNDAMENTAL RESOURCES AND VALUES

- **Ocean and Bay Environment –** Oceanic conditions, such as tides, currents, waves, surf, upwelling, and sea level, influence Golden Gate National Recreation Area's coastal environment, including climate and the land.
- **Coastal Ecosystems –** Golden Gate National Recreation Area contains a rich assemblage of coastal native plant and animal habitat that includes forests, coastal scrub, grassland, freshwater, estuarine and marine habitats, beaches, coastal cliffs, and islands.
- **Threatened and Endangered Species –** Golden Gate National Recreation Area supports one of the largest numbers of federally listed threatened and endangered species in the national park system. This island of refuge is due to the protected confluence of unique and diverse habitats adjacent to the urban Bay region.
- **Water Resources –** Golden Gate National Recreation Area's water resources support coastal corridor ecosystems and these consist of groundwater sources (aquifers and springs); freshwater systems (streams, lakes, and ponds); coastal, estuarine, and marine water resources (the Pacific Ocean and San Francisco Bay); and other wetlands.

INTERPRETIVE THEME

In a world of diminishing biological diversity and threatened natural resources, the Golden Gate National Recreation Area preserves islands of biodiversity within and near a large urban area. The accelerating rate of global climate change threatens even these remnants.



Military Installations and Fortifications

SIGNIFICANCE

The park includes one of the largest and most complete collections of military installations and fortifications in the country, dating from Spanish settlement in 1776 through the 20th century. These installations served as command post for the Army in the Western United States and the Pacific. This long period of military presence has yielded one of the most extensive collections of historic architecture in the national park system.

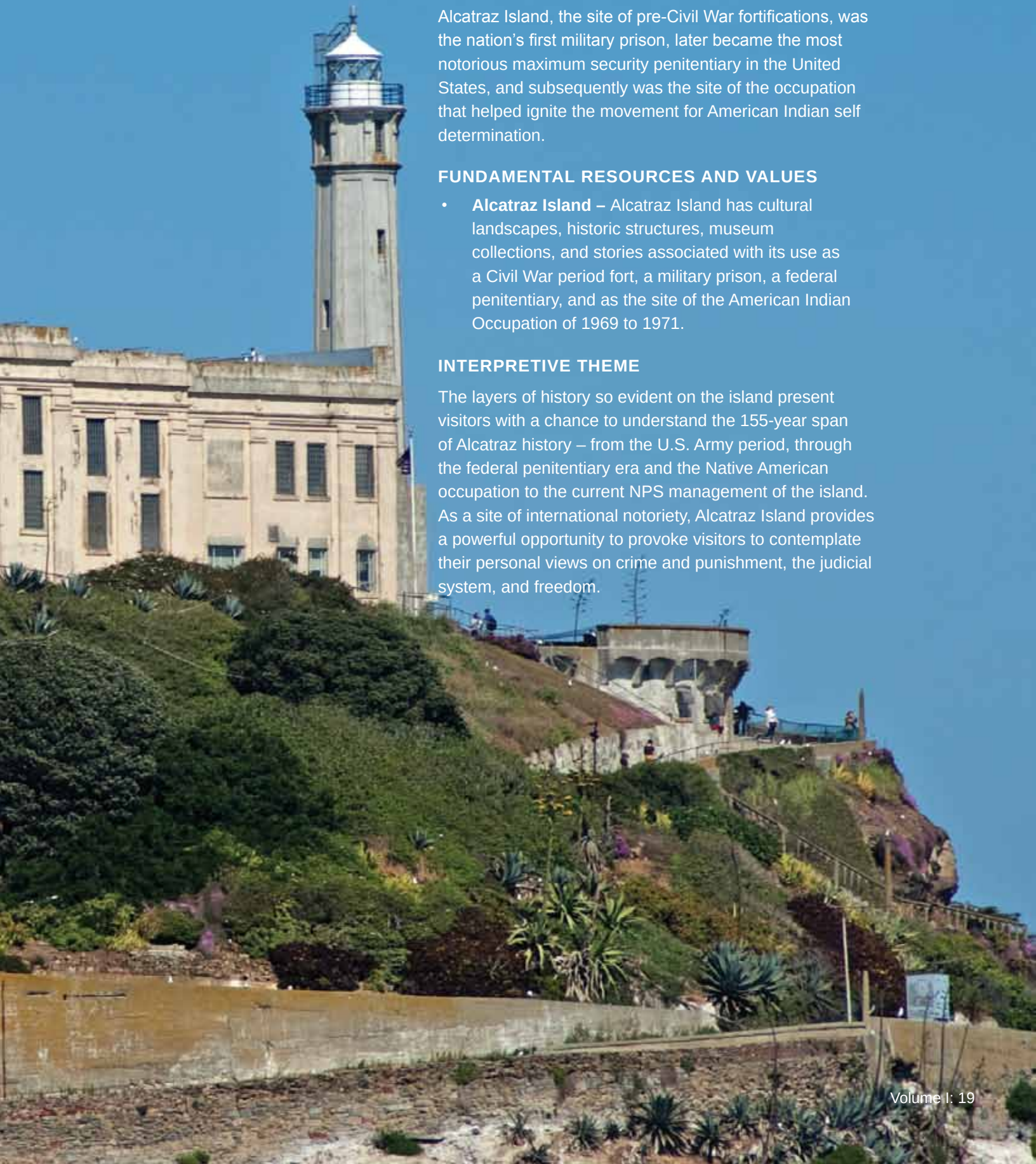
FUNDAMENTAL RESOURCES AND VALUES

- **Fortifications & Military Installations –** Golden Gate National Recreation Area includes cultural landscapes, structures, features, and museum collections, including historic fortifications and military installations.

INTERPRETIVE THEME

Coast defense posts are at the heart of park lands and are a major reason the park is preserved today. Although no hostile shot was ever fired, every major type of military fortification and architecture represented here demonstrates evolving defense technology. War, peace, and the nature of protection have shaped the country and will continue to shape the country.

Alcatraz Island



SIGNIFICANCE

Alcatraz Island, the site of pre-Civil War fortifications, was the nation's first military prison, later became the most notorious maximum security penitentiary in the United States, and subsequently was the site of the occupation that helped ignite the movement for American Indian self determination.

FUNDAMENTAL RESOURCES AND VALUES

- **Alcatraz Island –** Alcatraz Island has cultural landscapes, historic structures, museum collections, and stories associated with its use as a Civil War period fort, a military prison, a federal penitentiary, and as the site of the American Indian Occupation of 1969 to 1971.

INTERPRETIVE THEME

The layers of history so evident on the island present visitors with a chance to understand the 155-year span of Alcatraz history – from the U.S. Army period, through the federal penitentiary era and the Native American occupation to the current NPS management of the island. As a site of international notoriety, Alcatraz Island provides a powerful opportunity to provoke visitors to contemplate their personal views on crime and punishment, the judicial system, and freedom.

Scenic Beauty

SIGNIFICANCE

The headlands of the Golden Gate have long been recognized for their outstanding scenic qualities. The remarkable convergence of land and sea and of bay and ocean—combined with the palpable energy of 16 major rivers merging—create a spectacle that is truly unique.

FUNDAMENTAL RESOURCES AND VALUES

- **Dramatic Settings –** In concert with the open lands that frame it, the Golden Gate serves as the backdrop to the San Francisco metropolitan area. The dynamic contrasts between urban environments and undeveloped spaces—ranging from the open waters of the Pacific Ocean and San Francisco Bay to beaches, estuaries, headlands, and valleys—contribute greatly to the scenic experience enjoyed by area residents and visitors alike.
- **Compelling Historical Stage –** With its exceptional diversity of natural settings and central role in many significant chapters from America's past, the Golden Gate promotes a continuous sense of wonder and appreciation in the viewer. The integrity of this open space contributes significantly to the ability to recount the epic stream of history that flowed between the headlands.

INTERPRETIVE THEME

The powerful positive influences that park land and undisturbed open space can exert on urban settings—and residents—constitute a critical interpretive message. The scenic beauty of the park's historic and natural undeveloped landscapes inspired a grassroots movement that led to their protection. Proposed development that would have destroyed these lands sparked Bay Area community members to organize and ultimately preserve the open spaces that contribute so much to their quality of life.



Physical Landforms

SIGNFICANCE

The convergence of the San Andreas Fault, San Francisco Bay at the Golden Gate, and the California coastline creates a dynamic environment of exceptional scientific value.

FUNDAMENTAL RESOURCES AND VALUES

- **Geologic Resources –** Golden Gate National Recreation Area's geologic resources include faults, plate margins, and a subduction zone; a diversity of rock types and deposits representing more than 100 million years of the earth's history; and complex geologic processes that continue to shape the landscape.

INTERPRETIVE THEME

The park's underlying natural geologic systems and processes, and the resulting effects on people and the environment, link the park to the highly visible and significant geologic forces around the world.



Ohlone and Miwok

SIGNIFICANCE

Park lands are within the traditional homelands of Coast Miwok and Ohlone people. They contain indigenous archeological sites with native heritage, historic, and scientific values.

FUNDAMENTAL RESOURCES AND VALUES

- **Archeological Sites –** Sites in the park document the traditional homelands of the Coast Miwok and Ohlone people.

INTERPRETIVE THEME

The natural features and resources of the park, along with its location on the San Francisco Bay estuary, sustained the Ohlone and Miwok people for thousands of years before Europeans arrived. Archeological sites in the park link to these pre-European inhabitants and to their descendants who retain a vibrant culture to this day.

Foundation Statements for Muir Woods National Monument

Until the 19th century, redwood trees were in abundance in the many coastal valleys of northern California; however, logging soon removed most of them to supply the building materials for a growing population. In 1905, when William Kent and his wife, Elizabeth Thacher Kent, realized that Redwood Canyon, a popular hiking and recreation destination, contained one of the San Francisco Bay Area's last uncut stands of old-growth redwood, they bought 612 acres there for $45,000. To protect the trees, the Kents donated 298 acres containing the core of the forest to the United States government. President Theodore Roosevelt declared the area Muir Woods National Monument in 1908. The proclamation states that the tract contains "an extensive growth of redwood trees (*Sequoia sempervirens*)" that was "of extraordinary scientific interest and importance because of the primeval character of the forest in which it is located, and of the character, age and size of trees." At Kent's suggestion, the monument was named for conservationist John Muir. Due to circumstances surrounding its founding, Muir Woods National Monument holds a significant place in conservation history. It was the tenth national monument to be designated under the Antiquities Act, the first to be located in proximity to a major city, and the first to consist of formerly privately owned lands.



PARK PURPOSE

The purpose of Muir Woods National Monument is to preserve the primeval character and ecological integrity of the old-growth redwood forest for scientific values and inspiration.

Muir Woods National Monument

PARK SIGNIFICANCE

Muir Woods National Monument preserves the last remnant old-growth forest close to metropolitan San Francisco that retains its primeval character.

The establishment of the monument is an important manifestation of early 20th century conservation history.

FUNDAMENTAL RESOURCES AND VALUES

- **Old Growth –** Muir Woods National Monument preserves plant and animal species and the natural processes associated with the once abundant coastal redwoods ecosystem.
- **Conservation Movement –** The efforts of the people who ensured the preservation of this old-growth redwood forest continue to inspire conservation and stewardship actions today.

INTERPRETIVE THEME

The majestic, primeval old-growth redwoods of Muir Woods invite visitors, in the words of namesake John Muir, to “come to the woods, for here is rest.” The forest ecosystem of these towering trees and the creek beneath them supports an abundance of life. This remnant of the Bay Area’s once abundant redwood forests inspires visitors through its seminal conservation story, today welcoming travelers from around the world to have what is, for many, their first wildlands experience.

SPECIAL MANDATES AND ADMINISTRATIVE COMMITMENTS RELATED TO GOLDEN GATE NATIONAL RECREATION AREA

Special mandates are park-specific requirements that expand on the park's legislated purpose. These mandates generally require the National Park Service to perform some particular action as directed though congressional legislation. Administrative commitments are agreements that have been reached through formal, documented processes, and include agreements such as a conservation easement. The ongoing mandates and commitments for Golden Gate National Recreation Area are described in this section.

LAND ACQUISITION

Several pieces of legislation specify how Golden Gate National Recreation Area will conduct land acquisition activities.

- Public Law 92-589, the enabling legislation for Golden Gate National Recreation Area, specifies that "any lands or interests owned by the State of California, or any political subdivision thereof, may only be acquired by donation" (see appendix A).
- Public Law 95-625, Sec. 317(e), specifies that Golden Gate National Recreation Area (through the Secretary of the Interior) "shall accept and manage any land and improvements adjacent to the recreation area which are donated by the State of California or its political subdivisions."
- Public Law 96-199, Sec. 103(b), specifies spending limits on land acquisition.

MANAGEMENT AND ADMINISTRATION

- Public Law 95-625, Sec. 317(f), specifies that "no fees or admissions shall be charged, except to portions under lease or permit for a specific purpose. The Secretary [of the Interior] may authorize reasonable charges for public transportation."
- Public Law 106-291, Sec. 140, gives the park authority for fee-based education, interpretive, and visitor service functions within the Crissy Field and Fort Point areas of the Presidio.
- Public Law 96-199, Sec. 103(b), specifies spending limits on park development.
- Golden Gate National Recreation Area signed a Memorandum of Understanding (MOU) for the United Nations Educational, Scientific, and Cultural Organization's (UNESCO) Golden Gate Biosphere Reserve that requires the recreation area to cooperate with the reserve partners and promote reserve activities.

PENINSULA WATERSHED CONSERVATION EASEMENT

The San Francisco Public Utilities Commission's Peninsula watershed is home to three drinking water reservoirs. Located in San Mateo County, 13 miles south of San Francisco, the Peninsula watershed consists of 23,000 acres of forested hills, coastal scrub, and grasslands.

On January 15, 1969, the United States of America was granted conservation easements on 23,000 acres of watershed lands owned by the City/County of San Francisco. Two separate easements, a scenic easement and a scenic and recreation easement, were granted by San Francisco and accepted by the Secretary of the Interior. In 1972, Golden Gate National Recreation Area was charged with the responsibility of ensuring that the conditions of the easements are upheld.

The scenic easement generally includes the area within the watershed west of the Crystal Springs and San Andreas reservoirs. The primary purpose of this easement is to preserve the property in its natural state while permitting "the collection, storage, and transmission of water and protection of water quality for human consumption."

The scenic and recreation easement generally includes the area within the watershed east of the Crystal Springs and San Andreas reservoirs. The primary purpose of this easement is to preserve the property in its natural state while permitting "the collection, storage, and transmission of water and protection of water quality for human consumption; outdoor recreation; and other [compatible] uses."

Both easements contain numerous restrictions on use or modifications of the property. The scenic and recreation easement also grants the public "the right, subject to rules and regulations as may be imposed and published by [the Public Utilities Commission], to enter the premises for recreational purposes." Golden Gate National Recreation Area has the right and obligation to monitor use of the land for consistency with the terms of the two easements.

OTHER EASEMENTS

Golden Gate National Recreation Area is required to recognize numerous title encumbrances, including easement rights for access, utilities, and other purposes. These publicly and privately held rights can affect park operations and resources. Park managers cooperate with easement holders to protect park resources and provide visitor access.

TIDELANDS AND SUBMERGED LANDS LEASE

Golden Gate National Recreation Area leases tidelands and submerged lands from the California State Lands Commission. These include all offshore areas adjacent to park lands in Marin and San Francisco counties. The current term of the lease began June 1, 2009 and extends through May 31, 2058. Under the conditions of the lease, public access to and use of the existing beaches and strands shall remain open and available for public

use subject to reasonable regulation. The recreation area is required to notify the state within 10 days in the event that the public is charged any direct or indirect fee for the use and enjoyment of the leased areas. The lease also specifies that hunting on leased lands is prohibited.

The primary management purposes are to

- enhance public safety, use, and enjoyment of the subject lands and waters;
- protect and conserve the environment and any cultural and historical resources that may be present;
- preserve the subject lands in their natural state and protect them from development and uses that would destroy their scenic beauty and natural character;
- provide for recreation and educational opportunities; and
- manage the subject lands consistent with the administration and management of Golden Gate National Recreation Area, so long as it is not inconsistent with California state law.

LIGHTHOUSES

In September 2006, the United States Coast Guard notified the park of their plan to excess and transfer five lighthouses and navigational aids to the Department of the Interior in compliance with the park's enabling legislation (Public Law 92 as amended under Public Law 96-607) and the 2000 National Historic Lighthouse Preservation Act. The properties include Point Bonita Lighthouse, Point Diablo, and Lime Point in Marin County; the Montara Lighthouse in San Mateo County; and the Alcatraz Island lighthouse in San Francisco.

Following transfer to the park, the U. S. Coast Guard will continue to use the five sites as navigational aids under an NPS permit. The properties require substantial environmental cleanup and structure safety improvements to ensure public safety and visitor access in the future. The Park Service and the Coast Guard are cooperating to complete due diligence reports including environmental testing and analysis, building condition assessments, and developing cost estimates to determine remediation and structural safety requirements.

The park staff anticipates additional planning for the long-term preservation and use of the five lighthouses and is seeking funding prior to transfer. At the time of this writing, the timeframe and milestones for the property excess and transfer from the Coast Guard have not been established.

PLANNING ISSUES

Just as citizens helped to establish Golden Gate National Recreation Area, citizens helped identify the needs and opportunities that will shape the future management of the park. In 2006, more than 4,000 copies of the first GMP newsletter were distributed through a mailing list and park partners and at park visitor centers, popular park destinations and park events. The newsletter asked people for their opinions on what they value and enjoy most about the park, their concerns and suggestions for management, their ideas for the future of the park, and for any other comments they wanted to provide to the planning team. The park staff held six public open houses in April 2006 to gather additional input from the public. A scoping roundtable was attended by representatives of many local and regional jurisdictions, resource and regulatory agencies, and other public land managers. Discussion groups with environmental, historic, and community organizations and meetings with American Indian tribal representatives, park partners, and park founders were held to gather information. In addition, meetings with NPS staff were conducted as part of the scoping process.

The information gathered during these activities was used to develop and clarify the important planning issues. Exploring different ways to address the issues was the basis for developing the range of management concepts and the creation of the different management alternatives. The planning issues are summarized as follows:

ISSUES TO BE ADDRESSED

Visitor Access: Transportation and Trails

The current system of access to the park and monument do not fully address the needs of some park visitors or adequately protect park resources. The high reliance on cars and the lack of affordable transit options excludes some visitors, adds to roadway congestion, and increases emissions, resulting in a greater carbon footprint. This also creates problems with informal parking, public safety, visitor experience, and access for the park's neighbors. In some places, the condition of trails and their lack of connectivity to desired destinations do not meet all visitor and resource protection needs. Connections from communities within the region to the park are not adequate. There is a need for improved, safe trail connections among park sites and communities to provide seamless, safe, direct access alternatives. Visitor information and directional signs are inadequate; this leads to visitor frustration and the underutilization of park resources. The general management plan will address visitor access to and within the park in order to improve visitor experiences, improve connections among park sites and the larger community, and protect resources

Recreation Opportunities and Conflicts

Park use has increased in recent years, especially by traditional recreational users such as hikers, bicyclists, and equestrians. New activities such as boardsailing and mountain biking have developed and evolved since the 1980 *General Management Plan* was completed. There is interest in expanding current uses, including bicycling, hang gliding,

dog walking, individual and group camping, group day-use/picnicking, and hiking, and introducing new and different types of recreation. Requests to use the park and monument as venues for special events continue to increase. Conflicts between users—primarily between equestrians, mountain bikers, dog walkers, and hikers—have increased as overall park use has increased. There is concern about resource impacts associated with existing recreation activities, including habitat fragmentation, eroding trails, wildlife disturbance and harassment, litter, vandalism and graffiti, and vegetation trampling. The general management plan will address recreational opportunities by identifying the types of use, desired experiences, and support facilities that are appropriate for different park areas and sites in response to visitor demand and resource sensitivity.

Sustainable Natural Resource Preservation and Management

Golden Gate National Recreation Area is rich in natural resources: it comprises 19 types of ecosystems in numerous distinct watersheds and is home to rare, threatened, and endangered plant and animal species. The park is incorporated into the UNESCO Golden Gate Biosphere Reserve, designated by UNESCO's Man and the Biosphere Program—a program that provides a global network of sites representing the world's major ecosystem types. Historically, the lands within the park have been used for ranching, dairy farming, and military activities; this use has resulted in the modification of many of the area's natural ecosystems. Fire suppression and other management activities have also influenced natural ecosystems. Invasive plants from adjacent urban communities have taken root within the park.

The general management plan will address how park staff can preserve fundamental natural resources, as the fragility of those resources becomes better understood at the same time that visitation is increasing. The plan will provide direction for preserving and managing fundamental natural resources of the park in a sustainable manner and will provide direction for encouraging ongoing public stewardship.

Ocean resources, including natural marine resources and submerged cultural resources, are at risk due to a variety of threats. Global climate change has begun to cause sea level rise, change storm patterns, and affect ocean acidification. Natural sediment transport, which affects shoreline and beach dynamics, is affected by activities outside of park boundaries, including sand mining, dredging, dredge disposal, shoreline stabilization structures, and altered flow regimes. Overflights, boating, and other uses of marine habitats cause disturbance to marine species. Invasive exotic species inhabit the park's ocean and estuarine waters, displacing native species. Recreational and commercial fisheries may impact nearshore fish populations and ecosystem dynamics. Water quality is threatened by pollution from runoff, landslides, shoreline development, sewage outfalls, vessel traffic, oil spills, and contaminants exposed from dredging. Potential wave and tidal energy developments may alter habitat and disrupt physical processes. Numerous aquatic environments are in need of restoration. Currently the park has limited enforcement capacity for marine and estuarine resource protection.

- Alcatraz Island is a unique part of Golden Gate National Recreation Area. Accounts of early explorers describe the island as having little plant life and being covered with bird guano. Construction of fortifications during the Civil War and later the federal penitentiary changed the landscape significantly, sharpening the incline of the shoreline cliffs and flattening the slopes. Most of the existing plants on Alcatraz

> Island are a result of prison gardens or other means of importation, including soils brought from Angel Island during fort construction. Since the closure of the prison, many bird species have made the island home. Waterbirds and terrestrial landbirds (songbirds) have taken advantage of planted and unmanaged vegetation on the island. The seabirds and waterbirds are colonial nesting species that are highly susceptible to disturbance. Coupled with limited preservation of historic landscape features, the extent of sea bird habitat has grown sharply since 1972. The result is a tension between habitat protection and visitor access to many of the island's historic points.

Muir Woods National Monument preserves one of the last remaining ancient redwood forests in the Bay Area. From its inception, Muir Woods National Monument was designed to protect the "primeval character" of the redwood forests, and today, ecological integrity is a major driving force behind the management of the monument. Surrounding Muir Woods National Monument are mostly protected lands, including other units of Golden Gate National Recreation Area and lands managed by California State Parks (Mount Tamalpais State Park) and the Marin Municipal Water District.

Muir Woods National Monument is located entirely within the watershed of Redwood Creek, which originates on Mount Tamalpais (over 2,400 feet in elevation), flows through the heart of the national monument, bisects Frank Valley, and discharges into the Pacific Ocean at Muir Beach, approximately 3 miles below Muir Woods National Monument. The Redwood Creek watershed—extending from Mount Tamalpais to Muir Beach—is a delicate ecosystem that includes the northern spotted owl, coho salmon, and steelhead trout, and demands utmost care and vigilance. The Civilian Conservation Corp implemented projects to harden the banks of the creek in order to direct the flow of water away from Redwood groves. The stream stabilization on Redwood Creek has impacted the natural functions of the creek.

Sustainable Cultural Resource Preservation and Management

The park has a large collection of historic structures and archeological sites within a mosaic of cultural and natural landscapes. The majority of these cultural resources are nationally significant; however, their condition varies. The identification of appropriate preservation treatments, including sustainable adaptive uses of these resources, poses a substantial challenge. Cultural resources and archeological sites are impacted in a variety of ways such as through weathering, increases in visitor use, erosion, vandalism, and deferred maintenance. There is a continued need for developing baseline documentation of historic structures, cultural landscapes, and archeological inventories throughout the park. The park staff continues to work to balance the preservation needs of the park's natural and cultural resources. Still, there is a need to identify priorities when such balance is not very clear. The general management plan will address how to preserve fundamental cultural resources where visitation is increasing with the understanding of the fragility and significance of those resources. The general management plan will provide direction for preserving and managing fundamental cultural resources of the park in a sustainable manner and will provide direction for encouraging ongoing public stewardship.

Golden Gate National Recreation Area houses its museum collections in 15 separate facilities throughout the park that function as visitor centers, interpretive exhibits, or dedicated storage areas. Of the four largest storage repositories, three are located in

buildings owned by the Presidio Trust with no lease agreements in place. One of these structures, which is being removed in 2010 to make way for the Doyle Drive Project, houses the park's archeology lab. The park museum collections are in a vulnerable position due to temporary space and deteriorating structural conditions. The current conditions for museum collections in the park do not meet NPS standards for the long-term preservation, protection, and use of museum collections. Staffing for the museum collections has not been stable, thus precluding reliable access for researchers, the public, and park staff. Although planning has been underway, a suitable location for the park's museum collections has yet to be finally determined.

Alcatraz Island is a designated national historic landmark because of its national significance in the areas of military history and social history (penology: the study of incarceration). Although Alcatraz Island is a highly visible and popular site in San Francisco Bay, many of its buildings, archeological features, and landscape features are deteriorating, and sections of its shoreline are eroding. The park lacks the funding and personnel to protect and preserve all of the island's historic resources. In addition, some conflict has arisen over management strategies for protecting the island's cultural and natural resources (e.g., protecting important bird nesting habitat), as preservation of nesting habitat can inhibit historic preservation. The general management plan will provide direction for preserving and managing historic structures, archeological sites, cultural landscapes, and museum collections.

Climate Change

Climate change may have begun to affect both park resources and visitors. The effects are predicted to include changes in temperature, precipitation, evaporation rate, ocean and atmospheric chemistry, local weather patterns and increases in storm intensities and sea levels. These effects will likely have direct implications for resource management and park operations and influence the way visitors experience the park. Sustaining and restoring park resources will require the National Park Service to address many challenges, including fiscal and ecological threats and threats to the integrity of cultural and natural resources. Proactive planning and management actions will allow the park to avoid, mitigate, adapt to, and interpret these effects.

The general management plan will provide guidance on how to assess, respond to, and interpret the impacts of global climate change on park resources, and will identify objectives for reducing greenhouse gas emissions.

Land Acquisition

The 1978 National Parks and Recreation Act (16 USC 1a-7) requires general management plans to address potential modifications to the park boundaries. Current or potential changes in adjacent land uses could pose threats to the fundamental resources of the park and could limit the park's ability to protect the resources that support the park purpose and significance.

The diversity of park lands presents challenges for land and boundary management. The park needs to strengthen its strategic approach to land acquisition and park boundary changes and management in coordination with agencies and owners of property within the park boundary. A reassessment of guidelines and priorities is needed.

Golden Gate National Recreation Area and Muir Woods National Monument are portions of a larger area of protected open space in the Bay Area. The natural and cultural resources of the park would face a greater threat if not for the many other open space areas that contribute to the integrity of coastal ecosystems, scenic beauty, recreational opportunities, and the preservation of historic resources. The general management plan will address future land protection and boundary changes that support both the preservation of the park's fundamental resources and regional conservation priorities.

Reaching New Audiences

Visitation at many park sites does not reflect changing regional or state demographics. Some groups may not be aware of the park, feel a direct connection to it, or view the park as a recreational opportunity or a resource to be protected. Changing technology can also influence the park's relevancy to future generations. Reaching these audiences is essential to effective park management and to achieving civic engagement and community-based stewardship goals. The general management plan will include strategies to help engage new audiences.

Operational Facilities

Park resources, visitor safety, and visitor experience have suffered because of the lack of adequate operational facilities in appropriate locations. Golden Gate National Recreation Area has expanded in size in recent years, especially to the south in San Mateo County; the current distribution of facilities is no longer effective or efficient for day-to-day operations. Park maintenance and public safety functions are scattered throughout the park and are often located at sites and facilities that were not intended for such uses. Often, these functions operate out of makeshift facilities because they have been displaced by other park uses or outside forces, or have outgrown previous spaces. These operations have been forced to adapt to conditions that do not adequately meet their space, size, function, mobility, and security requirements. The general management plan will identify a strategy and actions for locating operational facilities.

Scenic Beauty and Natural Character

The park's scenic beauty and natural character provide opportunities for visitors to experience dramatic settings. The park's varied landscapes are the stage for multisensory experiences that are a hallmark of the Bay Area. Preserving these important scenic resources and making them available to the public are primary reasons the park was established. The National Park Service needs to protect these resources from degradation that can result from modern intrusions, including new development on the surrounding lands and waters. The general management plan will provide guidance in the preservation and enhancement of scenic resources.

Regional Cooperation

Visitor experience and resource protection in the park are affected by a variety of outside influences. Watersheds, viewsheds, soundscapes, ecosystems, and trail and transportation systems all extend beyond park boundaries; their management and preservation require cooperation with other adjacent public land managers, local jurisdictions, and private landowners. The park is located in an urban/suburban setting, which places demands on park lands and resources (particularly by local public utilies). The park staff cannot successfully manage the natural and cultural resources and visitor experiences by looking only within the park boundary. The general management plan will provide guidance on improving communication, coordination, and participation with public and private stakeholders with a goal of protecting ecosystems, watersheds, viewsheds, and visitor opportunities that cross jurisdictional boundaries.

National Park Service Identity

For a variety of reasons, the park does not have an easily recognized identity as part of the national park system. These include the large number of points of entry with minimal or no identifying entry features; the lack of NPS staff presence in many locations; the close juxtaposition of city, county, and state lands with NPS lands; and the lack of clearly marked park boundaries. The general management plan will provide guidance on improving and promoting the recognition of Golden Gate National Recreation Area and Muir Woods National Monument as national park system units and as areas where many visitors are first introduced to the concept and values of the national park system.

Partnerships

Partners are fundamental to long-term sustainability of the park. They help the National Park Service manage natural and cultural resources, deliver public programs, reach new audiences, and remain relevant and inclusive. They also help the park staff innovate and build community support. The National Park Service cannot fully accomplish parts of its mission without partners. Despite the many commonalities and objectives shared by the park staff and park partners, the current set of partners creates a diversity of goals and interests that may not be compatible with park goals. Partners' needs cannot always be accommodated in the park. The general management plan will provide guidance on partnership development and management that enables NPS managers to make effective decisions and foster flexible, productive relationships that strengthen the purpose and mission of the park.

American Indian Values

Since the late 1990s, the park staff has worked with American Indian groups, including the Federated Indians of Graton Rancheria (the federally recognized tribe comprised of park-associated Coast Miwoks and Southern Pomos), the many Ohlone tribes seeking federal recognition, and Ohlone individuals who partake in the stewardship of Ohlone heritage. Park lands in Marin County are the aboriginal homelands of Coast Miwoks. Park lands in San Francisco and San Mateo counties are the aboriginal homelands of Ohlones. The park staff desires to build on the relationship and civic engagement with American Indians in three broad activity areas: cultural resource management,

interpretation and education, and revitalization of community and tradition. The general management plan will provide guidance for integrating American Indian values with the management of resources and visitor experiences.

ISSUES THAT WILL NOT BE ADDRESSED

Dog Management

This general management plan does not make decisions about dog walking in the park. The National Park Service is conducting a separate planning process to develop a dog management plan that will decide how best to manage dog walking. The dog management plan will identify a range of alternatives, evaluate them, solicit public review, and make decisions. The planning team for the general management plan continues to coordinate with the dog management planning team to ensure consistency between the plans. The National Park Service could make minor changes to the preferred alternative in the general management plan to make the plan consistent with the final dog management plan.

RELATIONSHIP OF THIS PLAN TO OTHER PLANS

Golden Gate National Recreation Area and Muir Woods National Monument are located in the midst of a variety of public and private open spaces. These lands and waters combine to form a large and comprehensive natural open space corridor. Within Golden Gate National Recreation Area, there are sites that are being managed with guidance from recently completed land use or site management plans.

The complex physical and political landscape of the San Francisco Bay Area has produced an environment where a multitude of planning takes place regarding transportation, conservation, recreation, growth and development, and coastal and ocean resources. Most of these public and private land and marine areas are covered by approved plans prepared by a host of federal, state, regional, and local agencies. Management of these lands and waters could influence or be influenced by actions presented in this general management plan / environmental impact statement. The following narrative briefly describes the various planning efforts and projects at the federal, park, state, and county levels, and how they may be influenced by the general management plan.

NPS LAND USE PLANS FOR GOLDEN GATE NATIONAL RECREATION AREA SITES NOT INCLUDED IN THE GENERAL MANAGEMENT PLAN

Many of the park sites within Golden Gate National Recreation Area have recent management plans and environmental documents that provide updated guidance in how the lands will be managed. The following NPS management plans and decisions were reviewed in the preparation of the general management plan to ensure a coordinated management of park lands. For a complete understanding of how all lands and marine areas will be managed at Golden Gate National Recreation Area, the managers will be guided by this new general management plan in addition to the plans that cover park sites outside of this planning process. Each of these plans followed a prescribed planning process that involved public participation in their development. Following are descriptions of the management plans that together with this plan provide guidance for managing the park.

Point Reyes National Seashore / Golden Gate National Recreation Area Northern District Draft General Management Plan (draft)

The current guiding document for Point Reyes National Seashore and Golden Gate National Recreation Area is the 1980 *Golden Gate National Recreation Area / Point Reyes National Seashore General Management Plan* and its subsequent amendments. Since the 1980 plan was approved, Point Reyes National Seashore has managed the lands of the Northern District of Golden Gate National Recreation Area from the Bolinas/Fairfax road northward. The 1980 general management plan is being updated through the GMP/EIS planning process for Point Reyes National Seashore and the Northern District of Golden Gate National Recreation Area. The staff at Golden Gate

National Recreation Area participated in the planning process for Golden Gate National Recreation Area Northern District and worked to ensure consistency between the plans.

Fort Baker Plan and Final Environmental Impact Statement (2000)

In 1995, the remaining military land at Fort Baker was determined to be excess to the needs of the military by the Department of Defense's Base Realignment and Closure Committee. As a requirement of that determination, the land was transferred to the National Park Service, consistent with Public Law 92-589. The Fort Baker site includes a historic district listed on the National Register of Historic Places containing 45 contributing features (including post-Civil-War-era coastal fortifications), a marina and waterfront area at Horseshoe Cove, and important open space and scenic and natural areas including habitat for the federally listed endangered mission blue butterfly. The purpose of the 2000 EIS was to identify the following:

- the program and types of uses that would be accommodated in historic buildings and generate adequate revenue for building rehabilitation and preservation
- improvements to facilitate public uses, including new construction and removal of buildings, landscape treatments, trails, parking, circulation, and locations and patterns of use
- waterfront improvements
- opportunities for habitat restoration
- an approach to the protection, rehabilitation, and maintenance of the historic and natural resources

The highlights of the plan included development of a conference and retreat center, improvements to the Bay Area Discovery museum, and retention of the Coast Guard's Golden Gate Station. The plan provided guidance for the restoration of the historic parade ground, use of the historic boat shop as a public center; improvements to the marina; restoration of the beach; protection of mission blue butterfly habitat; and preservation of fortifications, batteries, and historic landscapes. Implementation of this plan contributes to the diversity of recreational opportunities provided at Golden Gate National Recreation Area and preserves military structures and landscapes that reflect the military history of the site. Actions in the GMP alternatives are consistent with the *Fort Baker Plan and Final Environmental Impact Statement*.

Fort Mason Center Long-term Lease Environmental Assessment (2004)

Fort Mason is part of the San Francisco Port of Embarkation National Historic Landmark District, historically serving as a major point of embarkation for American troops. In 1972, the U.S. Army transferred responsibility for its maintenance, restoration, and use of the long-time military base to the National Park Service as part of Golden Gate National Recreation Area. In 1975, a nonprofit group expressed an interest in moving to the lower part of Fort Mason, and the Fort Mason Foundation, a private nonprofit organization, was created by San Francisco civic and business leaders to negotiate with the National Park

Service on behalf of the nonprofit community. In 2004, following an environmental assessment and public review process, the National Park Service entered into a long-term lease with the Fort Mason Center to continue its public programming and management of Lower Fort Mason, and to invest in the capital improvements needed for historic building preservation. The long-term lease accommodates continued use of Building E by San Francisco Maritime National Historical Park. The alternatives in this general management plan are consistent with this environmental assessment and long-term lease.

Presidio General Management Plan Amendment and Environmental Impact Statement (1994)

The transition of the Presidio of San Francisco from military post to the national park system began in 1972 when, in the legislation creating Golden Gate National Recreation Area, Congress included a provision that the Presidio would become part of the national recreation area if the military ever declared the base excess to its needs. After the Presidio was designated for closure in 1989 by the Base Realignment and Closure Act, the U.S. Army transferred jurisdiction of the Presidio to the National Park Service in 1994. As part of the transition, in July 1994, the National Park Service completed and issued a final general management plan amendment for the Presidio laying out a vision for its future use and management.

Once the general management plan amendment was created, difficult issues remained regarding how to fund implementation of the plan. The National Park Service recognized that implementing the amendment would require innovative approaches and unique authorities to manage those aspects of the amendment. The National Park Service also recognized that the costs associated with this unit were high and uncharacteristic for the National Park Service. In 1996, Congress established the Presidio Trust (Trust) pursuant to the Presidio Trust Act for the purpose of preserving, enhancing, and maintaining the Presidio as a park, using the revenues from its leasable assets to fund that effort. In response to competing public policy goals, Congress gave the Trust the unique responsibility to reduce and eventually eliminate the costs of the Presidio to the federal government while retaining the Presidio within Golden Gate National Recreation Area.

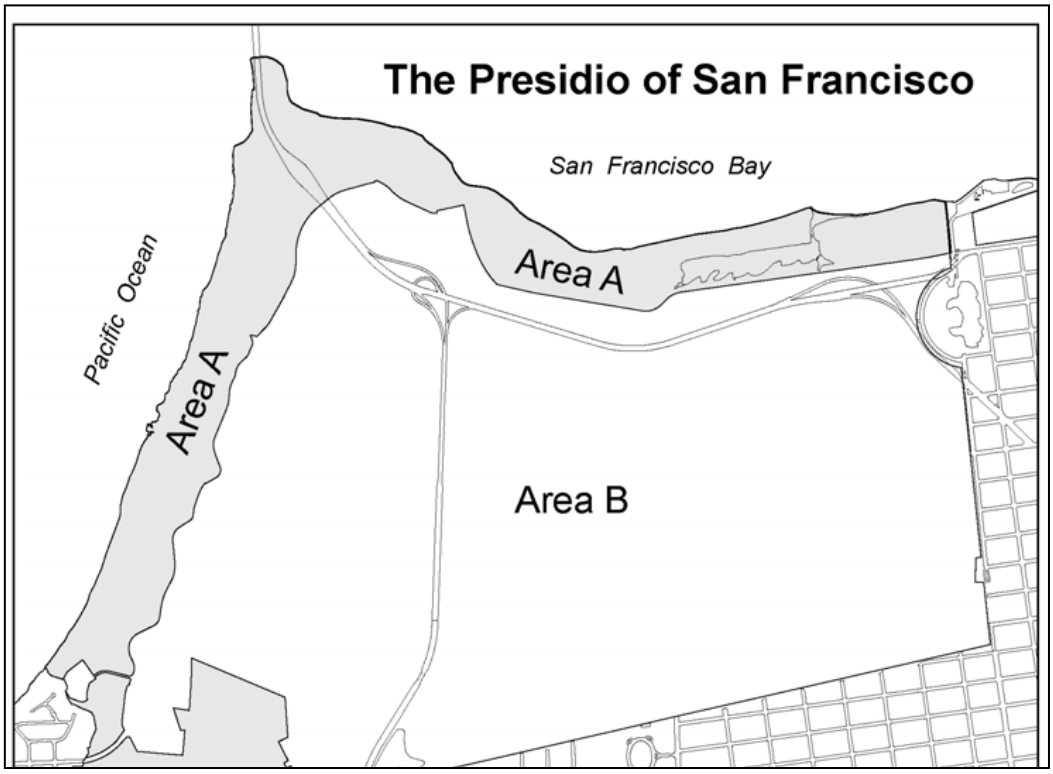
The Trust assumed jurisdiction over 80% of the Presidio of San Francisco (referred to as Area B) on July 1, 1998 and the National Park Service retains jurisdiction over the coastal areas and Lobos Creek and dunes (referred to as Area A). The general management plan amendment remains the foundation plan that guides the Trust's planning and decision making. In 2000, the Trust decided to develop a long-term management plan that would set the parameters within which the Trust would balance its preservation and financial responsibilities.

The general management plan amendment guidance for Area A, managed by the National Park Service, provides for natural resource restoration, education, and outdoor recreation along the coastal areas of San Francisco Bay and the Pacific Ocean. Major sites within Area A include Crissy Field, Fort Point National Historic Site, Baker Beach, and Lobos Creek and dunes.

For Area A, the actions proposed in this general management plan are consistent with the amendment that covers management of the lands within the Presidio of San Francisco.

The waters of the Pacific Ocean and San Francisco Bay that are adjacent to the Presidio have been zoned in the new general management plan.

Figure 2: Areas A and B of the Presidio of San Francisco



Sutro Historic District Comprehensive Design and Environmental Assessment (1993)

The *Sutro Historic District Comprehensive Design and Environmental Assessment* provides management guidance for the landscape rehabilitation of the Adolph Sutro Historic District. The plan retains the historic character while making changes to the property for new uses and interpretation for park visitors. The National Park Service continues to manage the Sutro Historic District structures and landscape, including the Cliff House, Sutro Baths, and the Sutro Heights Park. The landscape adjacent to the historic district includes a visitor center, trails, and parking, and the extended area is managed for natural and scenic values. The actions proposed in this general management plan recognize that the natural attributes and biotic systems of the larger surrounding park landscape contribute to the historical significance of the historic district. The alternatives are consistent with the environmental assessment.

CURRENT PLANS FOR OTHER PARK AREAS NOT MANAGED BY THE NATIONAL PARK SERVICE

Presidio Trust Management Plan: Land Use Policies for Area B of the Presidio of San Francisco (2002)

The *Presidio Trust Management Plan* is an update of the 1994 *General Management Plan Amendment* for the portion of the Presidio transferred to the Trust's jurisdiction in 1998. The Trust Act directs the Trust to manage Area B in accordance with the park purposes identified in the enabling legislation for Golden Gate National Recreation Area and the "general objectives" of the amendment. The latter were defined in Trust Board Resolution 99-11 ("General Objectives"). The *Presidio Trust Management Plan* provides an updated land use policy framework for Area B of the Presidio wholly consistent with the amendment's general objectives, and which retains and builds on the amendment's policies and principles. Since the time the amendment was adopted and the Presidio Trust Act was enacted, key land use and financial conditions have changed. *The Presidio Trust Management Plan* took into account the new Trust Act requirements, conditions that had changed since the amendment was adopted, new policies and management approaches, and provide a level of flexibility not contemplated in the amendment. The *Presidio Trust Management Plan* is the plan that the Trust looks to in making management and implementation decisions in Area B that are consistent with the purposes of Golden Gate National Recreation Area enabling legislation and the general objectives of the amendment. The amendment remains unaltered as the plan for NPS management of Area A of the Presidio.

The actions proposed in this general management plan are consistent with the *Presidio Trust Management Plan.*

OTHER NATIONAL PARK SERVICE PLANS

In addition to the overall vision and management plans previously described, the National Park Service develops detailed project and program implementation plans in order to implement the goals and objectives of those broader plans. The implementation plans cover topics such as natural and cultural resource restoration and preservation, visitor use, transportation, and park operations. An overall description of each plan or program in the following list, along with its relationship to this general management plan, is provided in Appendix B.

NPS Trails and Transportation Plans and Programs

- Marin Headlands and Fort Baker Transportation Infrastructure and Management Plan Final Environmental Impact Statement
- Trails Forever Program, in partnership with the Golden Gate National Parks Conservancy

NPS Restoration Plans

- Alcatraz Island Historic Preservation and Safety Construction Program Environmental Impact Statement
- Easkoot Creek Restoration at Stinson Beach Environmental Assessment
- Lower Redwood Creek Floodplain and Salmonid Habitat Restoration, Banducci Site – Environmental Assessment
- Lower Redwood Creek Interim Flood Reduction Measures and Floodplain / Channel Restoration Environmental Assessment
- Mori Point Restoration and Trail Plan – Environmental Assessment
- Ocean Park Stewardship Action Plan, National Park Service
- Pacific Ocean Park Strategic Plan, National Park Service
- Wetland and Creek Restoration at Big Lagoon, Muir Beach Final Environmental Impact Statement

NPS Program Implementation Plans

- Alcatraz Development Concept Plan and Environmental Assessment
- Bay Area Museum Resource Center Plan
- Climate Change Action Plan
- Comprehensive Interpretive Plan for the Golden Gate National Parks
- Fire Management Plan / Final Environmental Impact Statement for Golden Gate National Recreation Area
- Golden Gate National Recreation Area – Park Asset Management Plan

NPS Park Partner Plans

- Headlands Center for the Arts Master Plan
- Headlands Institute Campus Improvement and Expansion Plan
- Marine Mammal Center Site and Facilities Improvements Project Environmental Assessment
- Slide Ranch Master Plan and Environmental Assessment

NPS Plans in the Process of Being Developed

- Dog Management Plan / Environmental Impact Statement for Golden Gate National Recreation Area
- Golden Gate National Recreation Area – Long-Range Transportation Plan
- Marin Equestrian Stables Plan and Environmental Assessment

- Alcatraz Embarkation and Education Center Study
- Visitor Facility at Lands End

Other NPS General Management Plans

- San Francisco Maritime National Historical Park General Management Plan—Preparation of a new general management plan for the historical park is anticipated to begin shortly and will require close coordination with the staff at Golden Gate National Recreation Area.
- Point Reyes National Seashore General Management Plan—Preparation of a new general management plan is underway. This plan addresses lands that are part of Golden Gate National Recreation Area that are administered by Point Reyes National Seashore.

OTHER FEDERAL PLANS

- National Oceanic and Atmospheric Administration —Joint Management Plan for Cordell Bank, Gulf of the Farallones, and Monterey Bay National Marine Sanctuaries

STATE AND REGIONAL PLANS

- Association of San Francisco Bay Area Governments: Bay Trail Plan
- California Department of Parks and Recreation – Angel Island State Park Resource Management Plan / General Development Plan / Environmental Impact Report
- California Department of Parks and Recreation – California Outdoor Recreation Plan
- California Department of Parks and Recreation – Gray Whale Cove State Beach General Plan Amendment
- California Department of Parks and Recreation – Pacifica State Beach General Plan
- California Department of Parks and Recreation – Mount Tamalpais State Park General Plan
- Caltrans District 4 Devil's Slide Project
- Coastal Conservancy – Completing the California Coastal Trail
- Golden Lands, Golden Opportunity: Preserving Vital Bay Area Lands for all Californians (Greenbelt Alliance, Bay Area Open Space Council, Association of Bay Area Governments
- San Francisco Bay Plan
- San Francisco Bay Area Seaport Plan

- San Francisco Bay Area Water Transit Authority Final Program Environmental Impact Report: Expansion of Ferry Transit Service in the San Francisco Bay Area
- South Access to the Golden Gate Bridge – Doyle Drive Final Environmental Impact Statement / Report
- Statewide Historic Preservation Plan for California, 2006-2010

COUNTY AND LOCAL PLANS

- Central Marin Ferry Connection Project
- Fitzgerald Marine Reserve Master Plan
- Huddart and Wunderlch Parks Master Plan
- Marin County Bicycle and Pedestrian Master Plan
- Marin County Local Coastal Program Unit 1
- Marin Countywide Plan as amended
- Midcoast Action Plan for Parks and Recreation: Planning Team Report
- City of Pacifica Pedro Point Headlands Coastal Trail Connection
- Peninsula Watershed Management Plan – San Francisco Public Utilities Commission
- PG&E Jefferson-Martin 230kV Transmission Line Proposed Settlement and Environmental Assessment
- Regional Bicycle Plan for the San Francisco Bay Area
- San Francisco General Plan
- San Mateo County Comprehensive Bicycle Route Plan
- San Mateo County Trails Plan
- San Mateo Countywide Transportation 2010 Plan
- San Pedro County Park
- Sausalito General Plan
- Extension of San Francisco Municipal Railway's Historic Streetcar Environmental Impact Statement

RELATED LAWS AND NATIONAL PARK SERVICE POLICIES

Many park management directives are specified in laws and policies guiding the National Park Service and are not subject to alternative approaches. For example, there are laws and policies about managing environmental quality (such as the Clean Air Act, the Endangered Species Act, Executive Order 13112: "Invasive Species," and Executive Order 11990: "Protection of Wetlands"); laws governing the preservation of cultural resources (such as the National Historic Preservation Act and the Native American Graves Protection and Repatriation Act); and laws about providing public services (such as the Americans with Disabilities Act). In other words, a general management plan is not needed to decide that it is appropriate to protect endangered species, control exotic species, protect historic and archeological sites, conserve artifacts, or provide for access for disabled persons. Laws and policies have already addressed those and many other issues. Although attaining some conditions set forth in these laws and policies may have been temporarily deferred in the park because of funding or staffing limitations, the National Park Service will continue to strive to implement these requirements with or without a new general management plan. However, the general management plan provides an opportunity to develop more detailed interpretations needed in order to apply them in specific situations, and this is best decided during the development of the general management plan or during other planning processes.

There are other laws and executive orders that are applicable solely or primarily to units of the national park system. These include the 1916 Organic Act that created the National Park Service; the General Authorities Act of 1970; the act of March 27, 1978 (also called the Redwoods National Park Expansion Act), relating to the management of the national park system; and the National Parks Omnibus Management Act (1998).

The National Park Service Organic Act (16 *United States Code*, Section 1) provides the fundamental management direction for all units of the national park system:

> *[P]romote and regulate the use of the Federal areas known as national parks, monuments, and reservations . . . by such means and measure as conform to the fundamental purpose of said parks, monuments and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.*

The National Park System General Authorities Act (16 *United States Code* [USC] Section 1a-1 et seq.) affirms that while all national park system units remain "distinct in character," they are "united through their interrelated purposes and resources into one national park system as cumulative expressions of a single national heritage." The act makes it clear that the National Park Service Organic Act and other protective mandates apply equally to all units of the system. Further, amendments state that NPS management of park units should not "derogat[e] . . . the purposes and values for which these various areas have been established."

The National Park Service also has established policies for all units under its stewardship. These are identified and explained in a guidance manual entitled NPS *Management*

Policies 2006. The "action" alternatives considered in this document (alternatives 1, 2, and 3), as well as the no-action alternative (current management), incorporate and comply with the provisions of these mandates and policies. Appendix C details key NPS policies and their desired conditions and strategies.

Building the Management Alternatives 2



INTRODUCTION

The development of the alternatives for this general management plan began with publication of newsletter 1 (spring 2006) and public open houses that asked people what they valued and enjoyed most about Golden Gate National Recreation Area and Muir Woods National Monument. Additionally, the public were asked for their concerns and suggestions for the future management of the park. The public response was analyzed and reported in newsletter 2 (spring 2007). During this time, the planning team met with park staff, park partners, and other stakeholders to collect information on existing conditions and related issues.

Throughout the scoping process, the planning team collected and analyzed information about the park's natural and cultural resources, and about visitor characteristics and use patterns. Guided by the public input and the results of the analysis, the planning team defined the issues that the new general management plan would address. Next, the planning team explored different ways to address the issues. This exploration formed a set of concepts that would be used to develop the alternatives for the general management plan. The planning team developed four management concepts, each exploring a different possible future for Golden Gate National Recreation Area and Muir Woods National Monument. These management concepts were presented to the public in newsletter 3 (fall 2007). The management concepts were as follows:

- Concept 1: "Connecting People with the Parks"
- Concept 2: "Preserving and Enjoying Coastal Ecosystems"
- Concept 3: "Focusing on National Treasures"
- Concept 4: "Collaborating Regionally"

The planning team used these management concepts to guide their development of the preliminary alternatives for the general management plan. Each preliminary alternative consists of two main components. First, there is a management concept that creates a general theme for the overall management of the park. Second, management zones are created that identify a range of potential desired conditions for natural and cultural resources, opportunities for visitor experiences, and general levels of development and visitor use and services, based on the purpose and significance of the park. These management zones are then applied to the park in different ways to reflect the concept of each alternative.

Eight management zones were developed for this general management plan. The desired conditions are different in each management zone and reflect the focus of that particular zone. Guided by each management concept, zones were applied to the park in different configurations, forming the basis of the preliminary alternatives. The preliminary alternative maps reflected the intent of each concept, and showed how the zones would be allocated.

As the preliminary alternatives were being developed, it became apparent to the planning team that the fourth management concept, "Collaborating Regionally," was a philosophy that applied to the overall management of the park and was applicable in all of the alternatives, rather than a specific park vision used to guide the development of one

alternative. Therefore, the park managers adopted the "Collaborating Regionally" concept as a *guiding principle* for managing the park and did not further develop a fourth preliminary alternative.

Once developed, the three preliminary alternatives were described in detail in newsletter 4 (spring 2008) and shared with the public. The planning team hosted local workshops to explain and test the alternatives with the public. Using the public comments, the planning team worked to strengthen the alternatives and identify the NPS preferred alternative. With the alternatives approved by park managers, the planning team began preparation of this draft general management plan / environmental impact statement.

This general management plan presents the draft alternatives with their zone maps and supporting narratives, including the National Park Service's preferred alternative, for future management of Golden Gate National Recreation Area and Muir Woods National Monument. Also included is a description of current conditions, representing the management direction and trends that are based on the 1980 *General Management Plan* and its subsequent amendments. The description of the current conditions serves as a basis of comparison with the three alternatives and is referred to as the "No-action Alternative." The other draft alternatives are referred to as "Action Alternatives."

The next section presents the three management concepts that were used to guide the development of the alternatives for the general management plan. This is followed by an explanation of how the NPS preferred alternatives were selected. Then the reader is presented with detailed descriptions of the eight management zones.

CONCEPTS FOR FUTURE MANAGEMENT

The legislation that established the parks, the histories of the parks, and the issues and needs that were identified early in the planning process all helped to shape four general concepts for future management of the parks. While four concepts were developed, only three of them were carried forward to guide the development of distinct alternatives as the fourth applied to all alternatives. The following three concepts, then, formed the basis for developing potential management alternatives.

CONCEPT 1: CONNECTING PEOPLE WITH THE PARKS (EVOLVED INTO ALTERNATIVE 1)

The emphasis of this concept is to reach out and engage the community and other visitors in the enjoyment, understanding, and stewardship of the park's resources and values. Park management would focus on ways to attract and welcome people, connect people with the resources, and promote understanding, enjoyment, preservation, and health—all as ways to reinvigorate the human spirit. Visitor opportunities would be relevant to diverse populations now and in the future.

Rationale

This concept emphasizes the park's management commitment to the founding idea of "parks to the people," and the park's fundamental purpose of bringing national park experiences to a large and diverse urban population. Improving connections between the park and the people is fundamental to achieving the park's purpose and to maintaining the public's continued interest and support.

Goals

Visitor Experience

- Actively seek opportunities to respond to the needs and interests of the diversity of visitors.
- Encourage visitors to engage in a wide range of opportunities and experiences in a diversity of settings.
- Enhance outreach and access to and within the park and monument and make them welcoming.
- Foster the visitor's deep personal connection to the park and discovery of the values and enjoyment of the natural environment.
- Encourage hands-on stewardship through visitor opportunities that promote personal health and responsibility.

Cultural Resources

- Maximize adaptive reuse and rehabilitation of cultural resources (structures, landscapes, and archeological sites) to support visitor enjoyment, understanding, and community connections.
- Work with interested groups and populations to preserve and protect cultural resources.
- Preserve and protect cultural resources so that visitors can connect with and appreciate these resources and their stories.

Natural Resources

- Maintain the integrity and diversity of natural resources and systems.
- Enhance the public's access to natural resources to promote visitor understanding and appreciation.
- Integrate natural resource preservation and concepts with visitor stewardship opportunities to deepen visitor understanding.

CONCEPT 2: PRESERVING AND ENJOYING COASTAL ECOSYSTEMS (EVOLVED INTO ALTERNATIVE 2)

The emphasis of this concept is to preserve, enhance, and promote dynamic and interconnected coastal ecosystems in which marine resources are valued and prominently featured. Recreational and educational opportunities would allow visitors to learn about and enjoy the ocean and bay environments, and gain a better understanding of the region's international significance and history. Facilities and other built infrastructure could be removed to reconnect fragmented habitats and achieve other ecosystem goals.

Rationale

The concept creates a vision for intentionally connecting resources and systems to form contiguous habitat from the ocean to the coastal hills. The more connected the water and land base, the better the ability for ecosystems to adjust and adapt, thus increasing their resiliency to urban pressures and climate change. This concept also responds to the public's strong interest in having more natural wild lands in close proximity to the urban communities of the San Francisco Bay Area.

Goals

Visitor Experience

- Connect visitors with resources and the park through expanded and diverse science and stewardship programs that are focused on preservation and restoration of coastal and marine resources and address the implications of climate change.
- Provide greater opportunities for visitors to explore wild areas and immerse themselves in nature.

- Manage low-impact visitor use that enhances the qualities of solitude, quiet, and naturalness in sensitive natural resource areas, and accommodate active recreational pursuits in other areas.
- Increase visitor understanding, awareness, and support for coastal resources through participation in stories and programs about human interaction with and dependency on natural resources.

Cultural Resources

- Incorporate the history and collections related to natural resources to raise awareness of America's ongoing efforts to conserve marine ecosystems.
- In park interpretation and education programs, emphasize sites and stories connected to coastal resources, including shipwrecks, archeological sites, agricultural lands and uses, coastal defense, and lighthouses, so visitors can connect with those resources.
- Maximize adaptive reuse and rehabilitation of cultural resources to support visitor enjoyment, understanding, and community connections.
- Work with interested groups and populations to preserve and protect cultural resources.
- Preserve and protect cultural resources so that visitors can connect with and appreciate these resources and their stories.

Natural Resources

- Reconnect fragmented habitat within and adjacent to the park to strengthen the integrity and resiliency of the coastal ecosystem to respond to climate change and urban pressures.
- Optimize recovery of special status species and survival of wide-ranging wildlife.
- Restore natural processes and/or allow these processes to evolve unimpeded to the greatest degree feasible.
- Promote partnerships to help the park become a center for innovative coastal science, stewardship, and learning.

CONCEPT 3: FOCUSING ON NATIONAL TREASURES (EVOLVED INTO ALTERNATIVE 3)

The emphasis of this concept is to focus on the park's nationally important natural and cultural resources. The fundamental resources of each showcased site would continue to be managed at the highest level of preservation to protect the resources in perpetuity and to promote appreciation, understanding, and enjoyment of those resources. Visitors would have the opportunity to explore the wide variety of experiences that are associated with many different types of national parks—all in this park. All other resources would be managed to complement the nationally significant resources and associated visitor experiences.

Rationale

The concept highlights the park's variety of nationally significant resources. By distinguishing the nationally significant resources and promoting the NPS identity, the objective of bringing exemplary national park experiences to an urban population would be met. The concept would also allow the National Park Service to focus the management of the park's resources, visitor experiences, and partnerships, giving priority to the most significant sites.

Goals

Visitor Experience

- Provide visitors with opportunities to explore, learn, and enjoy the park's unique resources and stories.
- Allow the park's distinctive resources and associated stories to shape recreational opportunities.
- Emphasize active public participation in stewardship programs at the showcased sites.
- Provide visitors with opportunities for understanding and enjoying national park experiences.

Cultural Resources

- Emphasize the fundamental resources that contribute to the national significance of the park, including national historic landmarks. Manage all other resources to complement the significant resources and visitor experiences.
- Tie all the associated cultural resources, museum collections, and stories to the showcased sites.
- Preserve and protect cultural resources to highlight the interpretive and educational values and provide, wherever possible, direct contact with the resources.

Natural Resources

- Emphasize the preservation of fundamental natural resources that contribute to the significance of each park unit. Manage all other resources to complement the distinctive resources and experiences.
- Protect or restore the integrity of fundamental natural resources and processes that support the significance of each park unit.
- Manage distinctive natural resources to ensure their ecological integrity while providing opportunities to engage the visitors in hands-on stewardship and exploration.

ACTIONS AND ALTERNATIVES CONSIDERED BUT DISMISSED FROM FURTHER CONSIDERATION

During the planning process for this general management plan, five alternative concepts were developed:

- *Connecting People with the Parks,*
- *Preserving and Enjoying Coastal Ecosystems,*
- *Focusing on National Treasures,*
- *Mosaic of National Park Experiences,* and
- *Collaborating Regionally*.

A number of other concepts were developed in early brainstorming sessions: *Golden Gate National Recreation Area is a Crown Jewel, A Park for the Next Century, The Park as an Experiment/Living Laboratory, A Center of Hands-On Learning and Action, Healthy People/Healthy Parks, and Sustainability in Action*. Each of these concepts eventually evolved into ideas built into the remaining concepts, became guiding principles, or were recognized as NPS policy; therefore, they were not retained as individual alternative concepts.

As the planning team developed the five concepts into alternatives, two of the early concepts were dismissed from further consideration: *Mosaic of National Park Experiences* and *Collaborating Regionally*.

MOSAIC OF NATIONAL PARK EXPERIENCES

Mosaic of National Park Experiences envisioned Golden Gate National Recreation Area and Muir Woods as providing visitors with opportunities to explore different types of national parks within the park. Park areas would be designated to promote distinct types of national park settings and visitor experiences based on the primary natural and cultural resources and key interpretive themes. For example, one area of the park would be managed as a marine preserve, another park area managed as a national seashore, and one as a national historical park. Visitors would have the opportunity to explore the wide variety of national park experiences at one park. However, the planning team determined that this concept had more utility as a marketing strategy, rather than as a management concept. Parts of this concept are evident in *Focusing on National Treasures*, as it centers on the best that each area has to offer. Therefore, the *Mosaic* concept was dismissed from consideration and not brought forward to the public.

COLLABORATING REGIONALLY

The second dismissed concept, *Collaborating Regionally*, was shared with the public in newsletter 3 (fall 2007). The emphasis of the concept was to manage the park and monument as the core of extensive public lands, connecting all parks and open spaces and other resources as a seamless whole, regardless of land ownership and boundaries. Collaboration among land managers would integrate the NPS management of the park with that of their surrounding natural and cultural resources and visitor opportunities. The concept was eventually identified as an overall management philosophy applicable to all the alternatives. The *Collaborating Regionally* concept was therefore incorporated as a Guiding Principle for park management; integrated into all alternatives, and was not carried forward as a distinct land use alternative. Additionally, specific actions promoting collaboration among land managers are included within each alternative. A few of the many examples of these actions include trail connections to public lands and communities; multi-agency visitor centers and maintenance facilities, and collaborative ocean stewardship.

FULL RESTORATION OF BUILDINGS AND LANDSCAPES ON ALCATRAZ ISLAND

An early version of Alternative 3, "Focusing on National Treasures," originally contained a very high level of restoration of historic resources on Alcatraz Island. Given NPS fiscal constraints, the high cost of fully restoring numerous buildings and features, and the potential for major impacts to breeding colonies of waterbirds, the planning team revised the proposal to be more financially achievable and sustainable. The result is a more focused approach, highlighting the buildings and landscape areas that contribute most to the visitor experience and national historic landmark status, while minimizing impacts to wildlife. Costs were reduced by two-thirds through this approach. The revised Alternative 3 calls for restoration of only select parts of buildings and emphasizes stabilization and rehabilitation for other historic resources.

SELECTION OF THE NATIONAL PARK SERVICE PREFERRED ALTERNATIVES

The NPS preferred alternatives, one for planning area sites within Golden Gate National Recreation Area and another for Alcatraz Island and Muir Woods National Monument, were developed following an analysis of the advantages of each preliminary alternative, including consideration of public comments received in response to newsletter 4. The National Park Service uses a process called "Choosing by Advantages" (CBA) that allows the agency to evaluate the relative advantages of the alternatives, determine the importance of those advantages based on the park's purpose and related public interest, and assess whether those advantages are worth their associated costs.

The topics that the planning team used to evaluate the relative advantages between the alternatives were as follows:

- Strengthen the integrity and resiliency of coastal ecosystems.
- Strengthen the integrity of resources that contribute to the National Register of Historic Places, National Historic Districts, and National Historic Landmarks.
- Support a diversity of recreational opportunities and national park experiences.
- Improve and promote public understanding of park resources, identity, and NPS values.
- Provide visitors with safe and enjoyable access and circulation to and within the park.

The evaluation of the advantages and costs of each alternative were initially identified by park managers during a weeklong workshop, with several follow-up meetings to further refine the NPS preferred alternative. The CBA process indicated the following:

> **Alternative 1** represents the greatest advantage for the park lands of Golden Gate National Recreation Area in Marin, San Francisco, and San Mateo counties.
>
> **Alternative 3** represents the greatest advantage for Alcatraz Island and Muir Woods National Monument.

The CBA evaluation was an important step in selecting and refining the NPS preferred alternatives. Critical changes to the NPS preferred alternatives were made to incorporate ideas from the other alternatives where they were consistent with the management concept and provided additional "advantages" to the park. The process of shaping the preferred alternatives continued well after the CBA workshop through additional public comment and consultation with the staff at the NPS Pacific West Regional Office.

MANAGEMENT ZONES

Management zones are the heart of the alternatives developed for the general management plan. Each zone defines a set of desired conditions for natural and cultural resources, visitor experiences, and general levels of development. These desired conditions are different in each management zone and reflect the overall focus of that particular zone. Eight management zones have been developed.

Table 1: Management Zones

DIVERSE OPPORTUNITIES ZONE

This management zone provides a range of natural and historic settings and facilities to welcome and support a wide variety of visitor opportunities appropriate in the park. Significant fundamental park resources would be preserved while different levels of visitor use would be accommodated. People would have a wide range of educational, interpretive, and recreational opportunities to enjoy and appreciate the park's resources.

NATURAL RESOURCES	Natural resources provide distinct visitor opportunities and experiences through a range of park settings. The natural elements of these park settings would help define and locate visitor opportunities, services, and facilities.
Geologic Resources	Natural geologic processes, including natural physical shoreline processes, would be left unimpeded except when required for safety and to protect human health. To the greatest extent possible, infrastructure would be designed or relocated to avoid paleontological resources and geologic resources and hazards. Impacted areas would be restored to the greatest extent possible. Geologic and paleontological features and resources would be protected from visitor use impacts.
Water Resources	Natural hydrologic systems and processes would be left unimpeded to the greatest extent possible. Impacted areas would be restored to the greatest extent possible. Hydrologic systems and processes would be reestablished while incorporating visitor use objectives. Potential impacts from visitor use, including erosion, surface and groundwater contamination, and alteration of natural processes, would be avoided or minimized.

Marine Environment	The natural physical processes of marine and coastal areas would be left unimpeded to the extent possible. Impacted areas would be restored to the greatest extent possible. Marine resources would be protected from visitor use impacts.
Coastal Ecosystems: Vegetation	Native vegetation and vegetation communities (including aquatic vegetation) would be preserved to the greatest extent possible. Species that can withstand and support intense visitor use may be desired in developed areas or areas that receive high levels of trampling. Exotic invasive plants could be present, but would be suppressed and actively managed.
Coastal Ecosystems: Aquatic and Terrestrial Wildlife	Native wildlife and wildlife habitat would be protected from visitor use impacts to the greatest extent possible and wildlife watching opportunities would be available. Exotic invasive animals would be managed to the extent feasible, with emphasis on species that have inordinate impacts on native communities or are associated with human health risks.
Natural Sounds (Soundscapes) and Dark Night Skies (Lightscapes)	The natural soundscape would often be mixed with sounds from human activity, visitor use, and historically appropriate sounds. The soundscape would be affected by the developed landscape, and noise impacts on wildlife behavior and habitat could exist in areas. These impacts would be minimized as much as possible while providing for human uses and interpretation. During times of low visitation, including nighttime and off-peak times, the natural soundscape could predominate, with occasional noise-free intervals. Dark night skies and natural lightscapes would be preserved as much as possible while providing for visitor use and achieving historic preservation goals, such as re-creating historic lighting from the period of significance. Outdoor lighting would provide adequate illumination for visibility while minimizing impacts on nocturnal wildlife behavior to the extent possible.
Threatened & Endangered (T&E) Species and their Habitat	T&E species and their habitats would be managed to support species requirements.

CULTURAL RESOURCES

Cultural resources would provide distinct visitor opportunities and experiences through a range of park settings. The cultural elements of these park settings would be the backdrop for interpretation, visitor use and activities, and other visitor services.

Historic Structures

Based on their condition, national register significance, and suitability for recreational, visitor use/educational, or operational/administrative purposes, historic structures would be rehabilitated, stabilized, allowed to deteriorate naturally, or removed if they become unsafe. (See “Mitigative Measures” in part 7 for more information on the treatment of structures listed in or eligible for listing in the national register.)

Cultural Landscapes

Cultural landscapes would be managed to preserve their physical attributes and their use when that use contributes to their historical significance. Elements may be adapted to accommodate visitor use or education or park and partner operations, while preserving those features that convey historical, cultural, or architectural values.

Ethnographic Resources

Access for traditional activities would be preserved. The National Park Service would continue to recognize the past and present existence of peoples in the region and the traces of their use of resources as an important part of the cultural environment to be preserved and interpreted. The Park Service would consult with associated American Indian tribes to develop and accomplish the programs of the park in a way that respects the beliefs, traditions, and other cultural values of the tribes who have ancestral ties to the park lands.

Archeological Resources and Submerged Cultural Resources

Archeological resources and submerged cultural resources would remain *in situ* and undisturbed, unless removal of artifacts or intervention into cultural material is justified by preservation treatment, protection, research, interpretation, or development requirements. These preserved resources would be kept in a stable condition to prevent degradation and loss of research values or *in situ* exhibit potential. Significant archeological and other scientific data threatened with loss from the effects of natural processes, human activities, preservation treatments, park operations, or development activities would be recovered, recorded, or otherwise preserved.

Park Collections

Park collections (archeological artifacts, archival materials, natural history collections, and historical artifacts) would be documented, cataloged, and protected to ensure long-term preservation according to NPS standards and guidelines. Collections would be made available for research, exhibits, and interpretive programs in order to inform and

engage the public in ongoing stewardship.

VISITOR EXPERIENCE

People could participate in a range of recreational, interpretive, and educational opportunities supported by a variety of visitor services.

Types of Activities

The following recreational activities could occur in this zone:

beach activities such as informal beach sports, walking, swimming, picnicking, and surf fishing

marine activities such as fishing, boating, crabbing, kayaking, surfing, and sightseeing

land-related activities such as developed camping, overnight lodging, picnicking, biking, hiking, walking, running, horseback riding, hang gliding, sightseeing, and bird and wildlife viewing

other kinds of activities: exploring historic sites and structures, participating in interpretive programs and participating in stewardship programs, nature study, photography, and artistic endeavors

In addition, special and organized events such as family events, community celebrations, and foot races could be allowed when appropriate, but measures would be taken to mitigate impacts to resources and other visitors during these events.

Interpretation/ Education/ Orientation

Visitors would gain an understanding about the importance of the park's natural (including marine), scenic, and historic resources and the potential threats to those resources. Further, visitors would have diverse recreational and educational opportunities near the urban area.

A high level of visitor orientation and interpretive services would be available in this zone.

Communication of interpretive themes would occur through many interpretive methods.

Scenic Views

Outstanding views of natural, cultural, and scenic resources would be an integral part of the visitor experience of this zone.

Natural Sounds (Soundscapes) and Dark Night Skies (Lightscapes)

Natural sounds would be audible and would enhance the visitor experience in this zone. The natural soundscape would often be mixed with sounds from human activity and visitor use. In some areas, the soundscape would be affected by development. During times of low visitation, including nighttime and off-peak times, the natural soundscape could predominate, with occasional noise-free intervals.

Dark night skies and natural lightscapes would enhance the visitor experience in this zone. Outdoor lighting would provide appropriate illumination for safety and visitor expectation while minimizing light pollution.

Skills, Risk, Time Required

Challenge, risk, and testing of outdoor skills would be generally unimportant to most visitors in this zone. Visitors of all levels of physical ability would enjoy this zone.

The time commitment needed to experience this zone would vary from a very short period of time to several hours, possibly including overnight stays.

Use Levels/ Density/ Encounters

High levels of use in centralized activity nodes would be expected, leading to the likelihood of high rates of encounters among visitors. Groups of many sizes would be accommodated.

DEVELOPMENT AND MANAGEMENT

Development could include a diversity of facilities to welcome, orient, and support visitors.

Type/Character of Visitor Access

Visitor access would be a dominant aspect of the zone, with a system of multiple transportation modes that are highly interconnected to allow for user-defined access to and within the zone.

Vehicular and nonvehicular access would be provided to and throughout the zone.

Types of Facilities

The following types of facilities could be provided:

Interpretive: visitor centers/contact stations, amphitheaters, interpretive kiosks

Recreational: designated trails, designated activity areas, boardwalks, picnic facilities, boat docks, designated nonmotorized boat launch sites, fishing platforms, temporary boat tie-ups, horse stables, designated camping areas

	Support: overnight lodging facilities, retail/rental/food outlets, large event gathering areas, restroom facilities, parking areas, transportation facilities (multimodal hubs, bike paths, roads)
Commercial Services and Nonprofit Programming	A variety of necessary and appropriate commercial services offerings that may be available include but are not limited to: equipment rentals, guides, food and beverage, recreational, equestrian, overnight accommodations, and retail. A variety of nonprofit programming that may be available includes, but is not limited to environmental, educational, interpretive, community, and arts. Certain buildings may be leased for compatible uses.

SCENIC CORRIDOR ZONE

This management zone includes scenic trails, roads, and coastlines that provide for sightseeing and related recreational opportunities. Resources could be modified in this zone, and facilities would highlight and enhance the natural, cultural, and scenic values, as well as provide for a safe tour route.

NATURAL RESOURCES

Visitor opportunities and park operations would be managed to maintain and restore natural resource integrity.

Opportunities that allow visitors to view high quality natural resources and their inherent scenic qualities would be provided.

Geologic Resources

Natural geologic processes, including natural shoreline processes, would be left unimpeded except when human health and safety are threatened. To the greatest extent possible, infrastructure would be designed or relocated to avoid paleontological resources and geologic resources and hazards. Impacted areas would be restored to the greatest extent possible. Geologic and paleontological features and resources would be protected from visitor use impacts.

Water Resources

Natural hydrologic systems and processes would be left unimpeded to the greatest extent possible. Impacted areas would be restored to the greatest extent possible. Hydrologic systems and processes would be reestablished while incorporating visitor use objectives. Potential impacts from visitor use, including erosion, surface and groundwater contamination, and alteration of natural processes, would be avoided or minimized.

Marine Environment

The natural physical processes of marine and coastal areas would be left unimpeded to the extent possible. Impacted areas would be restored to the greatest extent possible. Marine resources would be protected from visitor use impacts.

Coastal Ecosystems: Vegetation

Native vegetation and vegetation communities (including aquatic vegetation) would be preserved to the greatest extent possible.

Vegetation—focused on sites lacking native habitat value—could be modified in this zone to accommodate and enhance scenic views. Intact native habitat loss would be mitigated through restoration actions and result in no net loss. Species that can withstand and support high levels of visitor use and trampling may be desired. Exotic invasive plants could be present, but would be suppressed and actively managed in the park.

Coastal Ecosystems: Aquatic and Terrestrial Wildlife	Native wildlife and wildlife habitat would be protected from visitor use impacts to the greatest extent possible. Exotic invasive animals would be managed to the extent feasible, with emphasis on species that have inordinate impacts on native communities or are associated with human health risks in high use areas.
Natural Sounds (Soundscapes) and Dark Night Skies (Lightscapes)	The natural soundscape would often be mixed with sounds from human activity and visitor use. The soundscape would be affected by the developed landscape, and noise could impact wildlife behavior and habitat in some areas. These impacts would minimized as much as possible while providing for human uses. During times of low visitation, including nighttime and off-peak times, the natural soundscape could predominate, with occasional noise-free intervals. Dark night skies and natural lightscapes would be preserved as much as possible while providing for visitor experience opportunities. Outdoor lighting would provide adequate illumination for visibility while minimizing impacts on nocturnal wildlife behavior as much as possible.
*Threatened & Endangered (*T&E*) Species and their Habitat*	T&E species and their habitats would be managed to support species requirements.
CULTURAL RESOURCES	The scenic qualities of cultural resources or designated cultural landscapes would be managed to preserve their visual and historic characteristics.
Historic Structures	Based on their condition, national register significance, and suitability for recreational, visitor use/educational, or operational/administrative purposes, historic structures would be rehabilitated, stabilized, allowed to deteriorate naturally, or removed if they become unsafe. (See “Mitigative Measures” in part 7 for more information on the treatment of structures listed in or eligible for listing in the national register.)
Cultural Landscapes	Cultural landscapes would be managed to preserve their physical attributes and their use when that use contributes to their historical significance. Elements may be adapted to accommodate visitor use/education or park and partner administration while preserving those features that convey historical, cultural, or architectural values.
Ethnographic Resources	Access for traditional activities would be preserved. The National Park Service would continue to recognize the past and present existence of peoples in the region and the

traces of their use of resources as an important part of the cultural environment to be preserved and interpreted. The Park Service would consult with associated American Indian tribes to develop and accomplish the programs of the park in a way that respects the beliefs, traditions, and other cultural values of the tribes who have ancestral ties to the park lands.

Archeological Resources and Submerged Cultural Resources

Archeological resources and submerged cultural resources would remain *in situ* and undisturbed, unless removal of artifacts or intervention into cultural material is justified by preservation treatment, protection, research, interpretation, or development requirements. These resources would be preserved in a stable condition to prevent degradation and loss of research values or *in situ* exhibit potential. Significant archeological and other scientific data threatened with loss from the effects of natural processes, human activities, preservation treatments, park operations, or development activities would be recovered, recorded, or otherwise preserved.

Park Collections

Park collections (prehistoric and historic objects, artifacts, works of art, archival material, and natural history specimens) would be acquired, accessioned, cataloged, preserved, protected, and made available for access and use according to NPS standards and guidelines.

VISITOR EXPERIENCE

Visitors would have the opportunity to tour through the scenic corridors with multiple opportunities to stop along the route for sightseeing, wildlife viewing, picnicking, or interpretive or educational information.

Types of Activities

The following recreational activities could occur in this zone:

beach activities such as informal beach sports, walking, swimming, picnicking, and surf fishing

marine activities such as fishing, boating, crabbing, kayaking, surfing, and sightseeing

Land-related activities such as developed camping, overnight lodging, picnicking, biking, hiking, walking, running, horseback riding, hang gliding, sightseeing, and bird and wildlife viewing

other kinds of activities such as exploring historic sites and structures, participating in interpretive programs and participating in stewardship programs, nature study,

	photography, and artistic endeavors In addition, special and organized events such as family events and community celebrations may be allowed, but group sizes may be limited. Measures may be taken to mitigate impacts to resources and other visitors during these events.
Interpretation/ Education/ Orientation	A high level of visitor orientation and interpretive services would be available in this zone. Communication of interpretive themes would occur through a broad array of interpretive methods.
Scenic Views	Outstanding views of natural, cultural, and scenic resources would be an integral part of the visitor experience of this zone.
Natural Sounds (Soundscapes) and Dark Night Skies (Lightscapes)	Natural sounds would be audible and would enhance the visitor experience in this zone. The natural soundscape would often be mixed with sounds from human activity and visitor use. During times of low visitation, including nighttime and off-peak times, the natural soundscape could predominate. In areas away from roads, there could be frequent and prolonged noise-free intervals. Dark night skies and natural lightscapes would enhance the visitor experience in this zone. Outdoor lighting would provide minimal visibility, and light pollution would be minimized. Only essential lights would be installed, and they would be operational only when needed. Nocturnal lightscapes would be preserved and restored to the extent possible.
Skills, Risk, Time Required	Opportunities for challenge, risk, and testing of outdoor skills would be available in this zone. Visitors of all levels of physical ability would be able to enjoy many of the areas within this zone. The time commitment needed to experience this zone would vary from a very short period to several hours, possibly including overnight stays.
Use Levels/ Density/ Encounters	Moderate to high use levels would be expected along scenic corridors, leading to the likelihood of moderate to high rates of encounters between visitors, particularly at locations such as overlooks, day use areas, and waysides. Groups would be accommodated, but group sizes could be limited based on facility capacities and/or experiential objectives.

DEVELOPMENT & MANAGEMENT

Development may include road and trail corridors and associated day use facilities that support and direct visitor use.

Type/Character of Visitor Access

Visitor access would be the defining element of the experience in this zone and would be interconnected and designed to encourage use of multiple transportation modes.

Vehicular and nonvehicular access would be provided to and throughout the zone.

Types of Facilities

The following types of facilities could be provided:

Interpretive: visitor contact stations, interpretive kiosks, small gathering places for interpretive programs

Recreational: designated trails, designated activity areas, boardwalks, picnic facilities, boat docks, designated nonmotorized boat launch sites, fishing platforms, temporary boat tie-ups, horse stables, and designated camping areas

Support**:** Campgrounds and rustic overnight accommodations, retail/rental/food outlets, restroom facilities, parking areas, and transportation facilities (multimodal hubs, bike paths, roads)

Commercial Services and Nonprofit Programming

A variety of necessary and appropriate commercial services offerings that may be available include but are not limited to: equipment rentals, guides, food and beverage, recreational, equestrian, overnight accommodations, and retail.

A variety of nonprofit programming that may be available includes, but is not limited to environmental, educational, interpretive, community, and arts. Certain buildings may be leased for compatible uses.

EVOLVED CULTURAL LANDSCAPE ZONE

This management zone would preserve significant historic, archeological, architectural, and landscape features while being adaptively reused for contemporary park and partner needs. Cultural resources, as well as the surrounding natural resources that are often integral to the historic site, would be preserved and interpreted. This zone could contribute to visitor enjoyment and exploration of the historic values and events while providing for other types of uses.

NATURAL RESOURCES

Natural resource integrity would be maintained and restored while the area would provide for historic preservation, visitor activities, and park operations.

Natural resources are often an integral component of cultural landscapes and would be managed to highlight the cultural resources and their associated values and characteristics. Natural resource objectives would be pursued in collaboration with, and where they complement, cultural resource objectives.

Geologic Resources Natural geologic processes, including natural shoreline processes, would be left unimpeded except when action is required for safety and to protect human health and important cultural resources. Impacted areas would be restored to the greatest extent possible. Geologic and paleontological features and resources would be protected from visitor use impacts.

Water Resources Natural hydrologic systems and processes would be left unimpeded, unless some alteration was required to protect cultural resources. Impacted areas would be restored to the greatest extent possible. Hydrologic systems and processes would be reestablished while incorporating cultural resource and visitor use objectives. Potential impacts from visitor use, including erosion, surface and groundwater contamination, and alteration of natural processes, would be avoided or minimized.

Marine Environment The natural physical processes of marine and coastal areas would be left unimpeded to the extent possible. Impacted areas would be restored to the greatest extent possible. Marine resources would be protected from visitor use impacts.

Coastal Ecosystems: Vegetation Native vegetation and vegetation communities (including aquatic vegetation) would be preserved in collaboration with, and where they complement, cultural landscape objectives. Nonnative species (contributing) could be desired and maintained to provide vegetation communities and patterns that support cultural landscape values and/or

tolerate high levels of visitor use. These areas would be managed to minimize potential impacts to adjacent native vegetation. Exotic invasive plants that do not contribute to the cultural resource values, could be present, but would be suppressed and actively managed with the goal of eradication in the park.

Coastal Ecosystems: Aquatic and Terrestrial Wildlife

Native wildlife and wildlife habitat would be preserved to the greatest extent possible while the integrity of cultural landscapes would be maintained. Consequently, wildlife habitat may appear more "groomed" in this zone to meet cultural landscape preservation goals. Exotic invasive animals would be managed to the extent feasible, with emphasis on species that have inordinate impacts on native communities or public safety.

Natural Sounds (Soundscapes) and Dark Night Skies (Lightscapes)

The natural soundscape would often be mixed with sounds from human activity and visitor use. Noise impacts on wildlife behavior and habitat would be minimized as much as possible while providing for visitor use. During times of low visitation, including nighttime and off-peak times, the natural soundscape could predominate. In areas away from roads, there could be frequent and prolonged noise-free intervals.

Dark night skies and natural lightscapes would be preserved as much as possible while providing for visitor experience opportunities. Outdoor lighting would provide minimal visibility, and impacts to nocturnal wildlife behavior would be minimized to the greatest extent possible. Only essential lights would be installed, and they would be operational only when needed.

Threatened & Endangered (T&E) Species and their Habitat

T&E species and their habitats would be proactively managed to support species requirements. Listed species and their habitats would be restored where such action is compatible with cultural landscape objectives.

CULTURAL RESOURCES

Cultural resources would be preserved through adaptive reuse. Historic values and characteristics would be preserved for interpretation and enjoyment.

Historic Structures

Historic structures would undergo preservation treatments ranging from stabilization to restoration based on whether they are fundamental park resources, their national register significance, condition, and interpretive value. (See "Mitigative Measures" in part 7 for more information on the treatment of structures listed in or eligible for listing in the national register.)

Cultural Landscapes Cultural landscapes would be rehabilitated for appropriate contemporary use of the landscape while preserving those features that convey historical, cultural, or architectural values.

Ethnographic Resources Access for traditional activities would be preserved. The National Park Service would continue to recognize the past and present existence of peoples in the region and the traces of their use of resources as an important part of the cultural environment to be preserved and interpreted. The Park Service would consult with associated American Indian tribes to develop and accomplish the programs of the park in a way that respects the beliefs, traditions, and other cultural values of the tribes who have ancestral ties to the park lands.

Archeological Resources and Submerged Cultural Resources Archeological resources and submerged cultural resources would remain *in situ* and undisturbed, unless removal of artifacts or intervention into cultural material is justified by preservation treatment, protection, research, interpretation, or development requirements. These resources would be preserved in a stable condition to prevent degradation and loss of research values or *in situ* exhibit potential. Significant archeological and other scientific data threatened with loss from the effects of natural processes, human activities, preservation treatments, park operations, or development activities would be recovered, recorded, or otherwise preserved.

Park Collections Park collections (archeological artifacts, archival materials, natural history collections and historical artifacts) would be documented, cataloged, and protected to ensure long-term preservation according to NPS standards and guidelines. Collections would be used to inform interpretive programs and incorporated into exhibits when feasible.

VISITOR EXPERIENCE Visitors would have the opportunity to explore designated portions of historic landscapes and structures while participating in contemporary activities.

Types of Activities The following recreational activities could occur in this zone:

beach activities such as informal beach sports, walking, swimming, picnicking, and surf fishing

marine activities such as fishing, boating, crabbing, kayaking, surfing, and sightseeing

	land-related activities such as overnight lodging, picnicking, biking, hiking, walking, running, horseback riding, sightseeing, and bird and wildlife viewing other kinds of activities, such as exploring historic sites and structures, participating in interpretive programs and participating in stewardship programs, nature study, photography, and artistic endeavors In addition, special and organized events such as family events and community celebrations may be allowed, but group sizes may be limited. Measures may be taken to mitigate impacts on resources and other visitors during these events.
Interpretation/ Education/ Orientation	Visitors would gain an understanding and appreciation of the importance of the park's historic and cultural resources and the strategy of adaptive reuse to sustain the preservation of historic structures. A moderate to high level of visitor orientation and interpretive services would be available in this zone. Communication of interpretive themes would occur through a broad array of interpretive methods.
Scenic Views	Outstanding views of natural, cultural, and scenic resources may be available and would enhance the visitor experience in this zone.
Natural Sounds (Soundscapes) and Dark Night Skies (Lightscapes)	Natural sounds would be audible and would enhance the visitor experience in this zone. The natural soundscape would often be mixed with sounds from human activity and visitor use. The soundscape would be affected by the developed landscape. During times of low visitation, including nighttime and off-peak times, the natural soundscape could predominate, with occasional noise-free intervals. Dark night skies and natural lightscapes would enhance the visitor experience in this zone. Outdoor lighting would provide appropriate illumination for safety and cultural resource interpretation while minimizing light pollution. Nocturnal lightscapes would be preserved and restored to the extent possible.
Skills, Risk, Time Required	Challenge, risk, and testing of outdoor skills would be generally unimportant to most visitors in this zone. Visitors of all levels of physical ability would be able to enjoy most areas of this zone. The time commitment needed to experience this zone would vary

	from a very short period to a few hours, possibly including overnight stays.
Use Levels/ Density/ Encounters	Moderate use levels would be expected around focused activity nodes, leading to the likelihood of moderate numbers of encounters with other visitors. Group sizes could be limited based on facility capacities and/or experiential objectives.
DEVELOPMENT & MANAGEMENT	Development may include a blend of historic and compatible modern structures to support visitor use and services.
Type/Character of Visitor Access	Visitor access would blend with the historic setting and consist of multiple transportation modes that are interconnected to provide user-defined access. The transportation system would connect points of interest to facilitate storytelling related to cultural resources. Vehicular and nonvehicular access would be provided to and throughout the zone.
Types of Facilities	The following types of facilities could be provided: interpretive facilities such as visitor contact stations, interpretive kiosks, and small gathering places for interpretive programs recreational facilities such as designated trails, designated activity areas, picnic facilities, boat docks, designated nonmotorized boat launch sites, temporary boat tie-ups support facilities such as overnight lodging facilities, retail/rental/food outlets, restroom facilities, parking areas, transportation facilities (multimodal hubs, bike paths, roads)
Commercial Services and Nonprofit Programming	A variety of necessary and appropriate commercial services offerings that may be available include but are not limited to: equipment rentals, guides, food and beverage, recreational, equestrian, overnight accommodations, and retail. A variety of nonprofit programming that may be available include but are not limited to environmental, educational, interpretive, community, and arts. Certain buildings may be leased for compatible uses.

HISTORIC IMMERSION ZONE

This management zone would preserve historic sites, structures, and landscapes that are evocative of their period of significance. Selected exteriors and designated portions of interior spaces would be managed to protect their historic values and attributes. Visitors would have opportunities to be immersed in the historic setting to explore history with direct contact to cultural resources, complemented by rich interpretation of past stories and events.

NATURAL RESOURCES

Natural resource integrity would be maintained and restored as compatible with historic preservation objectives.

The natural elements of cultural resources and designated cultural landscapes would be managed to highlight the cultural resources and their associated values and characteristics. Natural resource objectives would be pursued in collaboration with, and where they complement, cultural resource objectives.

Geologic Resources Natural geologic processes, including natural shoreline processes, would be left unimpeded except when action is required for safety and to protect human health and important cultural resources. Impacted areas would be restored to the greatest extent possible. Geologic and paleontological features and resources would be protected from visitor use impacts.

Water Resources Natural hydrologic systems and processes would be left unimpeded, unless some alteration was required to protect cultural resources. Impacted areas would be restored to the greatest extent possible. Hydrologic systems and processes would be reestablished while incorporating cultural resource and visitor use objectives. Potential impacts from visitor use, including erosion, surface and groundwater contamination, and alteration of natural processes, would be avoided or minimized.

Marine Environment The natural physical processes of marine and coastal areas would be left unimpeded to the extent possible. Impacted areas would be restored to the greatest extent possible. Marine resources would be protected from visitor use impacts.

Coastal Ecosystems: Vegetation Native vegetation and vegetation communities (including aquatic vegetation) would be preserved to the greatest extent possible, while cultural resource values would be supported. Nonnative species could be maintained to provide vegetation communities

	and patterns that contribute to cultural resource values and/or tolerate to high levels of visitor use. These areas would be managed to minimize potential impacts to adjacent native vegetation. Exotic invasive plants that do not contribute to cultural resource values could be present, but would be suppressed and actively managed with the goal of eradication in the park.
Coastal Ecosystems: Aquatic and Terrestrial Wildlife	Native wildlife and wildlife habitat would be preserved to the greatest extent possible while cultural resource values would be maintained. Consequently, wildlife habitat may appear more "groomed" in this zone to meet cultural resource goals. Exotic invasive animals would be managed to the extent feasible, with emphasis on species that have inordinate impacts on native communities or are associated with human health risks.
Natural Sounds (Soundscapes) and Dark Night Skies (Lightscapes)	The natural soundscape would often be mixed with sounds from human activity, visitor use, and development. Noise impacts to wildlife behavior and habitat could exist in some areas. These impacts would be minimized as much as possible while providing for human uses and interpretation. During times of low visitation, including nighttime and off-peak times, the natural soundscape could predominate, with occasional noise-free intervals. Dark night skies and natural lightscapes would be preserved as much as possible while providing for visitor experience opportunities. Outdoor lighting would provide adequate illumination for visibility and visitor expectation while minimizing impacts on nocturnal wildlife behavior as much as possible.
Threatened & Endangered (T&E) Species and their Habitat	T&E species and their habitats would be managed to support species requirements.
CULTURAL RESOURCES	Cultural sites, structures, and landscapes would be preserved, rehabilitated, or restored to reflect their period of significance, allowing people to experience these resources first-hand and learn about their associated stories and events.
Historic Structures	Historic structures would be rehabilitated or restored to their period of significance based on whether they are fundamental park resources and their national register significance, condition, and interpretive value. (See "Mitigative Measures" in part 7 for more information on the treatment of structures listed in or eligible for listing in the national register.)

Cultural Landscapes Cultural landscapes would be rehabilitated or restored for appropriate contemporary use of the landscape while preserving those features that convey historical, cultural, or architectural values.

Ethnographic Resources Access for traditional activities would be preserved. The National Park Service would continue to recognize the past and present existence of peoples in the region and the traces of their use of resources as an important part of the cultural environment to be preserved and interpreted. The Park Service would consult with associated American Indian tribes to develop and accomplish the programs of the park in a way that respects the beliefs, traditions, and other cultural values of the tribes who have ancestral ties to the park lands.

Archeological Resources and Submerged Cultural Resources Archeological resources and submerged cultural resources would remain *in situ* and undisturbed, unless removal of artifacts or intervention into cultural material is justified by preservation treatment, protection, research, interpretation, or development requirements. These resources would be preserved in a stable condition to prevent degradation and loss of research values or *in situ* exhibit potential. Important archeological and other scientific data threatened with loss from the effects of natural processes, human activities, preservation treatments, park operations, or development activities would be recovered, recorded, or otherwise preserved.

Park Collections Park collections (archeological artifacts, archival materials, natural history collections and historical artifacts) would be documented, cataloged and protected to ensure long-term preservation according to NPS standards and guidelines. Collections would be used to inform historically furnished spaces and incorporated into exhibits when feasible.

VISITOR EXPERIENCE

Visitors would have the opportunity to be immersed in a historic setting. Visitors could experience the sights, sounds, and activities that are evocative of the site's period of significance.

Types of Activities The following recreational activities could occur in this zone:

beach activities such as guided or self-guided interpretive walks, tours, or participation in historic interpretive programs

	marine activities such as guided or self-guided boat/kayaking trips or tours relevant to historic interpretive programs land-related activities such as guided and self-guided walks, hikes, tours, experiential learning (may include overnight stays), or historic study other kinds of activities such as exploring historic sites and structures, participating in interpretive programs and participating in stewardship programs, photography, and artistic endeavors In addition, special and organized events such as family events and community celebrations may be allowed, but group sizes may be limited. Measures may be taken to mitigate impacts on resources and other visitors during these events.
Interpretation/ Education/ Orientation	Through immersion in the cultural setting, visitors would gain an understanding of the importance of the park's historic and cultural resources and the long-standing physical and spiritual connection of people to these lands. A high level of visitor orientation and interpretive services would be available in this zone. Communication of interpretive themes would occur through a broad array of interpretive methods.
Scenic Views	Outstanding views of cultural resources would be an integral part of the visitor experience of this zone.
Natural Sounds (Soundscapes) and Dark Night Skies (Lightscapes)	Natural sounds would be audible and would enhance the visitor experience in this zone. Historically appropriate sounds would also enhance the experience of this zone. The soundscape would be affected by the developed landscape. During times of low visitation, including nighttime and off-peak times, the natural soundscape could predominate, with occasional noise-free intervals. Dark night skies and natural lightscapes would enhance the visitor experience in this zone. Outdoor lighting would provide appropriate illumination for safety and cultural resource interpretation while minimizing light pollution. Nocturnal lightscapes would be preserved and restored to the extent possible while achieving historic preservation goals, such as re-creating lighting from the period of significance.

Skills, Risk, Time Required	Challenge, risk, and testing of outdoor skills would be generally unimportant to most visitors in this zone. Visitors of all levels of physical ability would be able to enjoy most areas within this zone. The time commitment needed to experience this zone would typically be an hour or more, possibly including overnight stays to provide experiential learning.
Use Levels/ Density/ Encounters	Moderate use levels would be expected around focused activity nodes, leading to the likelihood of moderate numbers of encounters between visitors. Group sizes could be limited based on facility capacities and/or experiential objectives.
DEVELOPMENT & MANAGEMENT	Development would include sensitive rehabilitation or restoration of historic resources and may include nonhistoric visitor facilities if they can be blended into the historic fabric of the site.
Type/Character of Visitor Access	Visitor access would be a dominant aspect of the zone, with a system of multiple transportation modes that are highly interconnected to allow for user-defined access to and within the zone. Vehicular and nonvehicular access would be provided to and throughout the zone.
Types of Facilities	The following types of facilities could be provided: interpretive facilities such as interpretive kiosks, and small gathering places for interpretive programs recreational facilities such as designated trails, picnic tables, boat docks/designated boat put-ins, and temporary boat tie-ups support facilities such as restroom facilities, parking areas, and transportation facilities (multimodal hubs, bike paths, roads)
Commercial Services and Nonprofit Programming	Necessary and appropriate commercial services offerings that may be available include: limited food/beverage/retail, equipment rentals, guides, recreational, and equestrian. Nonprofit programming could be focused in the areas of environmental, educational, and interpretive. Certain buildings may be leased for compatible uses.

INTERPRETIVE CORRIDOR ZONE

(This management zone is applied only to alternatives for Muir Woods National Monument.)

This management zone would preserve the monument's natural character and would be richly interpreted through a variety of means. Visitor use would be managed to preserve important natural and cultural resources and their associated values and could involve controlled access.

NATURAL RESOURCES	Natural resource integrity would be maintained and restored while providing for visitor opportunities and park operations.
Geologic Resources	Natural geologic processes would be left unimpeded except when action is required for safety and to protect human health. To the greatest extent possible, infrastructure would be designed or relocated to avoid paleontological resources and geologic resources and hazards. Impacted areas would be restored to the greatest extent possible. Geologic and paleontological features and resources would be protected from visitor use impacts.
Water Resources	Natural hydrologic systems and processes would be left unimpeded to the extent feasible, unless some alteration was required to protect cultural resources and/or accommodate important visitor use objectives. Impacted areas would be restored to the greatest extent possible. Hydrologic systems and processes would be reestablished while incorporating cultural resource and visitor use objectives. Potential impacts from visitor use, including erosion, surface and groundwater contamination, and alteration of natural processes, would be avoided or minimized.
Marine Environment	Not Applicable
Coastal Ecosystems: Vegetation	Native vegetation and vegetation communities (including aquatic vegetation) would be preserved to the greatest extent possible with the goal of conserving native biodiversity. Exotic invasive plants could be present, but would be contained and actively managed with the goal of eradication in the monument.
Coastal Ecosystems: Aquatic and Terrestrial Wildlife	Native wildlife and wildlife habitat would be protected from visitor use impacts to the greatest extent possible. Exotic invasive animals would be managed to the extent feasible, with emphasis on species that have inordinate impacts on native communities or public health.

Natural Sounds (Soundscapes) and Dark Night Skies (Lightscapes)	The natural soundscape would often be mixed with sounds from human activity and visitor use. Noise impacts on wildlife behavior and habitat would be minimized to the greatest extent possible while providing for visitor use. During times of low visitation, including nighttime and off-peak times, the natural soundscape would predominate. In areas away from roads there could be frequent and prolonged noise-free intervals. Dark night skies and natural lightscapes would be preserved and restored to maintain and improve conditions for nocturnal wildlife behavior. Only essential lights would be installed, and they would be operational only when needed. Outdoor lighting would provide minimal visibility, and light impacts on the ecological system would be minimized to the greatest extent possible.
Threatened & Endangered (T&E) Species and their Habitat	T&E species and their habitats would be managed to support species requirements.
CULTURAL RESOURCES	Cultural resources would be preserved by managing for adaptive reuse. Historic values and characteristics would be preserved for interpretation and enjoyment.
Historic Structures	Based on their condition, national register significance, and suitability for recreational, visitor use/educational, or operational/administrative purposes, historic structures would be rehabilitated, stabilized, allowed to deteriorate naturally, or removed if they become unsafe. (See “Mitigative Measures” in part 7 for more information on the treatment of structures listed in or eligible for listing in the national register.)
Cultural Landscapes	Cultural landscapes would be rehabilitated in collaboration with, and where they complement, natural resource objectives to preserve their significant features.
Ethnographic Resources	Access for traditional activities would be preserved. The National Park Service would continue to recognize the past and present existence of peoples in the region and the traces of their use of resources as an important part of the cultural environment to be preserved and interpreted. The Park Service would consult with associated American Indian tribes to develop and accomplish the programs of the park in a way that respects the beliefs, traditions, and other cultural values of the tribes who have ancestral ties to these lands.

Archeological Resources and Submerged Cultural Resources

Archeological resources and submerged cultural resources would remain *in situ* and undisturbed, unless removal of artifacts or intervention into cultural material is justified by preservation treatment, protection, research, interpretation, or development requirements. These resources would be preserved in a stable condition to prevent degradation and loss of research values or *in situ* exhibit potential. Important archeological and other scientific data threatened with loss from the effects of natural processes, human activities, preservation treatments, park operations, and development activities would be recovered, recorded, or otherwise preserved.

Park Collections

Park collections (archeological artifacts, archival materials, natural history collections and historical artifacts) would be documented, cataloged and protected to ensure long-term preservation according to NPS standards and guidelines. Collections would be used in interpretive programs to help visitors understand the primeval forest and early 20th century conservation history.

VISITOR EXPERIENCE

Visitors would have the opportunity to be immersed in a natural environment (which could include historic resources) and participate in a variety of interpretive and educational opportunities to gain an in-depth understanding of these resources. Opportunities to experience natural sounds and closeness to nature would be important aspects of a visit to this area. Visitor use would be controlled to ensure that activities and their intensities are compatible with protecting resource integrity.

Types of Activities

Recreational activities could include walking, hiking, sightseeing, and wildlife viewing; programs and special events could include environmental education, stewardship, history, and science.

Interpretation/ Education/ Orientation

Through the opportunity to experience the natural and cultural resources of the area, visitors would gain an understanding and appreciation of the significance of the park's natural and cultural resources and the potential threats to those resources.

A moderate to high level of interpretive and education services would be available in this zone.

Communication of interpretive themes would occur through a broad array of interpretive methods.

The use of contained fires limited to interpretive and educational purposes could be

permitted by the Superintendent.

Scenic Views

Outstanding views of natural, cultural, and scenic resources may be available if unobstructed views occur naturally. If available, views would enhance the visitor experience in this zone.

Natural Sounds (Soundscapes) and Dark Night Skies (Lightscapes)

Natural sounds would be audible and would enhance the visitor experience in this zone. The natural soundscape would often be mixed with sounds from human activity and visitor use. During times of low visitation, including nighttime and off-peak times, the natural soundscape could predominate. In areas away from roads there could be frequent and prolonged noise-free intervals.

Dark night skies and natural lightscapes would enhance the visitor experience in this zone. Outdoor lighting would provide minimal visibility, and light pollution would be minimized. Only essential lights would be installed, and they would be operational only when needed. Nocturnal lightscapes would be preserved and restored to the extent possible.

Skills, Risk, Time Required

Challenge, risk, and testing of outdoor skills would be generally unimportant to most visitors in this zone. Visitors of all levels of physical ability would be able to enjoy many of the areas within this zone. The time commitment needed to experience this zone would vary from a short period of time to several hours.

Use Levels/ Density/ Encounters

Moderate to high use levels would be expected along interpretive corridors, leading to the likelihood of moderate to high rates of encounters between visitors. Groups would be accommodated, but group sizes could be limited based on facility capacities and/or experiential objectives.

DEVELOPMENT & MANAGEMENT

Development would be minimal and would be aimed at facilities that provide access, public safety, resource protection, and interpretation/education (e.g., trails, restrooms, boardwalks, fencing, interpretive gathering areas).

Type/Character of Visitor Access

Access opportunities would be subordinate to the natural setting and may be highly managed (i.e., restrictions on access) to protect resources and desired visitor experiences, as necessary.

	Only NPS administrative and emergency vehicular access would be permitted; nonvehicular access would be the primary mode of transportation throughout the zone.
Types of Facilities	The following types of facilities could be provided: interpretive facilities such as trailhead kiosks, small gathering places for interpretive/education programs, and waysides recreational facilities such as designated trails, and boardwalks support facilities such as trailhead restroom facilities, and limited parking areas
Commercial Services and Nonprofit Programming	Commercial services would be minimal. Nonprofit programming in the area of education and interpretation may be available.

NATURAL ZONE

This management zone would retain the natural, wild, and dynamic characteristics and ecological functions. The natural resources would be managed to preserve and restore resource integrity while providing for backcountry types of visitor experiences. Visitors would have opportunities to directly experience the natural resources primarily from trails and beaches. Visitor use would be managed to preserve resources and their associated values and could involve controlled access. External threats to resources would be aggressively addressed. Modest facilities that support management and visitor use within this zone, such as a trailhead, could be placed on the periphery of the zone.

NATURAL RESOURCES	Natural resource integrity would be maintained by preserving and restoring natural resources and their processes, systems, and values. Rare and exceptional natural resources, processes, systems, and values would be preserved and enhanced. Natural functions and processes would be reestablished in human-disturbed areas of the park to improve and maintain the resource integrity.
Geologic Resources	Natural geologic processes, including natural shoreline processes, would be left unimpeded except when action is required for safety and to protect human health. Impacted areas would be restored to the greatest extent possible. Unique geologic features would be preserved, and paleontological resources would be undisturbed.
Water Resources	Natural hydrologic systems and processes would be left unimpeded. Impacted areas would be restored to the greatest extent possible. Dynamic, sustainable, hydrologic systems and processes that support the diverse native life unique to the region would be reestablished.
Marine Environment	The natural physical processes of marine and coastal areas would be left unimpeded to the extent possible. Impacted areas would be restored to the greatest extent possible. Protection of marine areas that support the conservation of native species and biodiversity would be maximized.
Coastal Ecosystems: Vegetation	Native vegetation and vegetation communities (including aquatic vegetation) would be preserved to the greatest extent possible with the goal of conserving native biodiversity. Exotic invasive plants could be present, but would be contained and actively managed

	with the goal of eradication in the park.
Coastal Ecosystems: Aquatic and Terrestrial Wildlife	Native wildlife communities and ecosystem processes would be preserved and restored to the greatest extent possible. Exotic invasive animals would be managed with the goal of eradication in the park.
Natural Sounds (Soundscapes) and Dark Night Skies (Lightscapes)	The natural soundscape would be intact in this zone, and noise impacts on wildlife behavior and habitat would be minimal. Natural sounds would occasionally be mixed with sounds from human activity and visitor use. Dark night skies and natural lightscapes would be preserved and restored to maintain and improve conditions for nocturnal wildlife behavior. Only essential lights would be installed, and they would be operational only when needed. Outdoor lighting would provide minimal visibility, and light impacts on the ecological system would be minimized to the greatest extent possible.
Threatened & Endangered (T&E) Species and their Habitat	T&E species and their habitats would be proactively managed to support species requirements, including recovery actions. Natural habitat conditions and processes would be reestablished.
CULTURAL RESOURCES	Cultural resource objectives would be pursued in collaboration with, and where they complement, natural resource objectives. These cultural resources could be stabilized and preserved to maintain their integrity.
Historic Structures	Based on their condition, national register significance, safety considerations, and suitability as elements of the visitor experience, historic structures would be stabilized, become “discovery sites” that are allowed to deteriorate naturally, or be removed. (See “Mitigative Measures” in part 7 for more information on the treatment of structures listed in or eligible for listing in the national register.)
Cultural Landscapes	Cultural landscapes would be allowed to gradually revert to a more natural state, except where important landscape resources can be preserved without compromising natural resource values.

Ethnographic Resources	Access for traditional activities would be preserved. The National Park Service would continue to recognize the past and present existence of peoples in the region and the traces of their use of resources as an important part of the cultural environment to be preserved and interpreted. The Park Service would consult with associated American Indian tribes to develop and accomplish the programs of the park in a way that respects the beliefs, traditions, and other cultural values of the tribes who have ancestral ties to the park lands.
Archeological Resources and Submerged Cultural Resources	Archeological resources and submerged cultural resources would remain *in situ* and undisturbed, unless removal of artifacts or intervention into cultural material is justified by preservation treatment, protection, research, interpretation, or development requirements. These resources would be preserved in a stable condition to prevent degradation and loss of research values or *in situ* exhibit potential. Important archeological and other scientific data threatened with loss from the effects of natural processes, human activities, preservation treatments, park operations, and development activities would be recovered, recorded, or otherwise preserved.
Park collections	Park collections (archeological artifacts, archival materials, natural history collections and historical artifacts) would be documented, cataloged, and protected to ensure long-term preservation according to NPS standards and guidelines. Knowledge of natural history and archeology would be expanded by documentation, and collected when appropriate, to monitor changes over time.
VISITOR EXPERIENCE	Visitors would have the opportunity to be immersed in a natural environment and could seek areas where they could experience natural sounds, tranquility, closeness to nature, and a sense of remoteness and self-reliance. Visitor use would be controlled to ensure that activities and their intensities are compatible with protecting resource integrity.
Types of Activities	The following recreational activities could occur in this zone: beach activities such as walking, swimming, and surf fishing marine activities such as fishing, crabbing, kayaking, surfing, and sightseeing land-related activities such as primitive camping, hiking, walking, biking, horseback riding, sightseeing, and bird and wildlife viewing

	other kinds of activities such as exploring historic sites and structures, nature study, photography, artistic endeavors, and participating in stewardship programs In addition, a limited number of special and organized events (*e.g.,* running events on established trails) could be permitted, but events would be highly regulated and monitored to mitigate impacts to resources and other visitors.
Interpretation/ Education/ Orientation	Through opportunities to experience a wild setting and explore natural areas, visitors would gain an understanding and appreciation of the significance of the park's natural resources (including marine) and the potential threats to those resources. A low to moderate level of guided/unguided interpretive services would be available in this zone. Communication of interpretive themes would most often occur outside or at the entry to this zone through printed media and information kiosks; some guided programs would occur within the zone.
Scenic Views	Outstanding views of natural, cultural, and scenic resources would be available if unobstructed views occur naturally. If available, views would enhance the visitor experience of this zone.
Natural Sounds (Soundscapes) and Dark Night Skies (Lightscapes)	The natural soundscape would be intact in this zone and would be an important part of the visitor experience. Natural sounds would occasionally be mixed with sounds from human activity and visitor use. Noise disturbance of wildlife would be minimal in this zone. Dark night skies and natural lightscapes would be integral to the visitor experience in this zone. Nocturnal lightscapes would be preserved and restored. Only essential lights would be installed, and they would be operational only when needed. Outdoor lighting would provide minimal visibility, and light pollution would be minimized. This zone would provide an opportunity to demonstrate environmental leadership and to educate the public about light pollution.
Skills, Risk, Time Required	Challenge, risk, and testing of outdoor skills would be important to most visitors accessing this zone. There would be limited universal access opportunities. Time commitment to experience this area would typically be an hour or more.

Use Levels/ Density/ Encounters	Low to moderate use levels would be expected in this zone, with moderate use levels often found at entry points or points of interest. A moderate rate of encounters with other visitors would be expected, but opportunities for solitude might be found in certain areas if a visitor seeks it. Group sizes could be limited to protect experiential and resource protection objectives.
DEVELOPMENT & MANAGEMENT	Development would be minimal and would be aimed at facilities that provide access, public safety, and resource protection (e.g., trails, restrooms, and fencing). Nonhistoric structures could be removed and the site restored.
Type/Character of Visitor Access	Access opportunities would be subordinate to the natural setting and may be highly managed (i.e., restrictions on access) to protect resources and desired visitor experiences, as necessary. Trail access may be permitted to major destinations and access points.
Types of Facilities	The following types of facilities could be provided: interpretive facilities such as trailhead kiosks recreational facilities such as designated trails, designated primitive campsites, rustic huts for overnight accommodations, and designated nonmotorized boat launch sites support facilities such as trailhead restroom facilities, and limited parking areas and access roads (focused on the periphery of the zone to the extent possible)
Commercial Services and Nonprofit Programming	Commercial services would be minimal, such as guided activities. Nonprofit programming in the area of education and interpretation may be available.

SENSITIVE RESOURCES ZONE

This management zone would consist of fundamental natural resources that are highly sensitive to a variety of activities and would receive the highest level of protection. Resources would be managed to preserve their fundamental values while being monitored and often studied for scientific purposes. Access to these areas would be highly controlled. These areas could be subject to closures, and access could be restricted to the less sensitive edges of the zone. External threats to resources would be aggressively addressed.

NATURAL RESOURCES	Rare and exceptional natural resources, processes, systems, and values would be preserved and enhanced. Natural functions and processes would be reestablished in human-disturbed areas to improve and maintain the resource integrity.
Geologic Resources	Natural geologic processes, including natural shoreline processes, would be left unimpeded except when action is required for safety and to protect human health. Impacted areas would be restored to the greatest extent possible. Unique geologic features would be preserved, and paleontological resources would be undisturbed.
Water Resources	Natural hydrologic systems and processes would be left unimpeded. Impacted areas would be restored to the greatest extent possible, unless specifically managing for sensitive cultural resources. Dynamic, sustainable, hydrologic systems and processes that support the diverse native life unique to the region would be reestablished.
Marine Environment	The natural physical processes of marine and coastal areas would be left unimpeded to the extent possible. Impacted areas would be restored to the greatest extent possible. Protection of marine areas that support the conservation of native species and biodiversity would be maximized, unless the marine areas are specifically managed for sensitive cultural resources.
Coastal Ecosystems: Vegetation	Native vegetation and vegetation communities (including aquatic vegetation) would be preserved to the greatest extent possible with the goal of conserving native biodiversity. Exotic invasive plants could be present, but would be contained and actively managed with the goal of eradication in the park.

Coastal Ecosystems: Aquatic and Terrestrial Wildlife	Native wildlife communities and ecosystem processes would be preserved and promoted to the greatest extent possible. Exotic invasive animals would be managed with the goal of eradication in the park.
Natural Sounds (Soundscapes) and Dark Night Skies (Lightscapes)	The natural soundscape would be intact in this zone, and noise impact on wildlife behavior and habitat would be minimal. Natural sounds would occasionally be mixed with sounds from human activity and visitor use. Dark night skies and natural lightscapes would be preserved and restored to maintain and improve conditions for nocturnal wildlife behavior. No permanent outdoor lighting would be allowed except as needed for emergency response, critical natural resource goals, or emergency communications.
Threatened & Endangered (T&E) Species and their Habitat	T&E species and their habitats would be proactively managed to support species requirements, including recovery actions.
CULTURAL RESOURCES	Cultural resource objectives would be pursued in collaboration with, and where they complement, natural resource objectives. These cultural resources would be stabilized and preserved to maintain their integrity.
Historic Structures	Based on their condition, national register significance, safety considerations, and suitability as elements of the primitive visitor experience, historic structures would be stabilized, become “discovery sites” that are allowed to deteriorate naturally, or be removed. (See “Mitigative Measures” in part 7 for more information on the treatment of structures listed in or eligible for listing in the national register.)
Cultural Landscapes	Cultural landscapes would be allowed to gradually revert to a more natural state, except where important landscape resources can be preserved without compromising natural resource values.
Ethnographic Resources	Access for traditional activities would be preserved. The National Park Service would continue to recognize the past and present existence of peoples in the region and the traces of their use of resources as an important part of the cultural environment to be preserved and interpreted. The Park Service would consult with associated American Indian tribes to develop and accomplish the programs of the park in a way that respects

the beliefs, traditions, and other cultural values of the tribes who have ancestral ties to the park lands.

Archeological Resources and Submerged Cultural Resources

Archeological resources and submerged cultural resources would remain *in situ* and undisturbed, unless removal of artifacts or intervention into cultural material is justified by preservation treatment, protection, research, interpretation, or development requirements. These resources would be preserved in a stable condition to prevent degradation and loss of research values or *in situ* exhibit potential. Important archeological and other scientific data threatened with loss from the effects of natural processes, human activities, preservation treatments, park operations, or development activities would be recovered, recorded, or otherwise preserved.

Park Collections

Park collections (archeological artifacts, archival materials, natural history collections and historical artifacts) would be documented, cataloged, and protected to ensure long-term preservation according to NPS standards and guidelines. Knowledge of natural history and archeology would be expanded by documentation, and collected when appropriate, to monitor changes over time.

VISITOR EXPERIENCE

Visitors would have the opportunity to experience and understand the fundamental resources in the zone. In particular, visitors would be able to understand and value the sensitive nature of these resources. Visitor use would be highly controlled and managed to ensure that activities and their intensities are compatible with protecting resource integrity.

Types of Activities

The following recreational activities could occur in this zone:

beach activities such as walking and guided tours

marine activities such as kayaking, sightseeing, and guided tours

land-related activities such as hiking, walking, sightseeing, and bird and wildlife viewing, and guided tours

other kinds of activities such as guided trips through historic sites and structures and participation in stewardship programs

No special and organized events would be permitted.

Interpretation/ Education/ Orientation	Visitors would gain an understanding and appreciation of the importance of the park's sensitive resources (including marine resources) and the potential threats to those resources. A low to moderate level of guided/unguided interpretive services would be available in this zone. Communication of interpretive themes would most often occur outside or at the entry to this zone through printed media and information kiosks, with some guided programs within the zone.
Scenic Views	Outstanding views of natural, cultural, and scenic resources may be available if unobstructed views occur naturally.
Natural Sounds (Soundscapes) and Dark Night Skies (Lightscapes)	The natural soundscape would be intact in this zone and would be an integral part of the visitor experience. Natural sounds would occasionally be mixed with sounds from human activity and visitor use. Noise disturbance of wildlife would be minimal in this zone. Dark night skies and natural lightscapes would be integral to the visitor experience in this zone. Nocturnal lightscapes would be preserved and restored. No permanent outdoor lighting would be allowed except as needed for emergency response, critical natural resource goals, or emergency communications.
Skills, Risk, Time Required	Challenge, risk, and testing of outdoor skills may be important for visiting this zone. There would be very limited universal access opportunities. The time commitment needed to experience this zone would typically be a few hours.
Use Levels/ Density/ Encounters	Low use levels would be expected in these areas. At entry points or points of interest, a moderate number of encounters between visitors would be expected. As visitors travel away from these areas, there would be fewer encounters with other visitors. Group sizes could be limited to promote resource protection objectives.

DEVELOPMENT & MANAGEMENT	There would be minimal, if any, development except for some visitor facilities such as trails to allow for the concentration and direction of visitor use and the protection of resources.
Type/Character of Visitor Access	Access opportunities would be highly managed (i.e., permitted access, area closures) to protect sensitive resources. Vehicular access may be permitted to major access points, but nonvehicular access would be the primary mode of transportation throughout the zone.
Types of Facilities	The following types of facilities could be provided: interpretive facilities such as trailhead kiosks recreational facilities such as designated trails support facilities such as trailhead restroom facilities, and limited parking areas and access roads (focused on the periphery of the zone to the extent possible)
Commercial Services and Nonprofit Programming	Commercial services and nonprofit programming would be minimal.

PARK OPERATIONS ZONE

This management zone would primarily support developed facilities for park and partners operations and maintenance functions. This zone would be managed to provide facilities that are safe, secured, and appropriate for functions required for park management. Access to these areas for visitors would be controlled and limited to organized meetings, programs, and access to park administration.

NATURAL RESOURCES

Natural resources would be managed to accommodate operational uses/activities and to facilitate sustainable maintenance operations.

The intrusion of maintenance and operations activities on the surrounding park setting would be minimized through planning, design, screening, and noise reduction efforts. No park development actions would be taken that would preclude future natural resource protection or restoration.

Geologic Resources

Natural geologic processes, including natural shoreline processes, would be left unimpeded to the extent possible. Impacted areas would be restored to the greatest extent possible. Unique geologic features would be preserved, and paleontological resources would be protected while meeting operational needs. Avoidance and mitigation would be used to minimize impacts on geologic and paleontological resources. Where impacts are unavoidable, paleontological resources would, if necessary, be collected and properly cared for.

Water Resources

Natural hydrologic systems and processes would be left unimpeded to the greatest extent possible. Previously impacted areas would be restored to the greatest extent possible. Potential impacts from park operations, including erosion, surface and groundwater contamination, and alteration of natural processes, would be avoided or minimized.

Marine Environment

The natural physical processes of marine and coastal areas would be left unimpeded to the extent possible. Impacted areas would be restored to the greatest extent possible. Marine resources would be protected from impacts from park operations.

Coastal Ecosystems: Vegetation

Native vegetation and vegetation communities (including aquatic vegetation) would be preserved to the greatest extent possible. Impacts from park operations on these areas and on adjacent vegetation would be minimized. Species that can withstand and support operational uses may be desired. Exotic invasive plants could be present, but would be

	suppressed and actively managed in the park.
Coastal Ecosystems: Aquatic and Terrestrial Wildlife	Native wildlife communities would be protected to the greatest extent possible. Exotic invasive animals would be managed to the extent feasible, with emphasis on species that have inordinate impacts on native communities or are associated with human health risks.
Natural Sounds (Soundscapes) and Dark Night Skies (Lightscapes)	Natural sounds would be mixed with sounds from human activity, visitor use, and park operations. Noise impacts on wildlife behavior and habitat would be minimized where possible. During those times when activity associated with park operations is low, the natural soundscape could predominate, with occasional noise-free intervals. Dark night skies would be preserved to the greatest extent possible while operational needs and uses are accommodated. Impacts on nocturnal wildlife behavior would be minimized as much as possible while providing adequate outdoor illumination.
Threatened & Endangered (T&E) Species and their Habitat	T&E species and their habitats would be managed to support species requirements.
CULTURAL RESOURCES	Cultural resources could be preserved by adaptive reuse for the purposes of park operations and administration.
Historic Structures	Most historic structures would be rehabilitated for adaptive reuse. Historic structures not suited for adaptive reuse would be stabilized or, depending on condition, be removed. (See “Mitigative Measures” in part 7 for more information on the treatment of structures listed in or eligible for listing in the national register.)
Cultural Landscapes	Cultural landscapes would be rehabilitated for appropriate contemporary use of the landscape while preserving those features that convey historical, cultural, or architectural values.
Ethnographic Resources	Access for traditional activities would be preserved. The National Park Service would continue to recognize the past and present existence of peoples in the region and the traces of their use of resources as an important part of the cultural environment to be preserved and interpreted. The Park Service would consult with associated American Indian tribes to develop and accomplish the programs of the park in a way that respects

	the beliefs, traditions, and other cultural values of the tribes who have ancestral ties to the park lands.
Archeological Resources and Submerged Cultural Resources	Archeological resources and submerged cultural resources would remain *in situ* and undisturbed, unless removal of artifacts or intervention into cultural material is justified by preservation treatment, protection, research, interpretation, or development requirements. These resources would be preserved in a stable condition to prevent degradation and loss of research values or *in situ* exhibit potential. Important archeological and other scientific data threatened with loss from the effects of natural processes, human activities, preservation treatments, park operations, and development activities would be recovered, recorded, or otherwise preserved.
Park Collections	Park collections (archeological artifacts, archival materials, natural history collections and historical artifacts) would be documented, cataloged, and protected to ensure long-term preservation according to NPS standards and guidelines. Collections would be stored in centralized facilities and made available for research, exhibits, and interpretive programs to inform and engage the public in ongoing stewardship.
VISITOR EXPERIENCE	Visitors would have the opportunity for limited and controlled access to these areas for purposes of orientation, organized meetings, and access to park administration.
Types of Activities	The following recreational activities could occur in this zone: stewardship activities Special organized events would be permitted where compatible with park operations. Group sizes could be limited.
Interpretation/ Education/ Orientation	Visitors would gain an understanding of opportunities in the park. A minimal to moderate level of visitor orientation would be available depending on the site. Communication of interpretive themes would not be emphasized in this zone.
Scenic Views	Outstanding views of natural, cultural, and scenic resources may be available if unobstructed views occur naturally.

Natural Sounds (Soundscapes) and Dark Night Skies (Lightscapes)	Natural sounds would be audible and would enhance the visitor experience in this zone. Natural sounds would be mixed with sounds from human activity, visitor use, and park operations. During those times when activity associated with park operations is low, the natural soundscape could predominate, with occasional noise-free intervals. Dark night skies would be preserved to the greatest extent possible while operational needs and uses are accommodated. Outdoor lighting would provide adequate illumination for visibility while minimizing light pollution. This zone would provide an opportunity to demonstrate environmental leadership and educate the public about light pollution.
Skills, Risk, Time Required	Challenge, risk, and testing of outdoor skills would be unimportant to visitors in this zone. Visitors of all levels of physical ability would have some access to this zone depending on the site. The time commitment needed to experience this zone would vary from a very short period of time to several hours.
Use Levels/ Density/ Encounters	Low use levels would be expected because this area is intended for staff and visitors on official business. Frequency of encounters with other visitors would be low.
DEVELOPMENT & MANAGEMENT	Development patterns would include a diversity of facilities to support visitor services and park administration.
Type/Character of Visitor Access	Access opportunities would be limited and controlled for purposes of orientation, organized meetings, and access to park administration. Vehicular and nonvehicular access would be provided to administrative facilities. Trails would not likely be found in the zone, but pedestrian sidewalks and crosswalks would be appropriate in this zone. Trailheads connecting with other parks and neighboring communities would be appropriate in this zone.
Types of Facilities	The following types of facilities could be provided: administrative offices, maintenance and storage facilities, parking, pedestrian walkways, waste water and utility management facilities, and other operational needs

Commercial Services and Nonprofit Programming	No visitor support services or nonprofit programming would be expected in this zone.

3 Elements Common to All Action Alternatives



INTRODUCTION

While three different concepts for management are presented in the three action alternatives described in this document, there is some overarching management direction that will continue to guide the park and monument, regardless of the alternative selected. Some of these actions have developed through time from the founding principles of the park and monument; some are currently underway; and some are required by law or policy. The actions discussed in this section will occur regardless of the management alternative selected.

The following topics are included in this section:

- Boundary Adjustments
- Climate Change
- Facilities for Maintenance, Public Safety, and Collections Storage
- Facilities Not Directly Related to the Park Mission
- Native American Engagement
- Ocean Stewardship
- Park Collections
- Partnerships
- Trails
- Transportation

BOUNDARY ADJUSTMENTS

The 1978 National Parks and Recreation Act (16 USC 1a-7) requires general management plans to address potential modifications to park boundaries. Park boundaries are often initially drawn to reflect a wide range of practical considerations, and they do not necessarily reflect natural or cultural resource features, administrative considerations, or changing land uses. Current or potential changes in adjacent land uses could pose threats to park resources and limit the staff's ability to strengthen the fundamental resources that support the park purpose and significance.

Golden Gate National Recreation Area and Muir Woods National Monument are part of a larger area of protected open space in the Bay Area. The natural and cultural resources of the park would face a greater threat if not for the many other open space areas that contribute to the integrity of coastal ecosystems, scenic beauty, recreational opportunities, and the preservation of historic resources.

GOALS

The potential park boundary modifications would be guided by the following three major goals:

- Strengthen the diversity of park settings and opportunities supporting the park purpose to encourage, attract, and welcome diverse current and future populations while maintaining the integrity of the park's natural and cultural resources.
- Strengthen the integrity and resilience of coastal ecosystems by filling habitat gaps, creating habitat links, providing for the recovery of special status species and the survival of wide-ranging wildlife. In addition, boundary modifications would restore natural processes and ecosystem capacity to respond to the effects of climate change. Boundary adjustments would be guided by science-based approaches that build on the goals of cooperative regional efforts.
- Preserve nationally important natural and cultural resources related to the park's purpose.

In addition to following this guidance, the park staff would play a partnership role in regional land and marine area protection efforts. This role includes coordinating and developing multiple strategies with adjacent public land managers and open space organizations when land acquisition goals and objectives can be shared.

Any proposed boundary changes would be critically evaluated to confirm that such actions contribute to achieving the park's mission and resource protection goals and that the park is not accepting undue management burdens. Proposed land acquisitions must be feasible to administer considering their size, configuration, costs, and ownership. In addition, changes could be made if the land acquired was needed to address operational and management issues, such as visitor access, or to have logical and identifiable boundaries. The potential boundary modifications would continue to be made with

regional collaboration in mind, while working to strengthen and protect the park's natural, cultural, recreational, and scenic resources.

PROPOSED BOUNDARY ADJUSTMENTS

In compliance with federal law (PL 95-625, and PL 101-628) and National Park Service *Management Policies 2006*, the park has evaluated six properties using the three established criteria for inclusion within the official boundary. The lands and waters proposed here for inclusion within the park boundary either

1. include significant resources or opportunities for public enjoyment related to the purposes of the park; or
2. address operational and management issues such as access and boundary identification by topographic or other natural features or roads; or
3. protect park resources critical to fulfilling park purposes.

The planning team also has

- determined that the areas are feasible to administer;
- determined that other alternatives for management and resource protection are not adequate;
- consulted affected agencies and others; and
- estimated acquisition costs, if any.

Descriptions of the proposed boundary adjustments and evaluations of how they meet the criteria and determinations are below. It is the planning team's conclusion that each proposed boundary adjustment meets the federal criteria and is consistent with the park-specific goals stated above. See figure 3 for the location of these properties.

Offshore Ocean Environment, San Mateo County

Description

The park includes several coastal properties in San Mateo County. The western boundaries of these properties end at the line of mean high tide in the Pacific Ocean. The proposed boundary adjustment would place the new boundary 0.25 mile from the line of mean high tide to include offshore areas (about 2008 acres). This proposal would affect only properties the National Park Service currently manages; it would affect not areas within the boundary that are managed by others.

Criteria

1) ***Significance*:** The offshore areas proposed for inclusion in the boundary support an abundance of significant resources. These include marine mammals, seabirds, and intertidal resources. Portions of the areas are within Monterey Bay National Marine Sanctuary, California's James V. Fitzgerald Marine Reserve, two state marine protected

areas, and a special protected area at Egg Rock-Devil's Slide that is managed by the Bureau of Land Management. Known submerged or intertidal cultural resources include shipwrecks and features of a whaling station. These are also popular recreational areas for exploring tidepools, and for boating, fishing, swimming, and surfing. Each winter, the Mavericks Surf Contest, featuring many of the world's best big-wave surfers, takes place at the southern end of this zone.

2) ***Operational Issues:*** Unlike in San Francisco and Marin counties where the official boundary extends 0.25 mile beyond the line of mean high tide, the park boundary in San Mateo County ends at mean high tide. This exclusion restricts coordinated management of marine resources and visitor activities with other federal and state agencies. Lack of a consistent boundary also poses difficulties in coordinating with county public safety departments for visitor protection services, such as rescues. Questions about jurisdiction have complicated the park's rescue and recovery efforts.

3) ***Protects Park Resources—Fulfills Park Purpose:*** Protection of significant offshore resources and provision of appropriate recreational opportunities are part of the park's legislated purpose. Resource protection would be enhanced by including this parcel within the park boundary. The effects of climate change (especially sea level rise) and development of the NPS Pacific West Region's strategic plan for Pacific Ocean parks, make inclusion of these areas within the boundary a timely objective.

Determinations

Administration of these areas through cooperative management would be feasible. Park management of similar areas in San Francisco and Marin counties has not been an undue burden for park staff, due in large part, to collaboration with other agencies. Adding these areas to the park would enhance the value of current collaborative actions, rather than substitute management by the National Park Service alone. The proposal has the support of related agencies. Acquisition through a California state tide and submerged lands lease would have no cost. Management of the areas added to the park boundary would be guided by the park's ocean stewardship policy and the primary management purposes identified in the California state leases that the park retains over other portions of the offshore ocean and bay environment in San Francisco and Marin counties. The National Park Service anticipates this proposal would require a legislative boundary change.

Gregerson Property, San Mateo County

Description

The property forms a long rectangle of about 206 acres with 3 sides in common with the park's 4,200-acre Rancho Corral de Tierra unit. It is owned by the Peninsula Open Space Trust (POST), who acquired it in 2007. The POST maintains the property as conservation land. The property is undeveloped with the exception of a caretaker residence and paved access road that crosses the property from north to south. The only access to the property is from the south on a park road.

Criteria

1) ***Significance****:* The property has many of the same qualities and characteristics as Rancho Corral de Tierra, which was determined eligible for inclusion in the park in the *San Mateo County Boundary Study* (NPS 2001). The study determined that Rancho is a

logical and understandable southern entry to the park and an unusually large piece of significant scenic and ecological resources that is firmly linked to existing park lands. Rancho Corral de Tierra was included in the park boundary in 2005 through Public Law 109-131. Like Rancho Corral de Tierra, the Gregerson property also contains habitat for federally listed plant and animal species and provides connectivity in an important wildlife corridor. The property also possesses scenic vistas to the southeastern coast, and has high potential for recreation, including a trail along the ridge connecting to a future Bay Area Ridge Trail segment through the extensive SFPUC watershed lands.

2) ***Operational Issues****:* The access road would be beneficial for park management purposes. It runs along a low ridge, connecting the park's access road with the upper reaches of Rancho Corral de Tierra and the adjacent SFPUC watershed lands. In addition to improving access for managers, the property would simplify and reduce the length of the park's perimeter.

3) ***Protects Park Resources—Fulfills Park Purpose:*** Protection of federally listed species and provision of appropriate recreational opportunities are part of the park's legislated purpose. Resource protection and trail-based recreation would be enhanced by including this parcel within the park boundary.

Determinations

Administration of this small undeveloped property as part of the larger Rancho Corral de Tierra unit would be feasible. The road and other structures (residence, well, septic system, and solar power complex) are in good condition and could be used for park operations, environmental education, or other park purposes. The trust acquired this property with the objective of permanent protection, which it has identified as best being achieved through fee transfer to the National Park Service for inclusion in Golden Gate National Recreation Area. An access easement alone is not considered satisfactory, since use of the property by others would continue to compromise the Park Service's ability to maintain security at the main gate. This proposal has support from the trust and San Mateo County which manages nearby lands. The cost of acquisition has not been determined. The National Park Service anticipates this would be a minor boundary adjustment.

Margins of Rancho Corral de Tierra, San Mateo County

Description

These two areas (about 58 acres) are at the margins of agricultural lands owned by POST and are immediately adjacent to the park's 4,200-acre Rancho Corral de Tierra unit. The northern area is maintained as an open field with a light vegetative cover, but is not cultivated due to poor soil conditions. The southern area is primarily gently sloping hillsides adjacent to cultivated fields. Both areas abut State Route 1 and have informal access roads from it.

Criteria

1) ***Significance:*** Like the Gregerson Property, these areas have some of the same qualities and characteristics as Rancho Corral de Tierra which was determined eligible for inclusion in the park in the *San Mateo County Boundary Study* (NPS, 2001). These

areas may contain habitat for federally listed plant and animal species and provide connectivity in an important wildlife corridor. The properties also possess scenic vistas to the coast, and have high potential to serve as the critically-needed principal trailheads providing safe, direct access from State Route 1 and logical connections to existing recreational trails on Rancho. The northern area has been classified as "unique farmland" (of lesser quality than "prime farmland" due to substantial limitations for the production of crops.) The southern area includes soils with "unique" and lesser classifications along with a small area of "prime farmland" which could constrain development of non-agricultural facilities.

2) ***Operational Issues::*** These two properties are highly suitable for providing the principal vehicular access points to Rancho from State Route 1. There are good sight lines from State Route 1 to the properties, along with other favorable conditions for roadway improvements to enable safe, logical, vehicular access and egress. Creation of a trailhead with a small parking area (20-40 vehicles) and essential visitor facilities, such as restrooms and orientation kiosks, is feasible on each property, without impacting the highly scenic coastal landscape. The size of these areas has been kept to the minimum necessary to facilitate development of a trailhead and a connecting trail on each property. Development of these principal trailheads would enhance management of Rancho by reducing visitors' reliance on existing trailheads that are located on local streets in the community. Furthermore, the trailheads would reduce conflicts with visitors in the existing equestrian stables areas and avoid conflicts with ongoing agricultural operations and have the potential to be served by existing transit.

3) ***Protects Park Resources—Fulfills Park Purpose:*** Protection of federally listed species and provision of appropriate recreational opportunities are part of the park's legislated purpose. Resource protection and trail-based recreation would be enhanced by including this parcel within the park boundary.

Determinations

Administration of these areas as part of the larger Rancho unit would be feasible. The two trailheads are critically important to providing appropriate public access and enjoyment of Rancho, and would not pose undue management burdens on GGNRA. It is likely that these objectives could be accomplished with less-than-fee acquisition, such as trail easements over a portion of the property; however, a boundary adjustment is desirable to facilitate expenditure of federal funds for development of the trailheads, connecting trail, and long-term land management. This proposal has support from POST, the agricultural operator, California State Parks, San Mateo County, and the local community. The cost of acquisition has not been determined. The National Park Service anticipates this would be a minor boundary adjustment.

Additions to Cattle Hill: Vallemar Acres and State Route 1 Frontage, Pacifica

Description

Vallemar Acres and the State Route 1 Frontage parcel are both located at the edges of Cattle Hill, a prominent coastal landform in Pacifica. As such, they share similar characteristics and are evaluated together. Vallemar Acres consists of about 61 acres of sloping undeveloped land owned by the city of Pacifica. It is part of the lower southern slope of Cattle Hill and extends down to the property lines of residences on the north side of Fassler Avenue which ends at a park trailhead. The State Route 1 Frontage parcel consists of about six acres of sloping undeveloped land at the western end of Cattle Hill along State Route 1. It is owned by the state and managed by Caltrans. A recent boundary adjustment inadvertently omitted these two small parcels.

Criteria

1) ***Significance:*** Cattle Hill was evaluated in the *Pacifica Boundary Study* (NPS 1998), then added to the park in 2000 (Public Law 106-350). It protects habitat for federally listed species, preserves outstanding scenic values, and connects to the extensive network of trails on Sweeney Ridge including designated segments of the Bay Area Ridge Trail. These two adjoining parcels are extensions of the distinct landform possessing the same natural resource values as Cattle Hill—coastal scrub with documented and potential habitat for federally listed San Francisco garter snake and California red-legged frog. As integral parts of the scenic coastal hill, they present ready opportunities for enhanced trailheads and access to existing trails.

2) ***Operational Issues****:* Inclusion of these parcels would establish a more logical park boundary that corresponds with the main extent of the landform. Inclusion would also eliminate intervening ownerships and could prevent the development of unauthorized trails and access points with related impacts on resources.

3) ***Protects Park Resources—Fulfills Park Purpose****:* Protection of significant resources and provision of appropriate recreational opportunities are part of the park's legislated purpose. Resource protection and trail-based recreation would be enhanced by including this parcel within the park boundary.

Determinations

Administration of these parcels as part of the Cattle Hill unit would be feasible. The resources are in good condition and would not require remedial actions. The City of Pacifica staff works closely with the park staff on resource management and visitor services. The city had understood that the parcel was already included in the boundary; it supports this proposal. Acquisition cost for this property has not been determined. Caltrans, which manages the frontage property for the state of California, has plans to improve State Route 1 as it passes the base of Cattle Hill. This project, the Calera Parkway, is in the early design stages but is unlikely to affect the frontage parcel, which rises sharply from the roadway. Caltrans has not expressed any objections to this proposal. The park seeks to include the frontage parcel within the boundary to facilitate cooperative management and provide for a future trailhead. The National Park Service anticipates this would be a minor boundary adjustment.

McNee Ranch, San Mateo County

Description

This 710-acre former ranch property lies on the east side of State Route 1 just south of Devil's Slide. It is a unit of the California state park system, managed as part of Montara State Beach which is principally on the west side of State Route 1. The property shares a long boundary with Rancho Corral de Tierra which generally follows Martini Creek. The property includes two trailheads on State Route 1, a pedestrian bridge over Martini Creek, and two ranger residences: one near the bridge, the other close to the northern trailhead. No other major structures are present.

Criteria

1) ***Significance****:* The property possesses extensive natural biodiversity, especially on the serpentine soils of the lower slopes where such endangered species as Hickman's cinquefoil *(Potentilla hickmanii)* and San Mateo thornmint *(Acanthomintha duttonii)* are found. It connects to ecosystems and landscapes under NPS management, In addition, visitors enjoy sweeping vistas of the Pacific Coast and rugged coastal hills from a network of multiuse trails and unpaved roads. These routes connect Pacifica with the coastside communities of Montara and Moss Beach, and lead to the highest points on Montara Mountain. These trails are important to the planned east-west connection that will enable hikers to cross from San Francisco Bay to the Pacific Ocean. The property is also adjacent to public lands managed by Caltrans at Devil's Slide, which have high ecological value and may be opened to recreational use. The segment of Old San Pedro Mountain Road (now a multiuse trail) that crosses the property may be eligible for the national register.

2) ***Operational Issues:*** Inclusion of the property within the park would facilitate cooperative management of resources and visitors. The property is the only state park land adjacent to the Golden Gate National Recreation Area that is not also within the federal authorized boundary. Cooperative management is especially critical for the Martini Creek watershed, which is divided nearly equally between NPS and state park ownership. An equestrian facility is immediately adjacent to the creek on NPS land. A heavily used bridge carries Old San Pedro Mountain Road across the creek.

3) ***Protects Park Resources—Fulfills Park Purpose****:* Protection of significant resources and provision of appropriate recreational opportunities are part of the park's legislated purpose. Resource protection and trail-based recreation would be enhanced by including this parcel within the park boundary.

Determinations

McNee Ranch is the only state park land adjacent to Golden Gate National Recreation Area that is not also within the federal authorized boundary. The park seeks to include the property within its authorized boundary to facilitate cooperative management, provide consistency, and enhance recognition of this property as part of the larger area of protected lands. This is not a proposal for acquisition. This proposal corrects a technical error that omitted McNee Ranch from the park when Montara State Beach was included in the park boundary in 1980. Montara State Beach was expanded to include McNee Ranch sometime afterwards. As is the case with the other California state parks in the boundary, administration (cooperative management) would not be an additional burden.

No other management alternatives were considered. The California Department of Parks and Recreation supports this proposal. There would be no acquisition costs. The National Park Service anticipates this proposal would require a legislative boundary adjustment.

Bolinas Lagoon, Marin County

Description

Approximately 1,100 acres in size, Bolinas Lagoon is a tidal embayment that possesses an array of open water, subtidal channels, eelgrass beds, rocky and mudflat intertidal substrates, salt marsh, and upland marshes. It provides productive and diverse habitats for marine fishes, waterbirds, and marine mammals, and it is also part of a much larger protected natural habitat complex in the region. The site is located on the Pacific Flyway, which makes the Lagoon an ideal staging ground and stopover site for migratory birds; the temperate climate provides wintering habitat for ducks, geese, and shorebirds. It is managed by Marin County Open Space District as the Bolinas Lagoon Open Space Preserve.

Criteria

1) ***Significance:*** Bolinas Lagoon is one of Marin County's most significant natural resources. It was designated a Wetland of International Importance by the Ramsar Convention in 1998 (site no. 960). Along with Drake's Estero and Tomales Bay, Bolinas Lagoon provides an important coastal environment for fish, birds, and mammals that is unparalleled along the northern California coast between the San Francisco and Humboldt bays. Many tributary creeks support federally endangered steelhead trout.

2) ***Operational Issues****:* Inclusion of the property within the park boundary would facilitate cooperative management of resources among several federal, state, and local agencies, and conservation organizations, including the Audubon Canyon Ranch, which manage adjacent lands. Much of the eastern shoreline of the lagoon and portions of the adjacent uplands and small tributary creeks are managed by the National Park Service. The park land within the lagoon watershed totals approximately 986 acres. The Gulf of the Farallones National Marine Sanctuary also encompasses Bolinas Lagoon, with overlapping management authority with Marin County. Marin County, the National Oceanic and Atmospheric Administration, and the Army Corps of Engineers are currently developing plans for restoring natural processes and ecosystem integrity to the lagoon to mitigate for past human activity in the watershed.

3) ***Protects Park Resources—Fulfills Park Purpose****:* Protection of nationally significant resources is part of the park's legislated purpose. Resource protection would be enhanced by including this property within the park boundary.

Determinations

The park seeks to include the property within its authorized boundary to facilitate cooperative management. This is not a proposal for acquisition. Administration of this property through cooperative management would not be an additional burden on the park. No other management alternatives were considered. The Marin County Open Space District and Gulf of the Farallones National Marine Sanctuary support this proposal. There would be no acquisition cost. The National Park Service anticipates this proposal would require a legislative boundary change.

POTENTIAL FUTURE BOUNDARY ADJUSTMENTS

The National Park Service does not manage all the lands within the legislative boundaries of Golden Gate National Recreation Area; there are public lands within the boundaries that are managed by other agencies. Golden Gate National Recreation Area staff will continue to monitor these lands and coordinate with these land managers in a way that maintains and enhances the values that contributed to the lands being included in the boundary. Some of these efforts could lead to eventual acquisition by the National Park Service.

Several areas are of great interest to the National Park Service and appear to meet the NPS criteria for boundary adjustments. The park would continue working with open space partners to pursue protection of these properties, possibly including an NPS boundary adjustment, guided by the goals expressed earlier.

Priority Conservation Areas

Four areas adjacent to the park were identified as Priority Conservation Areas through a regional planning effort led by the Association of Bay Area Governments and documented in *Golden Lands, Golden Opportunities (*Bay Area Open Space Council, 2009). Multiple strategies and multiple land managers could have a role in managing these lands. At this time, no specific boundary adjustments are proposed by the park in these areas. However, anticipated studies would evaluate which specific properties within these areas would be most appropriately managed by the National Park Service.

Marin City Ridge, Marin County

Undeveloped lands adjacent to the park's Marin Headlands unit could enhance protection for the park's natural, scenic, and recreational resources while improving trail connections into an underserved community. These sites were evaluated in a boundary study in 2005 and determined appropriate for inclusion into the park.

Pacifica Conservation Area (South of Mussel Rock to McNee Ranch), San Mateo County

Disconnected, undeveloped parcels at the fringes of the Pacifica community could enhance continuity of existing Golden Gate National Recreation Area lands, including the park's trail links to the California Coastal Trail and Bay Area Ridge Trail, and improve natural resource corridors.

Montara Mountain Complex, San Mateo County

Undeveloped parcels adjacent to Rancho Corral de Tierra could strengthen protection of threatened and endangered species and contribute to the regional conservation efforts focused on preserving large natural resources corridors and scenic beauty.

Gateway to San Mateo County

Comprising a large area of land between Rancho Corral de Tierra and Highway 92, this area could contribute substantially to natural resource protection, the regional trails network, and preservation of scenic and rural character.

Other Potential Acquisitions

Muir Woods Welcome Center – Marin County Intercept Facility

The park anticipates requesting the authority to extend the boundary to include an off-site location for a facility that would serve visitors to Muir Woods and other recreational destinations in Marin County. The facility would support improved shuttle service to Muir Woods and public transit to other nearby recreational areas, including Tennessee Valley, Muir Beach, Mount Tamalpais State Park, Stinson Beach, and Point Reyes National Seashore. A key benefit would be to reduce congestion associated with growing recreational travel to southern and western Marin County. This facility would be located in the vicinity of Caltrans Manzanita park-and-ride, at the intersection of State Route 1 and Highway 101. It would provide necessary visitor services such as parking, sheltered waiting areas, light snacks, restrooms, and orientation information. The project would be developed in close collaboration with Marin County, California State Parks, Caltrans, and local communities.

Upland Goals Conservation Areas

A science-based approach towards identifying biologically important lands for protection in the San Francisco Bay Area was developed by the Bay Area Open Space Council (Weiss et al. 2008), with participation of NPS staff. The result is a network of conservation areas based on computer models that strives to achieve conservation goals for targeted vegetation types and individual species along with assessments of viability, ecological integrity, and level of connectivity of conservation lands. The model output identifies lands adjacent to the park that would help sustain diverse and healthy communities of plant, fish, and wildlife resources in the nine-county Bay Area. Some of these areas overlap with Priority Conservation Areas.

Stinson Beach Environs
Currently undeveloped lands located near Panoramic Highway have been identified as essential conservation areas and would help enhance the park's protection of contiguous coastal biological resources.

Lower Redwood Creek
Lands along the Redwood Creek corridor below its intersection with State Route 1 have been identified as essential conservation areas and would help enhance the park's protection of contiguous stream resources and associated threatened and endangered species.

Nyhan Creek
Lands along the Nyhan Creek corridor from its headwaters to the bay have been identified as an essential conservation area and would help the park contribute to the protection of contiguous stream resources within the region.

Mori-Milagra-Sweeney Connector
Currently undeveloped lands in the Pacifica area have been identified as essential conservation areas; their protection would help the park increase the long-term resiliency of small natural areas such as Milagra Ridge as well as secure important habitat corridors to facilitate species and community movements over time and space.

San Pedro Mountain and Rancho Corral de Tierra Environs, south to Highway 92
Currently undeveloped lands in the Montara, Moss Beach, and Half Moon Bay areas have been identified as essential conservation areas; their protection would help the park increase the core of protected lands along the spine of the San Francisco peninsula. Similar to those in the Pacifica area, these protected areas would provide important habitat corridors to facilitate species and community movements over time and space.

Undeveloped Land Adjacent to Sweeney Ridge and County of San Francisco Jail Property

The property is adjacent to park land, sharing two sides with Sweeney Ridge. It contains county jails #3 and #7, along with a plant nursery and cultivated fields. A large portion of the 145-acre property, roughly 50 acres, is undeveloped and relatively undisturbed. This undeveloped area is contiguous with the extensive coastal ecosystems that the National Park Service manages on Sweeney Ridge. It has similar scenic qualities and habitat values, including potential habitat for threatened and endangered species. Inclusion of the undeveloped area in the park's boundary would enable the National Park Service to receive it, should the county government declare the property excess.

Offshore Ocean Environment

Highway Frontage (West Cattle Hill)

Vallemar Acres

McNee Ranch State Park

Margins of Rancho Corral de Tierra

Gregerson Property

1

0 1.2 Miles

N

Bolinas Lagoon

0 1 Miles

Areas of Detail

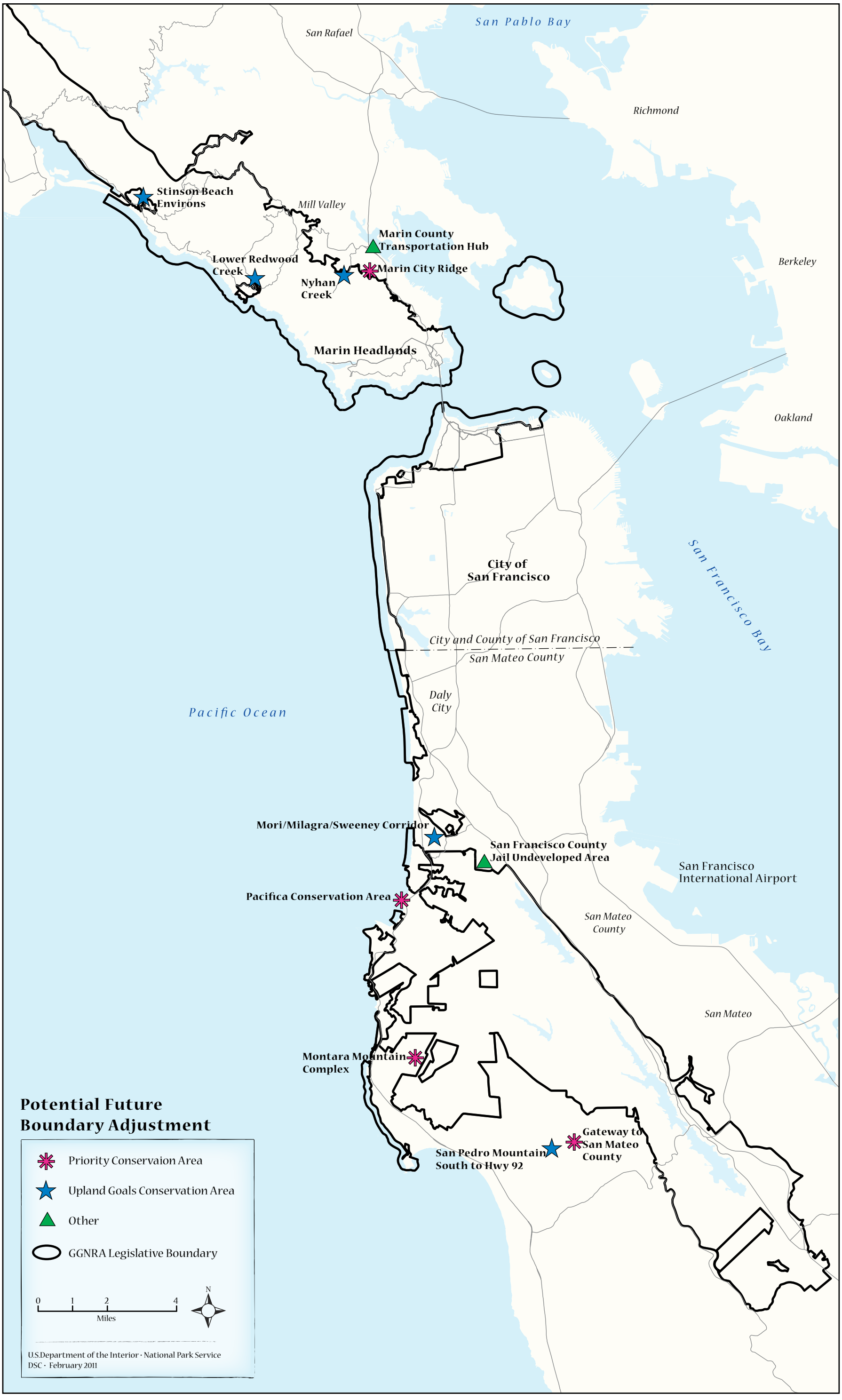
Proposed Boundary Adjustments

Proposed Boundary Adjustment

Current Legislative Boundary

Roads

U.S.Department of the Interior · National Park Service
DSC · February 2011


San Pablo Bay
San Rafael
Richmond
Stinson Beach
Environs
Mill Valley
Marin County
Transportation Hub
Lower Redwood
Creek
Marin City Ridge
Nyhan
Creek
Berkeley
Marin Headlands
Oakland
City of
San Francisco
San Francisco Bay
City and County of San Francisco
San Mateo County
Daly
City
Pacific Ocean
Mori/Milagra/Sweeney Corridor
San Francisco County
Jail Undeveloped Area
San Francisco
International Airport
Pacifica Conservation Area
San Mateo
County
San Mateo
Montara Mountain
Complex
Gateway to
San Mateo
County
San Pedro Mountain
South to Hwy 92
Potential Future
Boundary Adjustment
Priority Conservaion Area
Upland Goals Conservation Area
Other
GGNRA Legislative Boundary
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U.S.Department of the Interior · National Park Service
DSC · February 2011

CLIMATE CHANGE

The National Park Service has developed goals to guide the way climate change will be addressed. Sustaining and restoring park resources in the face of climate change will require the National Park Service to address many challenges to the integrity of cultural and natural resources. The general management plan describes the approach that the park would take to reduce emissions, educate visitors on the topic, and adapt to the effects of climate change during the next 20 years. In addition, the park maintains a "Climate Change Action Plan" that outlines the actions that would be taken to accomplish these broad goals.

GOALS

- Reduce CO_2 Emissions

  The park will become a carbon neutral park by 2016 by reducing the CO_2 emissions of NPS and partner operations, increasing the use of renewable energy and other sustainable practices, and reducing visitor emissions by lessening dependency on personal automobiles.

  National parks can demonstrate how to minimize their contribution to global warming through practices such as energy efficiency and use of renewable energy. Because emissions from visitor driving are estimated to contribute to more than 90% of the park's emissions, the park staff and partners would assist in reducing visitor greenhouse gases by providing opportunities for alternative transportation options.

- Educate and Interpret

  The park staff will help park visitors understand the process of global warming, climate change, the threats to the park, and how they can respond. Visitors are inspired to action through leadership and education.

  Through the efforts of employees, partners, and educational and interpretive media, the park staff can engage visitors on the topic of climate change, provide the latest park research and monitoring data and trends, inform the public about what response is being taken at the park, and inspire visitors to aid in that response.

- Assess Impacts and Respond to Changing Conditions

  The park staff will proactively monitor, plan, and adapt to the effects of climate change by using the best information as it becomes available.

  Climate change is a global phenomenon, outside the control of the National Park Service. The park cannot control the impacts of climate change on the park through its own emissions reductions and education practices. However, the park staff would do their part to improve conditions and demonstrate environmental leadership.

NPS staff would use and promote innovation, best practices, and partnerships to respond to the challenges of climate change and its effects on park resources. By using and developing tools and monitoring methods, including seeking outside assistance, the park staff can better respond to climate change. The park staff would interpret climate change science and develop management strategies, which may include predicting and projecting expected changes. The park staff would coordinate with other agencies in developing tools and strategies to help identify and manage climate change impacts. By adopting the best information on climate change as it becomes available, the park staff would be positioned to respond quickly and appropriately to the local effects of climate change.

The park staff may choose to use an adaptive management framework to respond to the effects of climate change. Temperature and precipitation changes may require that the park manages for native biodiversity and ecosystem function instead of managing for natural communities. In most cases park managers would allow natural processes to continue unimpeded, except when public health and safety or the park's fundamental resources and values are threatened. Scenario planning would likely play a pivotal role in developing the park's responses to climate change.

The park staff would coordinate with neighboring communities while implementing adaptation strategies that support the protection, preservation, and restoration of coastal wetlands and coastal processes, and can serve as vital tools in buffering coastal communities from the effects of climate change and sea level rise.

MANAGEMENT STRATEGIES

To meet the above goals, a more detailed management approach would be developed. The management approach would be an evolving process. The park staff would utilize local, regional, and larger scale monitoring, modeling and mapping evaluations. Through this data gathering, the park staff would identify and refine the assessment of park lands and resources that are vulnerable to sea level rise, extreme storms, and associated coastal erosion. Predictions and observations of other climate change effects, including weather, local climatic conditions, and phenology, would be gathered. Based on this information combined with the results of targeted monitoring, park managers could position themselves to respond and adapt according to changing conditions—a sort of early detection system.

The following approaches and management actions could be implemented to respond to the effects of climate change on park resources.

Natural Resources

- Reduce current and future stressors to the resource and the environment; this would improve the condition of the resource and build resiliency in the ecosystem that would help to minimize future adverse effects of climate change.

- Collect and/or document resources that would be otherwise lost to the effects of the climate change (e.g., fossils, unique geologic resources, unique biological resources).
- Sustain native biodiversity.
- Reduce habitat fragmentation and increase habitat connectivity and movement corridors.
- Restore and enhance habitats.
- Focus on ecosystem management and natural processes.
- Restore naturally functioning ecosystems.
- Manage for biological diversity.
- Minimize impact of invasive species.
- Plan for post-disturbance management.
- Employ adaptive management.
- Manage for realistic outcomes (triage).

Cultural Resources

- Reduce current and future stressors to the resource; this would improve the condition of the resource and help to minimize future adverse effects from climate change.
- Develop proactive triage criteria that would assist the park staff in prioritizing preservation treatments and other management actions. The decision on how to best treat a resource facing potential adverse effects from climate change should be based on 1) significance of the resource, 2) feasibility of the preservation action, 3) cost of the treatment/action, and 4) confidence in the data used to determine potential effects of sea level rise or climate change on the resource.
- Give highest priority to preserving cultural resources and artifacts in situ, coupled with sustainable efforts (intervention techniques) to mitigate and reduce any stressors that might adversely affect the resource.
- Pursue managed retreat when the results of the triage process indicate that preservation treatment or relocation is not practical.
- Pursue recordation and relocation of the resources with high significance and technically and economically feasible treatment and relocation options, and where there is high confidence in the predicted effects of sea level rise or other climate change impacts.
- Identify and document cultural resources to prioritize treatment needs.

Visitor Experience

- Continue to provide a range of experiences by transitioning recreational use away from locations where changes in resource conditions no longer support such uses.

- Remove existing visitor facilities and discontinue recreational uses where continued use is unsafe, infeasible, or undesirable due to changing environmental conditions.
- Evaluate and support changing visitor use patterns as appropriate.

FACILITIES FOR MAINTENANCE, PUBLIC SAFETY, AND COLLECTIONS STORAGE

Park maintenance, public safety, and collections storage functions are scattered throughout the park at sites and facilities that in many cases were not intended for these uses. These functions have had to adapt to conditions that do not adequately meet their space, size, function, mobility, and security requirements. Maintenance and public safety operations have also had to move numerous times, requiring them to reprogram their operations each time, resulting in many inefficiencies. Locating the park's museum collection in multiple storage facilities jeopardizes long-term preservation and restricts the collection's availability for research, education, and interpretive programming, thus limiting its usefulness to the public and park personnel.

The following section proposes a comprehensive approach to building and facility uses necessary to meet the existing and projected needs of these operational functions in conjunction with all draft alternatives. The actions proposed are based on a thorough analysis of park programs and facilities, including the possibilities for locating functions outside park boundaries. The park has other operational facilities such as staff offices, housing, native plant nurseries, and horse patrol facilities. The locations of these facilities vary among the alternatives and are addressed in the description of the alternatives.

GOALS FOR MAINTENANCE AND PUBLIC SAFETY

The large scale of the park, with sites distributed across three counties, poses a distinct challenge to providing facilities for maintenance and public safety operations. Over the years, a system organized around centralized facilities supported by smaller satellite sites has been an effective and successful means to manage the park. It is proposed to continue this organizational concept, but to more permanently establish the locations of the centralized facilities. This will allow the park to gain efficiencies through consolidation of some functions in central facilities and still retain the flexibility to meet dispersed maintenance and safety needs through the satellite offices.

Management Strategies

Centralized Maintenance Facilities

New maintenance facilities would be established in the park. North of the Golden Gate Bridge, a new centralized facility would be constructed in part of the Capehart housing area of the Marin Headlands. This new facility, about 45,000 square feet in size, would be a state-of-the-art, environmentally sustainable complex that would accommodate the park's Buildings and Utilities, Roads, and Marin Grounds functions. The project would include the demolition of selected housing units and new construction of shops, offices, covered storage, parking, and work yards. Maintenance operations presently located in Fort Baker (Building 513) and Fort Cronkhite (Buildings 1046, 1070, Nike missile launch site) would be relocated to this new facility. The estimated cost of demolition and construction of a maintenance facility at Capehart is $16,630,000.

South of the Golden Gate Bridge, the National Park Service would rehabilitate one of the buildings in the Presidio that formerly served as stables for the U.S. Cavalry to house the centralized maintenance functions for Area A, the part of the Presidio for which the Park Service is responsible. Reuse of the cavalry stables building would be contingent upon an agreement between the National Park Service and the Presidio Trust. Existing NPS maintenance operations currently spread among several Presidio buildings would be consolidated at the former stables site. The estimated cost of the rehabilitation for the maintenance function (with administrative offices) in this location is $5,500,000.

At Muir Woods National Monument, essential public safety and maintenance functions would continue to be located near the monument entrance. These functions could remain in existing structures or be incorporated into the new welcome center. However, the other maintenance operations would move from the Old Inn and lower Conlon Avenue areas to a new facility shared with California State Parks in Kent Canyon. This action is dependent upon an interagency agreement with California State Parks.

Public Safety Hub

A single centralized operational hub would be developed at Fort Baker to meet park law enforcement needs. These functions would be located in Building 507. Park wildland fire functions (offices, garaged vehicles, and fire caches) would be relocated from Fort Cronkhite Buildings 1068 and 1069. These functions would move to the former Nike missile launch site near the Marine Mammal Center that would be vacated by the current Roads operation. The historic fire station would remain at Fort Cronkhite. Dispatch and communications operations that serve the park and the Presidio would remain at Presidio Building 35 in the Main Post area. The estimated cost of rehabilitating Building 507 at Fort Baker for a public safety function is $1,830,000.

Satellite Offices

A well-distributed system of park operations satellite offices already exists in Marin and San Francisco counties. These sites would need minor improvements to function more efficiently. Satellites would be extended into San Mateo County by adapting existing park sites for these uses, or through partnerships with other agencies. Typically, each satellite site may have the capacity to collocate functions from several different divisions. The following is a list of satellite locations:

- Stinson Beach – No change is anticipated to the scale of the office, which serves both maintenance and public safety functions.
- Marin Headlands – Law enforcement would continue to have access to offices used by the wildland fire program in Fort Cronkhite.
- Presidio of San Francisco – Public safety would continue to have access to offices by the U.S. Park Police.
- Alcatraz Island – Public safety offices would remain in Building 64 and maintenance facilities would be expanded in the rehabilitated Quartermaster Warehouse.
- Fort Mason – Maintenance and public safety would continue to have administrative offices at park headquarters in Fort Mason. Grounds maintenance facilities would remain.

- Fort Miley – Maintenance and public safety facilities would continue at East Fort Miley.
- Fort Funston – The existing public safety and maintenance offices would remain. A small building for heavy equipment would be constructed.
- San Mateo County north of Devil's Slide – Maintenance and public safety offices could be located at the current Shelldance Nursery area or at San Pedro County Park in Pacifica.
- San Mateo County south of Devil's Slide – A new satellite office for maintenance and public safety offices would be developed at a location yet to be determined.

GOALS FOR COLLECTION STORAGE FACILITIES

The majority of the park's collection would be consolidated in two buildings in the Presidio that formerly served as stables for the U.S. Cavalry. When rehabilitated, the buildings would provide adequate space for the collection and meet national standards for security, fire protection, and environmental control. This consolidated facility would also provide public space for exhibits and programs that engage visitors in memorable and meaningful learning opportunities based on the collection. The estimated cost of this rehabilitation is $7,060,000. This action is dependent upon an interagency agreement with the Presidio Trust, consistent with the 2001 Presidio Trust Act (Section 103(b)) which authorizes the Trust to transfer administration of properties within the Presidio which are surplus to the needs of the Trust and which serve essential purposes of Golden Gate National Recreation Area.

Development of the facility would augment ongoing improvements to collections storage such as installation of space-saving storage equipment and participation in the Bay Area Museum Resource Center Plan (2010) which will provide space for over-sized museum objects.

COSTS OF ELEMENTS COMMON TO ALL ACTION ALTERNATIVES

Cost estimates for actions common to all the alternatives are identified in the table below. The actions common to all alternatives describe the maximum potential capital improvements; lesser improvements may be implemented, or built in phases if necessary. The implementation of the approved plan will depend on future funding. The approval of this plan does not guarantee that the funding and staffing needed to implement the plan will be forthcoming. Full implementation of the actions in the approved general management plan could be many years in the future. Additionally, some of the future long-term funding needed to implement the various actions called for in the alternatives is anticipated to come from nonfederal partners, consistent with the park's current practices.

Table 2: Essential/Priority* One-time Capital Costs for Elements Common to All Action Alternatives

Essential/Priority Projects*	
Presidio Cavalry Stables: rehabilitate for collection storage facility	$7,060,000
Presidio Cavalry Stables: rehabilitate for maintenance and administrative offices	$5,500,000
Total	**$12,560,000**

*Essential/Priority projects are required to preserve fundamental resources and experiences and would likely require federal funding.

Table 3: Desirable/Lower Priority* One-time Capital Costs for Elements Common to All Action Alternatives

Desirable/Lower Priority Projects*	
Capehart: central park operational facility	$16,630,000
Forts Barry and Cronkhite: consolidated law enforcement hub and wildland fire facility	$1,830,000
Total	**$18,460,000**

*Desirable/Lower Priority projects are important to full implementation of the GMP but may be accomplished with nonfederal funds or many years in the future.

FACILITIES NOT DIRECTLY RELATED TO THE PARK MISSION

Maintaining park facilities in acceptable condition is a continuing challenge that requires a multitude of management strategies. The park manages 1,150 assets without the funding required to do so adequately. Some of the facilities do not meet the needs of the park and its partners, and therefore are not used and are deteriorating.

According to the 2009 Park Asset Management Plan, the total assets of the park require $24.6 million in annual operations and maintenance; yet, typically, only $5.3 million has been allocated towards that need. This leaves a gap of nearly $20 million each year. Related to the inability to fund all maintenance needs is $198.1 million in deferred maintenance backlog related to park and partner assets. The $6.0 million typically allocated from special project funding each year for this need does not adequately reduce the deferred maintenance backlog.

This general management plan proposes to remove assets that are in poor condition and are not contributing to the preservation of natural or cultural resources or supporting the visitor experience. Disposal of unneeded assets would allow funding and staff resources to be redistributed to higher value assets.

While developing the GMP alternatives, the planning team identified facilities that did not contribute to the park mission. Further evaluation with an interdisciplinary team led to the identification of assets proposed for removal and the development of the following strategies. Before any facility would be scheduled for removal, appropriate National Environmental Policy Act and National Historic Preservation Act determinations would be completed.

The management team will continue to monitor and identify facilities not needed for implementation of the selected alternative in an effort to bring assets to acceptable conditions and to sustain those conditions over time.

GOALS

- Address the gap between maintenance funding and maintenance needs by reducing the number of park assets that require ongoing maintenance.
- Continue to address deferred maintenance by reducing the number of park assets.
- Support asset management strategies identified in the park asset management plan.
- Enhance the preservation of natural and cultural resources, support the visitor experience, and support park and partner operational needs through asset removal.

MANAGEMENT STRATEGIES

The following proposed actions would reduce deferred maintenance by approximately $1,520,000.

- Muir Woods National Monument Maintenance Facilities

  The park staff has identified inefficient and deteriorating structures to be removed from the monument. Removal would allow for further natural resource restoration and a reduced development footprint consistent with the action alternatives. Through this action, there is potential for deferred maintenance reductions of $40,000.

- Camino del Canyon and Conlon Avenue Structures

  The park staff has proposed removal of deteriorating structures that do not contribute to the history of the park. Removal would be in concert with natural resource restoration objectives, including habitat restoration, and restoration of the natural functioning of the tributary creek. Through this action, there is potential for deferred maintenance reductions of $210,000.

- Lower Redwood Creek and Tennessee Valley Structures

  Facilities that do not support the park mission and some that are in deteriorated condition were identified for removal. Removal of these structures would allow for extensive natural resource restoration, including a return of natural watershed processes, preservation of outstanding natural features, and protection of threatened and endangered species like the coho salmon and red-legged frog. Riparian areas adjacent to Tennessee Valley would also be enhanced through facility removal. Through this action, there is potential for deferred maintenance reductions of $600,000.

- Structures in Marin County park lands, including Capehart housing

  Housing and associated sheds and outbuildings north of Bunker Road were identified for removal to improve the scenic entrance to the Rodeo Valley. Other structures were identified for removal in support of the cultural landscape and for habitat restoration. Through this action, there is potential for deferred maintenance reductions of $670,000.

NATIVE AMERICAN ENGAGEMENT

Since the late 1990s, the NPS staff has worked with the Federated Indians of Graton Rancheria (the federally recognized tribe comprised of park-associated Coast Miwoks and Southern Pomos), with the many Ohlone tribes seeking federal recognition, and with Ohlone individuals who partake in the stewardship of Ohlone heritage. Park lands in Marin County are the aboriginal homelands of Coast Miwoks. Park lands in San Francisco and San Mateo counties are the aboriginal homelands of Ohlones. The park staff would continue to work with Coast Miwoks and Ohlones in the three broad activity areas in which it has worked with them to date: cultural resource management, interpretation and education, and revitalization of community and tradition.

GOALS

- Survey, Identify, and Inventory Archeological and Ethnographic Sites

  The park staff, together with tribal representatives, would continue to conduct fieldwork to survey, identify, and inventory archeological and ethnographic sites, as well as test, record, and preserve these sites.

  American Indians are permitted by law, regulation, or policy to pursue customary religious, subsistence, and other cultural uses of resources with which they are traditionally associated. Recognizing that its resource protection mandate affects this human use and cultural context of park resources, the National Park Service would plan and execute programs in ways that safeguard cultural and natural resources while reflecting informed concern for the contemporary peoples and cultures traditionally associated with them.

- Work with Park-Associated Native People on a Range of Interpretive and Educational Activities

  The park staff would continue to work with park-associated native people on a range of interpretive and educational activities. These activities could include Indian-led interpretive programs offered throughout the park, permanent and temporary exhibits on native history and culture, annual commemorative festivals with native components, teacher trainings on Native American curricula, and participation of native people on visitor center advisory boards.

- Continue to support the Revitalization of Coast Miwok and Ohlone Communities and Traditions

  The park staff would continue to support the revitalization of Coast Miwok and Ohlone communities and traditions. Native people would continue to conduct religious activities in the park, gather natural materials for use in traditional crafts, participate in the study of native histories and genealogies, and work with the park staff on ethnographic landscape restoration efforts.

MANAGEMENT STRATEGIES

To provide direction for these activities, the National Park Service would work to establish and implement a set of protocols that would institutionalize the way that park staff engages Native Americans in the park. Each protocol agreement would be tailored to the specific type of relationship that the National Park Service and the tribe have developed or are in the process of developing. Protocols and agreements could be developed that may include the following elements or stipulations:

- Establish a government-to-government relationship with the tribe by first contacting or notifying the tribal chair when issues arise.
- Establish contacts by the park superintendent (or designated staff) with specific tribal representatives or tribal council office(s) designated by the tribal council or tribal chairperson to deal with specific park proposals (or issues) that may arise. (The agreement should include a list of the types of proposed NPS activities for which the tribe would like to be contacted.)
- Conduct routine notification of appropriate tribal officials (designated by the tribal council or tribal chairperson) by the park regarding park planning, project development, or environmental impact assessments. (Appropriate methods for this preliminary notification should be summarized in the agreement—e.g., letter, telephone contact, meeting with tribal chair, cultural committee, tribal council.)
- Set up meetings between park management and the tribe on a periodic basis to review upcoming park plans or projects that may impact American Indian resources in or near the park (e.g., once a year, once every 6 months).
- Exchange information and research results, and technical assistance between the National Park Service and the tribe.
- Develop a timeframe for responding to oral and written communications.
- Create steps for resolving disputes (e.g., alternative dispute resolution processes, third party mediation, or mediation by the NPS regional director or Native American Affairs Office director).
- Define the process for amending or modifying the agreement.
- Establish a time period in which the agreement would remain in effect.
- Define the process for ending or canceling the agreement.

OCEAN STEWARDSHIP

INTRODUCTION

This section of the general management plan articulates an ocean stewardship policy that is based on and intended to support the Pacific West Region's strategic plan. The strategies and objectives included below are targeted at addressing the unique needs of Golden Gate National Recreation Area's ocean resources. The park would develop an implementation plan that would contain specific actions intended to achieve the measures included below.

With its boundary typically extending a quarter of a mile offshore, Golden Gate National Recreation Area manages miles of coastline and the associated marine and estuarine resources inside San Francisco Bay and along the outer coast. The park holds a lease from the State Lands Commission for management of tidelands and submerged lands within the park boundary to 1,000 feet offshore. In certain areas, the park shares overlapping management authority with the Gulf of the Farallones and Monterey Bay national marine sanctuaries.

Ocean resources, including natural marine resources and submerged cultural resources, are at risk due to a variety of threats. Climate change will cause sea level rise, changing storm patterns, and ocean acidification. Natural sediment transport, which affects shoreline and beach dynamics, is affected by sand mining, dredging, dredge disposal, shoreline stabilization structures, and altered flow regimes such as dams. Overflights, boats, and other uses of marine habitats cause disturbance to marine species. Invasive exotic species inhabit the park's ocean and estuarine waters, displacing native species. Recreational and commercial fisheries may impact nearshore fish populations and ecosystem dynamics. Water quality is threatened by pollution from runoff, landslides, shoreline development, sewage outfalls, vessel traffic, oil spills, and contaminants exposed from dredging. Potential wave and tidal energy developments may alter habitat and disrupt physical processes.

Effective management of the park's natural and cultural ocean resources requires a strategic approach. In 2006, the National Park Service developed an *Ocean Park Stewardship Action Plan* (NPS 2006) to respond to the issues and threats previously described. In 2007, the Pacific West and Alaska Regions of the National Park Service developed a strategic plan for Pacific Ocean parks (NPS 2007), which provided guidance and implementation details for achieving the goals of the servicewide plan. The strategic approach outlined in this plan is consistent with the policies and priorities of Executive Order 13547 for the Stewardship of Our Oceans, Coasts, and Great Lakes.

GOALS AND MANAGEMENT STRATEGIES

In order to be an effective steward of the park's natural and cultural ocean resources, park staff must research, monitor, and protect these resources, expand current and explore new partnerships with other agencies and organizations, and communicate an ocean

stewardship message to visitors, park managers, and the public. To accomplish this, park staff must develop a plan and then pursue funding and leverage partnerships.

Goal 1. Support a Seamless Network of Ocean Protected Areas

In order to effectively and efficiently manage the park's ocean resources, park staff must work with other agencies that have shared goals and objectives for marine resource protection. This local network currently includes Gulf of the Farallones National Marine Sanctuary, Monterey Bay National Marine Sanctuary, Cordell Bank National Marine Sanctuary, Point Reyes National Seashore, Farallon National Wildlife Refuge, Bolinas Lagoon Open Space Preserve, James V. Fitzgerald Marine Reserve, and portions of California Coastal National Monument.

Strategy 1.1. To ensure that the network is seamless in practice, park staff will work to expand current collaboration and strengthen communication with federal, state, and local agencies with overlapping and adjacent jurisdiction and with nongovernment organizations for management of ocean resources.

Goal 2. Inventory, Map, and Protect Ocean Parks

In collaboration with other agencies and organizations managing ocean resources, park staff will further develop their understanding of the park's natural and cultural ocean resources.

Strategy 2.1. Through collaboration with other agencies and organizations, the park will continue to conduct and support regional baseline inventories, monitoring, and mapping of marine and estuarine resources.

Strategy 2.2. Park staff will identify and quantify threats to marine resources, including those associated with climate change and land- and water-based activities.

Strategy 2.3. Through the establishment of sensitive resource zones and special closure areas, the park will protect the most sensitive biological resources from disturbance.

Strategy 2.4. Park staff will engage in restoration of estuarine and coastal wetland habitats and will assess new restoration opportunities in response to changes from climate change.

Strategy 2.5. Park staff will continue to work with the State Lands Commission to obtain additional state lease of all tidelands and submerged lands within the park’s legislated boundary.

Strategy 2.6. Park staff will pursue the necessary authorization to correct coastal boundary deficiencies with respect to mean high tide line.

Strategy 2.7. Park staff will increase public awareness of park jurisdiction by working with the National Oceanic and Atmospheric Administration and the Federal Aviation Administration to include park boundaries and special closure areas on nautical and aviation charts.

Strategy 2.8. Park staff will work proactively with the National Oceanic and Atmospheric Administration, the Bureau of Ocean Energy Management, Regulation,

and Enforcement, and the Federal Energy Regulatory Commission, and other agencies where appropriate, in addressing planning efforts as they relate to renewable ocean energy.

Strategy 2.9. Park staff will work with local, regional, and state agencies to reduce point and nonpoint pollution sources within and adjacent to the park and improve water quality in the marine and estuarine waters by implementing best management practices.

Strategy 2.10. Park staff will work with the NPS Submerged Resources Center, State Lands Commission, the National Oceanic and Atmospheric Administration, and other agencies to identify and formally assess the condition and value of submerged shipwrecks and other submerged archeological resources, and strategize for their protection, treatment, and interpretation.

Goal 3. Engage Visitors and the Public in Ocean Park Stewardship

Given the park's location and its millions of visitors each year, the park affords outstanding opportunities to educate the public about threats to ocean resources. Communication of scientific findings and outreach through education and stewardship programs are needed to elevate awareness of ocean issues, protect resources, and actively engage visitors and the public in ocean stewardship.

Strategy 3.1. Through collaboration with park partners, park staff will work to improve public understanding of the park as an ocean park through expanded interpretation and outreach through media and new technologies.

Strategy 3.2. Park staff will collaborate with the NPS Pacific Coast Science and Learning Center to expand communication of ocean science and research to park staff, visitors and the general public.

Strategy 3.3. Park staff will continue to engage students and visitors in ocean stewardship through the Crissy Field Center, park partners, and other organizations through educational programs.

Strategy 3.4. Park staff will support the Bay Water Trail as a form of sustainable recreation and collaborate with other organizations to outreach to trail users to ensure protection of marine and estuarine resources.

Goal 4. Increase Technical Capacity for Ocean Exploration and Stewardship

By drawing on the resources and expertise of other agencies and organizations, the park will leverage partnerships and increase its technical capacity to protect natural and cultural ocean resources.

Strategy 4.1. Through joint research programs with other agencies and organizations, park staff will facilitate research that improves our understanding of ocean resources.

Strategy 4.2. Park staff will partner with regional agencies on research and modeling of, and management response to, sediment dynamics and other coastal and ocean processes within the San Francisco littoral cell.

Strategy 4.3. Park staff will actively support ocean stewardship programs of park partners, such as California Seabird Protection Network, Gulf of the Farallones National Marine Sanctuary Beach Watch program, and Point Reyes Bird Observatory Conservation Science's Alcatraz Island seabird program.

Strategy 4.4. Park staff will continue to partner with regional, state, and federal agencies to monitor and model sea level rise and other local effects of climate change and assess affects on ocean and coastal resources.

Strategy 4.5. Park staff will partner with local and regional scientific and political entities to develop protection, mitigation, adaptation and restoration strategies and provide guidance on management of park resources that may be affected by climate change, including inundation and accelerated coastal erosion associated with sea level rise, increased storm wave energy and altered flow regimes.

PARK COLLECTIONS

INTRODUCTION

The park collections represent the fourth largest in the national park system, reflecting more than 200 years of the area's history. The park's legacy is reflected through artifacts relating to Native American culture, the evolution of military history from Spanish Colonial times to the coastal defense and Cold War periods, the advances of maritime history and Westward expansion, and the park's relationship with the surrounding San Francisco Bay Area communities. Highlighting this rich chronicle of history are significant collections from Alcatraz Island, the U.S. Army, the Nike Missile Site; archeological remains from every episode of the park's history; and archival photographs, oral histories, architectural drawings, and documents. The park's natural specimen collections reflect the unique geological features and fragile biodiversity of the central Californian coastal ecosystems.

To convey the diversity and scope of the collections and their representation of the park's cultural and natural resource heritage, these goals allow the collections to be better understood through continued access, study, interpretation, and education, while ensuring their preservation.

The goals that follow broaden the scope of collection management for long-term preservation and for the use of the collections in interpretive and educational programs.

GOALS AND MANAGEMENT STRATEGIES

- Preserve and Maintain the Collections

  Establish a curatorial and research facility that allows for consolidation of the majority of the park collections while meeting the national standards for security, fire protection, and environmental control. Provide public space for research and changing exhibits in this facility.

  Provide facilities and implement programs that ensure the long-term preservation of the collections through regular maintenance and preventive conservation.

  Evaluate and catalog the entire collection to ensure that materials are accessible and information is available for educational programming, research, and exhibits.

  For more information on collection storage facilities, see "Facilities for Maintenance, Public Safety, and Collections Storage" earlier in this section.

- Connect People with the Park's Collections

  Develop a park collection program that engages the visitor in memorable and meaningful learning opportunities, broadens public access, and creates a sense of place within historic sites.

Create opportunities for individuals to participate in the stewardship of the park collections so that visitors connect with, learn about, and enjoy this park resource.

Conduct oral histories that capture the stories associated with the park's resources and primary interpretive themes. Preserve the oral histories and make them accessible to staff, visitors, researchers, and scholars.

Develop a research and scholar's program that expands our knowledge and understanding of the park collections. Using evolving technologies, develop partnerships with and links to local and national organizations to place the collections in a broader historical and scientific context.

Provide outreach opportunities to a wider community and national audiences through virtual technologies and traveling exhibits. These technologies and exhibits would inform and orient visitors, increase understanding and appreciation of park resources, and improve public use and accessibility of the park collections.

- Strengthen the Collection

  Strengthen the park's collection by focusing on representations of the park's themes and varied resources.

  Strengthen the park collections' comprehensiveness and representation of the park's significance and varied resources through the targeted collection of materials that are missing, misrepresented, or underrepresented in the collections.

  Establish a set of protocols with the repositories that maintain the park's natural history specimen collections that allows access for park staff, visitors, researchers, and scholars. Define parkwide policies for future collection and storage of the park's natural history specimens.

PARTNERSHIPS

When people engage with the park through participation in a park or park partner program, they make an emotional connection to the park. This connection often creates an appreciation and support for the national park and its resources. Golden Gate National Recreation Area has effectively created and maintained partnerships that have increased the number and diversity of channels through which the community and visitors can engage with the park, thus extending the opportunity of engagement to more people, in more ways. These opportunities not only strengthen ties to Golden Gate National Recreation Area, they help to strengthen Americans' ties to their national park system.

The entire organization at Golden Gate National Recreation Area works to facilitate and maintain partnership opportunities by incorporating partnership development into every aspect of the organization. This includes specifically recruiting and training for partnering skills, organizing park staff in a way that facilitates partnerships, and actively seeking partners in the search for solutions to park management issues. Park managers are constantly evolving the partnership concept and exploring partnership practices from around the globe to gather innovative partnership ideas and best practices. The park aspires to continue its role as a learning laboratory in developing powerful and successful partnerships in a national park. The park staff will continue its focus on partnership development by

- Identifying Partnership Opportunities

  A partnership solution will be actively considered when tackling park management issues. The decision to establish a specific partnership is guided by a need that ties to and supports the park's purpose and significance, and which is best fulfilled or strengthened with a park partner. First, define the management issue and objectives; second, ask if a partner may be able to assist in meeting those objectives, or if working with a partner may improve park management's capabilities, the process, or level of community engagement. Then seek out the partner or partners who might be the most qualified and capable of meeting the objectives.

- Developing Win-Win Partnerships

  Each partner needs to see their contribution alongside the benefit gained. Selecting and maintaining a partner requires a clear understanding of the mutual benefits. It is important to tie the partnership and its outcomes to the missions of each partner. Sharing resources, benefits, and recognition of successes keeps the partnership from becoming lopsided or dominated by any one player.

- Being Innovative in Crafting Partnerships

  Partnerships may often be limited in vision, or significantly constrained by a risk-adverse perspective or a need to control outcomes. Golden Gate National Recreation Area managers commit to a broad partnership vision that includes a capability to take reasonable risk in partnerships within the parameters of policy and a willingness to share control in enacting the vision for its park lands.

- Sharing a Vision

  The partners collaborate in developing and refining a shared vision of the need that is to be fulfilled and the work that is to be accomplished through the partnership. The shared vision is reflected both in the broad body of work and in each project or initiative that is undertaken. Each partnership will require a culture of full engagement from the very beginning that leads to collective enthusiasm and clear results.

- Maintaining Clear Expectations

  Partnerships will require formal written agreements and work plans that define mutual interests and expectations, the roles and responsibilities of each partner, and clear accountability for the work to be performed. The staff of each partner organization needs to truly understand and embrace the mission and role of each partner and their contribution to stewardship of park resources and visitor opportunities. Good park partnerships represent a delicate balance between maintaining one's own identity and adding value to a collective effort of park stewardship.

- Committing to Actively Managing Partnerships

  All partners will invest time and resources in revisiting the partnership as needed to ensure it is on track and meeting the objectives. If a partnership is underperforming or not performing, Golden Gate National Recreation Area managers will reinvigorate, restructure, or end the partnership—redirecting the resources to a more successful or new partner.

TRAILS

INTRODUCTION

Golden Gate National Recreation Area's trail system would continue to be managed and improved to provide an enduring system of sustainable trails. Trails provide one of the most important ways that visitors experience and enjoy the park and discover its diverse settings.

The park's extensive network of trails allows millions of people to discover the natural world and deepen their awareness of the grandeur and fragility of park landscapes and resources. Sustainably designed and maintained trails welcome public use while protecting habitat and landscape and, in some cases, are historic resources themselves. Trails can support healthy lifestyles and offer a nonmotorized way to get to the park and its destinations.

A system of ranch and military roads inherited when the park was established in 1972 is the basis for much of the current trail system. Since then, park managers, with partners and the community, have planned and completed many improvements to park trails to better serve the public and protect park resources.

Much of the trail system still requires upgrading to improve conditions, provide more sustainable alignments, and to fill gaps in the system. In new areas where the park is expanding, such as Rancho Corral de Tierra, a thorough evaluation and plan would be required following this general management plan to guide needed improvements.

The successful Trails Forever initiative that was launched in 2003 with a focus on the California Coastal Trail is the most current and best example of the potential of public-community collaboration to establish a network of exceptional trails. Looking beyond the trails to incorporate caring for the setting through which they travel has integrated improvements to the natural and cultural resources along trail corridors into the trail projects. This approach has expanded the benefits and reach of the program and has inspired an unprecedented level of volunteer support that is key to the ongoing success of the program.

Golden Gate National Recreation Area's trail system would provide a sustainable network for visitors to access, enjoy, and understand the diversity of park settings while protecting park resources. The recreation area's trails would connect communities to the park, and park sites and destinations to each other, to adjacent public lands, and to the regional network of trails.

GOALS AND MANAGEMENT STRATEGIES

- Provide a system of trails integrated with the trail network beyond park boundaries, with coordinated regulations and supported by accurate maps and consistent signs.
- Continue to coordinate with other agencies and organizations to complete a comprehensive regional and national trail system that includes the California Coastal Trail, Bay Area Ridge Trail, San Francisco Bay Trail, Juan Bautista de Anza

National Historic Trail, American Discovery Trail, and San Francisco Bay Water Trail.

- Establish and maintain a trail system that offers a diversity of park experiences, including walking, hiking, scenery viewing, learning, horseback riding, bicycling; trails of varying lengths and loop configurations, varying degrees of challenge; access to a diversity of park settings; and opportunities for universal access where appropriate.
- Locate, design, and maintain new or improved trails and trailheads using best practices and sustainable design to protect the park's natural and cultural resources, provide enjoyable and safe access, and reduce ongoing maintenance requirements.
- Integrate improvements to the surrounding cultural landscape and natural habitats when creating or rehabilitating trails and, where appropriate, convert former management roads to trails.
- Create trails and trailheads that promote nonmotorized travel to and within the park, reducing the carbon footprint and supporting healthy communities.
- Establish a coordinated system of signs to provide wayfinding information, support understanding of the park history and resources, and communicate regulations.
- Create and support partnerships and community involvement in trail planning and ongoing stewardship, while continuing to engage the community through the Trails Forever initiative.

Marin County Trails

The Marin County trail system is well established. For much of Golden Gate National Recreation Area's Marin County lands, trail improvements have been identified in recent plans and trail system improvements are ongoing. Future efforts would focus on continuing to improve existing trails, including sustainable alignments and design, improving connectivity and accessibility, and providing wayfinding signs.

San Francisco City and County Trails

The more formal trails of San Francisco lands in the planning area are the Bay Trail, the California Coastal Trail, and their connectors. Continued efforts to improve these trails would focus on sustainable design to protect park resources, address the volume of use, and improve connectivity, especially to transit and the regional trail system.

San Mateo County Trails

In established areas of the park (Mori Point, Milagra Ridge, Sweeney Ridge) future efforts would focus on continuing to improve existing trails, including sustainable alignments and design, improved connectivity and accessibility, and provision of wayfinding signs. Safe trailheads, appropriate for both local and regional visitors, would be provided. Where appropriate, former management roads would be converted to trails. A more comprehensive approach to trail planning would be required for new areas

coming into park management (Pedro Point, Rancho Corral de Tierra) and areas where trail deficiencies have not been addressed (Phleger Estate).

TRANSPORTATION

Continued transportation planning and management is key to providing the broadest range of access for all visitors to Golden Gate National Recreation Area while reducing the park's carbon footprint. To protect the park's natural and cultural resources and provide for a high-quality visitor experience, addressing congestion, improving safety, and facilitating access/circulation to and within the park must remain important components of park planning. Access to the park must be provided and improved via alternative modes such as transit, bicycle, ferries, and trails. These transportation strategies were highlighted in the 1980 general management plan for the park and they are even more relevant today, in the face of climate change.

The park would pursue sustainable, multimodal access to park sites in partnership with other organizations. By improving trails, roads, and transit connections, a network of equitable energy efficient, low-emissions multimodal transportation options would allow for enjoyable access to park sites.

GOALS

- Reduce greenhouse gas emissions.
- Create enjoyable and welcoming transportation experiences for all visitors.
- Preserve and protect park resources by minimizing transportation impacts.
- Create equitable and convenient multimodal transportation options to and within the park.
- Inspire an environmental consciousness by demonstrating environmental excellence in transportation.
- Optimize management of the park transportation system through coordinated planning, programming, management, and maintenance.

MANAGEMENT STRATEGIES

- Expand Regional Park Ferry Access

  As envisioned in the 1980 general management plan, the staff at Golden Gate National Recreation Area continues to pursue expanded ferry access as an alternative means of travel among Fort Baker, Fort Mason, and the Presidio including possible links to Alcatraz Island, Angel Island, Sausalito, Tiburon, Larkspur and the East Bay.

  The National Park Service would continue to collaborate with the Water Emergency Transportation Authority and the San Francisco Port Authority to explore a range of future ferry connections. These planning efforts seek to improve visitor experience with links between park sites and the regional ferry network. Water taxi access would

also be considered as a component of the full network of waterborne access where fixed-route and scheduled ferry service may not be warranted.

- Address Alcatraz Island Ferry Access

  Consistent with regional, multiagency planning efforts, the National Park Service is evaluating new ferry departure points for Alcatraz Island from the northern waterfront of San Francisco.

- Pursue online Trip Planning/Wayfinding

  The park would continue to pursue improved mapping capabilities to enable visitor trip planning, integrated interpretive information and route planning, and other interactive tools. These ongoing improvements would be both online and at park and gateway sites. These website improvements would facilitate a broader understanding of park resources and the full array of transportation modes available to access them. Online trip planning would be linked or integrated with existing regional trip planning systems and other new technology encouraging use of alternative modes of access where available.

- Employ Tools for Congestion Management

  Congestion management or transportation demand management is a collection of management tools focused on shifting personal travel patterns to off-peak periods, more efficient modes (such as public transit and ridesharing) and alternative modes (such as cycling and walking) to offset vehicle congestion, particularly during peak periods. Tools could include improving and promoting transit options, implementing a reservation system, shifting employee work hours, and employing congestion fees (such as parking fees). In addition to parking fees included in the *Marin Headlands and Fort Baker Transportation Infrastructure and Management Plan Final Environmental Impact Statement* (2009), the other sites where parking fees would be considered include Stinson Beach, Tennessee Valley, Lands End, Fort Mason, Fort Funston, and Muir Woods. The park staff would continue to explore a full range of these tools to offset congestion at park sites.

- Expand the Muir Woods Shuttle

  The park staff would continue to collaborate with Marin County to improve the Muir Woods shuttle service.

- Employ Intelligent Transportation Systems

  Intelligent transportation systems use technology to improve transportation efficiency, such as electronic highway message signs with up-to-date travel information or electronic bus stop signs with up-to-the-minute information about bus arrivals. These tools help travelers better plan their trip and often help travelers choose alternative routes or modes to avoid congestion. As a result, the total distribution of travelers is spread more evenly across the system and the system functions more efficiently. Park managers would continue to work with Caltrans and other agencies to employ tools to support the Muir Woods shuttle and other alternative transportation access to park sites.

- Implement the Marin Headlands and Fort Baker Transportation Infrastructure and Management Plan of 2009

  Continue to implement actions that provide improved access to and within the Marin Headlands and Fort Baker for a variety of users, and to initiate these improvements in a way that minimizes impacts to the rich natural and cultural resources of the park.

- Improve Mobility, Access, Connectivity, and Collaboration

  Mobility, access, and connectivity form the keystone of the park and monument's multimodal transportation system. Although cars will continue to be an important part of the transportation system, the park staff is committed to reducing dependence on the automobile by increasing the efficiency of other modes of travel. Creating practical transportation choices and educating the public of their viability and desirability will increase use of modes other than cars. The park staff will continue to collaborate with regional partners to achieve the vision of creating a seamless multimodal transportation system to access the park for residents and visitors in the Bay Area. This collaboration extends to applying "universal design" principles that provide access for people with disabilities.

- Develop a Long-Range Transportation Plan

  Golden Gate National Recreation Area is developing the first park-level long-range transportation plan. An important component of this process is the creation of a list of prioritized future transportation projects, or the transportation improvement plan. Together, they would articulate the transportation priorities of the park.

  As a pilot project, the park staff would develop a model for park-level transportation planning in a manner that is consistent with state and metropolitan planning organizations. The project would provide NPS leaders with a replicable park-level transportation planning process, benchmarks for evaluating transportation projects, and park guidance for future planning and operational decisions.

The Alternatives for Alcatraz Island 4



NO-ACTION ALTERNATIVE

OVERVIEW

Alcatraz Island is one of the most popular destinations in the park. The only former federal penitentiary open to the public, it attracts more than 1.4 million visitors each year. However, the prison era is only part of its long and fascinating history. Alcatraz Island was a fort during the Civil War, the home of the West Coast's first lighthouse, and the birthplace of the American Indian "Red Power" movement. There is also a natural and scenic side to Alcatraz Island. Plant communities, tide pools, and birdlife are among its features, and a walk on the island promises panoramic views of the city skyline, ships, bridges, and bay waters.

Under the no-action alternative, the island would continue to be managed to preserve historic and natural resources, and provide public access to the variety of settings and experiences where appropriate and safe. The primary visitor experience would be day use, beginning with a ferry ride from San Francisco. The island experience would continue to be centered on the federal penitentiary; however, other periods of the island history and bird life would also be interpreted. Scheduled evening tours of Alcatraz Island would continue to provide visitors with this unique opportunity.

The deterioration of buildings and landscapes (exacerbated by the harsh island environment) and the protection of areas for bird nesting habitat (at least for part of the year) would continue to limit visitor access to much of the island, at least for part of the year. Rehabilitation of historic buildings and landscaped areas would be ongoing and subject to available funding.

The island supports one of the largest concentrations of colonial nesting waterbirds along the Central Coast of California. Many areas of the island would continue to be closed during breeding season to protect the colonies from human disturbance. In areas open to the public, western gulls would be managed under an existing agreement with the U.S. Fish and Wildlife Service in accordance with the Migratory Bird Treaty Act, through the use of bird exclusion measures and other deterrents to protect visitor health and safety. Education and stewardship opportunities would inform visitors about the importance of the island to nesting birds, and what the public can do to help protect them.

Management of Alcatraz Island is currently guided by the 1980 general management plan and the 1993 Alcatraz Island development concept plan, which established zones of year-round and seasonal access and established areas that are closed year-round to visitors. See "Figure 8: 1980 General Management Plan, Park Lands in Marin and San Francisco Counties (No-action Alternative)" for additional information on the current management.

FERRY EMBARKATION

Access to the island would remain at the docks on San Francisco's northern waterfront. The park would continue to provide basic orientation and visitor services at the pier. Ticketing would continue to be through a reservation system, and ferries would operate

daily on a year-round schedule. The length of the ferry trip between the mainland and Alcatraz Island would remain approximately 10–15 minutes.

ARRIVAL AREA
(including the Dock, Building 64 (Historic Barracks), and the Sallyport)

The arrival area would continue to provide orientation, restrooms, and other support services for visitors arriving and departing Alcatraz Island. This area includes a mix of structures and landscapes that would continue to support the high volume of visitation. Portions of the first floor of Building 64, the historic barracks, would be adaptively used for administrative purposes and some visitor services, including a small gift shop, exhibits, and a theater. The upper floors have not been rehabilitated and would remain unused. All visitors would continue to pass through the Sallyport, one of the oldest structures on the island.

MAIN PRISON AREA
(including the Citadel, Main Cellblock, Hospital Wing, Administration Wing, Recreation Yard, New Industries Building, Post Exchange, and Parade Ground)

The Main Prison Building and several adjacent areas, like the Recreation Yard, have been rehabilitated to represent the federal penitentiary era. They would continue to be managed as part of the central visitor experience. Visitors would have access to most of the building and yard. Several areas, like the Civil War era Citadel (located below the Main Cellblock) and part of the building's hospital wing, would remain closed. Visiting the Main Prison Building would primarily be a self-guiding experience facilitated by an audio tour.

Many adjacent landscape areas would continue to be minimally preserved and inhabited by waterbirds both seasonally and year round, while other areas include the island's restored historic gardens. Before the National Park Service assumed management of the island, the Government Services Administration demolished several residential structures on the Parade Ground. The piles of rubble from these demolished structures would remain and would be used seasonally by waterbirds.

LIGHTHOUSE

The lighthouse would continue to be managed for its historic function as an early aid to navigation in San Francisco Bay. It is currently managed by the U.S. Coast Guard, but is expected to be transferred to the National Park Service. Visitor access would be highly controlled.

NORTH END OF THE ISLAND

These buildings and adjacent yards were once active parts of the prison. They would continue to house the island's diesel generators that currently provide all power to the island's facilities and be used for operations and maintenance functions. The state of preservation would be minimal, and visitors would generally not be permitted in this area.

ISLAND PERIMETER

The perimeter of the island, including the steep cliffs and immediate shore, would continue to be managed to preserve habitat for birds and marine wildlife. Visitor access would be on primary trails that are open year-round, and on seasonal trails such as the Agave Trail. Other areas would be closed year-round for visitor safety and seabird habitat protection.

OFFSHORE BAY ENVIRONMENT

The National Park Service has jurisdiction over the bay environment extending approximately 1,000 feet from the island's shore. This area would not be actively managed, although access to the island would be only through the park's ferry concessionaire.

SUSTAINABILITY

The National Park Service would continue to develop and implement sustainable approaches to meet the island's energy, water, and wastewater needs. Actions that are being considered include replacing diesel generators with renewable (e.g., photovoltaic panels) and grid-tied energy sources. These infrastructure technologies would be interpreted where possible.

COST ESTIMATES

Cost estimates for the no-action alternative are identified in the table below. The costs shown here are not for budgetary purposes; they are only intended to show a relative comparison of costs among the alternatives.

The alternatives describe the maximum potential capital improvements; lesser improvements may be implemented, or built in phases if necessary. The implementation of the approved plan will depend on future funding. The approval of this plan does not guarantee that the funding and staffing needed to implement the plan will be forthcoming. Full implementation of the actions in the approved general management plan could be

many years in the future. Additionally, some of the future long-term funding needed to implement the various actions called for in the alternatives is anticipated to come from nonfederal partners, consistent with the park's current practices.

Annual Operating Costs

Operating costs and staff numbers for Alcatraz Island are included in Golden Gate National Recreation Area analysis.

One-time Capital Costs

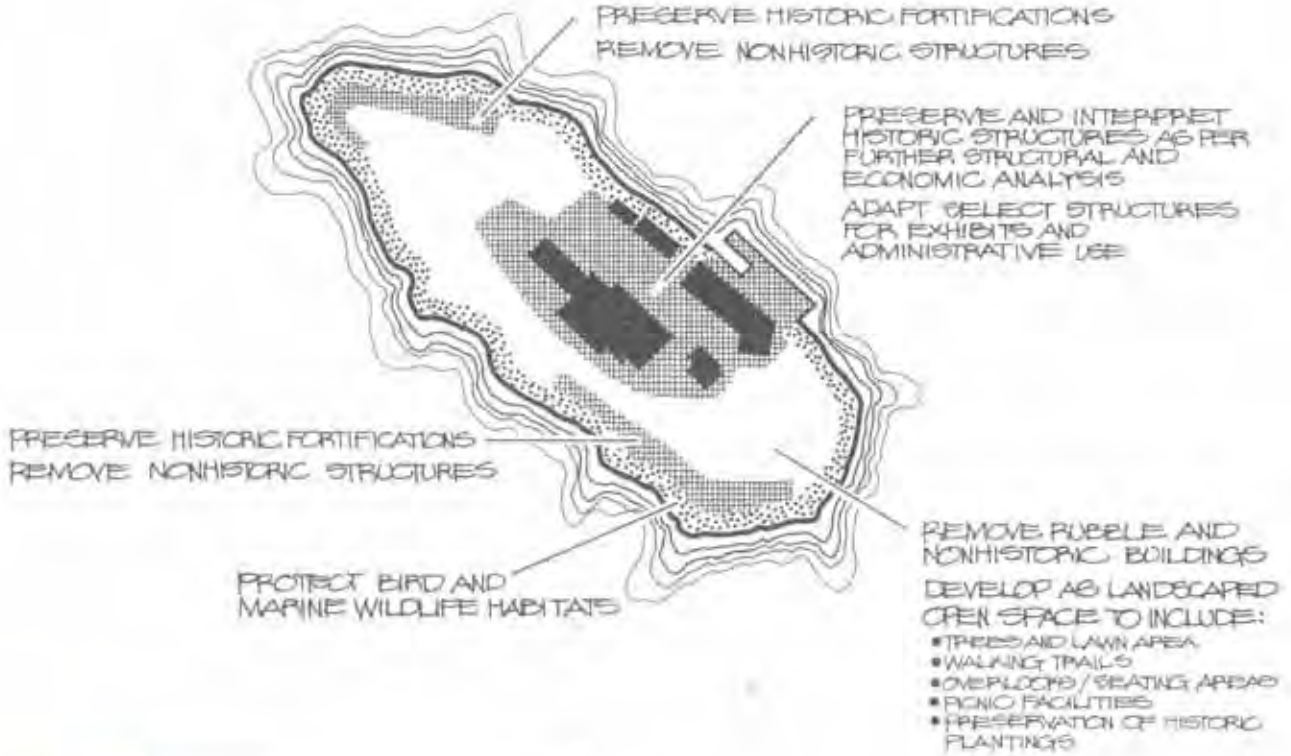
The estimated costs of the no-action alternative reflect the continuation of current management. One-time costs for the no-action alternative are the costs for those projects that are currently approved and funded—any requested but unfunded projects are not considered in this analysis. Therefore, while the action alternatives contain estimates for 20 years of proposed projects, the no-action alternative assumes no new projects would take place except those projects funded in 2009. Projects include electrical upgrades and repair of the Alcatraz Island morgue, and total $4.3 million.

In the no-action alternative, the current level of facilities would be continued. Improvements to facilities would include deferred maintenance and rehabilitation projects.

Table 4: One-time Costs for the No-action Alternative for Alcatraz Island

SUMMARY OF COSTS FOR THE NO-ACTION ALTERNATIVE	
One-time Capital Costs	
Total	**$ 4,260,000**

Operating costs and staff numbers for Alcatraz Island are included in Golden Gate National Recreation Area analysis.





1980 General Management Plan
Alcatraz Island

No-Action Alternative

ALCATRAZ

DEVELOPMENT CONCEPT

GOLDEN GATE NATIONAL RECREATION AREA
POINT REYES NATIONAL SEASHORE

ALTERNATIVE 1: CONNECTING PEOPLE WITH THE PARKS

OVERVIEW

Many who visit Alcatraz Island are drawn by the island's notorious prison reputation. Others want to see the crumbling ruins set against the spectacular scenery of San Francisco and the Golden Gate or understand the island's human dimension: the American Indian occupation or the gardens tended by guards and their families.

In this alternative Alcatraz Island would be managed to provide an expanded variety of settings and experiences that will pleasantly surprise visitors attracted by the notoriety of the prison, and connect them to the greater breadth of the island's resources and stories. The park would seek to enrich the scenic, recreational, and educational opportunities in the heart of San Francisco Bay.

Visitors would have access to the majority of the island's historic structures and landscapes to experience the layers of island history and its natural resources and settings. Many of the indoor and outdoor spaces currently inaccessible to visitors would be reopened to expand the range of available activities.

All historic structures would be preserved; most would be rehabilitated and adaptively reused for visitor activities and park operations. Food service, meeting and program space, and overnight accommodations (possibly including a hostel or camp site) would be provided.

Sensitive wildlife areas, like the shoreline, would be protected. Park managers would provide visitors with opportunities to see wildlife and nesting waterbirds and to participate in resource stewardship activities. Gulls would be managed to reduce conflicts in visitor use areas.

FERRY EMBARKATION

The visitor's immersion in Alcatraz Island history would begin at one or more off-island ferry docks that could include the historic Alcatraz dock at Pier 4 in Fort Mason. The primary embarkation site would remain on San Francisco's northern waterfront where visitor services, including education about Alcatraz and orientation to the GGNRA, could be enhanced. Additional ferry connections could be provided to other park sites as part of the facility's role as a portal to the park. Ticketing would continue to be through a reservation system, and ferries would operate daily on a year-round schedule. The length of the ferry trip between the mainland and Alcatraz Island would remain approximately 10–15 minutes.

ARRIVAL AREA
(including the Dock, Building 64 (Historic Barracks), and the Sallyport)

Diverse Opportunities Zone

This area would be managed to welcome visitors and provide orientation to the expansive opportunities on the island. Building 64 would be rehabilitated as a multipurpose facility to host an expanded variety of visitor services that could include hospitality (food service and overnight accommodations), interpretation and exhibit space, an audiovisual center, and administrative areas.

MAIN PRISON AREA
(including the Citadel, Main Cellblock, Hospital Wing, Administration Wing, Recreation Yard, New Industries Building, Post Exchange, and Parade Ground)

Historic Immersion Zone (Main Prison Building)

The park would manage this area to immerse visitors in the federal penitentiary period. A variety of programming and exhibits would bring prison history alive. Rehabilitation or restoration, where appropriate, would enhance resource integrity.

Evolved Cultural Landscape Zone (Guardhouse, Post Exchange, and gardens)

In this alternative, the park would manage the structures and landscaped areas surrounding the Main Prison Building to protect and interpret the layers of history. The Post Exchange and Warden's House ruins would be stabilized and the Guardhouse would be rehabilitated.

Diverse Opportunities Zone (Hospital Wing of Main Prison Building, Recreation Yard, New Industries Building, and Parade Ground)

These buildings and outdoor spaces would be rehabilitated to provide a range of visitor activities that could include informal gatherings, interpretive programs, and special events. The New Industries Building would be rehabilitated as a multipurpose facility. It would include flexible space that could accommodate interpretation, special events, classrooms and meetings and would include service areas to support these uses. The perimeter trail would use the existing path on the west side of the structure with appropriate separation to protect nesting birds on the cliff below.

The building rubble on the Parade Ground could be removed and bird populations would be managed to accommodate enhanced visitor access in coordination with the management of the Western gulls. This rehabilitation of the parade ground could incorporate measures to support wildlife.

LIGHTHOUSE

Historic Immersion Zone

The lighthouse and surrounding area would be preserved to give visitors opportunities to learn about the maritime history of Alcatraz Island and its strategic location in the bay. Access and interpretation would be enhanced.

NORTH END OF THE ISLAND

Park Operations Zone

The historic structures in this zone, including part of the Model Industries Building, would be rehabilitated and adaptively reused for maintenance, storage, and public safety functions. They could house green, sustainable infrastructure technologies. Where appropriate, visitor access would be provided to showcase the technologies and interpret the island's energy history.

ISLAND PERIMETER

Natural Zone (northeastern and southern perimeter of the island)

This area would be managed to protect natural habitat values while providing opportunities for visitors to walk on trails around more of the island's perimeter, at all times of the year to the extent feasible.

Sensitive Resources Zone (western coastal cliffs and Little Alcatraz Island)

Visitor access along the western coastal cliffs, rocks, and tide pools would be highly managed to protect visitors and natural habitat values. Seasonal closures would protect sensitive seabird habitat.

OFFSHORE BAY ENVIRONMENT

Sensitive Resources Zone (extending 100 feet from the island's western shore)

This area would be managed to protect marine resources. The National Park Service would prohibit boat landing in this area and exclude boat tours from this area.

Scenic Corridor Zone (extending beyond the Sensitive Resources Zone and along the island's eastern shore)

This area on the east side of the island would be managed to accommodate ferry service to the island. Boat tours around the island and some types of water-based recreation could be permitted. The area adjacent to the entry dock would be managed to expand the capacity and range of uses that may occur. This would enable the island to be part of the

San Francisco Bay Water Trail, welcoming nonmotorized boats via permits or reservations.

SUSTAINABILITY

The National Park Service would continue to develop and implement sustainable approaches to meet the island's energy, water, and wastewater needs. Actions that are being considered include replacing diesel generators with renewable (e.g., photovoltaic panels) and grid-tied energy sources. These infrastructure technologies would be interpreted where possible.

COST ESTIMATES

Cost estimates for alternative 1 are identified in the table below. The costs shown here are not for budgetary purposes; they are only intended to show a relative comparison of costs among the alternatives.

The alternatives describe the maximum potential capital improvements; lesser improvements may be implemented, or built in phases if necessary. The implementation of the approved plan will depend on future funding. The approval of this plan does not guarantee that the funding and staffing needed to implement the plan will be forthcoming. Full implementation of the actions in the approved general management plan could be many years in the future. Additionally, some of the future long-term funding needed to implement the various actions called for in the alternatives is anticipated to come from nonfederal partners, consistent with the park's current practices.

Alternative 1 for Alcatraz Island would provide an expanded variety of settings and experiences, thereby connecting visitors to the greater breadth of the island's resources and stories. Visitors would have access to the majority of the island's historic structures and landscapes, including areas currently closed to the public.

Annual Operating Costs

Operating costs and staff numbers for Alcatraz Island are included in Golden Gate National Recreation Area analysis.

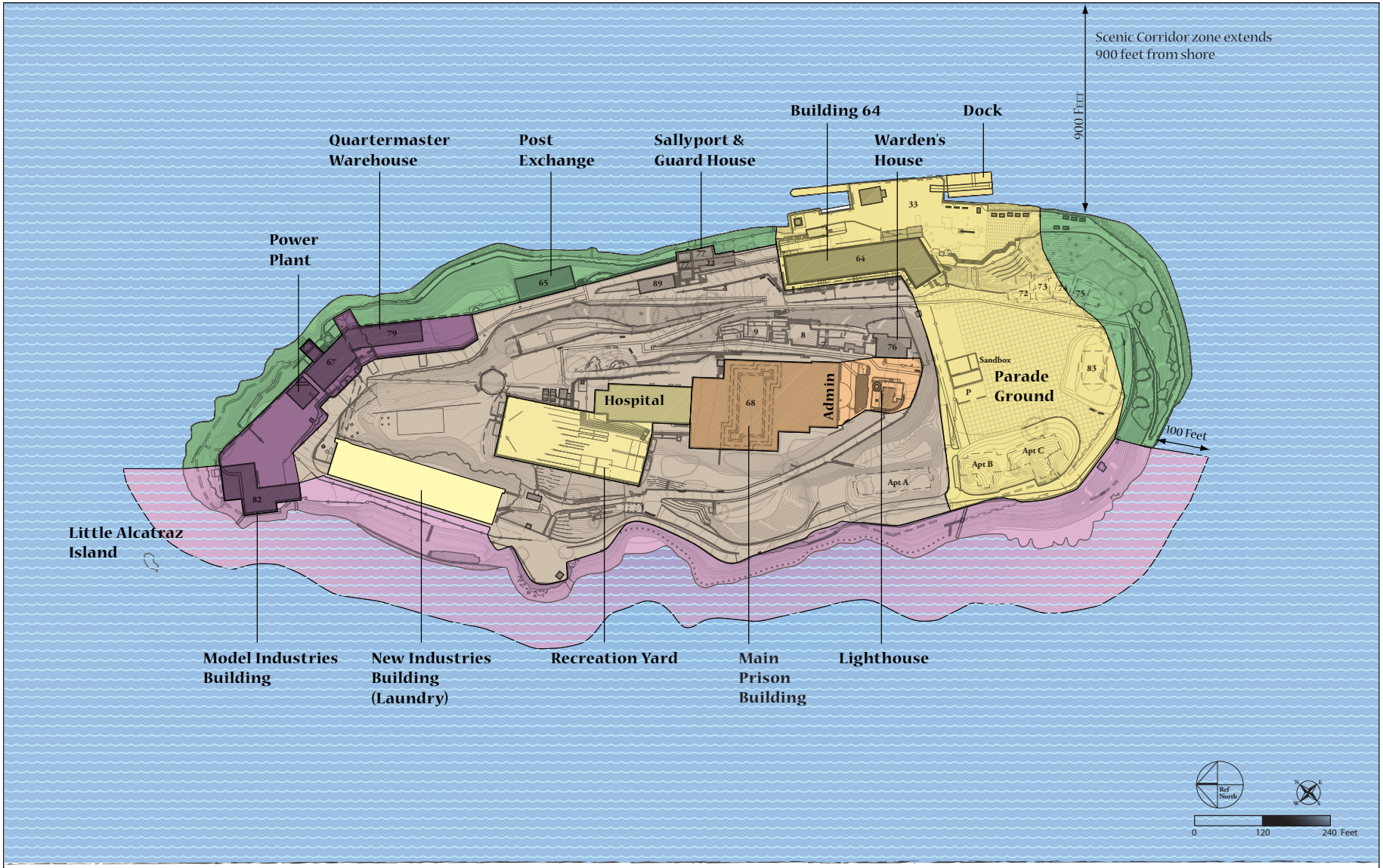
One-time Capital Costs

One-time facility costs of this alternative reflect the extensive rehabilitation required to more fully open buildings and landscapes to the public. All buildings would be preserved, with most rehabilitated and adaptively reused for visitor activities or park operations. Many of the structures on Alcatraz Island are in a deteriorated state and the stabilization costs to ensure the continuation of national landmark status alone is large. Total one-time costs for alternative 1 are estimated at $61.2 million.

Table 5: One-time Costs for Alternative 1 for Alcatraz Island

SUMMARY OF COSTS FOR ALTERNATIVE 1	
One-time Capital Costs	
HISTORIC PRESERVATION	
Building 64 rehabilitation	$10,080,000
Guardhouse and gardens rehabilitation	$4,320,000
Main Prison Building stabilization and rehabilitation	$19,030,000
Model Industries Building rehabilitation	$5,730,000
New Industries Building rehabilitation	$10,970,000
Parade Ground rehabilitation	$2,360,000
Post Exchange stabilization	$780,000
Power Plant rehabilitation	$1,890,000
Quartermaster Warehouse stabilization and rehabilitation	$5,120,000
Recreation Yard rehabilitation	$910,000
Total	**$61,190,000**

All costs in 2009 dollars



Management Zones

- Diverse Opportunities
- Scenic Corridor
- Interpretive Corridor
- Evolved Cultural Landscape
- Historic Immersion
- Natural
- Sensitive Resources
- Park Operations
- NPS Managed Marine Resources
- Island Shoreline

Connecting People with the Parks

Alternative 1
Golden Gate National Recreation Area
Alcatraz Island

United States Department of the Interior · National Park Service
DSC · February 2011 · 641/ 20620

ALTERNATIVE 2: PRESERVING AND ENJOYING COASTAL ECOSYSTEMS

OVERVIEW

Isolation—whether for soldiers, prisoners, birds, or plants—is a recurrent theme in the story of Alcatraz Island. In this alternative, the island's inhospitable and isolated—yet strategic—location at the entry to the Golden Gate and San Francisco Bay would be highlighted. The island's past and present significance to colonial nesting birds and its layers of human history—the Civil War fortress, the lighthouse, the prison and penitentiary—all derive from its position in the bay.

The island's changing natural and built landscape would continue to evolve, further enhancing habitat for nesting birds. Only those buildings and features necessary to maintain the island's national historic landmark status would be preserved; the natural elements would reclaim other features as part of the wilding of Alcatraz Island.

Visitors would be immersed in opportunities that showcase the island's isolation, its natural resources, and all the layers of history that can be found at the Main Prison Building. Visitor experiences would include outdoor learning, and natural and cultural resource stewardship programming delivered in partnership with Bay Area nonprofits.

While access would be managed to protect sensitive resources, visitors would be able to more freely explore, discover, and experience nature reclaiming Alcatraz Island, and understand the role the island plays in the broader marine ecosystem (reaching from San Francisco Bay to the Farallon Islands) as a result of its strategic location.

FERRY EMBARKATION

The visitor's immersion in Alcatraz Island history would begin at one or more off-island ferry docks that could include the historic Alcatraz dock at Pier 4 in Fort Mason. The primary embarkation site would remain on San Francisco's northern waterfront where visitor services, including education about Alcatraz and orientation to the GGNRA, could be enhanced. Additional ferry connections could be provided to other park sites as part of the facility's role as a portal to the park. Ticketing would continue to be through a reservation system, and ferries would operate daily on a year-round schedule. The length of the ferry trip between the mainland and Alcatraz Island would remain approximately 10–15 minutes.

ARRIVAL AREA
(including the Dock, Building 64 (Historic Barracks), and the Sallyport)

Evolved Cultural Landscape Zone

This area would welcome visitors while protecting the multitude of cultural resources. Building 64 would be adaptively reused to support the science, education, and stewardship programs. It could include space for offices, classrooms, labs, minimal food service, and hostel-like overnight facilities for program participants. Co-locating these functions would promote interactive learning and association among the scientists, teachers, and student participants. Administrative functions would also be housed in this building.

The park would also manage the structures and landscaped areas (such as the Guardhouse and gardens) between the entry dock and the Main Prison Building to protect and interpret the various periods of history.

MAIN PRISON AREA
(including the Citadel, Main Cellblock, Hospital Wing, Administration Wing, Recreation Yard, New Industries Building, Post Exchange, and Parade Ground)

Historic Immersion Zone (Main Prison Building, including the Hospital Wing and Recreation Yard)

These historic structures would be managed to provide visitors with access to the wide range of resources in historically accurate conditions, from the military period through the Indian occupation. Rehabilitation or restoration of historic resources would enhance their historic integrity.

Natural Zone (Model Industries Building, New Industries Building, Parade Ground, and western side of island)

The park would manage these structures and adjacent areas to enhance bird habitat and protect sensitive resources. Visitor use would be managed and controlled to support natural resource management goals. The New Industries Building would be stabilized and no efforts would be made to avoid its loss to coastal erosion. Visitor access could be provided for wildlife viewing, research, and education but would be highly controlled. The rubble piles on the Parade Ground would be retained to maintain and enhance seabird habitat. The existing Agave Trail would protect natural habitat while providing seasonal access to the shoreline for visitors. The Model Industries Building would be stabilized to allow expanded habitat for nesting birds. No efforts would be made to avoid the loss of the building to coastal erosion. Visitor access could be provided for wildlife viewing, research, and education but would be highly controlled.

LIGHTHOUSE

Historic Immersion Zone

The lighthouse and surrounding area would be preserved to give visitors opportunities to learn about the maritime history of Alcatraz Island and its strategic location in the bay. Access and interpretation would be enhanced.

NORTH END OF THE ISLAND

Park Operations Zone (Post Exchange, Quartermaster Warehouse, and Power Plant)

The interior spaces of the Post Exchange, Quartermaster Warehouse, and Power Plant would be dedicated park operation activities. The Post Exchange would be stabilized to preserve the exterior of the structure. An interior shell could be constructed within the ruin to support park operational functions if needed. Maintenance activities and visitor access outside and close to these structures would be managed to prevent disruption of sensitive natural resources.

ISLAND PERIMETER

Sensitive Resources Zone (majority of the island perimeter)

The majority of the perimeter of Alcatraz Island would be preserved to protect natural habitat values. Visitor use and access would be highly managed.

OFFSHORE BAY ENVIRONMENT

Sensitive Resources Zone (extending 300 feet from the island's western shore)

This zone extends out 300 feet and would be managed as a marine protected area to preserve coastal resources, including submerged resources, and seabird colonies using the island's cliffs. The area would be closed to boats during seabird breeding season.

Scenic Corridor Zone (extending beyond the Sensitive Resources Zone and along the island's eastern shore)

This area would be managed to accommodate ferry access to the island. Some other types of water-based access could also be permitted. Enforcement of resource protection measures and visitor access regulations would be strengthened. For example, tours near the island would be regulated.

SUSTAINABILITY

The National Park Service would continue to develop and implement sustainable approaches to meet the island's energy, water, and wastewater needs. Actions that are being considered include replacing diesel generators with renewable (e.g., photovoltaic panels) and grid-tied energy sources. These infrastructure technologies would be interpreted where possible.

COST ESTIMATES

Cost estimates for alternative 2 are identified below in the table below. The costs shown here are not for budgetary purposes; they are only intended to show a relative comparison of costs among the alternatives.

The alternatives describe the maximum potential capital improvements; lesser improvements may be implemented, or built in phases if necessary. The implementation of the approved plan will depend on future funding. The approval of this plan does not guarantee that the funding and staffing needed to implement the plan will be forthcoming. Full implementation of the actions in the approved general management plan could be many years in the future. Additionally, some of the future long-term funding needed to implement the various actions called for in the alternatives is anticipated to come from nonfederal partners, consistent with the park's current practices.

Alternative 2 for Alcatraz Island would highlight the island's isolated location, harsh environment, and strategic location in telling the story of the island. The weather, plants, and wildlife would reclaim much of the island, leaving only the historic landmark structures preserved.

Annual Operating Costs

Operating costs and staff numbers for Alcatraz Island are included in Golden Gate National Recreation Area analysis.

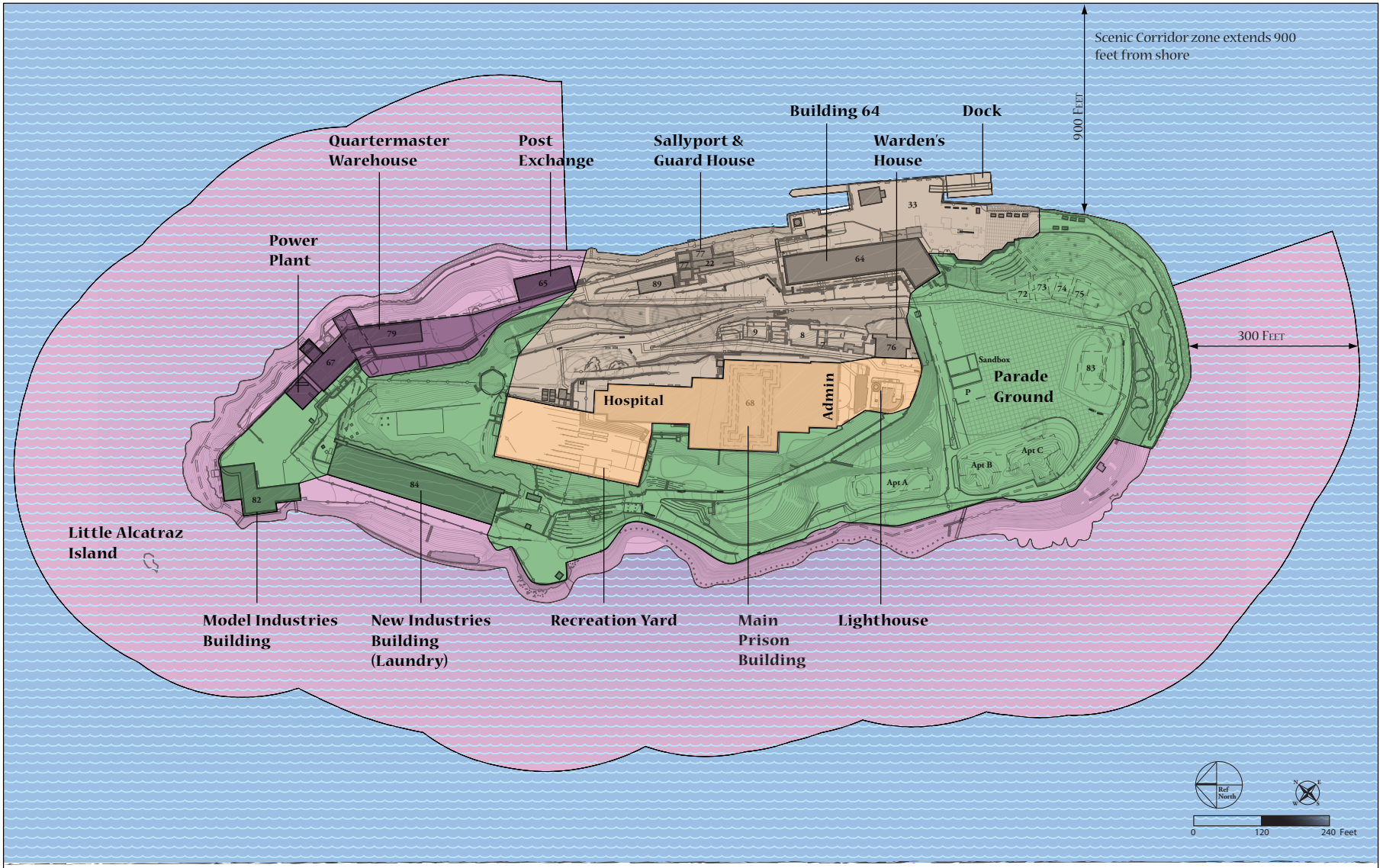
One-time Capital Costs

One-time costs reflect the rehabilitation of select buildings for contemporary uses and limited restoration to historic conditions, allowing other buildings and areas to be managed for natural resource objectives or as ruins. Many of the structures on Alcatraz Island are in a deteriorated state and the stabilization costs to ensure the continuation of national landmark status alone is quite large. Total one-time costs for alternative 2 are estimated at $37.4 million.

Table 6: One-time Costs for Alternative 2 for Alcatraz Island

SUMMARY OF COSTS FOR ALTERNATIVE 2	
One-time Capital Costs	
HISTORIC PRESERVATION	
Building 64 rehabilitation	$10,080,000
Guardhouse and gardens stabilization	$120,000
Main Prison Building stabilization and rehabilitation	$19,030,000
Model Industries Building Habitat Enhancement	$10,000
Post Exchange stabilization	$780,000
Power Plant rehabilitation	$1,890,000
Quartermaster Warehouse Rehabilitation	$5,120,000
Recreation Yard stabilization	$410,000
Total	**$37,440,000**

All costs in 2009 dollars



Management Zones

- Diverse Opportunities
- Scenic Corridor
- Interpretive Corridor
- Evolved Cultural Landscape
- Historic Immersion
- Natural
- Sensitive Resources
- Park Operations
- NPS Managed Marine Resources
- Island Shoreline

Preserving and Enjoying Coastal Ecosystems

Alternative 2

Golden Gate National Recreation Area

Alcatraz Island

United States Department of the Interior · National Park Service
DSC · February 2011 · 641/ 20620

ALTERNATIVE 3: FOCUSING ON NATIONAL TREASURES THE PREFERRED ALTERNATIVE

OVERVIEW

For more than 150 years, Alcatraz Island has been reworked and altered by human activity. This alternative would immerse visitors extensively in all of Alcatraz Island's historic periods, including the Civil War military fortifications and prison, federal penitentiary, and American Indian occupation. Alcatraz Island's history would be interpreted, first and foremost with tangible and accessible historic resources, including the structures, landscape, archeology, and museum collection. These resources contribute to the island's national historic landmark status and its recognition as an international icon.

Most visits would begin at an enhanced ferry embarkation facility in San Francisco. ON the way to the island, the ferry would pass a line of historic warning buoys. The immersive experience would continue at the island's arrival dock, with greater access to restored portions of Building 64, the historic barracks. Visitors would ascend to the main prison in the summit through a landscape of preserved historic structures and features. While the primary visitor experience would focus on the federal penitentiary, visitors also would be exposed to the other periods of history, literally and programmatically.

This alternative would require extensive stabilization, rehabilitation, and restoration of historic buildings and small-scale landscape features, as well as creative interpretative and educational programs and visitor services. It would create additional opportunities for cultural resource stewardship programs.

Visitors would have opportunities to learn about the natural history of San Francisco Bay. The colonial waterbird habitat that has grown in regional importance would be protected, enhanced, and interpreted. Visitors could also explore the island perimeter, managed to protect sensitive bird populations while providing opportunities to observe them or participate in stewardship activities. The large population of gulls would be managed to reduce conflicts in primary visitor use areas like the Parade Ground.

FERRY EMBARKATION

The visitor's immersion in Alcatraz Island history would begin at one or more off-island ferry docks that could include the historic Alcatraz dock at Pier 4 in Fort Mason. The primary embarkation site would remain on San Francisco's northern waterfront where visitor services, including education about Alcatraz and orientation to the GGNRA, could be enhanced. Additional ferry connections could be provided to other park sites as part of the facility's role as a portal to the park. Ticketing would continue to be through a reservation system, and ferries would operate daily on a year-round schedule. The length of the ferry trip between the mainland and Alcatraz Island would remain approximately 10–15 minutes.

ARRIVAL AREA
(including the Dock, Building 64 (Historic Barracks), and the Sallyport)

Historic Immersion Zone

Here, as in alternative 1, the park would welcome, orient, and begin to immerse visitors in the island's prison landscape, creating an atmosphere evocative of its history. Selected areas of Building 64 would be restored to tell the story of its history and use. Period restoration in the building would include the post office, canteen, and a prison-era guard apartment to extend the immersive experience. To better reveal the early military prison period, the guardhouse could be restored by removing the later boathouse addition. Other areas would be rehabilitated for visitor services and administrative functions and could include modest dorm-like overnight accommodations for participants in education, conservation, and stewardship programs. The upper floors would be stabilized to preserve the structure's integrity.

MAIN PRISON AREA
(including the Citadel, Main Cellblock, Hospital Wing, Administration Wing, Recreation Yard, New Industries Building, Post Exchange, and Parade Ground)

Historic Immersion Zone

The many historic resources of the Main Prison Building would provide visitors with the opportunity to explore the federal penitentiary's history. Visitors would also have access to the wide range of historic structures and features, in historically accurate conditions that tell stories about the different layers of island history. Park managers would look for opportunities to expose visitors to the tangible resources (including artifacts in the park's museum collection) of the federal penitentiary and military eras.

Treatments ranging from upgrades to exhibits and furnishings to more complete restoration would continue with the goal of increasing access and interpretation of the structure's history.

In this alternative, the park would also manage the adjacent areas, such as the main road, Warden's House, and the Parade Ground, to reinforce the sense of history as visitors move around the island. The Parade Ground would be rehabilitated to support year-round visitor exploration of this area in coordination with adaptive management of Western gulls. The rehabilitation could incorporate measures to support natural systems with preservation of cultural resources.

The Post Exchange would be stabilized while providing visitors with opportunities to explore this historic structure. Additional preservation would be possible with the involvement of partners to make a more complete visitor experience and interpret the building's history.

LIGHTHOUSE

Historic Immersion Zone

The lighthouse and surrounding area would be preserved to give visitors opportunities to learn about the maritime history of Alcatraz Island and its strategic location in the bay. Access and interpretation would be enhanced.

NORTH END OF THE ISLAND

Park Operations Zone

The Quartermaster Warehouse would be rehabilitated and used as an operational center for maintenance, public safety, and a preservation stewardship workshop.

The Power Plant would be stabilized to house green, sustainable infrastructure technologies. Where appropriate, visitor access would be provided to showcase the technologies and interpret the story of energy use on the island. The adjacent yard would support island operational needs. Access to the yard would employ measures to protect nearby seabird habitat.

Although this area is currently identified as the primary park operations area, the National Park Service would continue to evaluate other portions of the island that may be advantageous for operational uses such as administrative space, maintenance, and auxiliary functions.

Evolved Cultural Landscape Zone (including Model Industries Building and New Industries Building)

The Model Industries Building would be stabilized. The building and adjacent cliffs would be closed to general visitation and park operational uses to protect nearby sensitive habitat of nesting waterbirds. Vehicular access through the courtyard to the adjacent Power Plant yard would employ measures to protect habitat, possibly including seasonal closures.

The New Industries Building would be rehabilitated as a multipurpose facility. It would include flexible space that could accommodate interpretation, special events, classrooms, and meetings, and would include restrooms and a service kitchen to support these uses. The perimeter trail would connect through the building and provide bird-viewing opportunities from its interior.

ISLAND PERIMETER

Evolved Cultural Landscape Zone (majority of the island perimeter)

The perimeter of the island, including the coastal cliffs, would be managed to stabilize significant historic resources, protect colonial nesting birds and intertidal habitat, and interpret the island's evolving cultural and natural history. Opening a perimeter trail,

including segments of the historic sentry walk, would provide visitors with enhanced access to much of the island. Sensitive design and seasonal closure of the trail, which could include the Agave Trail, would protect nesting bird habitat.

OFFSHORE BAY ENVIRONMENT

Sensitive Resources Zone (extending 300 feet around most of Alcatraz Island)

This zone extends out 300 feet and would be managed as a marine protected area to preserve coastal resources, including Little Alcatraz island, submerged resources, and seabird colonies using the island's cliffs. The area would be demarcated by warning buoys and closed to boats year-round.

Historic Immersion Zone (extending from the Sensitive Resources Zone out to 900 feet from the island's shore)

The National Park Service would manage this area to accommodate ferry service to the island. Park managers would mark and interpret the historic no-trespass zone that was in place during previous periods. Only approved vessels, like the visitor ferry, would be allowed to approach and use the island's dock.

SUSTAINABILITY

The National Park Service would continue to develop and implement sustainable approaches to meet the island's energy, water, and wastewater needs. Actions that are being considered include replacing diesel generators with renewable (e.g., photovoltaic panels) and grid-tied energy sources. These infrastructure technologies would be interpreted where possible.

COST ESTIMATES

Cost estimates for alternative 3 are identified in table 5. The costs shown here are not for budgetary purposes; they are only intended to show a relative comparison of costs among the alternatives.

The alternatives describe the maximum potential capital improvements; lesser improvements may be implemented, or built in phases if necessary. The implementation of the approved plan will depend on future funding. The approval of this plan does not guarantee that the funding and staffing needed to implement the plan will be forthcoming. Full implementation of the actions in the approved general management plan could be many years in the future. Additionally, some of the future long-term funding needed to implement the various actions called for in the alternatives is anticipated to come from nonfederal partners, consistent with the park's current practices.

Alternative 3 for Alcatraz Island would require extensive but focused stabilization, rehabilitation, and restoration to effectively immerse the visitor in the history of Alcatraz Island as previously described in the alternative.

Annual Operating Costs

Operating costs and staff numbers for Alcatraz Island are included in the analysis for Golden Gate National Recreation Area.

One-time Capital Costs

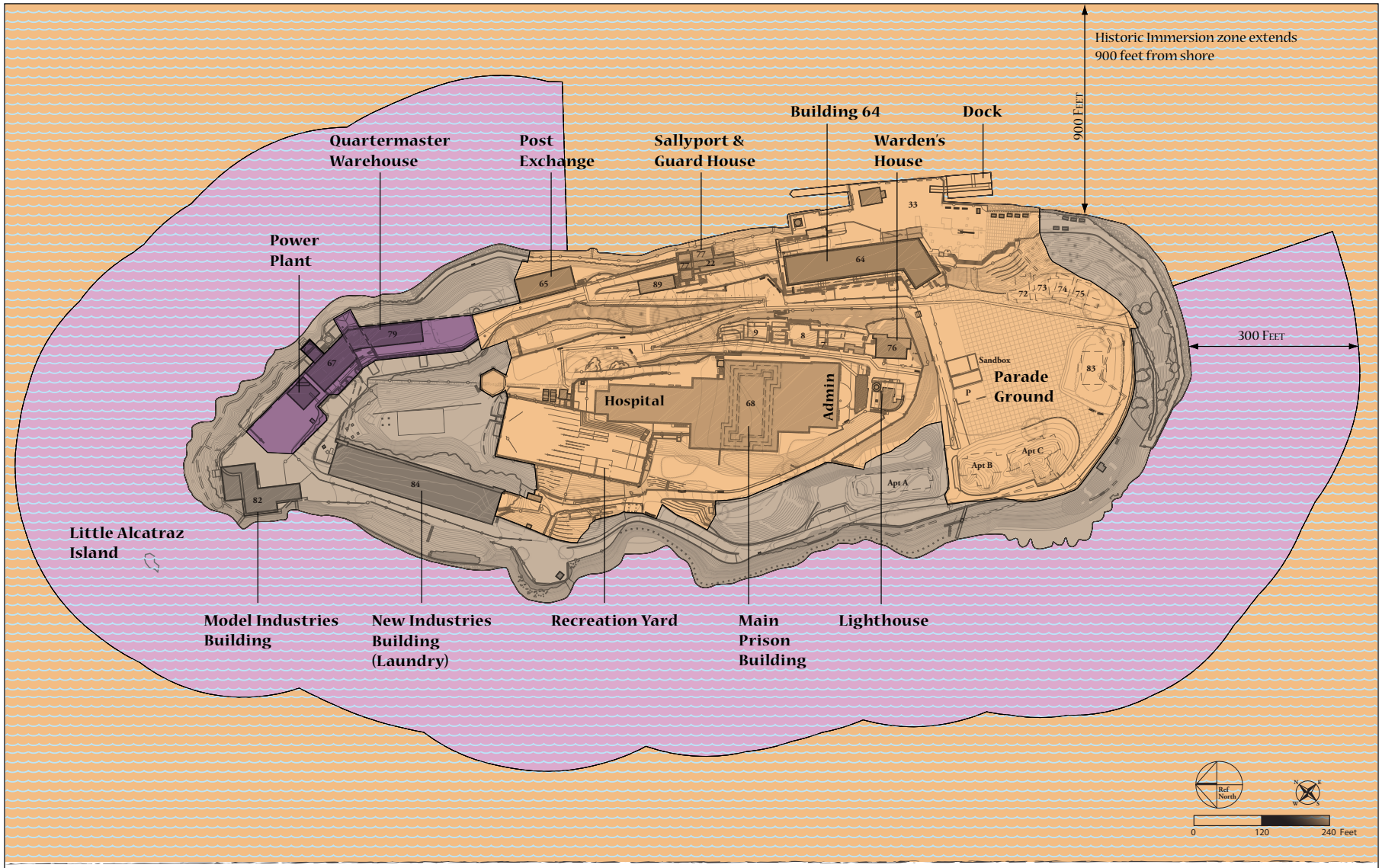
Many historic resources are in poor condition and would be stabilized to maintain the integrity of the National Historic Landmark district. Decisions to go beyond stabilization, including rehabilitation of a building or landscape, were based on the benefit to the visitor experience, capital and operating costs, impact on the sustainability of the island, and other factors such as the availability of new interpretive technologies. The estimated one-time capital costs are approximately $54.4 million.

Table 7: One-time Costs for Alternative 3 for Alcatraz Island

SUMMARY OF COSTS FOR ALTERNATIVE 3 (NPS Preferred Alternative)	
One-time Capital Costs	
HISTORIC PRESERVATION	
Building 64 stabilization	$4,000,000
Building 64 rehabilitation: offices, overnight accommodations, exhibits*	$6,080,000
Guardhouse stabilization	$1,970,000
Guardhouse rehabilitation*	$2,350,000
Main Prison Building stabilization and rehabilitation	$19,030,000
Model Industries Building stabilization	$1,100,000
New Industries Building stabilization	$4,000,000
New Industries Building rehabilitation*	$5,290,000
Parade Ground rehabilitation*	$2,360,000
Post Exchange stabilization	$780,000
Power Plant stabilization	$1,890,000

SUMMARY OF COSTS FOR ALTERNATIVE 3 (NPS Preferred Alternative)	
One-time Capital Costs	
HISTORIC PRESERVATION	
Quartermaster Warehouse stabilization and rehabilitation	$5,120,000
Recreation Yard stabilization	$410,000
Total	**$54,380,000**

All costs in 2009 dollars
*These projects are desirable/lower priority, and while important to full implementation of the alternative, may be accomplished with nonfederal funds or in later phases.



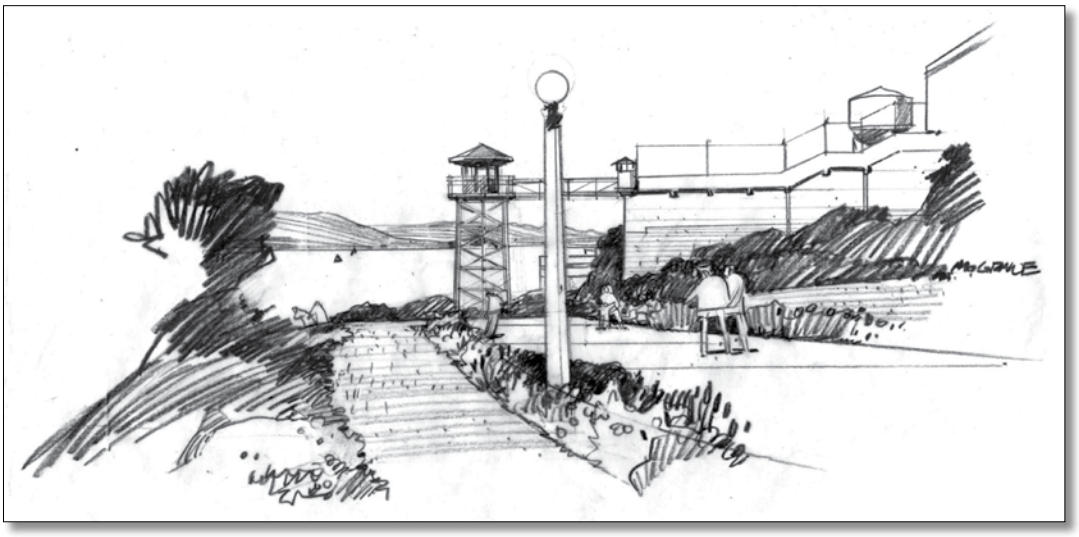
Management Zones

- Diverse Opportunities
- Scenic Corridor
- Interpretive Corridor
- Evolved Cultural Landscape
- Historic Immersion
- Natural
- Sensitive Resources
- Park Operations
- NPS Managed Marine Resources
- Island Shoreline

Focusing on National Treasures

Alternative 3 – Preferred Alternative
Golden Gate National Recreation Area
Alcatraz Island

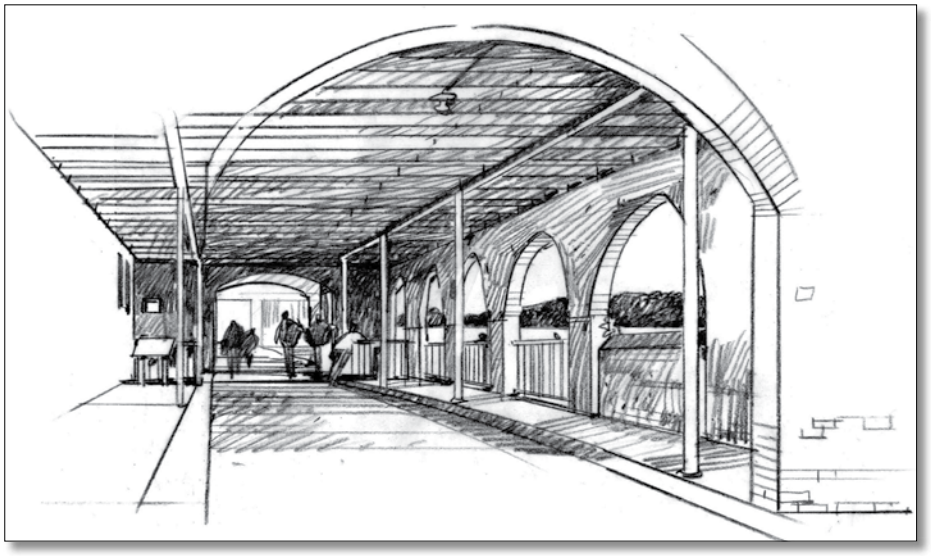
United States Department of the Interior · National Park Service
DSC · February 2011 · 641/ 20620



Partial restoration of guard towers and fences, along with maintaining vegetative buffers, could balance historic preservation and waterbird habitat goals on Alcatraz.



Controlling gulls and repairing the foundations of buildings razed after the American Indian occupation could enrich visitor's understanding of Alcatraz's parade ground.



Selectively removing later building additions could help visitor's understand the character and central role of the Guardhouse-Sallyport when Alcatraz was a military prison.

SUMMARY COST ESTIMATES FOR ALCATRAZ ISLAND

The cost figures shown here and throughout the plan are intended only to provide conceptual costs for a general comparison of alternatives. NPS and industry cost estimating guidelines were used to develop the costs (in 2009 dollars), but the estimates should not be used for budgeting purposes. Specific costs will be determined in subsequent, more detailed planning and design exercises, identifying detailed resource protection needs and changing visitor expectations. Actual costs to the National Park Service will vary depending on when actions are implemented, and on contributions by partners and volunteers.

The alternatives describe the maximum potential capital improvements; lesser improvements may be implemented, or built in phases if necessary. The implementation of the approved plan will depend on future funding. The approval of this plan does not guarantee that the funding and staffing needed to implement the plan will be forthcoming. Full implementation of the actions in the approved general management plan could be many years in the future. Additionally, some of the future long-term funding needed to implement the various actions called for in the alternatives is anticipated to come from nonfederal partners, consistent with the park's current practices.

Table 8: Summary of Costs Associated with the Implementation of the Alternatives for Alcatraz Island

	No-action Alternative	Alternative 1	Alternative 2	Alternative 3 (NPS Preferred)
One-time Capital Costs[1]	$4,260,000	$61,190,000	$37,440,000	$54,380,000

NOTES:

1 One-time costs for the no-action alternative only include costs associated with projects already approved and fully funded in 2009.

DEFERRED MAINTENANCE

The "Actions Common to All Alternatives" section, earlier in this document, contained a discussion of facilities that could be removed to reduce maintenance funding needs. However, in addition to removing facilities, expending one-time costs on park facilities would reduce the deferred maintenance by bringing the facilities up to a sustainable condition. Deferred maintenance—or work needed to bring park assets into good condition—exceeds $198.1 million at Golden Gate National Recreation Area, according to the 2009 *Park Asset Management Plan*.

Each alternative contains proposals that would reduce total deferred maintenance. Although the reductions in deferred maintenance are similar in amount for each alternative, the alternatives do not all contain the same proposals for reducing deferred maintenance; each alternative proposes different treatments for structures, including rehabilitation or removal.

Park staff continue to seek out additional measures to reduce deferred maintenance at the park. The *Park Asset Management Plan*, in particular, addresses strategies for reducing deferred maintenance.

Table 9: Reductions in Deferred Maintenance Associated with the Implementation of the Alternatives for Alcatraz Island

	No-action Alternative	Alternative 1	Alternative 2	Alternative 3 (NPS Preferred)
Alcatraz Island	$0	$16,130,000	$16,130,000	$15,920,000

ENVIRONMENTALLY PREFERABLE ALTERNATIVE FOR ALCATRAZ ISLAND

The environmentally preferable alternative is the alternative that promotes the national environmental policy expressed in the National Environmental Policy Act (Sec. 101(b)). This includes alternatives that

1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
2) ensure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings;
3) attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
4) preserve important historic, cultural, and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice;
5) achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities; and
6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources" (NPS DO-12 Handbook, Section 2.7D).

The alternatives are very similar with respect to criteria 1, 2, 5, and 6. The park staff continues to work in achieving these factors as a basic course of implementing the legal mandates for Golden Gate National Recreation Area and Muir Woods National Monument. All the alternatives equally meet the attainment for these four criteria; therefore, the evaluation focuses on criteria 3 and 4.

The no-action alternative represents a continuation of current management and was included to provide a baseline against which to compare the effects of the other (action) alternatives. The no-action is the weakest alternative in relationship to criteria 3 and 4. In this alternative, much of Alcatraz Island is not accessible to the public and therefore limits the range of beneficial uses. The primary purpose of preserving Alcatraz Island is to preserve and protect its historic resources. In the no-action alternative, minimal preservation efforts are applied to the island's historic resources. The limited visitor access and programs minimizes the range of beneficial uses.

Alternatives 1 and 2 include actions to significantly improve the current conditions of the historic resources while strengthening the island's natural resources. A variety of natural and cultural resource restoration activities, improved public access to more areas on the island, and enhanced stewardship programs would greatly enhance criteria 3 and 4. Alternative 3 has an even higher standard of historic preservation and visitor programs that improves upon the other alternatives. In addition, alternative 3 is strengthened by incorporating many of the natural resource restoration actions that were identified in alternative 2.

After considering the environmental consequences of the alternatives, including consequences to the human environment, the National Park Service has concluded that the NPS preferred alternative, Alternative 3 for Alcatraz Island, is also the environmentally preferable

alternative. This alternative best realizes the full range of national environmental policy goals as stated in section 101 of the National Environmental Policy Act.

SUMMARY TABLES OF THE ALTERNATIVES FOR ALCATRAZ ISLAND

NOTE: The following table summarizes the alternatives as applied to Alcatraz Island. The potential key impacts of implementing the alternatives for Alcatraz Island are included in Table 15: Summary of Potential Key Impacts of Implementing the Alternatives for Park Lands in Marin, San Francisco, and San Mateo Counties (including Alcatraz Island). The impacts to Alcatraz Island are not separated out from the rest of Golden Gate National Recreation Area.

Table 10: Comparison of the Alternatives for Alcatraz Island

NO ACTION	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3 (PREFERRED)
OVERVIEW			
• Management would continue to focus on the federal penitentiary. • Visitors would have limited access to the island's outdoor settings and other historic structures. • Many areas would continue to be protected for nesting birds.	• Expand visitor experience beyond prison focus to include human, natural and historic aspects of Alcatraz Island. • Preserve and rehabilitate more structures to share layers of history. • Protect sensitive natural areas and provide more visitor opportunities to see wildlife.	• Focus on how geographic isolation has impacted the natural and human experience at Alcatraz Island. • Minimally preserve the built environment to maintain national historic landmark status. • Visitor experience would be similar to alternative 1 in the prison, but based on self-discovery throughout the rest of the island. • Emphasize natural habitat for nesting birds.	• Immerse visitors in all historic periods; interpretation would be focused on tangible historic resources. • Stabilize, rehabilitate, and restore historic resources, including the cultural landscape. • Protect colonial waterbird populations.
FERRY EMBARKATION			
• Embarkation from San Francisco's northern waterfront would remain as the	• Primary embarkation would remain on San Francisco's northern waterfront;	• Same as alternative 1.	• Same as alternative 1

NO ACTION	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3 (PREFERRED)
only access point.	additional ferry connections could be provided.		
ARRIVAL AREA			
• Adaptively use Building 64 for administrative purposes and some visitor services; majority of the structure would remain unused.	• Building 64 would be rehabilitated and used as a multi-purpose facility with expanded visitor services.	• Building 64 would be adaptively used to support science education and stewardship programs, as well as administrative functions.	• This area would be used to welcome and immerse visitors into the island's prison landscape. • Selected areas of Building 64, including the prison post office, canteen, and guard apartment would be restored to reflect historic uses. • Addition to guardhouses would be removed.
MAIN PRISON AREA			
• The Main Prison Building and several adjacent areas, like the Recreation Yard, represent the federal penitentiary era. They would continue to be managed as part of the central visitor experience. • Visitors would have access to most of the building and yard. Several areas, like the Civil War–era Citadel (located	• The Main Prison Building and several adjacent areas would be managed to immerse visitors in the federal penitentiary period. A variety of programming and exhibits would bring prison history alive. Rehabilitation or restoration, where appropriate, would enhance resource integrity of the historic structures. • In this alternative,	• Visitors would have access to Main Prison Building and features in historically accurate conditions that tell the stories of the different layers of island history. • The Main Prison Building and several adjacent areas would be managed to provide visitors with access to the wide range of resources in historically accurate conditions, from the military period	• The Main Prison Building and several adjacent areas would provide visitors with the opportunity to explore the federal penitentiary's history. Visitors would also have access to the wide range of historic structures and features, in historically accurate conditions that tell stories about the different layers of island history. Park managers would look for opportunities to expose visitors to the tangible

NO ACTION	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3 (PREFERRED)
below the Main Cellblock) and part of the building's hospital wing, would remain closed. • Visiting the Main Prison Building would primarily be a self-guiding experience facilitated by an audio tour. • The piles of rubble on the Parade Ground would remain and would be used seasonally by waterbirds.	the park would manage the structures and landscaped areas surrounding the Main Prison Building to protect and interpret the layers of history. • The building rubble on the Parade Ground could be removed and bird populations would be managed to accommodate enhanced visitor access in coordination with management of the Western gulls. Building rubble on the parade ground could be removed; rehabilitation could incorporate measures to support wildlife.	through the Indian occupation. Rehabilitation or restoration of historic resources would enhance their historic integrity. • The park would manage these structures and adjacent areas to enhance bird habitat and protect sensitive resources. Visitor use would be managed and controlled to support natural resource management goals. • The building rubble on the Parade Ground would be retained to maintain and enhance seabird habitat.	resources (including artifacts in the park's museum collection) of the federal penitentiary and military eras. • Treatments ranging from upgrades to exhibits and furnishings to more complete restoration would continue with the goal of increasing access and interpretation of the prison's history. • The Parade Ground would be rehabilitated to portray its historic period and support year-round visitor exploration in coordination with adaptive manage-ment of Western gulls. Rehabilitation could incorporate measures to support wildlife.
Lighthouse			
• The lighthouse would be managed for historic function with highly controlled visitor access.	• The lighthouse would be preserved. Access and interpretation would be enhanced.	• Same as alternative 1.	• Same as alternative 1.
North End of Island			
• Area and buildings would continue to be used for operations and	• Historic structures including the Model Industries Building would be	• The interior of the Post Exchange, Quartermaster Warehouse, and Power Plant would	• The Quartermaster Warehouse would be rehabilitated for park operations and a preservation

NO ACTION	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3 (PREFERRED)
maintenance. • Visitors are not permitted.	rehabilitated and adaptively reused for maintenance, storage, and public safety. • Some visitor access would be provided to showcase infrastructure technologies. • The New Industries Building would be rehabilitated as a multipurpose facility (both floors)	be used for park operations. • The Model Industries Building would be stabilized to provide additional nesting bird habitat. • Visitor access would be highly controlled. • No effort would be made to avoid loss of buildings in this area due to coastal erosion.	stewardship workshop; the Power Plant would be stabilized to house green, sustainable infrastructure with possible visitor access and interpretation. • The Model Industries Building would be stabilized to protect sensitive natural resources. • The New Industries Building would be rehabilitated as a multipurpose facility (on the second floor).
Island Perimeter			
• This area would continue to be managed for bird and wildlife habitat. • Year-round and seasonal trails would remain; other areas would be closed for visitor safety and sea bird protection.	• This area would be managed for natural habitat. Trails would provide year-round visitor access. • Visitor access to western coastal cliffs and tide pools would be highly managed. Seasonal closures would protect sea bird habitat.	• The perimeter would be preserved to protect natural resources. • Visitor use and access would be highly managed.	• The perimeter and coastal cliffs would be managed to stabilize historic resources and protect natural resources. • Visitor access would be provided to much of the island perimeter; there could be seasonal closures.
Offshore Bay Environment			
• NPS jurisdiction extends 900 feet from shore; no active manage-ment of this area; access would	• The western shore and the area extending 100 feet beyond it would be managed to	• The western shore and the area extending 300 feet beyond it would be managed to protect coastal resources	• The western shore and the area extending 300 feet beyond it would be managed to protect coastal resources

NO ACTION	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3 (PREFERRED)
continue to be limited to the ferry.	protect marine resources. Boat landings and boat tours would be prohibited. • The eastern shore and the area beyond 300 feet from the western shore would be managed to accommodate ferry service and permit non-motorized boat tours.	and nesting seabird colonies on the cliffs. The area would be closed to boats during breeding season. • The eastern shore and the area beyond 300 feet from the western shore would be managed to accommodate ferry access. • Enforcement of resource protection measures would be strengthened.	and nesting seabird colonies on cliffs. The area would be closed to boats during breeding season. • The area extending out to 900 feet from the island's shore would be managed as a historic zone and would accommodate ferry service. The historic no-trespass zone would be marked and interpreted.

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As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historic places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

NPS 641/108779; NPS 112/108782; August 2011/Printed on recycled paper.

Golden Gate National Recreation Area • Muir Woods National Monument

Draft General Management Plan / Environmental Impact Statement

U.S. Department of the Interior • National Park Service • Denver Service Center

The Alternatives for Park Lands in Marin, San Francisco, and San Mateo Counties 5



NO-ACTION ALTERNATIVE

PARK LANDS IN MARIN COUNTY

Overview

In Marin County, Golden Gate National Recreation Area forms the southern core of a large network of regional, state, and federal protected lands and waters (many of which are recognized as part of the UNESCO Golden Gate Biosphere Reserve). Under the no-action alternative, the park would continue to manage this large expanse of preserved natural landscape, with scattered concentrations of developed facilities, to provide visitors with multiple opportunities for recreation; miles of trails, preserved historic military fortifications, and scenic and historic landscapes.

The county features some of the most varied landscapes in Golden Gate National Recreation Area, including lush woodlands, rugged coasts, sandy beaches, meadows, marshes, grasslands, and coastal shrubs. As a result, visitors can experience an array of wildlife and several different habitats in one brief hike.

Much of this area has been managed as part of Golden Gate National Recreation Area since the park was established in 1972. Management of this land would continue to be guided by the park's 1980 general management plan and subsequent land use and implementation plans (as described in the "Relationship of This Plan to Other Plans" section and in appendix B).

A diverse set of park partners—many housed in historic structures—would continue to provide programs and facilities for visitors' education and enjoyment. These facilities and programs currently include a hostel, environmental education and arts programming, equestrian facilities, and a marine mammal rehabilitation center. Park-managed visitor facilities would continue to include a visitor center, scenic overlooks, trails, campsites, and parking areas at recreational beaches.

National Park Service maintenance facilities, staff housing, administrative offices, and various partner offices would also continue to be located in the park.

Stinson Beach North to Bolinas–Fairfax Road

This developed area would continue to be managed to support intensive use as a scenic recreational beach receiving a high number of visitors. A variety of facilities would support activities that include picnicking, beach recreation, and water recreation (surfing, windsurfing, and boogie boarding). Two public bus routes currently serve this area. Easkoot Creek and the dunes would continue to be managed to preserve and enhance natural habitat. Areas of the park east of Bolinas Lagoon would be managed for their natural resource values and would have few trails or other visitor facilities.

This area would continue to be managed to protect and restore the coastal ecosystems, and contribute to the restoration of natural processes that affect Bolinas Lagoon. Partnerships with neighboring land managers would be strengthened to achieve these goals across the broader landscape.

State Route 1 and Panoramic Highway

Stretches of these roads pass through or alongside park lands. The roads are not under federal jurisdiction; however, as the underlying land manager, the National Park Service would continue to cooperate with Caltrans and Marin County for management of the road infrastructure and rights-of-way to protect park resources and preserve the scenic rural character of the setting.

State Route 1, a segment of the Pacific Coast Highway, is a designated national scenic byway. In general, the park land in this area would continue to be managed to preserve and enhance natural and cultural resources and offer access to park sites and recreational activities.

Slide Ranch

This area would continue to be managed by a park partner to operate an environmental and farm education center in a natural landscape with public access to trails and the shoreline. Slide Ranch would provide day and overnight experiences for program participants and promote healthy eating, healthy living, and environmental awareness. The rocky shoreline and natural area surrounding the program site would continue to be managed by the park to protect natural and ecological values and provide access on existing trails.

Lower Redwood Creek (former Banducci flower farm and surrounding area)

This area would continue to be managed to preserve and enhance natural processes in the creek, floodplain, and surrounding natural landscape. The National Park Service would work with other land managers in the restoration and preservation of the watershed and in the protection of threatened and endangered species like coho salmon and the red-legged frog. Land and water management would be consistent with the *Lower Redwood Creek Floodplain and Salmonid Habitat Restoration Plan* and the *Redwood Creek Watershed: Vision for the Future* plan. Existing residential structures could continue to provide housing for volunteers who contribute to site restoration and stewardship.

Muir Beach

This small but popular beach lies at the mouth of Redwood Creek and at the confluence of several park trails. In the no-action alternative, the National Park Service would continue to support recreation, hiking, access to the beach. The park staff would continue extensive wetland and creek restoration of the area

Golden Gate Dairy and Vicinity

The developed area along State Route 1 would be managed to support a small equestrian facility and the Muir Beach Volunteer Fire Department, which would continue to be housed in historic ranch buildings. Park housing would continue to be provided in nonhistoric structures. A small buffer area protects a tributary to Redwood Creek. The surrounding uplands would be managed to provide trail connections through a natural

coastal landscape. Recent trail and trailhead improvements connect this area to the Dias Ridge Trail.

Tennessee Valley (from Oakwood Valley to the ocean)

A major trailhead, multiple trails, Haypress Meadow hike-in campground, and an equestrian center are in the upper end of the valley. A site in the lower valley contains a nursery operation, the park's small horse patrol, an environmental education program, and the Youth Conservation Corps seasonal group campsite. This area would continue to be managed in a way that accommodates these intense and varied visitor uses. The management of equestrian facilities in this area would reflect the equestrian management environmental assessment that is underway.

The majority of the valley would be managed as a natural landscape with a trail system that provides access to a variety of destinations and landscapes. Remnants of former agricultural uses, including farm ponds, fence lines, and nonnative trees, would remain in the landscape. The creek corridor and shoreline would continue to be managed to protect sensitive natural resources. Tennessee Valley is not currently served by transit. In addition, the trail connections are poor between Tennessee Valley, Oakwood Valley, and the Tamalpais Valley community along Tennessee Valley Road.

Marin City Ridge and Gerbode Valley (the coastal ridges and valleys)

This extensive area would continue to be managed to preserve natural resources and processes, restore native habitats, and protect sensitive species, in addition to coastal fortifications, while providing for trail use, trail improvements, and primitive camping. The Marin City Ridge will continue to be managed as part of the adjacent Marin Headlands in order to protect and restore natural habitats and support public access on the trails that connect to the community.

Fort Barry and Fort Cronkhite

In this area, historic structures and their settings would be preserved or adaptively reused for recreation, education, and other uses, including park operations. Adaptive use of historic structures would continue to be the foundation of the robust program of park partners who preserve buildings and offer programs that further the mission of the park. Planned road, trail, and transit projects will improve access for visitors and partners (e.g., *Marin Headlands and Fort Baker Transportation Infrastructure and Management Plan Final Environmental Impact Statement*).

Park operations located in the area currently include a fire station, roads and maintenance facilities, staff offices, and a native plant nursery.

Recreational experiences supported in the area would continue to include beach activities, hiking, bicycle riding, horseback riding, picnicking, and environmental education.

The upland areas would be managed to preserve natural resources and processes, continue habitat restoration, protect sensitive species and habitats, and allow for continued trail use.

Capehart Housing Area

The National Park Service would continue to manage this area of housing on the north and south side of Rodeo Creek, located at the intersection of the two roads that access the Rodeo Valley, to provide workforce housing for park and partner staff. This area is named Capehart after the senator who sponsored the military housing act.

Conzelman, Bunker, and McCullough Roads (including Battery Spencer and Hawk Hill)

This area would continue to be managed to preserve historic and natural resources and scenic views of the Golden Gate and Pacific Ocean. The coastal defense fortifications would continue to be accessible and interpreted while protecting sensitive species and native habitats. Currently, scenic driving, bicycling, and walking the California Coastal Trail are popular activities. Planned road, trail, and transit projects will improve access for visitors and reduce congestion at scenic overlooks (e.g., *Marin Headlands and Fort Baker Transportation Infrastructure and Management Plan Final Environmental Impact Statement*).

Kirby Cove

This area would continue to provide a small campground and group picnic area. The beach would be accessible on foot or by nonmotorized boats. The historic coastal fortifications and forest would be preserved.

Point Bonita Lighthouse Complex

The lighthouse and several structures, including a small outbuilding, bridge, and access trail, would continue to be preserved. Visitors would be immersed in an authentic historic setting with interpretation about the site's maritime and military history. Access would continue to be highly managed.

Offshore Ocean and Bay Environment

The National Park Service has jurisdiction through a management lease with the State of California over a 1,000-foot-wide band of coastal waters immediately offshore. The area includes a variety of marine habitat. The shoreline in Point Bonita Cove would continue to be closed to public access year-round to protect the harbor seal haul-out, except for approved research. Park management of these areas would continue to accommodate public uses such as boating. The park staff would continue to encourage and support research, inventory, monitoring, and consultation and cooperation with other resource managing agencies.

PARK LANDS IN SAN FRANCISCO

Overview

San Francisco park lands in the planning area include upper Fort Mason, China Beach, Lands End, East and West Fort Miley, Ocean Beach, and Fort Funston.

The following areas that have recently completed land use plans, or are implementing recently completed plans, are not included in this plan: Lower Fort Mason (The Fort Mason Center), the Presidio (including Crissy Field), Fort Point National Historic Site, the Sutro Historic District (Sutro Heights Park, Sutro Baths, and the adjacent parking lot and trail), and the Cliff House.

Park lands in San Francisco ring the northern and western shores of the City of San Francisco, preserving a greenbelt next to dense urban neighborhoods. These lands would continue to be major attractions to tourists and central to the quality of life for local citizens. They offer city dwellers places to recreate, rejuvenate, and learn about the fascinating natural and cultural history of the region. For visitors, the park lands help define San Francisco as one of the most beautiful cities in the world.

Management of these lands and marine/bay waters would continue to focus on preserving natural, cultural, and scenic resources, and providing for a variety of recreational uses in the varied settings along San Francisco Bay and the Pacific coast.

Upper Fort Mason

Fort Mason would continue to be managed to preserve the historic district and to adaptively use the many historic military structures for a variety of park and park partner uses, including staff offices, maintenance, community garden, and a program center for other park partners. A hostel would continue to be the primary public use in the historic structures. The National Park Service manages a leasing program that provides the opportunity for the San Francisco community to live in historic residences, much like army personnel before them, while providing a source of funds for preservation and maintenance. The Fort Mason Post Exchange would continue to be available to the public for events, such as weddings and conferences.

The “Great Meadow” would continue to provide a flexible space that accommodates a range of informal uses and occasional large special events. The San Francisco Bay Trail through Fort Mason would continue to provide a continuous waterfront multiuse promenade that links to San Francisco Maritime National Historical Park and many park destinations along the City and Presidio waterfront. Planning is underway to bring water shuttle access to a pier at Lower Fort Mason. The City of San Francisco is also evaluating Bus Rapid Transit Service along Van Ness Avenue to terminate at an improved transit hub at North Point Boulevard, immediately adjacent to Fort Mason.

China Beach

This area would continue to be managed for the recreational enjoyment of the small secluded beach and to provide opportunities for bird watching. Park facilities such as picnicking, restrooms, and showers would continue to be provided. The area’s natural resources would be managed for native vegetation and slope stability.

Lands End

Only the northern area of Lands End is covered in this plan. This area would continue to be managed to preserve and enhance the rugged coastal landscape and its natural appearance, and to provide trail access. Public safety staff would continue to be located at this site. The southern portion of Lands End, the Sutro Historic District including the Cliff House, is not part of this plan. This area was recently transformed by the addition of a new parking lot, promenade, scenic overlooks, and extensive renovation of the Monterey cypress forest.

Fort Miley

Fort Miley is divided into East Fort Miley and West Fort Miley by the active Veterans Administration Medical Center hospital. Park managers would continue to preserve the historic structures and landscapes, providing for both public and park operation uses. East Fort Miley would continue to be managed as a small maintenance center housed in historic structures, with public access to an unimproved landscape setting primarily through the hospital campus.

West Fort Miley's historic forest would continue to provide an outdoor skills and fitness course and a small picnic area set among historic fortifications with spectacular coastal views. The historic Marine Exchange Lookout Building (Octagon House) would remain unused.

Ocean Beach

Ocean Beach would continue to be managed to provide a recreational beach that accommodates high levels of diverse use, while preserving its natural values, including habitat for shorebirds such as the threatened western snowy plover. It would continue to provide a long trail connection between Fort Funston and the Cliff House, as well as preserve the historic O'Shaughnessy seawall and promenade. The National Park Service would continue to collaborate with the City and County of San Francisco on Ocean Beach management issues.

Fort Funston

This park unit would continue to provide trail and beach access for a variety of recreational uses, including dog walking and hang gliding. It would also preserve important natural and cultural resources, including endangered species habitat and historic coastal defense fortifications. Former military structures support park operations and partner programs such as environmental education and a native plant nursery.

Offshore Ocean and Bay Environment

The National Park Service has jurisdiction through a management lease with the State of California over a 1,000-foot-wide band of coastal waters immediately offshore. The area includes a variety of marine habitat. Park management of these areas would continue to accommodate public uses such as boating. The park staff would continue to encourage

and support research, inventory, monitoring, and consultation and cooperation with other resource managing agencies.

PARK LANDS IN SAN MATEO COUNTY

Overview

At the time the 1980 general management plan was developed, Golden Gate National Recreation Area did not manage any land in San Mateo County. Since that time, NPS-managed land within the designated park boundary has grown to include almost 30,000 acres in San Mateo County.

Stretching along the San Mateo coast to Rancho Corral de Tierra and inland to the Phleger Estate, the southern park lands feature a remarkable wealth of natural and historic resources. From rugged coastal bluffs and windswept ridgelines to a redwood forest, wetlands, and streams, these lands support an abundance of plants and wildlife and tell the story of the people who have shaped this peninsula over generations.

Golden Gate National Recreation Area park lands in San Mateo County serve a large and diverse local population, offering many opportunities for recreation and enjoyment. Whether enjoying the trails, strolling the beaches, or taking in panoramic views up and down the Pacific coast, there are unlimited ways to explore and appreciate these park lands.

Currently the National Park Service's presence in San Mateo County is limited, sites are not well identified, and there are few basic facilities to support access. Management of park lands in San Mateo County is guided by the park's authorizing legislation and the management policies common to units of the national park system. This management approach would continue under the no-action alternative, with the exception of Sweeney Ridge, for which a general management plan amendment was approved in 1985 to provide specific management guidance.

Site planning for the enhancement of visitor facilities, such as the planning recently completed for Mori Point, would continue. The park management would also continue to consult with other agencies to achieve fundamental park goals regarding the San Francisco Public Utilities Commission Peninsula Watershed, where the park holds scenic and recreational easements.

Parcels South of Thornton State Beach and South of Mussel Rock

The National Park Service manages approximately 30 acres in two parcels in this geologically dynamic coastline: one parcel south of Thornton State Beach and one parcel south of Mussel Rock. No improvements for public access have been made by the National Park Service, and there is no active NPS presence in this area. In the absence of a general management plan, management is guided by the park's authorizing legislation (its purpose) and the management policies common to units of the national park system. This would continue under the no-action alternative.

Milagra Ridge

This area would continue to be managed to protect and restore natural habitat (including endangered species habitat), to protect historic coastal defense fortifications, and to provide public access through a system of trails so people can enjoy the site and its scenic beauty. Recent acquisition by the park of a conservation easement on the northwest slope allows potential development of a Bay Area Ridge Trail connection to the coast.

Shelldance Nursery Area

Portions of the Shelldance Nursery area were added to the park in 1988 and 1993. This small area would continue to be managed for trail access, including a trailhead and trails to Sweeney Ridge; office and storage of park maintenance equipment; and to accommodate a commercial nursery.

Sweeney Ridge (including Cattle Hill and Picardo Ranch)

Sweeney Ridge was added to the park in 1984. The area would continue to be managed for natural values and protection of historic resources, such as the San Francisco Bay Discovery Site National Historic Landmark and the 20th century Nike facilities. Cattle Hill is expected to be transferred to the National Park Service by the City of Pacifica in the near future and recent collaboration has provided trail and habitat improvements on this site. Picardo Ranch and the western extension of Cattle Hill are both private lands not managed by the National Park Service at this time. Picardo Ranch includes the lower slopes of Cattle Hill, and its trails connect to Sweeney Ridge. Currently, an equestrian facility provides horse boarding. Land and conservation easement acquisition would be a priority for the park.

Mori Point

Mori Point was added to the park in 2002. This site would continue to be managed to preserve and enhance habitat for threatened and endangered species (San Francisco garter snake, California red-legged frog) and to restore natural functions to a highly degraded site. A network of hiking trails, including the California Coastal Trail, is under development to provide visitors access to the area's scenic beauty. Management of this site would be guided by the *Mori Point Restoration and Trail Plan Environmental Assessment*.

Pedro Point, Devil's Slide, and San Pedro Mountain

These rugged coastal areas are not managed by the National Park Service. However, they will be greatly affected by the opening of the State Route 1 tunnel now under construction, and may be added to the park within the planning horizon of the general management plan. The City of Pacifica manages Pedro Point to preserve its natural features and open space. The Devil's Slide segment is managed by Caltrans to support State Route 1; several agencies have been involved in planning trailheads for the future conversion of the road to a multiuse trail when the Devils Slide tunnel opens in 2011. Lands adjacent to State Route 1 in this area and on San Pedro Mountain are in public and private ownership.

Rancho Corral de Tierra

One of the largest areas of open space near San Francisco, this 4,200-acre site is managed by the Peninsula Open Space Trust and encompasses the majority of an 1839 Mexican Land Grant. The isolated and undisturbed condition of the land provides unique and productive habitat for a diverse array of plant and animal species, including several threatened and endangered species. The headwaters of four major coastal watersheds are contained within this property, providing important riparian habitat and a scenic backdrop that visually distinguishes the San Mateo mid-coast region.

Limited public access would continue to be provided for recreation such as hiking and horseback riding. The area would be managed to provide for these current uses, such as equestrian facilities, and anticipated new public uses in a way that maintains and protects resources.

The acquisition process is underway to transfer some of this land to the National Park Service. Approximately 300 acres of the Rancho Corral de Tierra will not be included in the park. Those acres encompass farmland of "Local Significance" as designated by the State of California Department of Conservation, and will remain in agricultural use.

Montara Lighthouse

The site is presently managed by the U.S. Coast Guard. Under an agreement with California State Parks, a hostel is operated in several structures related to the lighthouse. Day use of the site is focused on scenic beauty and lighthouse history. Transfer of this site to the park is anticipated within the planning horizon of the general management plan. If this occurs, the site would be managed for its current uses.

Phleger Estate

This area was added to the park in 1994. It would continue to be managed to preserve the cultural and natural resources of this 1,000-acre, second-growth redwood forest and to provide access to the regional trail system.

San Francisco Public Utilities Commission Peninsula Watershed Easements

These 23,000 acres are managed by San Francisco Public Utilities Commission to protect San Francisco's water supply and the scenic, ecological, and cultural resources of the watershed. The management is guided by the commission's *Peninsula Watershed Management Plan*. Golden Gate National Recreation Area manages two easements over the Peninsula watershed: a scenic easement and a scenic and recreation easement that provide for preservation of natural values and limited recreational use. Compatible recreational, educational, and scientific uses are highly controlled. Primary public access is on trails along the eastern edge of the watershed where the trails are easily accessible from adjacent communities. Access on the 10-mile Cahill Ridge alignment of the Bay Area Ridge Trail is provided by guided tours. The San Francisco Public Utilities Commission and National Park Service cooperate to ensure that ongoing water operations and other allowable uses are compatible with the preservation and access components of

the easements. The Peninsula watershed forms the core of the UNESCO Golden Gate Biosphere Reserve, an area rich in native plant and animal life.

Offshore Ocean Environments

In areas where the park boundary coincides with the Fitzgerald Marine Reserve, the two organizations would continue to cooperate in the implementation of the provisions of the California State Marine Life Protection Act. The reserve area between Montara State Beach and Ross Cove has been designated as the Montara State Marine Reserve: no fishing, harvesting, or collecting would be allowed in this area. The reserve area between Ross Cove and Pillar Point Harbor has been designated as the Pillar Point Marine Conservation Area; some fishing would be allowed in this area.

COST ESTIMATES

Cost estimates for the no-action alternative are identified in the table below. The costs shown here are not for budgetary purposes; they are only intended to show a relative comparison of costs among the alternatives.

The alternatives describe the maximum potential capital improvements; lesser improvements may be implemented, or built in phases if necessary. The implementation of the approved plan will depend on future funding. The approval of this plan does not guarantee that the funding and staffing needed to implement the plan will be forthcoming. Full implementation of the actions in the approved general management plan could be many years in the future. Additionally, some of the future long-term funding needed to implement the various actions called for in the alternatives is anticipated to come from nonfederal partners, consistent with the park's current practices.

Annual Operating Costs

The operating budget for fiscal year 2009 was $28.0 million. This includes operations costs for Golden Gate National Recreation Area (including Alcatraz Island) and Muir Woods National Monument.

Staffing

The no-action alternative assumes that current staffing levels would be maintained at 335 FTE (one FTE or full time equivalent is one person working 40 hours per week for one year, or the equivalent). The FTE number does not include volunteer positions or positions funded by partners. FTE salaries and benefits are included in the annual operating cost.

One-time Costs

The estimated costs of the no-action alternative reflect the continuation of current management. One-time costs for the no-action alternative are the costs for those projects that are currently approved and funded—any requested but unfunded projects are not

considered in this analysis. Therefore, while the action alternatives contain estimates for 20 years of proposed projects, the no-action alternative assumes no new projects would take place except those projects funded in 2009. The costs include such projects as preservation of seacoast fortifications, trail realignment, and photovoltaic panel installation. Non-facility projects currently include conservation of museum collections, visitor use management and monitoring, and restoration of native plants. Total one-time costs of the no-action alternative are $5.3 million.

In the no-action alternative, the current level of facilities would be continued. Improvements to facilities would include deferred maintenance and rehabilitation projects.

Table 11: Costs Associated with the Implementation of the No-action Alternative for Park Lands in Marin, San Francisco, and San Mateo Counties

SUMMARY OF COSTS FOR THE NO ACTION ALTERNATIVE	
Annual Operational Costs	
Existing Operations	$28,030,000
Staffing (additional FTE)	334 (+0)
One-time Capital Costs	
Total	**$5,280,000**

All costs in 2009 dollars

MANAGEMENT ZONES FOR THE NO-ACTION ALTERNATIVE (FROM THE 1980 GENERAL MANAGEMENT PLAN)

Natural Resource Zones

Intensive Landscape Management Zone

Lands within this zone occur entirely within southern reaches of the park and basically include all areas where exotic vegetation predominates. Although all of these areas have been substantially modified through human activities, many of them still contain isolated populations of natural wildlife and vegetation which will be carefully preserved. When choices are available in these zones they should favor native species wherever possible. Within this category the following two subzones have been recognized.

Natural Appearance Subzone: (Ocean Beach, Fort Funston, Lands End, and Rodeo Lagoon picnic area). To many park users, lands in this subzone may appear to be as natural as wilderness areas at Point Reyes, but they are in fact man-created landscapes which in many cases will require the same degree of maintenance as an urban park setting. The primary management goal in these areas will be to continue to accommodate relatively high use levels with a commitment to intensive maintenance in order to retain the appearance of a natural landscape. Examples of intensive measures that will be required in this subzone include reforestation of Monterey cypress and stabilization and maintenance of planted sand dunes.

Urban Landscape Subzone: (Crissy Field, West Fort Mason, Fort Barry parade ground, Stinson Beach developed areas).This subzone is characterized by familiar elements found in traditional city parks—well tended trees, shrubs and flowers, irrigated and mowed lawns, and hard-surfaced areas for walking and congregating. These areas are designed for intensive use and should look complete only when filled with people. Primary resource management activities will include mowing, irrigation, weeding, fertilization, replanting, and trash pickup.

Natural Landscape Management Zone (Marin Headlands and Stinson Beach area)

In this zone natural resources and processes will remain as undisturbed as possible given a relatively high level of natural park uses (hiking, primitive camping, etc.). Management activities will be directed primarily at protecting wildlife and vegetation from misuse and overuse and at maintaining a variety of landscape settings conducive to recreation (open grasslands as well as forests).

Special Protection Zone

This zone includes lands that have received legislative or special administrative recognition of exceptional natural qualities requiring strict protection measures. Further analysis of park resources in the future could result in additional lands being placed in this category.

National Monument Subzone: (Muir Woods). Although contained within the boundary of Golden Gate National Recreation Area, Muir Woods retains its special status as a national monument, the sole purpose of which is to protect a stand of virgin coast redwoods for public enjoyment of their scientific, scenic, and educational values.

Biotic Sensitivity Subzone: (shoreline and stream courses). This subzone, derived from high sensitivity ratings in the information base, generally identifies those natural resources in the park that are particularly sensitive to human use or are especially valuable from an ecological or scientific point of view. Use and development in these areas should be either discouraged or mitigated sufficiently to avoid significant levels of deterioration.

Most of the areas covered by this subzone are water courses or bodies of water recognized for their importance in sustaining wildlife and vegetation. Because the lands near these resources have been and will continue to be the most attractive locations for use and minor development, mitigation measures will be particularly important. Siting of minor facilities will be crucial. For example, locating a campground directly upon the bank of a stream could cause unacceptable impacts that could be avoided by shifting the facility only several hundred feet.

Historic Resource Zones

Preservation Zone (Fort Point, ships, lighthouses, fortifications, historic buildings at Alcatraz Island)

Spaces and objects placed in this category are managed and used primarily for the purpose of facilitating public enjoyment, understanding, and appreciation of their historic values. Management activities will include the protection of structures from influences and uses that could cause deterioration and the presentation of tours, exhibits, or other appropriate interpretive efforts.

Because of the unusually large number of historic structures in the parks, many that are suitable for adaptive use have been placed in this category simply because a use has not yet been specifically identified for them. Undoubtedly some of these will be adapted for management or visitor uses in the future, but in the meantime they will be simply protected from damage and deterioration.

Enhancement Zone (Sutro Baths, Sutro Heights, Cliff House, Aquatic Park)

All of the areas within this subzone were developed originally as recreation spaces and still derive their primary value from recreation use. Management practices will be directed at preserving the basic integrity of their settings and specific structures within them. Enhancement of the usability and attractiveness of these partially rundown and deteriorated areas will be accomplished through the addition of elements and the practice of maintenance activities similar to those described for the urban landscape subzone.

Adaptive Use Zone (Alcatraz Island grounds, north and east Fort Mason, Haslett Warehouse, East Fort Miley, areas of Marin Headlands)

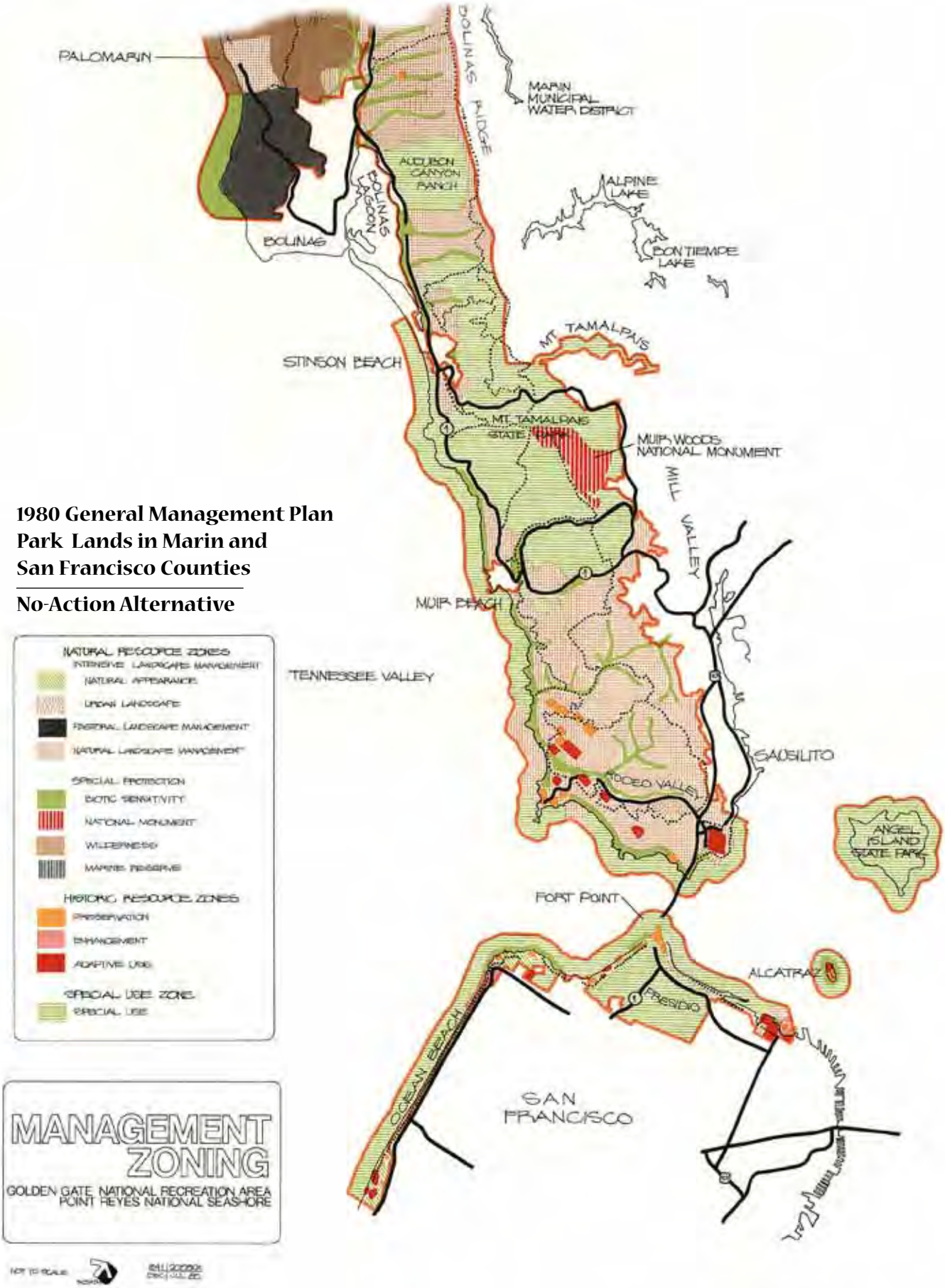
This subzone defines structures or spaces of historic value that have been or will be adapted for recreation, park management, and related activities. Although as much historic integrity as possible will be retained throughout all areas of the park, the interior spaces of structures included in this zone may be modified considerably to accommodate recreation, education, and other park-related uses. Exterior settings may also be modified

to include site improvements such as landscaping in cases where modification is deemed necessary to properly accommodate public use.

Special Use Zone (Vedanta Society, Audubon Canyon Ranch, Zen Center, Mount Tamalpais and Angel Island State Parks, Lincoln Park and Marina Green city parks, Presidio of San Francisco)

Lands within this zone are located within the authorized boundaries of Golden Gate National Recreation Area or Point Reyes National Seashore but are not currently or expected in the foreseeable future to come under the jurisdiction of the National Park Service. Management policies and practices of the agencies and organizations administering these lands appear to adequately provide for the continued preservation of the natural, scenic, recreational, and historic values which motivated their inclusion within the boundaries.

Not shown: Areas to north managed by Point Reyes National Seashore



1980 General Management Plan
Park Lands in Marin and
San Francisco Counties

No-Action Alternative

ALTERNATIVE 1: CONNECTING PEOPLE WITH THE PARKS THE PREFERRED ALTERNATIVE

PARK LANDS IN MARIN COUNTY

Overview

In this alternative, park managers would preserve the natural, cultural, scenic, and recreational qualities that are enjoyed today and would improve access to the park for all visitors. The park would enhance the facilities that support visitors' experiences in what has been called "the wilderness next door." Park managers would work to preserve and restore these interconnected coastal ecosystems through collaborative partnerships with other land management agencies in the region. A stronger national park identity and message would welcome people as they arrive, and improved orientation and information services would inform them of the variety of experiences available in the park. Important park operational uses would remain in the Marin Headlands, and the visitor facilities at these sites would be improved.

The park lands in Marin County are an outdoor recreationist's paradise, with an extensive network of trails through valleys, atop windblown coastal bluffs, along rocky shores, and among redwoods and oaks. Sustainable approaches to rehabilitating facilities that are in place today would improve trailheads and trails as well as roads, parking lots, campsites, picnic areas, restrooms, and other structures at popular destinations, such as the coastal fortifications. Some new facilities would be developed to improve visitor services and support the growing stewardship programs. Park partners would continue to play important roles in preserving resources and offering programs and services to visitors in support of the park's mission. Public transportation and multimodal access to all park sites would be improved.

Stinson Beach North to Bolinas–Fairfax Road

Diverse Opportunities Zone (beach, dunes, and developed area)

At Stinson Beach, the setting and facilities would be improved to better support beach recreation, expand the creek buffer to protect endangered species habitat, and enhance the dunes. Sustainable new facilities would replace deteriorated restrooms, showers, picnic areas, and parking lots. A visitor contact facility could combine existing services (food service, equipment rental) and interpretive and educational programs. Visitor facilities would be removed if it becomes infeasible to maintain them because of climate change. Maintenance and public safety offices with staff housing would be retained.

The park would explore ways to improve visitor access to Stinson Beach, such as increasing transit on weekends during the peak season and enhancing regional trail connections. The park would also continue to work with the community and Marin County to manage parking and reduce traffic using congestion management tools.

The park would continue to work with the Stinson Beach Community Services District, Marin County, and the local community to find sustainable solutions to flooding and

floodplain function, water use, water quality, and wastewater treatment, and sea level rise related to climate change where these affect park resources. More detailed site planning for proposed improvements will involve working with the community to identify alternatives for vulnerable facilities, including offsite locations and increased transit service to offset reduced parking.

Natural Zone (surrounding park land north to Bolinas-Fairfax Road, except Stinson Beach)

This area would be managed to protect and restore the coastal ecosystems, and contribute to the restoration of natural processes that affect Bolinas Lagoon. Partnerships with neighboring land managers would be strengthened to achieve these goals across the broader landscape. The park would improve trails, trailheads, and directional signage to provide access to other nearby park lands.

State Route 1 and Panoramic Highway

Scenic Corridor Zone

Park lands in this area would be managed to enable visitors traveling by car, bicycle, and transit to enjoy spectacular views of the Pacific coast and natural habitats, and to provide trail access to park sites.

The park would collaborate with Caltrans, Marin County, California State Parks and other land management agencies to improve the roadways and trail crossings for the safety and enjoyment of park visitors while retaining the scenic rural character. New facilities could include overlooks and trailheads with parking, restrooms, interpretive exhibits, picnic areas, enhanced trail and transit connections, and a unified wayfinding system. A small trailhead parking area could be developed in the vicinity of the former White Gate Ranch. Improvements east of Panoramic Highway in the vicinity of Homestead Hill would enhance trail and transit access in this area. Improvements would fit with the rural character of the area. Park managers would seek to minimize impacts to natural resources caused by road use, maintenance, and drainage.

Slide Ranch

Diverse Opportunities Zone (developed area)

This area would be managed to enhance the environmental and farm education center and provide improved facilities for public day use of the site, including a picnic area, trail access, and a scenic overlook. Improvements would take into account the dynamic geologic conditions of the site.

Natural Zone (land surrounding the developed area)

The landscape that surrounds the educational programs would be managed to enhance its natural and scenic values, retain flexibility to adapt to coastal geologic processes, and provide for public trail use and access to the coast.

Lower Redwood Creek (former Banducci flower farm and surrounding area)

Natural Zone (majority of Lower Redwood Creek)

Park managers would continue to restore the natural coastal ecosystem and the riparian habitat of Redwood Creek while providing improved trail connections to Mount Tamalpais State Park and other area trails, including the California Coastal Trail. All unnecessary structures would be removed.

Evolved Cultural Landscape Zone (developed area and adjacent approximately 6-acre site)

Park managers would preserve the rural, pastoral character of the landscape. Stewardship facilities relocated from Muir Woods National Monument could be accommodated in this zone. The stewardship center, incorporating a native plant nursery and other native plant propagation areas, would reinvigorate the horticultural traditions of the site and engage the community. Existing buildings would be rehabilitated to support park programs and operations.

The National Park Service would work with California State Parks to provide a small trailhead parking and picnic area near the Santos Meadow and the Frank Valley horse camp, and improve access to this zone.

A sustainable approach to providing for water supply and wastewater treatment would be identified and implemented to confirm the viability of possible uses at this site. To further protect the creek's endangered salmon, park managers could collaborate with the community to increase water storage capacity for use during the dry season.

Park managers would continue to work with Marin County and California State Parks to explore realignment of Muir Woods Road to reduce impacts to Redwood Creek and repair and reopen damaged road segments.

Muir Beach

Natural Zone

The National Park Service would manage the area to restore and sustain the wetlands, creek, dunes, and lagoon with improvements for beach and trail access that preserve the community's natural setting. The park would continue to collaborate with the community, Muir Beach Community Services District, and Marin County to understand and address water quality issues that impact park resources.

Golden Gate Dairy and Vicinity

Evolved Cultural Landscape Zone (developed area only)

The area would be managed to preserve the historic structures and pastoral character while continuing to support park and community needs. Site improvements to accommodate a small trailhead and rural transit stop and enhance the creek corridor would be included. Equestrian facilities would be retained, with site improvements made to incorporate best management practices and protect the adjacent riparian area. The National Park Service would continue to work with the operator of the equestrian

facilities to expand programs that benefit the public. Nonhistoric residences along State Route 1 could be removed if they do not contribute to essential community services or park operational needs.

The National Park Service would continue to promote regularly scheduled transit service to reduce vehicle traffic and to work with Caltrans to improve the safety of State Route 1 for park visitors including traffic calming and improved pedestrian crossing.

Natural Zone (surrounding uplands)

The uplands surrounding the dairy would be managed to preserve and enhance the natural setting, protect the coastal prairie and scrub habitat, and provide connections to trails to the beach and the adjacent Mount Tamalpais State Park.

Tennessee Valley (from Oakwood Valley to Tennessee Valley Road)

Diverse Visitor Opportunities (Tennessee Valley trailhead and the upper stables area)

Trailhead site improvements, including potable water, restrooms, and an improved picnic and parking area, would enhance this "portal" to the park that supports hiking, biking, and equestrian activities. A small food and information kiosk could be included in this area.

In collaboration with Marin County and the community, park managers would explore transit to the trailhead on peak season weekends, extend a multiuse trail to connect with Oakwood Valley and the Mill Valley Bike Path (San Francisco Bay Trail), and manage traffic congestion.

Equestrian facilities would be retained and could be expanded while protecting the historic character of the former dairy ranch. Site improvements would be made to incorporate best management practices and protect the adjacent riparian area. The National Park Service would continue to work with equestrian operators to expand programs that benefit the public.

Modest facilities could be located within this zone that support stewardship, education, youth programs, and the park horse patrol relocated from lower Tennessee Valley.

Diverse Opportunities Zone (Oakwood Valley)

Visitor access improvements, including trailhead and parking, picnicking, and restrooms, would be provided in this zone to support access to the trail system.

Natural Zone (from the trailhead to the ocean and the surrounding uplands including Oakwood Valley)

The main multiuse trail would be enhanced to support family groups and improve accessibility.

All facilities and structures would be removed. Unnecessary management roads could be converted to trails and natural processes restored. Primitive group camping could be retained at Haypress and the Youth Conservation Corps seasonal group camp. All other existing functions could be accommodated closer to the trailhead.

The scenic hills that surround the main trail corridor and trailhead would be managed to preserve and enhance the expanse of undeveloped coastal habitat, outstanding natural features, and the scenic beauty of a large contiguous natural area extending to the north and south. An improved, more sustainable trail system would provide access to the variety of settings. The remaining dams and artificial ponds would be removed. Native wetland and riparian habitat would be restored in these areas.

Marin City Ridge and Gerbode Valley

Natural Zone (majority of the Marin Headlands extending south of Tennessee Valley)

This area would be managed to preserve the expansive undeveloped wilderness-like character of the landscape, preserve natural resources and processes, continue habitat restoration, protect endangered and sensitive species, and improve the trail system with more sustainable trails and better connections to adjacent communities. Visitor amenities could include expanded primitive and accessible camping opportunities. The National Park Service would collaborate with other agencies and the community to develop a community trailhead in Marin City.

Fort Barry and Fort Cronkhite

Diverse Opportunities Zone (lower elevations of Rodeo Valley along Bunker Road and Fort Barry and Fort Cronkhite)

This zone would be managed to provide visitors with a variety of recreational, educational, and stewardship activities consistent with the protection of the nationally significant cultural resources in the area. Visitor amenities could be expanded to include improved trailheads, accessible trails, camping, picnicking, and orientation. These facilities would welcome visitors and give access to the adjacent natural areas. Fort Cronkhite would become the visitor portal to the Headlands.

This alternative would build upon the nucleus of existing programs offered by the park and its partners that contribute to the concept of a “Center for the Environment.” Rehabilitated structures and limited new construction would continue to be used by the park and its partners to provide visitors with an expanded menu of opportunities that are strongly linked to the park’s purpose. Programs would focus on environmental education, science, history and culture, recreation, healthy lifestyle activities, and special events. Housing for staff, interns, and volunteers of the park and its partners would be provided within this zone. A visitor contact facility combining information and food service would be developed in a location near both the beach and a transit stop, replacing the existing chapel visitor center at Fort Barry.

In 1994, the Park Service removed a national landmark WWII cantonment to restore Crissy Field, with the explicit understanding that the cantonment at Fort Cronkhite would be preserved and interpreted. The Fort Cronkhite cantonment is not only highly representative of the once-ubiquitous 700-Series World War II mobilization cantonments; it is considered the best-preserved example of its type in the nation. Every effort will be made to enhance the historic scene while creating diverse visitor opportunities in this zone.

Fort Barry and other historic sites and structures within this zone would continue to support programs provided by the park and its partners consistent with the concept described for Fort Cronkhite. Equestrian facilities would be supported in this area of the Headlands. This zone would also continue to provide for park operational needs including maintenance, public safety, staff offices, and a plant nursery facility. The chapel at Fort Barry could be adapted as a multiuse meeting and program facility.

Natural Zone (uplands)

This area of Marin Headlands would be managed as part of the extensive natural landscape, with emphasis on the protection and restoration of habitat for threatened and endangered species.

Evolved Cultural Landscape Zone (Rodeo Beach and seacoast fortifications)

This zone would be managed for the enjoyment of the beach, trails, and other outdoor recreation and educational opportunities. The landscape would be managed to preserve and interpret the significant military features and structures, such as Wolf Ridge and Batteries Townsley and Mendell, in the natural coastal setting.

Sensitive Resources Zone (Rodeo Lagoon and Rodeo Lake)

This area would be managed to preserve and restore coastal habitat for threatened and endangered species. Visitor access would be highly controlled and restricted to designated trails.

Historic Immersion Zone (Nike Missile Site SF88-L)

The restored compound would continue to provide visitors with an experience that is evocative of its historic use.

Capehart Housing Area

Park Operations Zone

A new park operational facility would be constructed within this zone south of Bunker Road. Housing lost through the removal of housing units to construct this facility could be accommodated in another location, either in existing structures or through limited new construction.

Natural Zone

The residences on the north side of Bunker Road would be removed to provide for creek restoration and to create a more natural and scenic entrance to Rodeo Valley.

Conzelman, Bunker, and McCullough Roads (including Battery Spencer and Hawk Hill)

Scenic Corridor Zone

Managers would highlight the fundamental coastal resources, endangered species habitat, military fortifications, and spectacular views of the Golden Gate Bridge, San Francisco Bay, and the urban skyline of San Francisco from the roads. Safe pedestrian, bike, and motor vehicle access to overlooks and to interpretive and recreational opportunities

would be provided. Some overlooks would be improved with amenities such as interpretive signs, restrooms, and benches.

Kirby Cove

Evolved Cultural Landscape Zone

This area would be managed for beach access and camping, and would support additional uses by visitors on the new San Francisco Bay Water Trail. Rustic cabin accommodations could be developed, maintaining the setting and character of this park site. The coastal fortifications and the historic forest would be preserved and interpreted.

Habitat restoration would continue outside of the historic forest with removal of invasive nonnative vegetation and expansion of habitat for the endangered mission blue butterfly.

Point Bonita Lighthouse Complex

Historic Immersion Zone

The park would continue to preserve the historic structures and interpret the site's maritime and military history. The coastal environment and the sensitive marine habitat would be protected.

Offshore Ocean and Bay Environment

Scenic Corridor Zone (all offshore areas except Point Bonita Cove and Bird Rock)

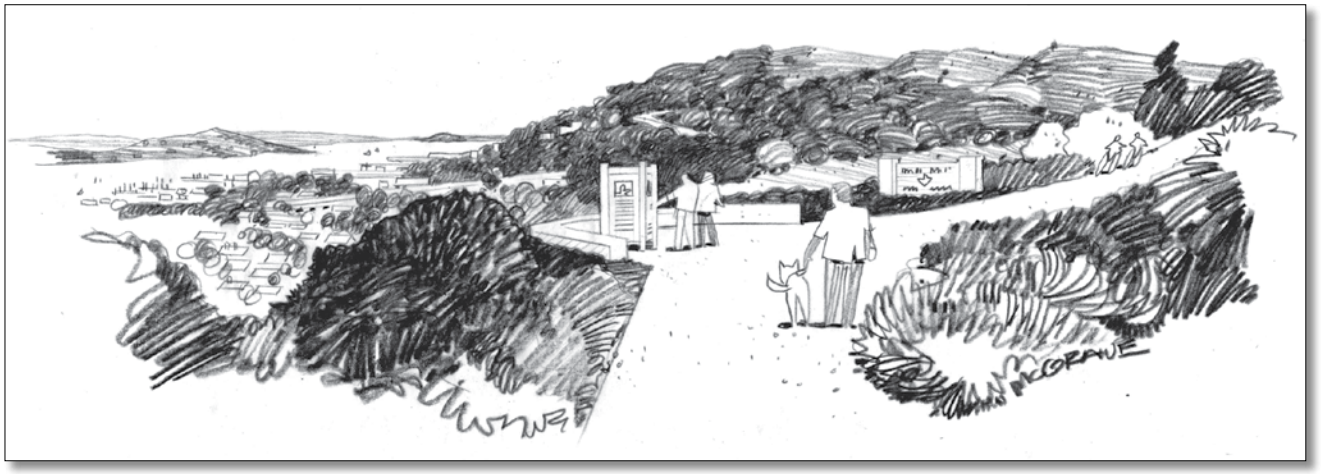
Park managers would work to preserve the integrity of the ocean and bay environment, while accommodating public uses including surfing, boating, and noncommercial fishing. Management actions would protect the marine habitat, rocks, sea caves, and other natural features of the area in coordination with the Monterey Bay and Gulf of the Farallones national marine sanctuaries. This zone would support the San Francisco Bay Water Trail where appropriate.

Sensitive Resources Zone (Offshore areas at Point Bonita Cove and Bird Rock)

The park would preserve sensitive marine resources—intertidal resources, seabirds, and marine mammals—in these two locations. Visitation would be highly restricted to protect resources that are easily disturbed. Park-approved research would be the primary activity in this zone, but would be conducted in a manner that is highly protective of sensitive resources.



A visitor center in the historic WWII barracks supports the wide range of visitor activities and preservation goals at Rodeo Beach.



A community trailhead connects to ridgetop trails and Marin Headlands.



Valuable habitat created by removing obsolete facilities and power lines improves the ecological function and natural beauty of Tennessee Valley.

PARK LANDS IN SAN FRANCISCO

Overview

The park lands of San Francisco provide opportunities to experience nature; explore our heritage; and enjoy the company of families, friends, and fellow community members. Under this alternative, these areas would be managed to preserve and enhance a variety of settings, and improve and expand the facilities that welcome and support visitors to the "National Park Next Door."

The visibility and identity of national park system sites would be improved in settings from military to "wild," and visitors would be introduced to Golden Gate National Recreation Area through facilities, information, and programming at popular arrival nodes and recreational destinations. As in other alternatives, the San Francisco-based Alcatraz embarkation facility would serve as a portal to the GGNRA and larger national park system.

This alternative would also emphasize the importance of education, civic engagement, and healthy outdoor recreation, including offering nature experiences to city children and their families. Existing and new facilities, including a museum collection facility, would support visitor enjoyment, learning, and community-based natural and cultural resource stewardship. Recreational and stewardship opportunities would promote healthy parks and healthy communities. Similar to Crissy Field, this alternative would engage the community to revitalize coastal park areas such as Ocean Beach, Fort Funston, and Lands End.

The park would continue to improve trails and trailheads throughout the San Francisco park lands to make the park accessible to the broadest array of visitors. Sites would be connected to each other and to communities by the trail system and the city's transit and multimodal access systems.

Upper Fort Mason

Evolved Cultural Landscape Zone (eastern portion of the site)

The historic district would become a portal to Golden Gate National Recreation Area, using historic structures to welcome visitors in a setting that would remain a peaceful contrast to the more bustling northern waterfront of Fisherman's Wharf and Lower Fort Mason. The park would preserve and rehabilitate select historic structures for new uses that provide orientation, information, food service, special events, and other services for visitors. With improved visibility, signs, and additional activities, this site would provide visitors with better access and understanding of the opportunities available throughout the park.

Historic residences would continue in residential use where compatible with preservation goals. Other nonresidential historic structures would be preserved for uses such as a hostel and other overnight accommodations, park headquarters, partner offices, and other programs that support the park mission.

The two neighboring national park units, Golden Gate National Recreation Area and San Francisco Maritime National Historical Park, would collaborate on unified visitor welcoming and orientation, exploring the potential to share facilities. Consistent NPS site

identification and directional signs would be placed along the popular Golden Gate Promenade/San Francisco Bay Trail and at transit nodes.

An expanded stewardship program would connect the park with San Francisco through youth programs offered by the park and its partners.

The historic district's batteries and landscape would be restored and rehabilitated, including the overgrown gardens on the east and northeast slopes. The community garden would be retained in its current location.

This alternative anticipates improved access to the park by the development of a water shuttle at Lower Fort Mason, improved walking paths, expansion of the F-Line, and development of the bus rapid transit on Van Ness Avenue. Visitor circulation and wayfinding improvements would be implemented in response to new adjacent bus transit and ferry connections. These concepts would require close collaboration with San Francisco Maritime National Historical Park and the City of San Francisco to improve the experience of arriving at Fort Mason through Aquatic Park and Gashouse Cove at Laguna Street and Marina Boulevard.

Diverse Opportunities Zone ("Great Meadow")

The "Great Meadow" would continue to support the variety of current uses and special events with modest improvements to enhance the landscape, enhance the safety of pedestrians and bicyclists on the paths, and provide formal opportunities for picnicking.

Park Operations Zone

Park operations could remain in their current locations. Adjacent structures would continue to house a conservation corps program. If the program relocates, the site and structures would serve park operational needs.

Sensitive Resource Zone (shoreline at Black Point, including a 100-foot offshore buffer to protect intertidal resources)

This area would be managed to protect the rare remaining natural rocky shoreline in San Francisco inside the Golden Gate. An overlook would be developed in the adjacent zone to allow visitors to experience this small site.

China Beach

Diverse Opportunities Zone

Park managers would improve visitor facilities and access to support current uses.

Lands End

Evolved Cultural Landscape Zone

Park managers would continue to enhance the landscape, integrating natural habitat restoration with cultural landscape preservation, and improving the trail system. This would include the California Coastal Trail and the secondary trails that access the shoreline, and would enhance scenic viewpoints and opportunities for bird watching. The area would continue to be managed for the preservation of dark night skies. Trail

connections and directional signage to the community and adjacent park lands would also be improved.

Fort Miley

Evolved Cultural Landscape Zone (West Fort Miley)

The historic structures and cultural landscape would be preserved and enhanced. The Marine Exchange Lookout Station (Octagon House) would be rehabilitated to interpret its history and provide for park operational or public uses. Site improvements would focus on enhancing the Fort's appearance and providing better connections to the surrounding community, nearby Lands End site, and the Veterans Administration hospital campus. Improved picnicking and group camping facilities would be provided in an appropriate location, as would opportunities for outdoor learning and leadership programs. The area would continue to be managed for the preservation of dark night skies.

Park Operations (East Fort Miley)

Park maintenance and public safety satellite operations would remain in the historic warehouse and batteries. Safe and more direct vehicle and trail access would be developed to better support its use and preservation.

Ocean Beach

In Both the Diverse Opportunities Zone and the Natural Zone

In this alternative, the National Park Service would participate in multiagency efforts to knit the unique assets and experiences of the Ocean Beach corridor into a seamless and welcoming public landscape, planning for environmental conservation, sustainable infrastructure, and long-term stewardship.

The Park Service would continue to work with the City of San Francisco, California Coastal Commission, and the U.S. Army Corps of Engineers to address coastal erosion: relocating facilities out of vulnerable locations and restoring natural processes to maximize protection of the beach for its natural and recreational values.

Diverse Opportunities Zone (along the O'Shaughnessy seawall)

Park managers would continue to provide for a diversity of recreational beach use and preserve the natural setting and resource values, including shorebird habitat. The vital community stewardship activities that are part of the successful management of the beach would be promoted.

The park would preserve the historic O'Shaughnessy seawall and collaborate with the City of San Francisco to enhance the Ocean Beach corridor with improved amenities that support enjoyment of the beach, including the promenade, parking, and restrooms.

The California Coastal Trail and other connections would be improved to link Ocean Beach to Lands End, Fort Funston, city neighborhoods, and other park lands including Golden Gate Park and Lake Merced.

Natural Zone (south of the O'Shaughnessy seawall)

The area would be managed to protect shorebirds and threatened species and allow natural coastal and marine processes to occur, while providing for a variety of compatible recreational activities. Public safety activities would be continued.

Fort Funston

Diverse Opportunities Zone (central area and southern beach)

This site would continue to support current recreational activities, including dog walking and the unique opportunity for hang gliding in the park, while making landscape and trail improvements and protecting and restoring natural habitat. New visitor facilities would be provided near the parking lot. These could include restrooms, group picnicking facilities, a visitor contact facility combining food service with park information, and other support structures. Battery Davis, the historic seacoast fortification, would be preserved and interpreted and its earthworks fenced and protected.

Natural Zone (corridors along the perimeter and northern beach)

Fort Funston's islands of native habitat would be extended to form a continuous habitat corridor that supports recovery of native dune habitat including endangered San Francisco *Lessingia* plants. The northern stretch of beach would be managed to protect shorebirds, coastal bluffs, and bank swallows and to allow natural coastal and marine processes to occur to the extent feasible, while providing for a variety of compatible recreational activities.

Park Operations Zone (southeast corner)

Operational facilities could be expanded to meet park needs, including public safety offices, nursery, stewardship center, satellite maintenance facilities, and staff or volunteer housing.

The existing environmental education center could remain in this zone or be relocated to another site better served by public transportation with appropriate facilities and outdoor settings.

Offshore Ocean and Bay Environment

Scenic Corridor Zone

The park would preserve the ocean and bay environment and accommodate public uses including surfing, boating, and noncommercial fishing. Park managers would protect the marine habitat, geologic resources and processes, and other natural features of the area.



The coastal setting of the historic Marine Exchange Lookout Station at West Fort Miley is restored.



New garden walkways and the historic streetcar connect visitors to Fort Mason and Aquatic Park.

PARK LANDS IN SAN MATEO COUNTY

Overview

Under this alternative and others, park lands and ocean environments in San Mateo County would be managed as part of a vast network of protected lands and waters, some recognized as part of the UNESCO Golden Gate Biosphere Reserve. This network includes San Francisco Public Utilities Commission Peninsula Watershed lands, California state parks, the Monterey Bay National Marine Sanctuary, county parks, and other land held by regional land trusts. Park managers would emphasize connectivity, preservation, and restoration of the area's vital ecosystems through collaborative partnerships with other land management agencies.

In the spirit of the "Parks to People" movement that created Golden Gate National Recreation Area four decades ago, this alternative would focus on the importance of improving access and engaging the community in these newest park lands. Given the significant addition of park land in the county in recent years, a series of actions would be needed to enhance visitor access, enjoyment, appreciation, and stewardship.

Key efforts would include improving the visibility and identity of National Park Service sites. Park trails would be improved to create a sustainable system that provides opportunities to enjoy park sites, connects with local communities, and contributes to an exceptional regional trail network. Equestrian facilities would continue to have an important role in recreation and stewardship. A comprehensive trail plan would be prepared to achieve these goals. Park managers would work with county transit providers to improve transit connections to local trailheads and east–west transit between bayside communities and State Route 1. Collaboration with the community and Caltrans would focus on providing safe access to park sites along State Route 1.

The addition of signs and trailhead parking will help visitors find their way to various park sites and will help them gain an understanding of the park's diverse natural and cultural resources. Equestrian needs would be incorporated in trail and trailhead design.

Equally important would be providing facilities to welcome visitors to the park. This alternative would promote visitor information and orientation centers in Pacifica and in the coastside community south of Devil's Slide. Park improvements would be consistent with preservation of community character. These facilities could be shared with San Mateo County Department of Parks, California State Parks, Monterey Bay National Marine Sanctuary, local governments, and other organizations.

Thornton State Beach to South of Mussel Rock

Natural Zone

In all alternatives park managers would preserve and enhance the natural and scenic values of the area; allow for natural coastal geologic processes to continue; and provide modest visitor access facilities (trails, trailheads) to beaches, scenic overlooks, and along the California Coastal Trail, where feasible.

The beach, dunes, and cliffs extending from San Francisco's Ocean Beach south to Mussel Rock (a stretch of almost 5 miles) would be managed to protect shorebird habitat, allow natural shoreline processes to continue unimpeded, and provide improved or new

trails for visitors to enjoy and view nature. Park staff would work with neighboring communities to mitigate concentrated urban runoff and landslide threat.

Milagra Ridge

Natural Zone

The area would be managed to preserve its wild character and protect habitat for endangered species. Disturbed areas would be restored. Coordinating with other land managers, the park would also make trail improvements that could include connections to Oceana Boulevard, the Pacific coast, Skyline Boulevard, and Sweeney Ridge. Historic structures would be preserved.

Scenic Corridor Zone (center of ridge)

Additional amenities would be developed to support visitors and stewardship volunteers. These could include accessibility improvements, trailhead parking, restrooms, and picnic facilities.

Shelldance Nursery Area

Diverse Opportunities Zone and **Park Operations Zone**

The site would transition from a commercial nursery to an area that provides a variety of visitor services that could include enhanced trailhead parking serving Sweeney Ridge and Mori Point, restrooms, park orientation and information, and a community stewardship/education center. Access from State Route 1 and the trail connection to Mori Point would be improved.

In all alternatives, a portion of this park site would be dedicated to park operational needs possibly including a satellite facility for maintenance and public safety, native plant nursery, and ranger workforce or volunteer housing.

Sweeney Ridge (including Cattle Hill and Picardo Ranch)

Natural Zone (majority of the area)

The area would be managed to protect endangered species and the large contiguous natural landscape extending into the San Francisco Public Utilities Commission Peninsula Watershed. Visitors could experience the area through stewardship activities, improved trails, and primitive camping. Connections to the regional trail network and the surrounding public lands (San Francisco Public Utilities Commission lands, San Pedro Valley County Park, McNee Ranch, and Rancho Corral de Tierra) would be developed in coordination with other land managers.

Scenic Corridor Zone (Sneath Lane and part of Sweeney Ridge)

Trail amenities would be developed, and connections would be enhanced to the Bay Area Ridge Trail and the Sawyer Camp Trail in San Francisco Public Utilities Commission Peninsula Watershed. The San Francisco Bay Discovery Site National Historical Landmark would be preserved and interpreted. Limited vehicular access to the discovery

site would be permitted. A hikers' hut could be developed as part of a system of huts proposed for the Bay Area Ridge Trail.

Diverse Opportunities Zone (developed portion of Picardo Ranch)

If acquired, the existing facilities could be adapted or replaced with new facilities to support visitor activities, potentially including continued equestrian use, environmental education, trailhead improvements, and park operations. Management would include strong protection for the creek corridor and other natural habitats.

Mori Point

Natural Zone

The land would be managed for ongoing restoration of natural habitats and to protect threatened and endangered species while improving the trail system for public enjoyment of the site and its exceptional views and landscapes. Access to Mori Point would be enhanced with modest trailhead and parking improvements.

Trail connections to the community, Sweeney Ridge and the adjacent public lands, and the California Coastal Trail would be improved in partnership with other land managers. Collaboration with adjacent land managers would also contribute to expanded efforts to preserve listed species and their habitats, improving habitat connectivity across management boundaries

Pedro Point, Devil's Slide, and San Pedro Mountain

Natural Zone

These lands, if acquired, would be managed to maintain natural features and scenic beauty and to continue with the habitat restoration and access improvements initiated by the community and other agencies. Trailheads and trails would be developed and enhanced to improve accessibility and connections to the California Coastal Trail and adjacent public lands. Public access to Devil's Slide and the surrounding coastal bluffs west of existing State Route 1 would be managed to protect nesting seabirds and historic sites. Collaboration with adjacent land managers would be essential.

Rancho Corral de Tierra

Natural Zone (majority of the area)

The upland areas and land outside the existing equestrian centers would be managed to preserve the wild, open character of the landscape and offer trail-based recreation that is light on the land, including walking, hiking, bicycling, and horseback riding. Natural habitats and processes in the zone, which includes four creek corridors, would be restored to the greatest extent possible with the help of community stewards.

Visitors would enjoy the scenic coastal environment through an enhanced and sustainable system of trails. The trail network would connect local communities to the park and link the ridges of Montara Mountain to the Pacific Ocean. The National Park Service would work with the San Francisco Public Utilities Commission to complete a trail connection to Sweeney Ridge through the Peninsula Watershed's northwest corner along Whiting

Ridge. Unnecessary roads could be converted to trails or removed. Exploration of the park could be facilitated by scenic overlooks, sites for picnicking, primitive camping sites, and possibly a hikers' hut in a remote setting.

Diverse Opportunities Zone

Modest improvements would be created in this zone consisting of trailheads and other visitor facilities that provide for the enjoyment of this new area. This area would be considered as a southern "portal" to the Golden Gate National Recreation Area and other public open space. Detailed planning following general management plan approval would determine the mix of uses that would share this zone. Equestrian uses would be retained at Rancho Corral de Tierra, with the exact location, type, and scale of facility improvements determined in future planning efforts. Park managers would continue to work with equestrian operators to enhance the best management practices employed to protect the environment and expand programs that welcome and benefit the public. New facilities in this zone could include trails, trailheads, a community stewardship/educational center, a group picnic area, a rustic campsite, and a horse camp. Significant constraints on availability of water will influence development and operations of facilities at this site. Any new visitor facility would be sited to preserve natural and cultural resources and where compatible with adjacent uses such as agriculture.

In addition, safe trailheads would be developed near State Route 1 to support exploration of this large, diverse landscape and the extensive adjacent public lands. The multiuse trails and trailheads would be compatible with adjacent residential uses.

Habitat restoration and community stewardship activities would have a strong presence in both zones. An area for native plant production would be established to support restoration projects in the park. The National Park Service would partner with surrounding land managers and the Fitzgerald Marine Reserve, one of the richest intertidal areas on the California coast, to improve habitat connectivity and protect sensitive habitats, to protect water quality, restore the creek corridors and reconnect them to the ocean, and to reestablish anadromous fish passage where possible.

The National Park Service would connect people to the agriculture history of Rancho Corral de Tierra through interpretation of its cultural landscape and adjacent working farms.

Montara Lighthouse

Evolved Cultural Landscape Zone

In all alternatives, the historic lighthouse structures and other associated resources would be preserved and interpreted. Management would enhance the current hostel and day use programming. Trail connections from the hostel up and down the coast would better integrate this site with other park lands and open space. Access from State Route 1 would be improved.

The park would look for an opportunity to locate a multiagency visitor information and orientation facility in this vicinity.

Phleger Estate

Natural Zone

In all alternatives, the area would be managed to provide trail-based recreation in a natural and contemplative setting that complements the more developed recreation facilities at adjacent Huddart County Park. The redwood forest ecosystem, including West Union Creek and threatened and endangered species, would be protected and restored. The history of logging on the estate and its role in the settlement of San Mateo County would be interpreted. Trail connections to adjacent lands and the regional trail system would be pursued in collaboration with San Mateo County and San Francisco Public Utilities Commission. These connections would include the Bay Area Ridge Trail, potential access from trailheads on Cañada Road and Skyline Boulevard, and a multiuse trail connection between Cañada Road and Skyline Boulevard north of Phleger Estate. Community stewardship of the site could contribute to trail and habitat improvements. The National Park Service would explore community trailheads and partnerships with the Woodside Store historic site.

San Francisco Public Utilities Commission Peninsula Watershed Easements

Natural Zone (majority of the area, corresponding with the scenic easement)

Park managers would continue to cooperate with the San Francisco Public Utilities Commission for the preservation of the natural, cultural, scenic, and recreational features of the watershed. Within this zone, the park would promote completion of the Bay Area Ridge Trail connection from the Phleger Estate to Highway 92 and a new trail connection between the Bay Area Ridge Trail and the California Coastal Trail on the existing alignment over Whiting Ridge; this would connect Sweeney Ridge with McNee Ranch and Rancho Corral de Tierra.

Scenic Corridor Zone (eastern area closest to Highway 280, corresponding with the scenic and recreation easement)

Park managers would promote preservation of natural, cultural, and scenic values with improved public access on trails. Proposed trail improvements include connecting the existing San Andreas multiuse trail to Sweeney Ridge via Sneath Lane, and improving trail access to the Phleger Estate from a new trailhead on Cañada Road. Park managers also would promote the implementation of other trails proposed in the 2002 *San Francisco Watershed Management Plan*, including completion of the north–south corridor through the watershed in areas of low sensitivity. The park would work with the San Francisco Public Utilities Commission to provide a multiuse trail connection through the Peninsula watershed lands between Cañada Road and Skyline Boulevard north of Phleger Estate. Preservation of scenic views along the trails, Cañada Road, Skyline Boulevard, Interstate 280, and its vista points would also be promoted in cooperation with the San Francisco Public Utilities Commission and Caltrans. The National Park Service would collaborate with the San Francisco Public Utilities Commission in creating a watershed visitor education center near the Pulgas Water Temple on Cañada Road, as described in the 2002 *Watershed Management Plan*. Additional coordination with the Juan Bautista De Anza National Historic Trail could also be provided.

Offshore Ocean Environment

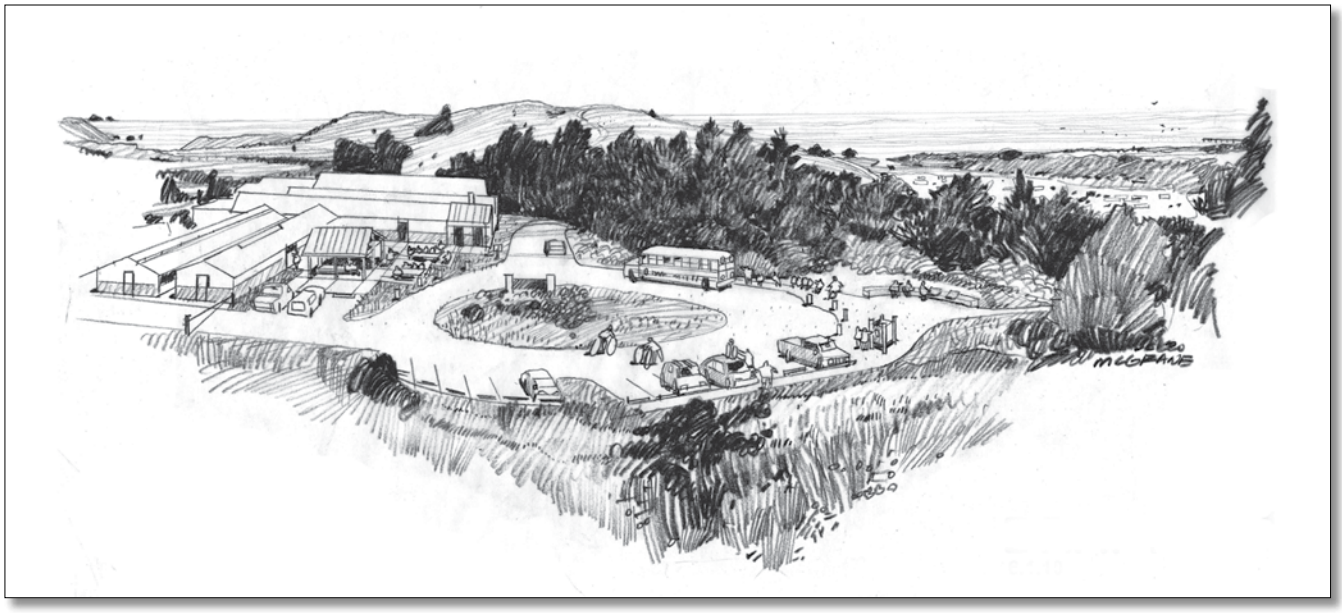
Management of offshore areas could be extended to cover new segments of the San Mateo County coast as described in the "Boundary Adjustments" section.

Sensitive Resources Zone (Fitzgerald Marine Reserve)

In areas where the park boundary coincides with the Fitzgerald Marine Reserve, the two organizations would continue to cooperate in the implementation of the provisions of the California State Marine Life Protection Act. The offshore area between Montara State Beach and Ross Cove, designated as the Montara State Marine Reserve, would not permit fishing, harvesting, or collecting. The reserve area between Ross Cove and Pillar Point Harbor, designated as the Pillar Point Marine Conservation Area; some fishing would be allowed in this area.



Visitors are welcomed to Rancho Corral de Tierra at a new trailhead portal.



The trailhead to Sweeney Ridge is enhanced at the site transitions from commercial to park purposes.

COST ESTIMATES

Cost estimates for alternative 1 are identified below in the table below. The costs shown here are not for budgetary purposes; they are only intended to show a relative comparison of costs among the alternatives.

The alternatives describe the maximum potential capital improvements; lesser improvements may be implemented, or built in phases if necessary. The implementation of the approved plan will depend on future funding. The approval of this plan does not guarantee that the funding and staffing needed to implement the plan will be forthcoming. Full implementation of the actions in the approved general management plan could be many years in the future. Additionally, some of the future long-term funding needed to implement the various actions called for in the alternatives is anticipated to come from nonfederal partners, consistent with the park's current practices.

The costs to implement alternative 1 focus on a diversity of facilities to attract and welcome visitors, connect people with the resources, and promote understanding, enjoyment, preservation, and health. Costs reflect all proposals of alternative 1 that could be implemented over the 20-year life of the general management plan.

Annual Operating Costs

The annual operating costs for alternative 1 are made up of the current annual operating costs, with changes made to reflect additional staffing needs. The annual operating costs of alternative 1 are estimated at $32.0 million.

Staffing Requirements

Total additional staff needed to support alternative 1, including staff for Alcatraz Island and Muir Woods National Monument, is 46 FTE. A significant amount of staff would be required to support the newly acquired lands in San Mateo County. Staff would support orientation, safety, maintenance, and resource protection in these areas.

Additional staff would be needed to carry out new functional use of the park lands. An increase in interpretive staff would support expanded interpretive programs throughout the park. A greater number of law enforcement officers would allow for needed patrol and response to increased visitor recreational activities. With the addition of new trails and facilities and rehabilitation of other facilities, maintenance responsibilities would increase, also requiring additional staff.

The natural resources division would have a need for staff to perform additional inventory and monitoring duties, as well as enhanced management and restoration activities. The cultural resources division would need funds to conduct baseline studies to inventory and identify resources. In addition, staff would support a series of rehabilitation projects, and would require technical specialists in the fields of historic architecture, landscape architecture, archeology, curation, cataloging, and compliance. The responsibilities of the planning division for project coordination, compliance, and public involvement would also expand, requiring additional staff. The business management division would require additional staff to manage additional visitor facilities, Alcatraz

Island services, and equestrian operations. New staff would also manage the rigorous user capacity program at Alcatraz Island and Muir Woods National Monument.

Other divisions, including administration, environmental and safety, and public affairs would each require a few additional staff members to manage new areas and uses of the park lands.

Proposed New Staff

- 10 positions in visitor resources and protection
- 12 positions in maintenance
- 6 positions in interpretation and education
- 2 positions in planning and compliance
- 4 positions in cultural resources and museum management
- 6 positions in natural resources management and science
- 1 position in public affairs
- 2 positions in business management
- 2 positions in administration
- 1 position in environmental and safety programs

One-time Costs

One-time costs of alternative 1 reflect extensive rehabilitation to provide a diverse range of visitor activities for the park's many visitors. Total one-time costs are estimated at $46.7 million over the life of the general management plan.

Table 12: Costs Associated with the Implementation of Alternative 1 for Park Lands in Marin, San Francisco, and San Mateo Counties

SUMMARY OF COSTS FOR ALTERNATIVE 1 (NPS Preferred Alternative)	
Annual Operational Costs	
Annual Operational Costs	$32,000,000
Staffing (additional FTE)	380 (+46)
One-time Capital Costs	
FACILITY REHABILITATION	
Fort Barry/Fort Cronkhite: visitor access improvements	$480,000
Fort Funston: visitor facilities improvements	$770,000
Fort Miley: improve visitor access and facilities*	$1,500,000
Lower Redwood Creek: improve trail connections*	$1,020,000
Lower Redwood Creek: stewardship center and landscape improvements	$1,220,000
Oakwood, Marin City Ridge, Gerbode: improve trail connections to local communities*	$1,090,000
Oakwood, Marin City Ridge, Gerbode: visitor access improvements	$560,000
Other Marin County projects	$580,000
Other San Francisco projects*	$1,050,000
Other San Mateo County projects*	$1,190,000
Rancho Corral de Tierra: equestrian facilities improvements	$2,870,000
Rancho Corral De Tierra: trails system development	$810,000
Stinson Beach: replace restrooms, showers, parking	$1,480,000

SUMMARY OF COSTS FOR ALTERNATIVE 1 (NPS Preferred Alternative)	
Stinson Beach: replace visitor contact facility (warming hut)*	$1,240,000
Tennessee Valley: improve main multiuse trail*	$1,360,000
Tennessee Valley: stewardship center and environmental education	$800,000
Tennessee Valley: trailhead improvements	$1,930,000
Thornton Beach/Mussel Rock: improve trail and trailhead*	$530,000
HISTORIC PRESERVATION	
Marin Headlands seacoast fortifications: stabilization and rehabilitation*	$960,000
China Beach: rehabilitate structures and parking	$2,430,000
Fort Barry/Fort Cronkhite: rehabilitate and relocate visitor contact facility (warming hut)*	$1,920,000
Fort Miley: rehabilitate historic structures*	$3,330,000
Ocean Beach: rehabilitate O'Shaughnessy seawall	$6,000,000
Other San Mateo County historic preservation projects*	$740,000
Shelldance Nursery: rehabilitate for park operational uses*	$640,000
Shelldance Nursery: rehabilitate for stewardship center*	$1,140,000
NATURAL RESOURCE RESTORATION	
Marin County sites, including Stinson Beach	$1,960,000
San Francisco: Ocean Beach, Fort Funston, and Lands End	$1,000,000

SUMMARY OF COSTS FOR ALTERNATIVE 1 (NPS Preferred Alternative)	
San Mateo County sites	$1,510,000
FACILITY REMOVAL	
Capehart housing: remove units north of Bunker Road	$250,000
NEW CONSTRUCTION	
Fort Funston: new visitor contact facility (warming hut)*	$1,240,000
Kirby Cove: new rustic overnight accommodations*	$390,000
Other Rancho Corral de Tierra Projects: trailhead and parking	$980,000
Rancho Corral de Tierra: new rustic overnight accommodations*	$780,000
Rancho Corral de Tierra: new stewardship and education center*	$960,000
Total	**$46,710,000**

All costs in 2009 dollars

*These projects are desirable/lower priority, and while important to full implementation of the alternative, may be accomplished with nonfederal funds or in later phases.

Connecting People with the Parks

Alternative 1 – Preferred Alternative
Golden Gate National Recreation Area
Marin County

Management Zones

- Diverse Opportunities
- Scenic Corridor
- Interpretive Corridor
- Evolved Cultural Landscape
- Historic Immersion
- Natural
- Sensitive Resources
- Park Operations

- Other Open Space
- Existing Plan
- NPS Managed Marine Resources
- Road
- Tunnel
- Trail



*The planning area includes an off shore distance of approximately 1/4 mile.

United States Department of the Interior · National Park Service
DSC · June 2010 · 641 / 20615

GGNRA (Managed by Point Reyes National Seashore)
Point Reyes National Seashore
Bolinas/Fairfax Rd
Audubon Canyon Ranch
Marin Municipal Water District
Kentfield
Larkspur
Richmond-San Rafael Bridge
580
101
Bolinas Lagoon
Bolinas
Mount Tamalpais State Park
Corte Madera
Ferry Route
Panoramic Hwy
Panoramic Highway
Muir Woods National Monument
(Refer to Muir Woods NM alternatives)
Mill Valley
Stinson Beach
Muir Woods Rd
Lower Redwood Creek
Golden Gate Dairy
Hwy 1
Tamalpais Valley
Tiburon
Marin City
Slide Ranch
Trailhead
Oakwood Valley
Marin City Ridge
Muir Beach
Tennessee Valley
Sausalito
Gerbode Valley
Capehart
McCullough Rd
Rodeo Valley
Fort Baker
Fort Cronkhite
Rodeo Lagoon
Conzelman Rd
Fort Barry
Nike Missile Site
Kirby Cove
Golden Gate Bridge
Point Bonita

Marin County
Marin Headlands
101
Alcatraz Island
(Refer to Alcatraz Island alternatives)
Golden Gate Bridge
Presidio Cavalry Stable
Fort Point National Historic Site
San Francisco Maritime National Historical Park
Crissy Field
Fort Mason
Baker Beach
Lombard Street
101
Van Ness Ave.
Presidio of San Francisco
1
China Beach
Lands End
Lincoln Park
Park Presidio Blvd.
East Fort Miley
West Fort Miley
Sutro Heights
Golden Gate Park
Great Hwy
Ocean Beach
19th Avenue
Sloat Blvd
San Francisco Zoo
Harding Park
Lake Merced
Fort Funston
280
Pier 4
Black Point
100 feet
San Francisco Maritime NHP
Lower Fort Mason
Upper Fort Mason
Great Meadow
Park Headquarters Bldg 201
Van Ness Ave.
Bay Street
N
0 1,000 3,000 6,000 Feet

Connecting People with the Parks

Alternative 1 – Preferred Alternative
Golden Gate National Recreation Area
San Francisco City and County

Management Zones

- Diverse Opportunities
- Scenic Corridor
- Interpretive Corridor
- Evolved Cultural Landscape
- Historic Immersion
- Natural
- Sensitive Resources
- Park Operations

- Other Open Space
- Existing Plan
- NPS Managed Marine Resources
- Road



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Connecting People with the Parks

Alternative 1 – Preferred Alternative
Golden Gate National Recreation Area
San Mateo County

Management Zones

- Diverse Opportunities
- Scenic Corridor
- Interpretive Corridor
- Evolved Cultural Landscape
- Historic Immersion
- Natural
- Sensitive Resources
- Park Operations

- Other Open Space
- Golden Gate National Recreation Area Easement
- Future Park Addition
- NPS Managed Marine Resources

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0 Miles 2

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Fort Funston
City and County of San Francisco
San Mateo County
John Daly Blvd
Thornton State Beach
Daly City
San Bruno Mountain State Park
Colma
Brisbane
Mussel Rock
South San Francisco
Milagra Ridge
Sharp Park Beach
Sharp Park Blvd
San Bruno
Mori Point
Sharp Park
Sneath Lane
Shelldance Nursery
Cattle Hill
Sweeney Ridge
Pacifica State Park
Skyline Blvd
San Francisco International Airport
Millbrae
Pacifica
Picardo Ranch
San Pedro Point
Burlingame
Devil's Slide
San Pedro Valley Park
Hillsborough
McNee Ranch
Peninsula Watershed
(San Francisco Public Utilities Commission)
NPS Easement
San Mateo
Montara State Beach
Montara
Montara Lighthouse
Moss Beach
Rancho Corral de Tierra
Belmont
Fitzgerald Marine Reserve
Pillar Point Bluff
Ross Cove
Half Moon Bay State Beach
Canada Road
Edgewood Park
Half Moon Bay
Filoli Center
Phleger Estate
Skyline Blvd
Huddart County Park

1 280 101 35 380 92

ALTERNATIVE 2: PRESERVING AND ENJOYING COASTAL ECOSYSTEMS

PARK LANDS IN MARIN COUNTY

Overview

In this alternative, management would strive to further preserve and restore the dynamic, interconnected coastal ecosystems at the core of protected lands through collaborative regional partnerships. These lands provide significant swaths of protected habitat for many of the park's sensitive, rare, threatened, and endangered species. Partners would work on common goals to sustain the area's native biodiversity, reconnect fragmented habitats and migration corridors, minimize the impact of invasive species, manage for changing fire regimes, protect threatened and endangered species, and restore naturally functioning ecosystems. Proactive management would work to build resiliency to climate change into the natural environment.

This alternative would highlight Marin County's park lands and waters as living laboratories, engaging visitors in participatory science, education, and stewardship that nurture personal connections with nature and inspire advocacy.

Exploration of trails and beaches would further highlight the park's coastal natural and cultural resources. Cultural resource sites and stories would emphasize human occupation of the coastal environment, as reflected in lighthouses, coastal defense structures, archeological sites, and agricultural land uses.

Stinson Beach North to Bolinas–Fairfax Road

Diverse Opportunities Zone (beach and developed area)

The current level of visitor services such as restrooms, seasonal lifeguards, and food service, would continue to support beach recreation; however, park facilities such as the central restroom and its septic system would be relocated farther from the dunes and beach to better protect natural resources. As in alternative 1, sustainable new facilities would replace deteriorated restrooms, showers, picnic areas, and parking lots. The Easkoot Creek riparian corridor would be further enhanced by redesigning the parking lot.

As in alternative 1, park managers would explore improved weekend transit service at peak times in order to reduce congestion, minimize impacts on natural resources, and provide a way to get to the beach without a car.

Natural Zone (dunes, south parking lot, and surrounding park land north to Bolinas–Fairfax Road)

The sand dunes would be restored and the south parking lot would be removed to support wetland restoration. The rest of the lands and waters in the vicinity of Stinson Beach, including the uplands, would be managed to protect and restore the coastal ecosystems, and contribute to the restoration of natural processes that affect Bolinas Lagoon.

Partnerships with neighboring land managers would be strengthened to achieve these goals across the broader landscape.

State Route 1 and Panoramic Highway

Natural Zone

As in alternative 1, these park lands would be managed to enable visitors traveling by car, bicycle, and transit to enjoy spectacular views of the Pacific Coast, and to provide access to park sites.

Under this alternative, greater emphasis would be placed on collaboration with Caltrans and other agencies to further protect and restore the coastal ecosystem. In the event of a catastrophic landslide, park managers would encourage abandonment of State Route 1 between Muir Beach and Stinson Beach in the affected segment. Interpretive exhibits could illustrate the dramatic impacts on coastal ecosystems caused by constructing and maintaining the highway.

Slide Ranch

Natural Zone

The existing environmental education center and farm education program would be relocated to a more sustainable and geologically stable site in a less remote location. The area would be managed to promote restoration of coastal resources and to allow for natural geologic processes to continue unimpeded. A modest trailhead near State Route 1 would be provided to support visitor access to the rugged coast, but all other structures and farm areas would be removed to allow for restoration of natural conditions.

Lower Redwood Creek (former Banducci flower farm and surrounding area)

Natural Zone

Park managers would continue to restore the native coastal ecosystem, including Redwood Creek and endangered salmon habitat, the riparian corridor and adjacent wetlands, and the uplands that were planted with heather and eucalyptus. Visitors would have opportunities to participate in stewardship activities in the restoration of the natural systems. All facilities and structures would be removed unless needed to support stewardship, restoration activities, and trail use. The California Coastal Trail could also connect at this park site.

Park managers would work with Marin County and California State Parks to explore realignment of Muir Woods Road to reduce impacts to Redwood Creek. To further protect the creek's endangered salmon, park managers could collaborate with the community to increase water storage capacity for use during the dry season.

Muir Beach

Natural Zone

Management of this zone would be the same as that described under alternative 1.

Golden Gate Dairy and Vicinity

Evolved Cultural Landscape Zone (developed area and surrounding uplands)

The area would be managed to preserve the historic structures and pastoral landscape and protect the coastal prairie and scrub habitat.

The historic structures could be adaptively reused for a science and stewardship center or for local community services that are consistent with park goals. Nearby nonhistoric residences could be removed if they do not contribute to essential community services or park operational needs. The rest of this park site could be restored to its natural condition. Equestrian use would be provided on designated trails in the area.

Tennessee Valley (from Oakwood Valley to the ocean)

Evolved Cultural Landscape Zone (Tennessee Valley trailhead and the Miwok Stables area)

This area would be managed to retain its traditional equestrian uses and provide for a minimal level of visitor facilities and an improved trailhead to support visitor access to the extensive network of trails. Modest facilities could be located within this zone that support the stewardship and restoration activities and the park horse patrol that are currently located in lower Tennessee Valley.

Natural Zone (from the trailhead to the ocean and the surrounding uplands including Oakwood Valley)

Park managers would preserve and enhance the native coastal ecosystem and allow visitors to experience the wild character of the valley. Nonhistoric facilities and structures would be removed. Unnecessary management roads, including Marincello Road, could be converted to trails, or removed if not historic, and natural processes restored.

The main Tennessee Valley Trail would be converted to a multiuse trail, and the remaining dams and artificial ponds would be removed. Native wetland and riparian habitat would be restored in these areas.

Marin City Ridge and Gerbode Valley

Natural Zone (Marin City Ridge and Gerbode Valley)

This area would be managed to restore and preserve the undeveloped coastal corridor of contiguous habitat and natural resources, and the outstanding open space and wild character of these lands. The nonhistoric facilities and infrastructure would be removed and the land restored to a natural condition. Unnecessary management roads could be converted to trails, or removed if not historic, and natural processes restored. Opportunities would be explored to provide trail connections from these park lands to local communities.

Fort Barry and Fort Cronkhite

Sensitive Resources Zone (Rodeo Lagoon and most of the Rodeo Valley uplands south of Bunker Road)

This area would be managed to preserve and restore coastal habitat for threatened and endangered species. Visitor access would be highly controlled and restricted to designated trails in this zone.

Evolved Cultural Landscape Zone (Rodeo Beach, Fort Cronkhite, and Fort Barry)

These areas would be managed to maintain the military identity of the area, provide for higher levels of visitor use than in surrounding areas, and provide educational programs, surfing, fishing, and other outdoor recreation opportunities. The adjacent forts would be managed to protect and interpret the national register historic district while allowing for reuse of the buildings for park programming and operations, possibly including a new visitor center. Habitat restoration within this zone would be consistent with the preservation of the military landscape. Equestrian facilities would be accommodated in this area.

Historic Immersion Zone (Nike Missile Site SF88-L)

Management of this zone would be the same as that described under alternative 1.

Capehart Housing Area

Park Operations Zone

A new park operations facility would be constructed within this zone south of Bunker Road. Residential structures and unnecessary infrastructure would be removed; riparian and upland habitats would be restored, and fragmented habitat would be reconnected where possible.

Conzelman, Bunker, and McCullough Roads (including Battery Spencer and Hawk Hill)

Scenic Corridor Zone

Same as alternative 1, except that outside of the immediate road corridor, the area would be managed to protect and restore coastal habitat that supports the threatened mission blue butterfly. Visitor access would be highly controlled and restricted to designated trails in this zone.

Kirby Cove

Evolved Cultural Landscape Zone

The park resources and stories associated with coastal fortifications would be highlighted and camping would promote appreciation of views of the Golden Gate Bridge and the wild-urban interface between the park and the City of San Francisco. Facilities would provide visitors with access to the beach and new San Francisco Bay Water Trail.

Habitat restoration would continue outside of the historic forest with removal of invasive nonnative vegetation and expansion of mission blue butterfly habitat.

Point Bonita Lighthouse Complex

Historic Immersion Zone

Management of this zone would be the same as that described under alternative 1.

Offshore Ocean and Bay Environment

Scenic Corridor Zone (offshore areas except Muir Beach and Point Bonita)

Management of this zone would be the same as that described under alternative 1.

Sensitive Resources Zone (offshore areas around Muir Beach and Point Bonita)

The park would preserve sensitive marine resources—intertidal resources, Redwood Creek salmonids, seabirds, and marine mammals—in these two locations. Visitation would be highly restricted to protect resources that are easily disturbed. Park-approved research would be the primary activity in this zone, but would be conducted in a manner that is highly protective of sensitive resources.

PARK LANDS IN SAN FRANCISCO

Overview

San Francisco's national park system lands are a vital natural refuge, rich in biodiversity and native habitat. As in alternative 1, San Francisco park lands would welcome visitors to the "National Park Next Door"; however, this alternative would focus on engaging visitors, communities, and partners in participatory science, education, and stewardship focused on the coastal environment.

The local impacts of global climate change, including rising sea level provide a focal point for individual and collective action and advocacy. The park, in collaboration with community partners, would demonstrate leadership in proactive adaptation and management in the face of accelerated sea level rise. These interpretive messages would reach visitors enjoying the coastal environment along the San Francisco Bay Trail and the California Coastal Trail. Cultural resource sites and stories would also highlight the human connection to the coastal environment; sites and stories would include archeological sites, European exploration, maritime history, and coastal defense. As in other alternatives, the San Francisco-based Alcatraz embarkation facility would serve as a portal to Golden Gate National Recreation Area and larger national park system.

Upper Fort Mason

Evolved Cultural Landscape Zone (Majority of the site)

This zone would be managed similar to alternative 1, but adaptive use of historic structures, including Pier 4, would bring new park partners who would engage visitors,

communities, and others in participatory science, education, and stewardship focused on the coastal environment. A stewardship "hub" would be based at Fort Mason to transport volunteers arriving by public transit to volunteer and stewardship activities in other park locations. Visitor circulation and wayfinding improvements would be implemented in response to new adjacent bus transit and ferry connections.

Diverse Opportunities Zone ("Great Meadow")

Management of this zone would be the same as that described under alternative 1.

Sensitive Resources Zone (shoreline at Black Point)

Management of this zone would be the same as that described under alternative 1.

China Beach

Diverse Opportunities Zone

Management of this zone would be the same as that described under alternative 1.

Lands End

Natural Zone

Native habitat and natural processes would be restored within the coastal corridor extending from Eagle's Point (Sea Cliff neighborhood) south to the area of recent restoration and trail improvements near the new Lands End parking lot.

The trail system would be improved to provide access to the shoreline and vistas, as well as connections to the community and adjacent park areas.

Fort Miley

Evolved Cultural Landscape Zone

Same as alternative 1, except that more natural landscape enhancements would be integrated and the Marine Exchange Lookout Building (Octagon House) would be adaptively reused to engage the public in the natural and human history of the ocean environment.

Ocean Beach

In Both the Diverse Opportunities Zone and the Natural Zone

In this alternative, the National Park Service would participate in multiagency efforts to knit the unique assets and experiences of the Ocean Beach corridor into a seamless and welcoming public landscape, planning for environmental conservation, sustainable infrastructure, and long-term stewardship.

The park would continue to work with the City of San Francisco and the U.S. Army Corps of Engineers to address coastal erosion by relocating facilities out of vulnerable locations and restoring natural processes.

Diverse Opportunities Zone (along the O'Shaughnessey seawall)

The northern end of Ocean Beach would be managed to provide opportunities for visitors to engage in a variety of beach-related recreational activities.

As in alternative 1, the park would collaborate with the City of San Francisco to provide an enhanced oceanfront landscape in the Ocean Beach corridor with improved amenities to support enjoyment of the beach, including the coastal promenade, parking, and restrooms.

Natural Zone (south of the O'Shaughnessey seawall)

The area would be managed to protect shorebirds and allow natural coastal and marine processes to occur while providing for a variety of compatible recreational activities that allow visitors to enjoy and view nature. This zone would extend to create approximately 5 miles of beach, dunes, and cliffs from central Ocean Beach south to Mussel Rock in San Mateo County. Park managers would protect shorebird habitat, allow natural shoreline processes to continue unimpeded, and provide visitors opportunities for self-discovery while enjoying and viewing nature.

In Both Zones

This alternative supports the City of San Francisco's interest in a broad approach to redesigning the Ocean Beach corridor and exploring sustainable approaches to sea level rise.

The park would continue to work with the City of San Francisco and the U.S. Army Corps of Engineers to address coastal erosion by relocating facilities out of vulnerable locations and restoring natural processes.

Fort Funston

Natural Zone (majority of the site)

Fort Funston's islands of native habitat would be expanded to form a continuous habitat corridor that supports recovery of native dune habitat including endangered San Francisco *Lessingia* plants.

The beach, dunes, and cliffs extending from central Ocean Beach south to Mussel Rock (a nearly continuous stretch of almost 5 miles) would be managed to protect shorebird habitat, allow natural shoreline processes to continue unimpeded, and provide improved or new trails for visitors to enjoy and view nature.

Diverse Opportunities Zone (central core of existing facilities)

This area would be managed to provide continued high levels of varied visitor use, including hang gliding and dog walking, near the main parking lot, supported by parking, restrooms, and trails. Park managers would preserve Battery Davis as a structure contributing to the history of seacoast fortifications.

Park Operations Zone (southeastern corner)

Park operations, stewardship, and education support facilities would remain.

Offshore Ocean and Bay Environment

Sensitive Resources Zone (Eagle's Point near China Beach to Seal Rocks, and area at West Crissy Field)

These areas would be designated marine reserves to protect seabirds and marine mammals.

Scenic Corridor Zone (all other offshore areas in San Francisco)

Management of this zone would be the same as that described under alternative 1.

PARK LANDS IN SAN MATEO COUNTY

Overview

As in the other alternatives, park lands and ocean environments in San Mateo County would be managed as part of a vast network of protected lands and waters. In this alternative, however, park managers would work to preserve and restore these interconnected coastal ecosystems through collaborative partnerships with other land management agencies in the region. Together these groups would work to sustain the area's native biodiversity, reconnect fragmented habitats and migration corridors, minimize the impact of invasive species, manage for changing fire regimes, and restore naturally functioning ecosystems. Proactive management would build into the environment greater resiliency to climate change.

Park lands in San Mateo County provide an extensive wildlife corridor that includes habitat for threatened and endangered species. Under this alternative, these lands would serve as living laboratories, engaging visitors in participatory science, education, and stewardship—activities that nurture personal connections with nature and inspire advocacy.

Exploration along the vast network of trails would further highlight the park's diverse ecosystems and rich cultural resources. Cultural resource sites and stories—archeological sites, European exploration, agricultural land uses, coastal defense sites, and the lighthouse—would emphasize human occupation of the coastal environment. Most cultural resources would be stabilized if not in conflict with natural resource restoration.

Land protection strategies would seek to reconnect fragmented endangered species habitat and strive to remove features that impede movement or migration of species, or disrupt ecological function.

Thornton State Beach to South of Mussel Rock

Natural Zone

Management of this zone would be the same as that described under alternative 1.

Milagra Ridge

Natural Zone

The land would be managed to preserve the wild character of the area and protect endangered species habitat. Disturbed areas would be restored. Coordinating with other land managers, the National Park Service would also make trail improvements that could include connections to Oceana Boulevard, the Pacific coast, Skyline Boulevard, and Sweeney Ridge.

Shelldance Nursery Area

Diverse Opportunities Zone and **Park Operations Zone**

Management of this zone would be the same as that described under alternative 1.

Sweeney Ridge (including Cattle Hill and Picardo Ranch)

Natural Zone

This area would be managed to protect endangered species and restore the large contiguous natural landscape extending into the San Francisco Public Utilities Commission Peninsula Watershed. Visitors would experience the wild character of these lands through stewardship activities, trail use, and primitive camping. Sneath Lane could be converted to a trail and connect to the Bay Area Ridge Trail in the San Francisco Public Utilities Commission Peninsula Watershed. Unnecessary fire roads could also be converted to trails or removed if not historic, and natural resources restored. If acquired, a trailhead would be located at Picardo Ranch with modest visitor support facilities (restroom, picnic tables, parking).

The San Francisco Bay Discovery Site National Historical Landmark would be preserved and interpreted.

Mori Point

Sensitive Resources Zone

Visitor use would be highly controlled to protect threatened and endangered species that inhabit the site. The public would continue to engage in community stewardship to preserve and restore the native coastal ecosystem.

Pedro Point, Devil's Slide, and San Pedro Mountain

Sensitive Resources Zone (Devil's Slide area)

If acquired, the rugged coastal areas west of existing State Route 1 would be managed to protect seabirds that are sensitive to human disturbance. Visitor access would be highly managed or closed during breeding seasons.

Natural Zones (other areas)

Management of this zone would be the same as that described under alternative 1.

Rancho Corral de Tierra

Natural Zone (majority of the area)

Management would be the same as alternative 1, but with fewer and more primitive visitor amenities. Unnecessary fire roads could be converted to trails or removed if not historic, and natural processes restored.

Sensitive Resources Zone (creek corridors)

In this alternative, the four equestrian facilities would be removed or relocated away from creek corridors over time. The park would partner with surrounding land managers to restore the creek corridors, reconnect them to the ocean, and restore anadromous fish passage.

Scenic Corridor Zone (existing equestrian lease area)

These areas would accommodate visitor and equestrian facilities, in sustainable locations and configurations, compatible with natural resource management goals for the surrounding area.

Montara Lighthouse

Evolved Cultural Landscape Zone

Similar to alternative 1, the historic resources would be preserved and adaptively used, but the site would be dedicated to stewardship and environmental education. The site would become a campus focused on enhancing understanding and stewardship of coastal resources, with hostel and overnight accommodations for program participants and staff.

Phleger Estate

Natural Zone

Management of this zone would be the same as that described under alternative 1.

San Francisco Public Utilities Commission Watershed Easements

Sensitive Resources Zone (majority of the area)

In this alternative, the park managers would continue to cooperate with the San Francisco Public Utilities Commission for the preservation of the natural, cultural, scenic, and recreational features of the watershed. Park managers would promote natural resource preservation and highly managed public access in most of the watershed to support the values that resulted in designating this area as the core of the UNESCO Golden Gate Biosphere Reserve.

Scenic Corridor Zone (Crystal Springs Regional Trail / Juan Bautista de Anza National Historic Trail corridor)

Park managers would promote access and visitor services along the existing multiuse trail and the implementation of trail improvements proposed in the *San Francisco Watershed Management Plan* (2002), including completion of the north–south corridor through the

watershed in areas of low sensitivity. Additional coordination with the Juan Bautista De Anza National Historic Trail could also be provided.

Offshore Ocean Environment

Management of offshore areas could be extended to cover new segments of the San Mateo County coast as described in the "Boundary Adjustments" section.

Sensitive Resources Zone (Fitzgerald Marine Reserve)

In areas where the park boundary coincides with the Fitzgerald Marine Reserve, the two organizations would continue to cooperate in the implementation of the provisions of the California State Marine Life Protection Act. The reserve area between Montara State Beach and Ross Cove has been designated as the Montara State Marine Reserve; no fishing, harvesting, or collecting would be allowed in this area. The reserve area between Ross Cove and Pillar Point Harbor has been designated as the Pillar Point Marine Conservation Area; some fishing would be allowed in this area.

COST ESTIMATES

Cost estimates for alternative 2 are identified in the table below. The costs shown here are not for budgetary purposes; they are only intended to show a relative comparison of costs among the alternatives.

The alternatives describe the maximum potential capital improvements; lesser improvements may be implemented, or built in phases if necessary. The implementation of the approved plan will depend on future funding. The approval of this plan does not guarantee that the funding and staffing needed to implement the plan will be forthcoming. Full implementation of the actions in the approved general management plan could be many years in the future. Additionally, some of the future long-term funding needed to implement the various actions called for in the alternatives is anticipated to come from nonfederal partners, consistent with the park's current practices.

Alternative 2 proposes to reconnect the coastal ecosystems as well as provide visitors with recreational and educational opportunities that would allow them to learn about and enjoy the coastal and marine environments. Costs to implement this alternative include funding needed for a wide range of landscape restoration activities and stewardship and science programming.

Annual Operating Costs

The annual operating costs for alternative 2 are made up of the current annual operating costs, with changes made to reflect additional staffing needs. The annual operating costs of alternative 2 are estimated at $31.1 million.

Staffing Requirements

Additional staffing needs were estimated to support alternative 2. While some divisions would not require changes in staff, total additional staff needed to support alternative 2 is estimated at 35 FTE. Most divisions would require additional staff to support the newly acquired lands in San Mateo County.

Other additional staff would be needed to carry out new uses of the park lands. An increase in interpretive staff would support expanded interpretive programs throughout the park. A greater number of law enforcement officers would allow for needed evening coverage, marine patrol, and response to increased visitor recreational activities. With the addition of new trails and facilities and the rehabilitation of other facilities, maintenance responsibilities would increase, also requiring additional staff.

The natural resources division would have additional responsibilities related to the inventory, monitoring, and restoration of natural areas and habitats.

As a result of the expanded natural areas, cultural resources would require extensive documentation and survey, as well as adaptive management. Significant cultural resources would require rehabilitation for park and partner use. Additional archeological surveys would be needed before areas were allowed to revert to their natural environment. Compliance would be needed in cultural areas and also to document wild areas where buildings may be removed and archeological resources covered by vegetation. The responsibilities of the planning division for project coordination, compliance, and public involvement would also expand, requiring additional staff.

Other divisions, including business and administration, environmental and safety, and public affairs would each require a few additional staff members to manage new areas and uses of the park lands. New staff would also manage the rigorous user capacity program at Alcatraz Island and Muir Woods National Monument.

Proposed New Staff

- 8 positions in visitor resources and protection
- 7 positions in maintenance
- 4 positions in interpretation and education
- 2 positions in planning and compliance
- 3 positions in cultural resources and museum management
- 7 positions in natural resources management and science
- 1 position in public affairs
- 1 position in business management
- 1 position in administration
- 1 position in environmental and safety programs

One-time Costs

One-time costs of alternative 2 reflect extensive restoration of the landscape, as well as rehabilitation of facilities in concert with the goals of the alternative. Proposed facility needs in this alternative reflect the overarching goal of creating a park that preserves and promotes enjoyment of the coastal ecosystems. Total one-time costs (including facility and landscape restoration costs) are estimated at $47.3 million.

Table 13: Costs Associated with the Implementation of Alternative 2 for Park Lands in Marin, San Francisco, and San Mateo Counties

SUMMARY OF COSTS FOR ALTERNATIVE 2	
Annual Operational Costs	
Annual Operational Costs	$31,090,000
Staffing (additional FTE)	369 (+35)
One-time Capital Costs	
REHABILITATION PROJECTS	
Lower Redwood Creek: improve trail connections	$1,020,000
Oakwood, Marin City Ridge, Gerbode: improve trail connections to local communities	$1,090,000
Other Marin County projects	$40,000
Other San Francisco projects	$1,330,000
Other San Mateo County projects	$1,570,000
Rancho Corral de Tierra: relocate equestrian facilities	$2,500,000
Stinson Beach: replace restrooms, septic and other facilities with sustainable systems	$1,930,000
Tennessee Valley: improve equestrian facilities	$1,120,000
Other rehabilitation projects	$3,210,000

SUMMARY OF COSTS FOR ALTERNATIVE 2	
HISTORIC PRESERVATION	
China Beach: rehabilitate structures and parking	$2,430,000
Fort Miley: rehabilitate historic structures	$3,330,000
Ocean Beach: rehabilitate O'Shaughnessy seawall	$6,000,000
Shelldance Nursery: rehabilitate for stewardship center	$1,140,000
NATURAL RESOURCE RESTORATION	
Marin County sites	$13,630,000
San Francisco sites	$3,060,000
San Mateo County sites	$1,500,000
FACILITY REMOVAL	
Facilities at various park sites	$2,350,000
NEW CONSTRUCTION	
None	$0
Total	**$47,250,000**

All costs in 2009 dollars

Preserving and Enjoying Coastal Ecosystems

Alternative 2
Golden Gate National Recreation Area
Marin County

Management Zones

- Diverse Opportunities
- Scenic Corridor
- Interpretive Corridor
- Evolved Cultural Landscape
- Historic Immersion
- Natural
- Sensitive Resources
- Park Operations

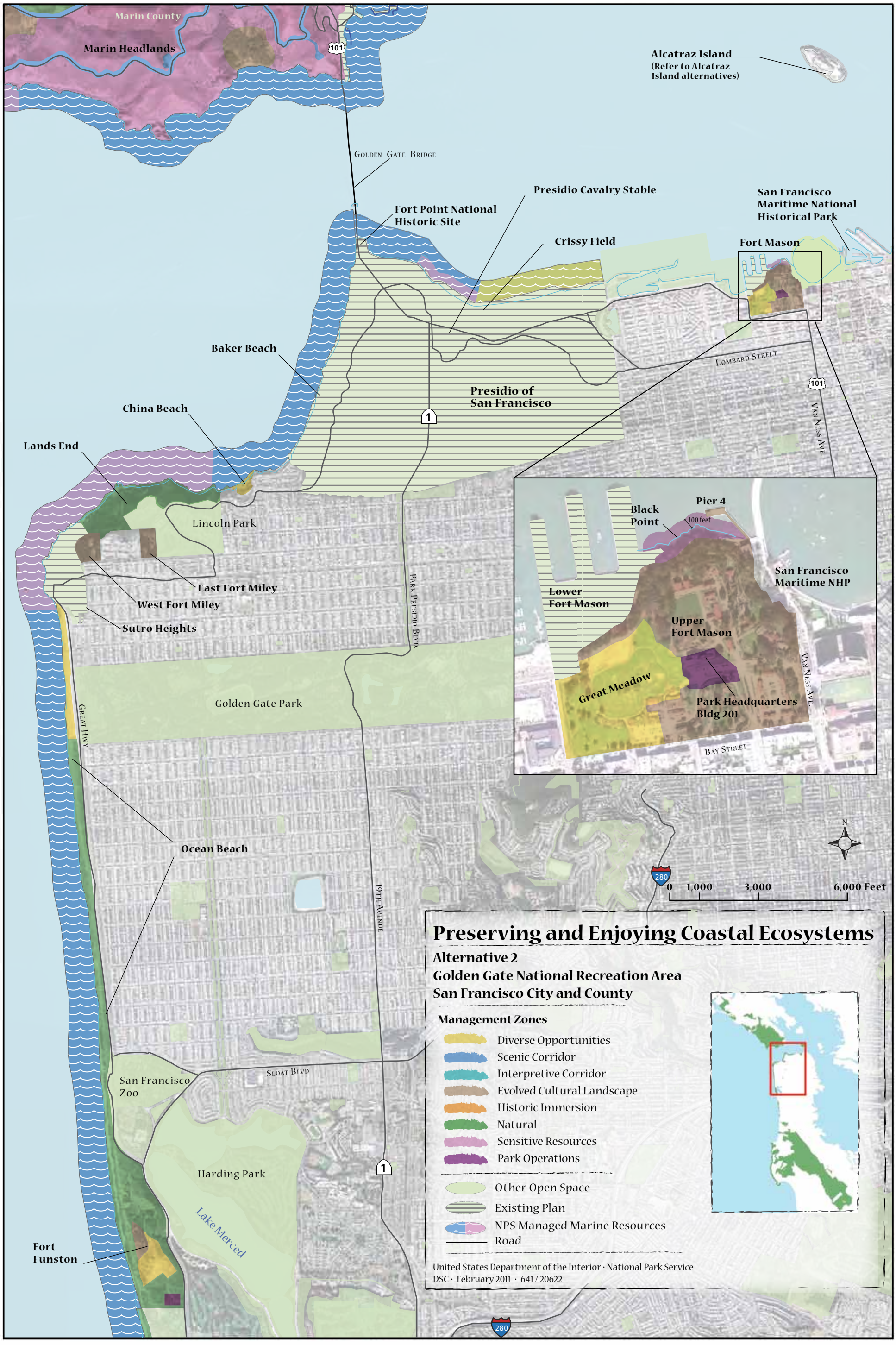
- Other Open Space
- Existing Plan
- NPS Managed Marine Resources
- Road
- Tunnel
- Trail



* The planning area includes an off shore distance of approximately 1/4 mile.

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GGNRA (Managed by Point Reyes National Seashore)
Point Reyes National Seashore
Bolinas/Fairfax Rd
Audubon Canyon Ranch
Bolinas Lagoon
Bolinas
Stinson Beach
Marin Municipal Water District
Mount Tamalpais State Park
Panoramic Hwy
Panoramic Highway
Muir Woods National Monument
(Refer to Muir Woods NM alternatives)
Muir Woods Rd
Mount Tamalpais State Park
Lower Redwood Creek
Golden Gate Dairy
Hwy 1
Slide Ranch
Muir Beach
Trailhead
Tennessee Valley
Oakwood Valley/Marin City Ridge
Gerbode Valley
Rodeo Valley
Fort Cronkhite
Rodeo Lagoon
Fort Barry
Nike Missile Site
Point Bonita
Kentfield
Larkspur
Corte Madera
Mill Valley
Tamalpais Valley
Marin City
Sausalito
Capehart
McCullough Rd
Conzelman Rd
Fort Baker
Kirby Cove
Golden Gate Bridge
Richmond-San Rafael Bridge
580
101
Ferry Route
Tiburon
N


Marin County
Marin Headlands
101
Alcatraz Island
(Refer to Alcatraz Island alternatives)
Golden Gate Bridge
Presidio Cavalry Stable
Fort Point National Historic Site
San Francisco Maritime National Historical Park
Crissy Field
Fort Mason
Baker Beach
Presidio of San Francisco
Lombard Street
101
Van Ness Ave.
China Beach
1
Lands End
Lincoln Park
East Fort Miley
West Fort Miley
Sutro Heights
Park Presidio Blvd.
Golden Gate Park
Great Hwy
Ocean Beach
19th Avenue
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Preserving and Enjoying Coastal Ecosystems

Alternative 2
Golden Gate National Recreation Area
San Mateo County

Management Zones

- Diverse Opportunities
- Scenic Corridor
- Interpretive Corridor
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- Historic Immersion
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- Other Open Space
- Golden Gate National Recreation Area Easement
- Future Park Addition
- NPS Managed Marine Resources

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0 Miles 2

N

Fort Funston
Thornton State Beach
Mussel Rock
Sharp Park Beach
Mori Point
Shelldance Nursery
Pacifica State Park
Devil's Slide
Montara State Beach
Fitzgerald Marine Reserve
Pillar Point Bluff
Ross Cove
Half Moon Bay State Beach
City and County of San Francisco
San Mateo County
John Daly Blvd
Daly City
San Bruno Mountain State Park
Colma
Brisbane
South San Francisco
Milagra Ridge
Sharp Park Blvd
Sharp Park
Sneath Lane
Cattle Hill
Sweeney Ridge
Picardo Ranch
San Pedro Point
San Pedro Valley Park
McNee Ranch
Pacifica
Montara
Montara Lighthouse
Moss Beach
Rancho Corral de Tierra
Peninsula Watershed (San Francisco Public Utilities Commission) NPS Easement
Skyline Blvd
San Bruno
San Francisco International Airport
Millbrae
Burlingame
Hillsborough
San Mateo
Belmont
Canada Road
Filoli Center
Edgewood Park
Phleger Estate
Huddart County Park
Half Moon Bay
1
35
92
101
280
380

ALTERNATIVE 3: FOCUSING ON NATIONAL TREASURES

PARK LANDS IN MARIN COUNTY

Overview

This alternative would welcome visitors to a vast network of open space that protects natural and cultural resources and offers many forms of recreation in a setting of national importance. Much of the area's undeveloped land is a legacy of the U.S. Army, whose coastal defense systems remain anchored in the landscape.

The park would highlight several nationally important sites, including Muir Woods, the Golden Gate, the coastal setting of the State Route 1 National Scenic Byway, and the historic Army posts on the Marin Headlands.

Although this alternative shares many characteristics of alternatives 1 and 2, the management of the Marin Headlands' historic core would be very different. Sheltering the best-preserved collection of seacoast fortifications in the country, the Marin Headlands tell the story of two centuries of evolving weapons technology and the nation's unwavering efforts to protect the Golden Gate. As a result, this alternative would focus on immersing visitors in its compelling sites and history, using and interpreting preserved structures and landscapes ranging from Battery Spencer to the Nike Missile Launch Site.

Other important landmarks, such as the Point Bonita Lighthouse, established in 1855, also would be preserved and interpreted for visitors.

Stinson Beach north to Bolinas–Fairfax Road

Diverse Opportunities Zone (beach, dunes, and developed area)

Management of this zone would be the same as that described under alternative 1.

Natural Zone (Easkoot Creek corridor and surrounding park lands north to Bolinas–Fairfax Road)

The natural ecosystem of Easkoot Creek riparian corridor and the uplands east of State Route 1 would be restored. The coastal defense structures in the vicinity of State Route 1 near Red Rock Beach would be preserved and interpreted.

As in alternative 1, other park lands and waters in the vicinity of Stinson Beach, including the uplands, would be managed to protect and restore the coastal ecosystems, and contribute to the restoration of natural processes that affect Bolinas Lagoon. Partnerships with neighboring land managers would be strengthened to achieve these goals across the broader landscape.

State Route 1 and Panoramic Highway

Scenic Corridor Zone

Management of this zone would be the same as that described under alternative 1.

Slide Ranch

Natural Zone

Management of this zone would be the same as that described under alternative 2.

Lower Redwood Creek (former Banducci flower farm and surrounding area)

Natural Zone

Management of this zone would be the same as that described under alternative 2.

Muir Beach

Natural Zone

Management of this zone would be the same as that described under alternative 1.

Golden Gate Dairy and Vicinity

Evolved Cultural Landscape Zone (developed area only)

The area would be managed to preserve the pastoral landscape and historic structures and stories associated with past dairy ranching.

The historic structures could be adapted for use to support equestrian and other recreational uses, park operations, and local community services that are consistent with park goals. The rest of this park site could be restored to its natural coastal conditions.

Natural Zone (surrounding uplands)

Management of this zone would be the same as that described under alternative 1.

Tennessee Valley (from Oakwood Valley to the ocean)

Scenic Corridor Zone (Tennessee Valley trailhead and the Miwok Stables area, including the trail to the beach)

The area would be managed to establish a visitor facility that provides orientation and services to support the recreational and educational opportunities available in this region of large undeveloped open spaces. Equestrian, environmental education, and stewardship uses would be retained in improved, sustainable facilities.

The trail and ocean beaches would also be managed to promote hiking, biking, and equestrian touring on a “trail to the sea.” Modest and rustic facilities could be provided that support these recreational activities including overnight accommodations that complement the scenic touring experience.

Natural Zone (surrounding uplands including Oakwood Valley)

Outside the trail corridor, the area would be managed to protect undeveloped coastal habitat and outstanding natural features that are backdrops to the scenic corridor experience.

Marin City Ridge and Gerbode Valley

Natural Zone

Management of this zone would be the same as that described under alternative 1.

Fort Barry and Fort Cronkhite

Historic Immersion Zone (Rodeo Valley, Fort Barry and Fort Cronkhite)

These areas would be managed to showcase the stories and structures of military history and the transition from Army post to national park. Infrastructure and landscapes within this area would be restored (at varying levels of historic preservation treatment) to be evocative of the military era, while protecting threatened and endangered species habitat. Structures could continue to be used for a diversity of purposes, including use by park partners, but partners would be encouraged to incorporate into their programming an association with military history and conservation of open space. Equestrian facilities would be accommodated in this zone.

Much of the visitor immersion would be interpretive, incorporating the latest technological and multimedia advances to bring history alive in new and nontraditional ways. Interpretive themes would address the various military periods. Preservation of the historic military resources would be consistent with natural resource protection.

Historic Immersion Zone (Nike Missile Site SF88-L)

Management of this zone would be the same as that described under alternative 1.

Capehart Housing Area

Diverse Opportunities Zone

Some Capehart residences would be replaced with new facilities on the south side of the Bunker Road to serve park uses and operational needs.

Conzelman, Bunker, and McCullough Roads (including Battery Spencer and Hawk Hill)

Historic Immersion Zone

The roads and adjacent park lands would be managed to focus visitors on the coastal geology and the military fortifications, and to engage them in the exploration of these stories. Deteriorated military sites and features would be restored. New or improved trails throughout the area, including the California Coastal Trail, would help connect the visitor to the geologic and military resources and to follow a historic route while protecting habitat for threatened and endangered species.

Kirby Cove

Historic Immersion Zone

The park resources and stories associated with coastal fortifications would be highlighted and overnight accommodations would promote appreciation of views of the Golden Gate Bridge and the wildland-urban interface between the park and city of San Francisco. Facilities would provide visitors with access to the beach and new San Francisco Bay Water Trail.

Habitat restoration would continue outside of the historic forest with removal of invasive nonnative vegetation and expansion of mission blue butterfly habitat.

Point Bonita Lighthouse Complex

Historic Immersion Zone

Management of this zone would be the same as that described under alternative 1.

Offshore Ocean and Bay Environment

Scenic Corridor Zone (all offshore areas)

Park managers would work to preserve the ocean and bay environment and accommodate public uses including water recreation, boating, and noncommercial fishing.

PARK LANDS IN SAN FRANCISCO

Overview

This alternative would focus on the collection of historic sites and the dynamic coastal landscape that defines San Francisco's edge, from Fort Mason to Fort Funston. Visitors would be welcomed to the "National Park Next Door" as in alternative 1, with a focus on the nationally important sites that are connected by the San Francisco Bay Trail and California Coastal Trail, thus creating a scenic and historic corridor.

Park lands in San Francisco encompass a significant collection of historic sites, ranging from the Civil War era Black Point at Fort Mason to the military coastal fortifications at Fort Funston. These sites are located amid a windswept coastal environment, featuring rocky bluffs, acres of dunes, sandy beaches, and fragile native habitat.

Today, these offerings are an array of popular destinations for park lovers. Under this alternative, the National Park Service would expand interpretive programs and visitor services to enable residents and visitors to further appreciate the significant landmarks and landscapes at the Golden Gate. As in other alternatives, the San Francisco-based Alcatraz embarkation facility would serve as a portal to Golden Gate National Recreation Area and the larger national park system.

Upper Fort Mason

Diverse Opportunities Zone (majority of the site)

More of the structures at Fort Mason would be dedicated to visitor services to expand the range of opportunities. Fort Mason would serve as the primary visitor entrance to Golden Gate National Recreation Area with an orientation and information center that would introduce visitors to all Bay Area national parks, as well as to the programs offered by the park's many partners, thus enabling visitors to better plan their national park visit. Visitor circulation and wayfinding improvements would be implemented in response to new adjacent transit and ferry connections.

Park managers would preserve historic structures and landscapes that tell the story of continuous military and civilian use of the fort. Expanded overnight accommodations would provide a base for day trips to explore other areas of the park. The "Great Meadow" could have sustainable infrastructure to support special events.

Historic Immersion Zone (Building 201—Park Headquarters and Pier 4)

Golden Gate National Recreation Area headquarters would share space with a museum that would showcase the military history of Fort Mason and the 20th-century port of embarkation that is the centerpiece of the historic district.

In this alternative, historic program tours to Alcatraz Island would leave from a restored Pier 4 at the foot of Van Ness Avenue. The facility would include interpretive and educational exhibits.

McDowell Road would continue to facilitate pedestrian and bicycle travel through Fort Mason and highlight scenic views of the Golden Gate and San Francisco Bay.

As in alternative 1, these proposals would require close collaboration with San Francisco Maritime National Historical Park and the City of San Francisco.

Sensitive Resources Zone (shoreline at Black Point)

Same as in alternative 1.

China Beach

Diverse Opportunities Zone

Management of this zone would be the same as that described under alternative 1.

Lands End

Evolved Cultural Landscape Zone

Management of this zone would be the same as that described under alternative 1.

Fort Miley

Historic Immersion Zone (West Fort Miley, the USS San Francisco Memorial, and Marine Exchange Lookout Building)

The park would preserve these structures and sites and showcase military and maritime history.

Park Operations Zone (East Fort Miley)

Park managers would focus on providing park maintenance and public safety operations needed to support the surrounding park lands. Safer and more direct vehicle and trail access to East Fort Miley would be developed to better support this use.

Ocean Beach

In Both the Diverse Opportunities Zone and the Natural Zone

In this alternative, the National Park Service would participate in multiagency efforts to knit the unique assets and experiences of the Ocean Beach corridor into a seamless and welcoming public landscape, planning for environmental conservation, sustainable infrastructure, and long-term stewardship.

The park would continue to work with the City of San Francisco and the U.S. Army Corps of Engineers to address coastal erosion by relocating facilities out of vulnerable locations and restoring natural processes.

Diverse Opportunities Zone (along the O'Shaughnessey seawall)

Management of this zone would be the same as that described under alternative 2.

Natural Zone (south of the O'Shaughnessey seawall)

Management of this zone would be the same as that described under alternative 2.

Fort Funston

Natural Zone (majority of the site)

This area would be managed to provide recreational activities in a more natural setting with limited support facilities. Access and parking would be at the edge of the site, allowing restoration of the natural dune ecosystem and providing for trail access. Nonhistoric structures would be removed; existing park operation functions and the environmental education program would be relocated to suitable locations elsewhere in the park.

The historic Battery Davis would be preserved within the context of the natural setting. The coastal bluffs would be preserved for their unique geology and to allow natural processes to continue unimpeded.

Diverse Opportunities Zone (uplands, away from the edge of the Dune)

This zone would be managed to provide for continued high levels of visitor use and current opportunities such as hang gliding and dog walking, to the extent the area remains safe from bluff erosion.

Offshore Ocean and Bay Environment

Natural Zone (all offshore areas in San Francisco)

Management of this zone would be the same as that described under alternative 1.

PARK LANDS IN SAN MATEO COUNTY

Overview

As in the other alternatives, park lands and ocean environments in San Mateo County would be managed as part of a vast network of protected lands and waters. This alternative, however, would highlight how this "quilt" of undeveloped land has been protected by numerous organizations. Over the past 20 years, the National Park Service, local governments, private land trusts, and dedicated individuals have worked together to acquire and preserve this "wilderness" next door.

Today, these lands are a national treasure of recreational, natural, and cultural resources. Several nationally significant historic sites are in San Mateo County, along with habitat for numerous endangered species. Many of these important resources are managed by other agencies on nearby sites. This alternative would focus on protecting resources in the park while developing recreational and thematic connections between sites managed by other land managers.

This alternative also looks beyond the immediate park lands to explore the potential to stimulate regional landscape management and enhance heritage tourism. To do so, park managers would work with communities between Pacifica and Santa Cruz to support the National Scenic Byway designation of Pacific Coast Highway (State Route 1). The highway is one of the unifying features of the rural coast, and is characterized by forested hills, small-scale agriculture, and seaside communities.

Thornton State Beach to South of Mussel Rock

Natural Zone

Management of this zone would be the same as that described under alternative 1.

Milagra Ridge

Natural Zone

Management of this zone would be the same as that described under alternative 2.

Shelldance Nursery Area

Diverse Opportunities Zone and **Park Operations Zone**

Management of these zones would be the same as that described under alternative 1.

Sweeney Ridge (including Cattle Hill and Picardo Ranch)

Natural Zone (majority of the area)

The area would be managed to protect endangered species and the large contiguous natural landscape extending into the San Francisco Public Utilities Commission Peninsula Watershed. Visitors could experience the area through stewardship activities, improved trails, and primitive camping. The area would connect visitors to the Bay Area Ridge Trail. The San Francisco Bay Discovery Site National Historical Landmark would be preserved, enhanced, and interpreted.

Diverse Opportunities Zone (developed portion of Picardo Ranch)

Management of this zone would be the same as that described under alternative 1.

Mori Point

Natural Zone

Management of this zone would be the same as that described under alternative 1.

Pedro Point, Devil's Slide, and San Pedro Mountain

Natural Zone

Management of this zone would be the same as that described under alternative 1.

Rancho Corral de Tierra

Natural Zone (majority of the area)

Management of this zone would be the same as that described under alternative 1.

Diverse Opportunities Zone (existing equestrian lease area)

Management of this zone would be the same as that described under alternative 1.

Montara Lighthouse

Historic Immersion Zone

As the most intact lighthouse complex in the park, the site offers an opportunity for immersion in the life of lighthouse keepers. This alternative would restore historic structures and landscape features, remove contemporary structures, and develop new visitor programs. Overnight stays would be part of the immersion experience.

Phleger Estate

Natural Zone

Management of this zone would be the same as that described under alternative 1. Interpretation would explore the estate's similarities with and differences from Muir Woods National Monument.

San Francisco Public Utilities Commission Watershed Easements

Natural Zone (majority of the area corresponding with the Scenic Easement)
Management of this zone would be the same as that described under alternative 1.

Scenic Corridor Zone (eastern edge, adjacent to Highway 280)

Same as alternative 1, but with an emphasis on promoting enhanced interpretation to highlight the scope of the water system with its origins in Yosemite National Park and enhanced interpretation of Spanish exploration and colonization efforts including the Bay Area Discovery Site and Anza and Portola routes.

Offshore Ocean Environment

Management of offshore areas could be extended to cover new segments of the San Mateo County coast as described in the "Boundary Adjustments" section.

Sensitive Resources Zone (Fitzgerald Marine Reserve)

In areas where the park boundary coincides with the Fitzgerald Marine Reserve, the two organizations would continue to cooperate in the implementation of the provisions of the California State Marine Life Protection Act. The reserve area between Montara State Beach and Ross Cove has been designated as the Montara State Marine Reserve; no fishing, harvesting, or collecting would be allowed in this area. The reserve area between Ross Cove and Pillar Point Harbor has been designated as the Pillar Point Marine Conservation Area; some fishing would be allowed in this area.

COST ESTIMATES

Cost estimates for alternative 3 are identified in the table below. The costs shown here are not for budgetary purposes; they are only intended to show a relative comparison of costs among the alternatives.

The alternatives describe the maximum potential capital improvements; lesser improvements may be implemented, or built in phases if necessary. The implementation of the approved plan will depend on future funding. The approval of this plan does not guarantee that the funding and staffing needed to implement the plan will be forthcoming. Full implementation of the actions in the approved general management plan could be many years in the future. Additionally, some of the future long-term funding needed to implement the various actions called for in the alternatives is anticipated to come from nonfederal partners, consistent with the park's current practices.

The costs of this alternative reflect the effort to focus the management of the park's resources, visitor experiences, and partnerships on the park's most significant sites.

Annual Operating Costs

The annual operating costs for alternative 3 are made up of the current annual operating costs, with changes made to reflect additional staffing needs. The annual operating costs of alternative 3 are estimated at $31.6 million.

Staffing Requirements

Additional staffing needs were estimated to support alternative 3. While some divisions would not require changes in staff, total additional staff needed to support alternative 3 is estimated at 43 FTE. Most divisions would require additional staff to support the newly acquired lands in San Mateo County.

Other additional staff would be needed to carry out new uses of the park lands. An increase in interpretive staff would support expanded interpretive programs throughout the park. A greater number of law enforcement officers would allow for evening coverage, marine patrol, and response to increased visitor recreational activities. With the addition of new trails and facilities and rehabilitation of other facilities, maintenance responsibilities would increase, also requiring additional staff.

The natural resources division would have additional responsibilities related to the inventory, monitoring, and restoration of natural areas and habitats.

The cultural resources division would have additional work associated with expanded stewardship centers throughout the park, museum collection program and outreach, and restoration of historic structures and landscapes. The responsibilities of the planning division for project coordination, compliance, and public involvement would also expand, requiring additional staff.

Other divisions, including business and administration, environmental and safety, and public affairs would each require a few additional staff members to manage new areas and uses of the park lands. New staff would also manage the rigorous user capacity program at Alcatraz Island and Muir Woods National Monument.

Proposed New Staff

- 10 positions in visitor resources and protection
- 9 positions in maintenance
- 6 positions in interpretation and education
- 2 positions in planning and compliance
- 4 positions in cultural resources and museum management
- 7 positions in natural resources management and science
- 1 positions in public affairs
- 1 positions in business management
- 2 positions in administration
- 1 positions in environmental and safety programs

One-time Costs

Alternative 3 proposes a high level of restoration and rehabilitation of historic resources. Total one-time costs are estimated at $78.2 million.

Table 14: Costs Associated with the Implementation of Alternative 3 for Park Lands in Marin, San Francisco, and San Mateo Counties

SUMMARY OF COSTS FOR ALTERNATIVE 3	
Annual Operational Costs	
Annual Operational Costs	$31,630,000
Staffing (additional FTE)	377 (+43)
One-time Capital Costs	
FACILITY REHABILITATION	
Lower Redwood Creek: improve trail connections	$1,020,000
Oakwood, Marin City Ridge, Gerbode: improve trail connections to local communities	$1,090,000
Other Marin County projects	$1,460,000
Other San Francisco projects	$1,000,000
Other San Mateo County projects	$4,190,000
Rancho Corral de Tierra: relocate equestrian facilities and make other improvements	$2,870,000
Stinson Beach: replace restrooms, showers, parking	$1,480,000
Stinson Beach: replace visitor contact facility (warming hut)	$1,240,000
Tennessee Valley: trailhead improvements	$1,930,000
HISTORIC PRESERVATION	
China Beach: rehabilitate structures and parking	$2,430,000
Fort Barry and Fort Cronkhite: rehabilitate military structures	$4,360,000

SUMMARY OF COSTS FOR ALTERNATIVE 3	
Fort Mason: rehabilitate Pier 4	$18,850,000
Fort Miley: rehabilitate historic structures	$3,330,000
Marin Headlands: rehabilitate military sites and features along Conzelman, Bunker, and McCullough Roads	$4,890,000
Montara Lighthouse: rehabilitate historic structures and remove contemporary structures	$2,250,000
Ocean Beach: rehabilitate O'Shaughnessy seawall	$6,000,000
Other historic preservation projects	$2,330,000
Shelldance Nursery: rehabilitate for stewardship center	$1,140,000
NATURAL RESOURCE RESTORATION	
Marin County sites	$2,300,000
San Francisco sites	$1,010,000
San Mateo County sites	$190,000
FACILITY REMOVAL	
Facilities at various park sites	$1,430,000
NEW CONSTRUCTION	
Capehart visitor facility	$6,700,000
Upper Fort Mason: construct special events facilities in the Great Meadow	$1,540,000
Rancho Corral de Tierra: visitor contact facility	$2,240,000
Rustic overnight accommodations at Kirby Cove and Rancho Corral de Tierra	$940,000
Total	**$78,210,000**

All costs in 2009 dollars

Focusing on National Treasures

Alternative 3
Golden Gate National Recreation Area
Marin County

Management Zones

- Diverse Opportunities
- Scenic Corridor
- Interpretive Corridor
- Evolved Cultural Landscape
- Historic Immersion
- Natural
- Sensitive Resources
- Park Operations

- Other Open Space
- Existing Plan
- NPS Managed Marine Resources
- Road
- Tunnel
- Trail



*The planning area includes an off shore distance of approximately 1/4 mile.

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GGNRA (Managed by Point Reyes National Seashore)
Point Reyes National Seashore
Bolinas/Fairfax Rd
Audubon Canyon Ranch
Bolinas Lagoon
Bolinas
Stinson Beach
Marin Municipal Water District
Mount Tamalpais State Park
Panoramic Hwy
Muir Woods National Monument (Refer to Muir Woods NM alternatives)
Mount Tamalpais State Park
Muir Woods Rd
Lower Redwood Creek
Golden Gate Dairy
Hwy 1
Slide Ranch
Muir Beach
Trailhead
Tennessee Valley
Oakwood Valley/Marin City Ridge
Gerbode Valley
Rodeo Valley
Capehart
McCullough Rd
Conzelman Rd
Fort Cronkhite
Rodeo Lagoon
Fort Barry
Nike Missile Site
Point Bonita
Fort Baker
Kirby Cove
Golden Gate Bridge
Kentfield
Larkspur
Corte Madera
Mill Valley
Panoramic Highway
Tamalpais Valley
Marin City
Sausalito
Tiburon
Richmond-San Rafael Bridge
580
101
1
Ferry Route
Ferry Route
Ferry Route
N

Marin County
Marin Headlands
101
Alcatraz Island
(Refer to Alcatraz Island alternatives)
Golden Gate Bridge
Presidio Cavalry Stable
San Francisco Maritime National Historical Park
Fort Point National Historic Site
Crissy Field
Fort Mason
Baker Beach
Lombard Street
101
Van Ness Ave.
Presidio of San Francisco
1
China Beach
Lands End
Lincoln Park
East Fort Miley
West Fort Miley
Sutro Heights
Park Presidio Blvd.
Golden Gate Park
Great Hwy
Ocean Beach
19th Avenue
Sloat Blvd
San Francisco Zoo
Harding Park
Lake Merced
Fort Funston
1
280
Pier 4
Black Point
100 feet
San Francisco Maritime NHP
Lower Fort Mason
Upper Fort Mason
Great Meadow
Park Headquarters Bldg 201
Van Ness Ave.
Bay Street
N
0 1,000 3,000 6,000 Feet

Focusing on National Treasures

Alternative 3
Golden Gate National Recreation Area
San Francisco City and County

Management Zones

- Diverse Opportunities
- Scenic Corridor
- Interpretive Corridor
- Evolved Cultural Landscape
- Historic Immersion
- Natural
- Sensitive Resources
- Park Operations

- Other Open Space
- Existing Plan
- NPS Managed Marine Resources
- Road



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Focusing on National Treasures

Alternative 3
Golden Gate National Recreation Area
San Mateo County

Management Zones

- Diverse Opportunities
- Scenic Corridor
- Interpretive Corridor
- Evolved Cultural Landscape
- Historic Immersion
- Natural
- Sensitive Resources
- Park Operations
- Other Open Space
- Golden Gate National Recreation Area Easement
- Future Park Addition
- NPS Managed Marine Resources

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Fort Funston
City and County of San Francisco
San Mateo County
John Daly Blvd
Thornton State Beach
Daly City
San Bruno Mountain State Park
Colma
Brisbane
Mussel Rock
South San Francisco
Milagra Ridge
Sharp Park Beach
Sharp Park Blvd
San Bruno
Mori Point
Sharp Park
Sneath Lane
Shelldance Nursery
Skyline Blvd
San Francisco International Airport
Cattle Hill
Sweeney Ridge
Pacifica State Park
Millbrae
Pacifica
Picardo Ranch
San Pedro Point
Burlingame
Devil's Slide
San Pedro Valley Park
Hillsborough
McNee Ranch
Peninsula Watershed
(San Francisco Public Utilities Commission)
NPS Easement
San Mateo
Montara State Beach
Montara
Montara Lighthouse
Moss Beach
Rancho Corral de Tierra
Belmont
Fitzgerald Marine Reserve
Pillar Point Bluff
Ross Cove
Half Moon Bay State Beach
Canada Road
Edgewood Park
Filoli Center
Half Moon Bay
Phleger Estate
Skyline Blvd
Huddart County Park

SUMMARY COSTS ESTIMATES FOR PARK LANDS IN MARIN, SAN FRANCISCO, AND SAN MATEO COUNTIES

The cost figures shown here and throughout the plan are intended only to provide conceptual costs for general comparison of alternatives. National Park Service and industry cost estimating guidelines were used to develop the costs (in 2009 dollars) to the extent possible, but the estimates should not be used for budgeting purposes. Specific costs will be determined in subsequent, more detailed planning and design exercises, after considering the design of facilities, identification of detailed resource protection needs, and changing visitor expectations. Actual costs to the National Park Service will vary depending on when actions are implemented, and on contributions by partners and volunteers.

The alternatives describe the maximum potential capital improvements; lesser improvements may be implemented, or built in phases if necessary. The implementation of the approved plan will depend on future funding. The approval of this plan does not guarantee that the funding and staffing needed to implement the plan will be forthcoming. Full implementation of the actions in the approved general management plan could be many years in the future. Additionally, some of the future long-term funding needed to implement the various actions called for in the alternatives is anticipated to come from nonfederal partners, consistent with the park's current practices.

Table 15: Summary of Costs Associated with the Implementation of the Alternatives for Park Lands in Marin, San Francisco, and San Mateo Counties

	No-action Alternative	Alternative 1 (NPS Preferred)	Alternative 2	Alternative 3
Annual Operational Costs[1]	$28,030,000	$32,000,000	$31,090,000	$31,630,000
Staffing (additional FTE)	334 (+0)	380 (+46)	369 (+35)	377 (+43)
One-time Capital Costs[3]	$5,280,000	$46,710,000	$47,250,000	$78,210,000

NOTES:

1 Annual operating costs are the total costs per year for maintenance and operations associated with each alternative, including utilities, supplies, staff salaries and benefits, and leasing. Costs and staffing estimates assume that the alternative is fully implemented as described in the narrative. All annual operating costs for Muir Woods National Monument and Alcatraz Island were included in the above table, as those costs are administered by Golden Gate National Recreation Area.

2 The total number of FTEs is the number of person-years of staff required to maintain the assets of the park at a good level, provide acceptable visitor services, protect resources, and generally support the park's operations. The FTE number indicates ONPS-funded NPS staff only, not volunteer positions or positions funded by partners. (ONPS funds are funds designated for the

"Operation of the National Park Service.") FTEs area from the 201- Green Book, adjusted to reflect the loss of 32 structural fire positions.

3 One-time costs for the no-action alternative only include costs associated with projects already approved and fully funded. Costs for Alcatraz Island are not included in this table. (See "Part 4: Alternatives Applied to Alcatraz Island" for these costs.)

4 Costs are in 2009 dollars.

DEFERRED MAINTENANCE

The "Actions Common to All Alternatives" section, earlier in this document, contained a discussion of facilities that could be removed to reduce maintenance funding needs. However, in addition to removing facilities, expending one-time costs on park facilities would reduce the deferred maintenance by bringing the facilities up to a sustainable condition. Deferred maintenance—or work needed to bring park assets into good condition—exceeds $198.1 million at Golden Gate National Recreation Area, according to the 2009 *Park Asset Management Plan*.

Each alternative contains proposals that would reduce total deferred maintenance. Although the reductions in deferred maintenance are similar in amount for each alternative, the alternatives do not all contain the same proposals for reducing deferred maintenance; each alternative proposes different treatments for structures, including rehabilitation or removal.

Park staff continue to seek out additional measures to reduce deferred maintenance at the park. The *Park Asset Management Plan*, in particular, addresses strategies for reducing deferred maintenance.

Table 16: Reductions in Deferred Maintenance Associated with the Implementation of the Alternatives for Park Lands in Marin, San Francisco, and San Mateo Counties

	No-action Alternative	Alternative 1 (NPS Preferred)	Alternative 2	Alternative 3
Parklands in Marin, San Francisco, and San Mateo Counties	$0	$5,210,000	$6,370,000	$4,450,000

ENVIRONMENTALLY PREFERABLE ALTERNATIVE FOR PARK LANDS IN MARIN, SAN FRANCISCO, AND SAN MATEO COUNTIES

The environmentally preferable alternative is the alternative that promotes the national environmental policy expressed in the National Environmental Policy Act (Sec. 101(b)). This includes alternatives that

1. fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
2. ensure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings;
3. attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
4. preserve important historic, cultural, and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice;
5. achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities; and
6. enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources" (NPS DO-12 Handbook, Section 2.7D).

The alternatives are very similar with respect to criteria 1, 2, 5, and 6. The park staff continues to work in achieving these factors as a basic course of implementing the legal mandates for Golden Gate National Recreation Area. All the alternatives equally meet the attainment for these four criteria, therefore the evaluation focuses on criteria 3 and 4.

The no-action alternative is included to provide a comparison against the action alternatives. The legal foundation for managing these park lands requires the National Park Service to provide for outdoor recreation opportunities while protecting the natural, historic, and scenic values of the park. The no-action alternative does not fully provide for the widest range of beneficial uses. Some of the park lands are not easily identifiable as public lands and are not very welcoming to the park visitor. Most of the recent land additions and some existing park lands are in need of natural and cultural resource restoration or stabilization. These lands lack appropriate land use planning; therefore, the desired conditions for future recreation activities and levels of resource preservation are not defined. Through this planning process, the future desired conditions have been described for each of the action alternatives.

Alternative 2 emphasizes management of these park lands for natural resource restoration and preservation, while providing for an increase in hiking and primitive recreational opportunities. This alternative identifies actions that will provide a slightly wider range of beneficial uses than the no-action alternative. But visitor opportunities would not be as diverse as those identified in alternatives 1 and 3.

In alternative 3, the focus is on preserving and strengthening those park resources and values that have national significance. This would result in a more diverse range of visitor opportunities and greater resource restoration, protection, interpretation, and stewardship for both natural and cultural resources than is provided in the no-action alternative and alternative 2.

In alternative 1, the emphasis is to be welcoming to park visitors (improved information, facilities, and signing) while providing diverse opportunities and restoring the park's natural and cultural resources. The emphasis on visitor opportunities, education, and stewardship provides additional actions that better attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences. This is accomplished by incorporating actions for natural and cultural resources preservation and restoration from the other alternatives where there is a well-defined advantage. Implementation of alternative 1 will provide the best means to preserve important historic, cultural, and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice.

After considering the environmental consequences of the alternatives, including consequences to the human environment, the National Park Service has concluded that the NPS preferred alternative, alternative 1 for park lands in Marin, San Francisco, and San Mateo counties, is also the environmentally preferable alternative. This alternative best realizes the full range of national environmental policy goals as stated in section 101 of the National Environmental Policy Act.

SUMMARY TABLES OF THE ALTERNATIVES FOR PARK LANDS IN MARIN, SAN FRANCISCO, AND SAN MATEO COUNTIES

Table 17: Comparison of Alternatives for Park Lands in Marin County

COMPARISON OF ALTERNATIVES FOR PARK LANDS IN MARIN COUNTY			
NO ACTION	**ALTERNATIVE 1 - PREFERRED**	**ALTERNATIVE 2**	**ALTERNATIVE 3**
Concept			
• Reflects current conditions and activities: NPS would continue to manage these areas under the 1980 general management plan and subsequent land use and implementation plans.	• Consistent with the concept "Connecting People With the Parks," this alternative would further the founding idea of "parks to the people," and engage the community and other potential visitors in the enjoyment, understanding, and stewardship of the park's resources and values. Focus park management on ways to attract and welcome people, connect people with the resources, and promote understanding, enjoyment, preservation, and health.	• Consistent with the concept of "preserving and Enjoying Coastal Ecosystems," this alternative would place an emphasis on preserving, enhancing, and promoting the dynamic and interconnected coastal ecosystems. Through recreational and educational opportunities, allow visitors to learn about and enjoy the ocean and bay environments, and gain a better understanding of the region's international significance and history.	• Consistent with the concept of "Focusing on National Treasures," this alternative would place an emphasis on the park's nationally important natural and cultural resources. Manage the nationally significant fundamental resources at the highest level of preservation to promote appreciation, understanding, and enjoyment of those resources.
Stinson Beach North to Bolinas-Fairfax Road			
• Manage the developed areas to support intensive use as a scenic recreational beach. • Preserve habitat at Easkoot Creek and dunes. • Manage area east of Bolinas Lagoon to protect natural resources.	• Improve facilities to support beach recreation, expand creek buffer and enhance dunes. Build sustainable new facilities to replace deteriorated restrooms, showers, picnic areas, and parking lots. • Work with the community to improve access to Stinson Beach through transit and congestion management. • Continue to work on flooding and water issues with local community and authorities. • Manage natural areas to protect and restore coastal ecosystems.	• Replace central facilities with sustainable new facilities and transit support. • Remove south parking lot and restore wetlands and sand dunes. • Manage natural areas to protect and restore coastal ecosystems. Restore the sand dunes and wetlands and contribute to restoration of natural processes at Bolinas Lagoon.	• Manage beach, dunes and developed areas same as Alternative 1. • In Easkoot Creek corridor and lands north to Bolinas-Fairfax Road, restore natural ecosystem and riparian corridor. • Preserve and interpret coastal defense structures along State Route 1 near Red Rock Beach. • As in Alternative 1, manage other lands and waters outside Stinson Beach to protect and restore coastal ecosystems, and contribute to restoration of natural processes at Bolinas Lagoon.
State Route 1 and Panoramic Highway			
• Manage park lands in this area to enhance resources and offer access to park sites and recreational activities and to preserve the scenic rural character.	• Manage this area to enable visitors to enjoy spectacular views of the Pacific coast. • Work with other governmental and nongovernmental groups to improve rural roadways and trail crossings.	• Manage this area in a way similar to that in Alternative 1, but with greater emphasis on collaboration with Caltrans and other agencies to protect the ecosystem. • Encourage the abandonment of State Route 1 if a catastrophic landslide occurs.	• Same as Alternative 1.
Slide Ranch			
• Manage the area through a park partner to operate an environmental farm and education center in a natural landscape with public access to trails and the shoreline.	• Manage the area to enhance the environmental and farm education center and provide improved facilities for public day use including picnic area, trail access, and scenic overlook. • Manage surrounding natural zone to enhance natural and scenic values and provide public access to trails and the coast.	• Manage the area to promote restoration of coastal resources. Provide modest trailhead at State Route 1 for coastal access. Remove structures from farm and relocate environmental education center and farm education program to a less remote and more geologically stable location.	• Same as Alternative 2.

COMPARISON OF ALTERNATIVES FOR PARK LANDS IN MARIN COUNTY			
NO ACTION	**ALTERNATIVE 1 - PREFERRED**	**ALTERNATIVE 2**	**ALTERNATIVE 3**
Lower Redwood Creek (former Banducci flower farm and surrounding area)			
• Manage this area to preserve and enhance natural processes in the creek, floodplain, and surrounding landscape, and to protect threatened and endangered species. • Retain the rural character, existing buildings to support park programs and operations.	• Manage the majority of the area to restore natural coastal ecosystem and riparian habitat and provide trail connections. • Manage developed area to preserve rural pastoral character; existing buildings would support park programs and stewardship opportunities. • To protect salmon, collaborate with community to increase water storage capacity for use in dry season.	• Manage area, including Redwood Creek, to restore coastal ecosystem and endangered salmon habitat. Visitors would have opportunities to participate in these stewardship activities. • Remove all facilities not needed for stewardship, restoration, or trail use. With partners, explore realignment of Muir Woods Road to reduce impacts to Redwood Creek. • To protect salmon, collaborate with community to increase water storage capacity for use in dry season.	• Same as Alternative 2.
Muir Beach			
• Manage the beach, creek, parking lot and picnic area as planned in the wetland and creek restoration plan.	• Manage the area to restore and sustain wetlands and creek. • Improve beach and trail access and preserve natural setting. • Collaborate with community to address water quality issues impacting park resources.	• Same as Alternative 1.	• Same as Alternative 1.
Golden Gate Dairy			
• Manage area to support equestrian facility and Muir Beach Volunteer Fire Department within historic ranch buildings.	• Manage the developed area to preserve historic structures and pastoral landscape and to protect coastal prairie and scrub habitat. • Manage surrounding uplands to preserve and enhance the natural setting and provide trail connections. • Create site improvements including trailhead. • Continue to work with Caltrans to improve the safety of Highway 1. • Retain equestrian facilities with improvement to protect adjacent riparian area.	• Manage develop area and surrounding uplands to preserve historic structures and pastoral landscape and to protect coastal prairie and scrub habitat. • Reuse historic structures for science and stewardship center or local community services consistent with park goals. Remove nearby nonhistoric residences if not contributing to community services. • Provide equestrian use on designated trails.	• Manage developed area to preserve pastoral landscape and historic structures and stories associated with past dairy ranching. • Manage surrounding uplands same as Alternative 1. • Adaptively reuse historic structures to support equestrian and other recreational uses, park operations, and local community services consistent with park goals.
Tennessee Valley (from Oakwood Valley to the ocean)			
• Manage the area to accommodate a variety of uses including trailhead, multiple trails, hike-in campground, equestrian center, nursery, horse patrol, environmental education, and campground.	• Provide improvements at trailhead, such as potable water, restrooms, and possibly a food kiosk. • Retain equestrian facilities and possibly expand them. • Retain walk-in group camping. • Remove structures and restore wetland and riparian habitat in lower valley.	• Manage Tennessee Valley trailhead and Miwok stable area to retain equestrian use and provide minimal visitor facilities; improve trailhead to support visitor access to trails. Provide modest facilities to support stewardship and restoration activities. • Remove nonhistoric structures and convert unneeded roads to trails. • Remove dams and artificial ponds and restore wetland and riparian habitat.	• Manage Tennessee Valley trailhead and Miwok stable area to establish a visitor facility providing orientation and services to support area recreational and educational opportunities. • Retain equestrian, environmental and stewardship uses with improved sustainable facilities. • Modest facilities could be provided to support recreational activities and could include rustic overnight accommodations.

COMPARISON OF ALTERNATIVES FOR PARK LANDS IN MARIN COUNTY			
NO ACTION	**ALTERNATIVE 1 - PREFERRED**	**ALTERNATIVE 2**	**ALTERNATIVE 3**
Marin Headlands: Marin City Ridge, and Gerbode Valley			
• Manage area to preserve natural resources and processes, restore habitats, protect sensitive species and habitats and allow trail use. • Provide primitive camping and a trail network with access to local communities.	• Manage area to preserve undeveloped wilderness-like character. • Could expand primitive camping opportunities that are accessible. • Continue habitat restoration, protect sensitive species. • Improve sustainability of trail system and explore an opportunity to provide a community trailhead in Marin City.	• Manage area to restore and preserve coastal corridor of contiguous habitat and natural resources. • Remove nonhistoric buildings and infrastructure and restore lands. • Convert unnecessary roads to trails. Explore opportunities to provide trail connections to local communities.	• Same as Alternative 1.
Marin Headlands: Fort Barry and Fort Cronkhite			
• Continue to utilize historic structures for a variety of education, recreation, conservation, and park operations for the park and our partners. • Some visitor facilities, such as waysides, parking, and a small visitor center are provided. • Equestrian programs exist but provide limited opportunities for the park visitor.	• Manage for a variety of recreational, educational and stewardship activities. Expand visitor amenities at Fort Baker and Fort Cronkhite. Rehabilitate structures and limited new construction for programs. • Visitor amenities could be expanded to include trailheads, accessible trails, camping, picnicking, and park orientation. • Build on existing programs with focus on environmental education, science, history, culture, recreation, healthy lifestyle activities, and special events. • Some housing for staff, interns, and volunteers of the park and its partners would be provided. • Add a warming hut at Rodeo Beach to replace the chapel visitor center at Fort Barry. • Equestrian programs would be supported in this area. • Manage upland areas to protect and restore habitat for endangered species; preserve coastal fortifications. • Continue to maintain restored Nike Missile Site to provide experience evocative of its historic use.	• Manage Rodeo Beach, Fort Cronkhite and Fort Barry to maintain military identity; provide higher levels of visitor use, educational programs, and recreation. Manage forts to interpret national register historic district; allow reuse of buildings for park programming. • Manage Rodeo Lagoon and uplands south of Bunker Road to preserve and restore coastal habitat for threatened/endangered species. Limit visitor access to designated trails. • Accommodate equestrian use and restore habitat consistent with military landscape. • Manage Nike Missile Site as in Alternative 1.	• Manage Rodeo Valley, Fort Barry, and Fort Cronkhite to showcase stories and structures of military history and transition to a national park. Restore infrastructure and landscapes to military era; protect threatened/endangered species habitat. Continue to use structures for a variety of purposes, and encourage park partners to incorporate programming with military history and conservation of open space. • Incorporate technology and multimedia to enhance interpretation and visitor immersion. • Accommodate equestrian facilities. • Manage Nike Missile Site as in Alternative 1.
Capehart Housing Area			
• Manage area to provide workforce housing for park and partner staff	• Construct sustainable housing and park operations facility south side of Bunker Road. • Remove residences on north side of Bunker Road to provide for creek restoration.	• Consider a new park operations facility south of Bunker Road. • Remove residential structures and unnecessary infrastructure; restore riparian and upland habitats and reconnect fragmented habitat where possible.	• Replace some residences with new visitor center and facilities on south side of Bunker Road.
Conzelman, Bunker, and McCullough Roads (including Battery Spencer and Hawk Hill)			
• Manage to preserve historic and natural resources and scenic views as well as protecting sensitive species and habitats. Implement planned road, trail, and transit projects to improve access and reduce congestion at scenic overlooks.	• Highlight fundamental coastal resources, military fortifications, and scenic views. • Provide safe pedestrian, bike, and motor vehicle access to overlooks and to interpretive and recreational opportunities.	• Same as Alternative 1, except that area outside immediate road corridor would be managed to protect and restore coastal habitat to support mission blue butterfly. • Limit visitor access to designated trails in area outside immediate road corridor.	• Manage roads and adjacent park lands to focus visitors on coastal geology and military fortifications. Restore military structures and fortifications. • Provide new and improved trails following historic routes and connecting visitors to geologic and military resources.

COMPARISON OF ALTERNATIVES FOR PARK LANDS IN MARIN COUNTY			
NO ACTION	**ALTERNATIVE 1 - PREFERRED**	**ALTERNATIVE 2**	**ALTERNATIVE 3**
	• Add interpretive signs, restrooms, and benches to some overlooks.		• Protect habitat for threatened/endangered species.
Offshore Ocean and Bay Environment			
• Maintain 1,000-foot-wide buffer in coastal waters. • Manage area to accommodate public uses including water recreation and noncommercial fishing. • Support research and cooperation with other resource managing agencies.	• Preserve integrity of ocean and bay environment. • Accommodate appropriate public uses including water recreation, boating, and noncommercial fishing. • Protect marine habitat in coordination with Monterey Bay and Gulf of the Farallones national marine sanctuaries. At Point Bonita Cove and Bird Rock, limit access in order to preserve sensitive resources; primary use would be research.	• Offshore areas except Muir Beach and Point Bonita would be managed the same as in Alternative 1. • At offshore areas around Muir Beach and Point Bonita, preserve sensitive marine resources including intertidal resources, Redwood Creek salmonids, seabirds, and marine animals. • Restrict visitation to protect resources, primary use would be research.	• Work to preserve the integrity of ocean and bay environment and accommodate public uses including water recreation, boating, and noncommercial fishing.

Table 18: Comparison of Alternatives for Park Lands in San Francisco

COMPARISON OF ALTERNATIVES FOR PARK LANDS IN SAN FRANCISCO			
NO ACTION	**ALTERNATIVE 1 - PREFERRED**	**ALTERNATIVE 2**	**ALTERNATIVE 3**
Upper Fort Mason			
• Manage the area to preserve historic district and to adaptively reuse historic structures for park and park partner uses. • Provide public use through hostel and leasing of historic residences. • Provide a range of uses in the Great Meadow.	• Manage this district as a portal to the park; use selected historic structures for orientation and visitor services. Restore historic landscape and Pier 4; enhance connections to the Aquatic Park. • Maintain residential uses where compatible with preservation goals. • Develop an expanded stewardship program. • Maintain park operations in current location. • Provide modest improvements at the Great Meadow. • Manage Black Point to protect natural rocky shoreline and provide a scenic overlook.	• Manage this area similar to Alternative 1, but selected historic structures would be used for new park partners to engage visitors, communities, and others in participatory science, education, and stewardship focused on coastal environment. • Develop a stewardship “hub” at Fort Mason to transport volunteers arriving by transit to other work sites in the park. • Improve visitor circulation and wayfinding, especially from transit arrival areas. • Manage Great Meadow and shoreline at Black Point as in Alternative 1.	• Manage Fort Mason as primary visitor entrance to the park, with an orientation and information center. • Preserve historic structures and landscapes. • Expand overnight accommodations. • Develop historic Pier 4 as an additional embarkation point to Alcatraz Island. • Manage Great Meadow and shoreline at Black Point same as in Alternative 1.
China Beach			
• Manage the area to provide for enjoyment of a secluded beach and bird watching.	• Improve visitor facilities and access to support current uses.	• Same as Alternative 1.	• Same as Alternative 1.
Lands End (Northern area)			
• Manage the area to preserve and enhance the rugged coastal landscape.	• Enhance the landscape, integrating natural habitat restoration and cultural landscape preservation. • Enhance scenic viewpoints and opportunities for bird watching. • Improve trail system, including connections to community and adjacent park lands.	• Restore native habitat and natural processes within the coastal corridor from Eagle’s Point south to area of recent restoration. • Improve trail system to provide access to shoreline and vistas and to connect to communities.	• Same as Alternative 1.
Fort Miley			
• Manage the area to preserve the historic structures and landscapes and provide public and park operations uses.	• Preserve and enhance historic structures and cultural landscapes. Rehabilitate Marine Exchange Lookout Station (Octagon House). • Focus site improvements on appearance and connection to community and VA hospital campus. • Provide improved picnicking and group camping facilities and improved opportunities for outdoor learning and leadership programs. • Park operations would remain at East Fort Miley.	• Same as Alternative 1, with more restoration of natural landscape. Adaptively reuse Marine Exchange Lookout Building (Octagon House) to engage the public in natural and human history of the ocean environment. • Park operations would remain at East Fort Miley.	• Preserve and enhance USS San Francisco Memorial, Marine Exchange Lookout Building, and structures and sites showcasing military and maritime history at West Fort Miley. • Continue to use East Fort Miley for park operations, and provide safer and more direct vehicle and trail access.

COMPARISON OF ALTERNATIVES FOR PARK LANDS IN SAN FRANCISCO			
NO ACTION	**ALTERNATIVE 1 - PREFERRED**	**ALTERNATIVE 2**	**ALTERNATIVE 3**
Ocean Beach			
• Manage to provide a recreational beach accommodating high levels of use while preserving natural values, including habitat for shorebirds such as the threatened western snowy plover.	• Collaborate with City of San Francisco and other agencies to address coastal erosion, seal level rise, and redesign of the corridor. • Manage area north of seawall to provide diverse recreational uses and preserve natural resources. • Manage area south of seawall to protect shorebirds and allow natural coastal processes, along with compatible recreational uses. • Relocate facilities out of areas vulnerable to coastal erosion.	• As in Alternative 1, support City's efforts to redesign Ocean Beach corridor and relocate facilities out of areas vulnerable to coastal erosion. • Manage northern end of beach to provide a variety of recreational opportunities. Manage area south of seawall to protect shorebirds and allow natural coastal processes while allowing compatible recreational uses.	• Same as Alternative 2.
Fort Funston			
• Provide trail and beach access for recreational uses including dog walking and hang gliding. • Preserve natural and cultural resources including historic fortifications. Maintain park operations and environmental education center.	• Continue existing recreational activities. Provide new visitor facilities. Preserve and interpret Battery Davis. • Expand islands of native habitat to form continuous native dune habitat corridor. • Along northern stretch, protect shorebirds, including threatened western snowy plover. • Retain and possibly expand park operational facilities.	• Expand islands of native habitat to form continuous native dune habitat corridor. • Manage southern area to protect shorebird habitat and provide new trails. • In developed area, manage to provide continued levels of high use and variety of recreational activities and support facilities. • Preserve Battery Davis.	• For the majority of the site, manage to provide recreational activities with limited support facilities. • Restore natural dune ecosystem and trail access, locate parking at edge of site. • Remove nonhistoric buildings; relocate park operation functions and environmental education programs to suitable locations. • Preserve historic Battery Davis within natural setting. • Manage uplands for continued high levels of recreational use.
Offshore Ocean and Bay Environment			
• Maintain 1,000-foot-wide buffer in coastal waters. • Manage this area to accommodate public uses including water recreation and noncommercial fishing. • Support research and cooperation with other resource managing agencies.	• Preserve integrity of ocean and bay environment. • Accommodate appropriate public uses including water recreation, boating, and noncommercial fishing.	• Designate Eagle's Point near China Beach to Seal Rocks and West Crissy Field as marine reserves to protect seabirds and marine mammals. • Remainder of area would be managed as in the no-action alternative.	• Work to preserve the integrity of ocean and bay environment and accommodate public uses including water recreation, boating, and noncommercial fishing.

Table 19: Comparison of Alternatives for Park Lands in San Mateo County

COMPARISON OF ALTERNATIVES FOR PARK LANDS IN SAN MATEO COUNTY			
NO ACTION	**ALTERNATIVE 1 - PREFERRED**	**ALTERNATIVE 2**	**ALTERNATIVE 3**
Thornton State Beach to South of Mussel Rock			
• Limited management would continue.	• Preserve and enhance natural and scenic values; allow for coastal geologic processes. • Provide modest visitor access facilities; protect shorebird habitat.	• Same as Alternative 1.	• Same as Alternative 1.
Milagra Ridge			
• Manage to protect and restore natural habitat, to protect historic coastline defenses. • Maintain limited trail access.	• Manage area to preserve wild character and protect habitat for endangered species. Restore heavily disturbed areas. • Improve trails and trail connections in coordination with other land managers. At center of ridge, improve access and add additional visitor amenities.	• Same as Alternative 1 without additional amenities and improved access at center of ridge.	• Same as Alternative 2.
Shelldance Nursery Area			
• Manage area for multiple uses including commercial nursery, trailhead, and park maintenance storage.	• Transition area to provide visitor services including trailhead parking, restrooms, orientation, and community stewardship/education center. • Designate some portion for park operations.	• Same as Alternative 1.	• Same as Alternative 1.
Sweeney Ridge (including Cattle Hill and Picardo Ranch)			
• Manage for natural values and protection of historic resources. • Cattle Hill to be transferred to NPS in the near future, with trail improvements underway. • Picardo Ranch is a priority for land and conservation easements for the park.	• Manage to protect endangered species and large contiguous natural landscape. • Visitor experience would include stewardship activities, trail use, and primitive camping. Coordinate improvements in regional trail system connections, develop trail amenities. • Preserve and enhance interpretation of the San Francisco Bay Discovery Site National Historic Landmark. • If acquired, locate trailhead at Picardo Ranch with visitor use improvements.	• Majority of area managed similar to Alternative 1. • Convert Sneath Lane to a trail to connect Bay Area Ridge Trail. Remove unnecessary fire roads or convert to trails. • If acquired, locate trailhead at Picardo Ranch with modest improvements. • Preserve and interpret San Francisco Bay Discovery Site National Historic Landmark.	• Manage majority of area to protect endangered species and the large contiguous landscape extending to San Francisco Public Utilities Commission Peninsula Watershed. • Visitor experience could include stewardship activities, improved trails, and primitive camping. • Connect to Bay Area Ridge Trail. Preserve and enhance interpretation of the San Francisco Bay Discovery Site National Historic Landmark. • If acquired, manage developed portions of Picardo Ranch the same as Alternative 1.
Mori Point			
• Manage to preserve and enhance habitat for threatened and endangered species and to restore natural functions. • Develop hiking trails network.	• Manage land for ongoing restoration of natural habitats and to protect endangered species. • Improve trail system and its connections and improve access.	• Control visitor use to protect threatened and endangered species on site. • Continue community stewardship to restore ecosystem.	• Same as Alternative 1.

COMPARISON OF ALTERNATIVES FOR PARK LANDS IN SAN MATEO COUNTY			
NO ACTION	**ALTERNATIVE 1 - PREFERRED**	**ALTERNATIVE 2**	**ALTERNATIVE 3**
Pedro Point, Devil's Slide, and San Pedro Mountain			
• Not currently managed by NPS, but could be added to the park after construction of the State Route 1 tunnel.	• If acquired, manage to maintain natural features and scenic views, and restore habitat. • Improve trails and trailheads; control access to protect nesting seabirds.	• Same as Alternative 1.	• Same as Alternative 1.
Rancho Corral de Tierra			
• Non-agricultural portions of this open space managed by Peninsula Open Space Trust are in the process of being transferred to NPS. • Manage for limited public access for recreation such as hiking and horseback riding.	• Create trailheads and other visitor facilities that provide for the enjoyment of this area. • Manage areas outside equestrian centers to preserve wild, open character and offer trail-based recreation. • Equestrian facilities and uses would be retained although the exact location, type, and scale will be subject to future planning efforts. • Restore natural habitats with community stewards.	• Same as Alternative 1, with fewer amenities. • Remove unnecessary roads or convert to trails. • Remove or relocate equestrian facilities away from creek corridors. • Partner with surrounding land owners to restore creek corridors supporting fish passage.	• Same as Alternative 1.
Montara Lighthouse			
• Currently managed by the U.S. Coast Guard; current uses include a hostel. Potential to be transferred to NPS.	• Preserve and interpret historic structures and associated resources. • Enhance hostel and day use programming. • Encourage multiagency visitor center in vicinity. • Improve trail connections.	• Similar to Alternative 1, but dedicate the site to stewardship and environmental education including education related to coastal resources. • Maintain hostel and overnight accommodations for use by program participants and staff.	• Restore and interpret historic structures and landscape features to support immersion in life of lighthouse keepers, remove contemporary structures, and develop new visitor programs. • Continue overnight stays as part of immersion experience.
Phleger Estate			
• Manage this area to preserve cultural and natural resources of second-growth redwood forest and to provide access to regional trail system.	• Manage this area to provide trail-based recreation in natural setting. • Restore redwood forest ecosystem and pursue trail connections. • Interpret logging history.	• Same as Alternative 1.	• Same as Alternative 1.
San Francisco Public Utilities Commission Peninsula Watershed Easements			
• Managed by San Francisco Public Utilities Commission to protect water supply and ecological and cultural resources. The NPS manages a scenic easement and a recreation easement to protect natural values and limited recreational uses compatible with ongoing water operations.	• Continue to cooperate with San Francisco Public Utilities Commission on land management for preservation of natural, cultural, scenic, and recreational features of the watershed, including new trail connections. • In scenic and recreation easement, promote preservation while providing improved public trail access. • Collaborate with San Francisco Public Utilities Commission on a watershed visitor education center.	• Similar to Alternative 1, with emphasis on promoting natural resources preservation and supporting biodiversity values. • Promote access and visitor services along existing multiuse trail and implement trail improvements proposed in San Francisco Watershed Management Plan (2002) including north-south corridor in areas of low sensitivity.	• Manage majority of area, corresponding to scenic and recreational easement, as in Alternative 1. • Manage eastern edge, adjacent to Highway 280 as in Alternative 1, but with emphasis on promoting enhanced interpretation to highlight the scope of the water system with its origins in Yosemite National Park.

COMPARISON OF ALTERNATIVES FOR PARK LANDS IN SAN MATEO COUNTY			
NO ACTION	**ALTERNATIVE 1 - PREFERRED**	**ALTERNATIVE 2**	**ALTERNATIVE 3**
Offshore Ocean Environments			
• Where park boundary coincides with Fitzgerald Marine Reserve, continue to cooperate on management. The Fitzgerald Marine Reserve area between Montara State Beach and Ross Cove has been designated as the Montara State Marine Reserve; no fishing, harvesting, or collecting would be allowed in this area. The Fitzgerald Marine Reserve area between Ross Cove and Pillar Point Harbor has been designated as the Pillar Point Marine Conservation Area; some fishing would be allowed in this area.	• Management could be extended to cover new offshore areas added to the park.	• Same as Alternative 1.	• Same as Alternative 1.

Table 20: Summary of Potential Key Impacts of Implementing the Alternatives for Park Lands in Marin, San Francisco, and San Mateo Counties (including Alcatraz Island)

POTENTIAL KEY IMPACTS ON PARK LANDS				
	NO ACTION ALTERNATIVE	**ALTERNATIVE 1 – NPS PREFERRED**	**ALTERNATIVE 2**	**ALTERNATIVE 3**
NATURAL RESOURCES				
Carbon Footprint and Air Quality	Total gross emissions would be 6,924 MTCE, resulting in long-term, minor to moderate, adverse impacts to the park's carbon footprint. Overall, when compared to background levels of air pollution and GHG emissions in the region or the nation, impacts to air quality from the no-action alternative would be long term, adverse, and negligible. No impairment of air resources would result from this alternative.	The combined effect of the actions included in alternative 1 would increase the gross emissions of the entire park by 2% to 7,040 MTCE. This would result in long-term, minor, adverse impacts on the NPS' carbon footprint. As in the no-action alternative, impacts to air quality would be negligible when compared to background levels of regional and national air pollution. No impairment of air resources would result from this alternative.	The combined effect of the actions included in alternative 2 would reduce the gross emissions of the entire park by 6% to 6,506 MTCE, the lowest of all of the alternatives. This would result in long-term, minor, beneficial impacts on the park's carbon footprint. As in the no-action alternative, impacts to air quality would be negligible when compared to background levels of regional and national air pollution. No impairment of air resources would result from this alternative.	The combined effect of the actions included in alternative 3 would reduce the gross emissions of the entire park by 5%, to 6,609 MTCE. This would result in long-term, minor, beneficial impacts on the park's carbon footprint. As in the no-action alternative, impacts to air quality would be negligible when compared to background levels of regional and national air pollution. No impairment of air resources would result from this alternative.
Soils and Geologic Resources and Processes	Overall, the impact to geologic resources and soils from the no-action alternative would be long-term, range from minor adverse to moderate beneficial, and be localized and parkwide. Adverse impacts would occur from the presence and maintenance of existing facilities and visitor use. Beneficial impacts would occur from restoration and education and stewardship activities. No impairment of geologic resources would result from this alternative.	The elimination of unsustainable roads and trails would reduce soil erosion, resulting in long-term, minor, beneficial, localized impacts to soils. The removal of facilities and structures would result in long term, minor to moderate, beneficial, localized impacts, although new recreational development would have long-term, adverse, localized impacts on soils and geologic resources. During the removal or construction period, short-term, minor, adverse impacts (such as increased erosion or compaction in adjacent areas) would occur. No impairment of geologic resources would result from this alternative.	The elimination of unsustainable trails and roads and the removal and restoration of unneeded management roads, would reduce soil erosion, resulting in long-term, minor to moderate, beneficial, localized impacts. The removal of facilities/structures and restoration of a large number of natural areas would result in long-term, moderate, beneficial, and localized impacts. No impairment of geologic resources would result from this alternative.	The reduction in soil erosion and the reclamation of disturbed building sites would result in long-term, minor to moderate, beneficial, localized impacts. Impacts from new recreational development would be long term, minor to moderate, adverse, and localized. No impairment of geologic resources would result from this alternative.
Water Resources and Hydrologic Processes	The continued existence of structures and facilities in some areas of the park would have long-term, minor to moderate, adverse, and localized impacts. Projects to improve natural habitat values and ecosystem function would have long-term, minor to moderate, beneficial, and localized impacts on water resources and hydrologic processes. No impairment of water resources would result from this alternative.	The removal and reclamation of facilities and structures, the re-creation of natural hydrologic regimes, and restoration of watershed processes would result in long-term minor to moderate, beneficial impacts to water quality, while the construction, maintenance or removal of trails and facilities would have short-term, minor to moderate, adverse impacts to water quality. There would be long-term minor to moderate, adverse, localized impacts to water quality resulting from cleaning of primary visitor use areas on Alcatraz Island and increased vessel traffic in San Francisco Bay. No impairment of water resources would result from this alternative.	The removal of unsustainable trails and unneeded management roads, removal of facilities and structures, creek restorations, realignment of small sections of roadway, and the relocation of horse stables from adjacent creeks would result in long-term, minor to moderate, beneficial impacts to water resources, wetlands, floodplains, and overall hydrologic processes. However, the construction, maintenance, or removal activities associated with these changes would have short-term, minor to moderate, adverse impacts to water quality. Leaving greater portions of the island to natural reclamation and reducing the visitor use area would result in long-term, minor, beneficial, localized impacts to water quality No impairment of water resources would result from this alternative.	The removal and natural restoration of unsustainable trails and unneeded management roads, the removal of facilities and structures, and creek restoration efforts would result in long-term, minor to moderate, beneficial impacts to water resources and hydrologic process, However, the construction, maintenance, or removal of trails and facilities would have short-term, minor to moderate, adverse impacts to water quality. The scale of historic structure rehabilitation and facility improvements on Alcatraz Island could result in impacts to water quality. The cleaning of the primary visitor use areas on Alcatraz Island and the increased vessel traffic in San Francisco Bay would result in long-term minor to moderate, adverse, localized impacts to water quality. No impairment of water resources would result from this alternative.
Habitat (Vegetation and Wildlife)	The conditions related to existing facilities would continue to cause fragmentation of habitat and the potential for exotic plant species to displace native species. The continuation of current recreational use also would reduce habitat integrity. The impacts would	The development of a sustainable trail system and elimination of unneeded and unsustainable roads and trails, the removal of facilities/structures with reclamation of disturbed building sites, and habitat restoration efforts would result in long-term, minor to moderate, beneficial,	The development of a sustainable trail system, the elimination of unneeded roads, and the removal of a large number of structures with the restoration of natural vegetation in these areas would result in long-term, minor, beneficial, localized impacts on vegetation and	The development of a sustainable trail system and the elimination of unneeded roads and the restoration of natural vegetation in these areas would result in long-term, minor, beneficial, localized impacts on vegetation and

POTENTIAL KEY IMPACTS ON PARK LANDS				
	NO ACTION ALTERNATIVE	**ALTERNATIVE 1 – NPS PREFERRED**	**ALTERNATIVE 2**	**ALTERNATIVE 3**
	be long-term, minor to moderate, adverse, and localized but would occur throughout the park. Habitat restoration efforts and educational and participatory stewardship programs would result in long-term, minor to moderate, beneficial impacts that would occur both at the local level (habitat restoration) and parkwide (stewardship programs). Impacts to waterbirds would be long-term, minor to moderate, adverse, and localized. No impairment of vegetation or wildlife resources would result from this alternative.	localized impacts on vegetation and wildlife. The expansion of visitor access and use and the development of new or improved recreational facilities would result in long-term, minor, adverse, and localized impacts. The construction activities related to these developments would result in short-term, minor, and adverse impacts. Impacts from NPS educational and stewardship programs would generally be the same as those described in the no-action alternative. Similarly, impacts from vegetation and wildlife management and monitoring activities under alternative 1 would be the same as those described in the no-action alternative. However, the establishment of a native plant nursery would provide additional capacity to improve native vegetation and wildlife habitat and expand stewardship efforts—resulting in a beneficial impact. Habitat restoration efforts and educational and participatory stewardship programs would result in long-term, minor to moderate, beneficial impacts that would occur both at the local level (habitat restoration) and parkwide(stewardship programs). An additional beneficial impact would result from the establishment of a native plant nursery. Impacts to waterbirds would be long-term, moderate, adverse, and localized. No impairment of vegetation or wildlife resources would result from this alternative.	wildlife. The expansion of visitor access and use and the development of new or improved recreational facilities would result in long-term, minor, adverse, and localized impacts. The construction activities related to these developments would result in short-term, minor, and adverse impacts. Habitat restoration efforts and educational and participatory stewardship programs would result in long-term, minor to moderate, beneficial impacts that would occur both at the local level (habitat restoration) and parkwide (stewardship programs). Additional beneficial impacts would result from the establishment of a native plant nursery and partnering with other agencies to manage visitor access and promote restoration and habitat management as part of the UNESCO Biosphere Reserve. Impacts to waterbirds on the island would be long-term, moderate, beneficial, and localized. No impairment of vegetation or wildlife resources would result from this alternative.	wildlife. The expansion of visitor access and use and the development of new or improved recreational facilities would result in long-term, minor, adverse, and localized impacts. The construction activities related to these developments would result in short-term, minor, and adverse impacts. Natural resource restoration would result in long-term, moderate, beneficial, and localized impacts. Habitat restoration efforts and educational and participatory stewardship programs would result in long-term, minor to moderate, beneficial impacts that would occur both at the local level (habitat restoration) and parkwide (stewardship programs). Impacts to waterbirds on the island would be long-term, moderate, adverse, and localized. No impairment of vegetation or wildlife resources would result from this alternative.
Special Status Species (Federal and State Threatened and Endangered Species)	• **California red-legged frog**–(Federal threatened) “may affect, likely to adversely affect” for project specific actions in the short-term, and “may affect, not likely to adversely affect” for land use and park management over the long-term. • **Mission blue butterfly** (Federal endangered): “may affect, likely to adversely affect” for project specific actions in the short-term, and “may affect, not likely to adversely affect” for land use and park management over the long-term. • **Tidewater goby** (Federal endangered: “may affect, likely to adversely affect” for project specific actions in the short-term, and “may affect, not likely to adversely affect” for land use and park management over the long-term. • **San Francisco garter snake** (Federal endangered): “may affect, likely to adversely affect” for project specific actions in the short-	• **California red-legged frog** (Federal threatened): “may affect, not likely to adversely affect” • **Mission blue butterfly** (Federal endangered): “may affect, not likely to adversely affect” • **Tidewater goby** (Federal endangered): “may affect, not likely to adversely affect” • **San Francisco garter snake** (Federal endangered): “may affect, not likely to adversely affect” • **San Bruno elfin butterfly** (Federal endangered): “may affect, not likely to adversely affect” • **Coho salmon and Steelhead trout, Central California Coast** (Federal threatened): “may affect, not likely to adversely affect” • **Western snowy plover** (Federal threatened): “may affect, not likely to adversely affect.” • **Northern spotted owl** (Federal threatened): “may	• **California red-legged frog** (Federal threatened): “may affect, not likely to adversely affect” • **Mission blue butterfly** (Federal endangered): “may affect, not likely to adversely affect” • **Tidewater goby** (Federal endangered): “may affect, not likely to adversely affect” • **San Francisco garter snake** (Federal endangered)” “may affect, not likely to adversely affect” • **San Bruno elfin butterfly** (Federal endangered): “may affect, not likely to adversely affect” • **Coho salmon and Steelhead trout,** Central California Coast (Federal threatened): “may affect, not likely to adversely affect” • **Western snowy plover** (Federal threatened): “may affect, not likely to adversely affect.” • **Northern spotted owl** (Federal threatened):	• **California red-legged frog** (Federal threatened): “may affect, not likely to adversely affect” • **Mission blue butterfly** (Federal endangered):“may affect, not likely to adversely affect” • **Tidewater goby** (Federal endangered): “may affect, not likely to adversely affect” • **San Francisco garter snake** (Federal endangered): “may affect, not likely to adversely affect” • **San Bruno elfin butterfly** (Federal endangered): “may affect, not likely to adversely affect” • **Coho salmon and Steelhead trout, Central California Coast** (Federal threatened): “may affect, not likely to adversely affect” • **Western snowy plover** (Federal threatened): “may affect, not likely to adversely affect.” • **Northern spotted owl** (Federal threatened): “may

	POTENTIAL KEY IMPACTS ON PARK LANDS			
	NO ACTION ALTERNATIVE	**ALTERNATIVE 1 – NPS PREFERRED**	**ALTERNATIVE 2**	**ALTERNATIVE 3**
Special Status Species (Federal and State Threatened and Endangered Species) (continued)	term, and "may affect, not likely to adversely affect" for land use and park management over the long-term. • **San Bruno elfin butterfl**y (Federal endangered): "may affect, not likely to adversely affect • **Coho salmon and Steelhead trout,** Central California Coast (Federal threatened): "may affect, likely to adversely affect" for project specific actions in the short-term, and "may affect, not likely to adversely affect" for land use and park management over the long-term. • **Western snowy plover** (Federal threatened): "may affect, likely to adversely affect" • **Northern spotted owl** (Federal threatened): "may affect, not likely to adversely affect" • **San Francisco lessingia** (Federal endangered): "may affect, not likely to adversely affect" • **Bank swallow** (Federal candidate; State threatened): Long-term, beneficial impact that is minor and localized. • **Montara Manzanita** (State threatened): No impact	affect, not likely to adversely affect" • **San Francisco lessingia** (Federal endangered): "may affect, not likely to adversely affect" • **Bank swallow** (Federal candidate; State threatened): long-term, beneficial impact that is minor and localized • **Montara Manzanita** (State threatened): long-term, adverse impact that is minor and localized	"may affect, not likely to adversely affect" • **San Francisco lessingia** (Federal endangered): "may affect, not likely to adversely affect" • **Bank swallow** (Federal candidate; State threatened): long-term, beneficial impact that is minor and localized • **Montara Manzanita** (State threatened): long-term, adverse impact that is minor and localized	affect, not likely to adversely affect" • **San Francisco lessingia** (Federal endangered): "may affect, not likely to adversely affect" • **Bank swallow** (Federal candidate; State threatened): long-term, beneficial impact that is minor and localized • **Montara Manzanita** (State threatened): long-term, adverse impact that is minor and localized
CULTURAL RESOURCES				
Archeological Resources	Because 90% of the park has not been surveyed for archeological resources, there is potential for the park to contain buried prehistoric and historic resources. Such resources could potentially be subject to loss of integrity from natural processes, ongoing agricultural and ranching operations, and inadvertent visitor activity or vandalism. Known archeological resources (Muir Beach Archeological District, Point Lobos Archeological Sites, as well as the *King Philip* and *SS Tennessee)* could also be adversely affected by natural processes and inadvertent visitor activity or vandalism. Adverse impacts would be permanent and of minor to moderate intensity. Archeological surveys and/or monitoring would precede any ground disturbing activity. If significant archeological resources could not be avoided, an appropriate mitigation strategy would be developed in consultation with the state historic preservation officer. Any adverse impacts to archeological resources would be permanent and minor to moderate in intensity. No impairment of park resources or values would result	Because 90% of the park has not been surveyed for archeological resources, there is potential for the park to contain buried prehistoric and historic resources. Such resources could potentially be subject to loss of integrity from natural processes, ongoing agricultural and ranching operations, and inadvertent visitor activity or vandalism. Known archeological resources (Muir Beach Archeological District, Point Lobos Archeological Sites, as well as the *King Philip* and *SS Tennessee)* could also be adversely affected by natural processes and inadvertent visitor activity or vandalism. Adverse impacts would be permanent and of minor to moderate intensity. On Alcatraz Island, archeological resources would be identified, evaluated, and provided stabilization, security, or other protection commensurate with their significance and sensitivity – a beneficial impact. Such resources could also be incorporated into visitor interpretive opportunities. Archeological surveys and/or monitoring would precede any ground disturbing activity. If significant archeological resources could not be avoided, an appropriate	Because 90% of the park has not been surveyed for archeological resources, there is potential for the park to contain buried prehistoric and historic resources. Such resources could potentially be subject to loss of integrity from natural processes, ongoing agricultural and ranching operations, and inadvertent visitor activity or vandalism. Known archeological resources could also be adversely affected by natural processes and inadvertent visitor activity or vandalism. Adverse impacts would be permanent and of minor to moderate intensity. On Alcatraz Island, archeological resources would be identified, evaluated, and provided stabilization, security, or other protection commensurate with their significance and sensitivity – a beneficial impact. Such resources could also be incorporated into visitor interpretive opportunities. Archeological surveys and/or monitoring would precede any ground disturbing activity. If significant archeological resources could not be avoided, an appropriate mitigation strategy would be developed in consultation with the state historic preservation officer. Any adverse	Because 90% of the park has not been surveyed for archeological resources, there is potential for the park to contain buried prehistoric and historic resources. Such resources could potentially be subject to loss of integrity from natural processes, ongoing agricultural and ranching operations, and inadvertent visitor activity or vandalism. Known archeological resources could also be adversely affected by natural processes and inadvertent visitor activity or vandalism. Adverse impacts would be permanent and of minor to moderate intensity. On Alcatraz Island, archeological resources would be identified, evaluated, and provided stabilization, security, or other protection commensurate with their significance and sensitivity – a beneficial impact. Such resources could also be incorporated into visitor interpretive opportunities. Archeological surveys and/or monitoring would precede any ground disturbing activity. If significant archeological resources could not be avoided, an appropriate mitigation strategy would be developed in consultation with the state historic preservation officer. Any adverse impacts to archeological resources would be permanent and minor to

POTENTIAL KEY IMPACTS ON PARK LANDS				
	NO ACTION ALTERNATIVE	**ALTERNATIVE 1 – NPS PREFERRED**	**ALTERNATIVE 2**	**ALTERNATIVE 3**
	from this alternative.	mitigation strategy would be developed in consultation with the state historic preservation officer. Any adverse impacts to archeological resources would be permanent and minor to moderate in intensity. No impairment of park resources or values would result from this alternative.	impacts to archeological resources would be permanent and minor to moderate in intensity. No impairment of park resources or values would result from this alternative.	moderate in intensity. No impairment of park resources or values would result from this alternative.
Ethnographic Resources/ Traditional Cultural Properties	Surveys and research necessary to determine Alcatraz Island's eligibility for listing in the National Register of Historic Places as a traditional cultural property are a prerequisite for understanding the resource's significance, as well as the basis of informed decision-making in the future regarding how the resource should be managed. Such surveys and research would result in a negligible to minor, beneficial, long-term impact. No impairment of park resources or values would result from this alternative.	Surveys and research necessary to determine Alcatraz Island's eligibility for listing in the National Register of Historic Places as a traditional cultural property are a prerequisite for understanding the resource's significance, as well as the basis of informed decision-making in the future regarding how the resource should be managed. Such surveys and research, including those planned for Alcatraz Island, would be a negligible to minor, beneficial long-term impact. No impairment of park resources or values would result from this alternative.	Surveys and research necessary to determine Alcatraz Island's eligibility for listing in the National Register of Historic Places as a traditional cultural property are a prerequisite for understanding the resource's significance, as well as the basis of informed decision-making in the future regarding how the resource should be managed. Such surveys and research would be a negligible to minor, beneficial long-term impact. No impairment of park resources or values would result from this alternative.	Surveys and research necessary to determine Alcatraz Island's eligibility for listing in the National Register of Historic Places as a traditional cultural property are a prerequisite for understanding the resource's significance, as well as the basis of informed decision-making in the future regarding how the resource should be managed. Such surveys and research would be a negligible to minor, long-term, beneficial impact. No impairment of park resources or values would result from this alternative.
Historic Structures	The park would continue to stabilize and preserve historic structures as financial resources and opportunities become available. The park's historic structures have generally retained their integrity but the incremental and piecemeal approach to preservation and maintenance, as well as their various adaptive uses, has resulted in long-term, minor to moderate, adverse impacts because historic buildings, fabric, and integrity have been lost. No impairment of park resources or values would result from this alternative.	Implementing the actions under alternative 1 would generally provide better opportunities for strengthening the integrity and adaptive use of historic structures that are listed in or determined eligible for listing in the National Register of Historic Places or are designated as National Historic Landmarks. Actions under this alternative, such as adaptive reuse of historic structures, could result in localized loss of historic fabric on some historic buildings (resulting in permanent adverse impacts of minor intensity) but would generally improve the integrity, enhance the preservation and stabilization, and halt further deterioration of the park's historic buildings, resulting in general overall long-term, beneficial impacts. Monitoring human impacts to historic structures, increased ranger patrol, and increased historical interpretation associated with this alternative could indirectly discourage vandalism and inadvertent impacts and minimize adverse impacts. Adverse impacts would be long term and negligible to minor in intensity. No impairment of park resources or values would result from this alternative.	Alternative 2 would generally provide opportunities for strengthening the integrity and adaptive use of historic structures that contribute to historic properties listed in or determined eligible for listing in the national register or designated as national historic landmarks. Although actions involving stabilization and recovery could result in localized loss of some historic fabric, the actions would enhance the preservation and stabilization of historic structures in the park. The primary goals for coastal ecosystem restoration and rehabilitation of rural and pastoral landscapes could impact the integrity of some historic structures. Collectively, actions under alternative 2 would result in impacts that range from long-term and beneficial (because of improved treatment to historic buildings) to permanent and adverse of minor to moderate intensity (resulting from adaptive use and the potential for future coastal erosion). Under alternative 2, more historic structures on Alcatraz Island would become managed ruins. However, a benchmark/threshold evaluation stabilization plan is needed to determine the minimum level of historic building/fabric integrity needed in order to retain the island's National Historic Landmark designation. Monitoring human impacts to historic structures, increased ranger patrol, and increased historical interpretation could indirectly discourage vandalism and inadvertent impacts and minimize adverse impacts. Adverse impacts would be long term and negligible to minor in intensity.	Under alternative 3, nationally significant buildings would be rehabilitated and adaptively used to showcase the park's military, maritime, commercial, and agricultural and ranching history themes and to support visitor programming and services. The condition of all primary buildings would be improved. This alternative would provide for the greatest number of historic buildings preserved in "good" condition. It would also provide for public access to the greatest number of historic buildings. Although public access and adaptive reuse could result in localized adverse impacts to historic properties or fabric, overall, alternative 3 would have major comprehensive long-term beneficial impacts on the park's historic structures, including those on Alcatraz Island. Monitoring human impacts to historic structures, increased ranger patrol, and increased historical interpretation could indirectly discourage vandalism and inadvertent impacts and minimize adverse impacts. Adverse impacts would be long term and negligible to minor in intensity. No impairment of park resources or values would result from this alternative.

POTENTIAL KEY IMPACTS ON PARK LANDS				
	NO ACTION ALTERNATIVE	**ALTERNATIVE 1 – NPS PREFERRED**	**ALTERNATIVE 2**	**ALTERNATIVE 3**
			No impairment of park resources or values would result from this alternative.	
Cultural Landscape Resources	The park would continue to stabilize and preserve cultural landscapes as financial resources and opportunities become available. The incremental approach to preservation of cultural landscape resources has resulted in varying degrees of preservation and possible localized loss of resource integrity, but overall the park's cultural landscape resources have retained their historic integrity. The park would continue to make incremental improvements upon existing facilities, including consolidation and participation in the Bay Area Museum Resource Center Plan for oversized objects. Conditions would be improved to meet NPS standards; impacts would be short term, minor, and beneficial No impairment of park resources or values would result from this alternative.	Alternative 1 would provide improved opportunities for strengthening and enhancing the integrity of cultural landscape resources. Although actions could result in localized loss of some cultural landscape features due to increasing visitor opportunities, overall, alternative 1 would improve the integrity of the cultural landscape features in the park (including Alcatraz Island). Features near all primary historic buildings would be rehabilitated. Although some localized cultural landscape features would likely deteriorate or be lost in the park (resulting in permanent adverse impacts of minor intensity), the overall effect would have a long-term, minor, and beneficial impact on cultural landscape resources. No impairment of park resources or values would result from this alternative.	Alternative 2 would provide opportunities for strengthening the integrity and adaptive use or interpretation of cultural landscape resources. However, some actions involving the coastal ecosystem restoration and rehabilitation of existing pastoral and rural landscapes could negatively impact the integrity of some cultural landscape resources and would likely result in long-term, adverse impacts of moderate intensity. Overall, the majority of actions in alternative 2 would have a long-term, beneficial impact on the cultural landscape resources in the park. Under alternative 2, more cultural landscape resources on Alcatraz Island would become ruins and many of the island's cultural landscape features would only be stabilized. Thus, many could be lost over time. Recent findings indicate that cultural landscape resources on the island are deteriorating at a rapid rate, and alternative 2 would do little to reverse that trend. The impacts on Alcatraz Island would range from long term, moderate, and beneficial to long term, moderate, and adverse. No impairment of park resources or values would result from this alternative.	Under alternative 3, the historically significant cultural landscape resources that have integrity would be rehabilitated and adaptively used to showcase the park's military, maritime commercial, and agricultural/ranching history themes, and support visitor programming and services. Throughout the park (including Alcatraz Island) this alternative would generally result in a comprehensive effort to improve, preserve, and rehabilitate the cultural landscape resources in "good" condition and provide public access to the greatest number of cultural landscape features. These actions would result in long-term beneficial impacts to cultural landscape resources. However, the loss of some cultural landscape resources would result in permanent adverse impacts of minor intensity. No impairment of park resources or values would result from this alternative.
Park Collections	Park collections are currently stored in 15 different facilities throughout the park. This places the collections in a vulnerable position because of potential eviction and deteriorating structural and curatorial conditions. The current conditions for collections at the park do not meet NPS standards for long-term preservation, protection, and use, resulting in long-term, moderate, and adverse impacts. No impairment of park resources or values would result from this alternative.	Establishing a curatorial and research facility that meets NPS standards and can accommodate the majority of the park collection will have a long-term beneficial impact to the preservation of the collections. Incorporating the park collections in ways that enhance the visitor experience and helps expose the values of the collection while still meeting NPS preservation standards would have a long-term, beneficial impact on the value of the collection. No impairment of park resources or values would result from this alternative.	Establishing a curatorial and research facility that meets NPS standards and can accommodate the majority of the park collection will have a long-term beneficial impact to the preservation of the collections. The increased emphasis of collecting and preserving natural resource specimen would have a long-term, negligible, and beneficial impact to the park collections. No impairment of park resources or values would result from this alternative.	Establishing a curatorial and research facility that meets NPS standards and can accommodate the majority of the park collection will have a long-term beneficial impact to the preservation of the collections. Incorporating the park collections in ways that enhance the visitor experience and helps expose the values of the collection while still meeting NPS preservation standards would have a long-term, beneficial impact on the value of the collection. No impairment of park resources or values would result from this alternative.
VISITOR USE AND EXPERIENCE				
	The no-action alternative for Golden Gate National Recreation Area would result in long-term, minor to moderate, beneficial impacts from continued opportunities to access high-quality resource-dependent visitor opportunities and experience the natural, historic, and scenic qualities of the park. However, minor to moderate adverse impacts on the visitor experience from traffic congestion, use conflicts, limited facilities in San Mateo County, and restricted to access to a few	The actions proposed in alternative 1 for Golden Gate National Recreation Area would result in long-term, moderate, beneficial impacts to the visitor experience. The diversity of recreational opportunities provided, the new and enhanced visitor support facilities, and the purposeful effort to engage a more diverse audience would have a positive impact on the visitor experience to the park. Further, the emphasis on improved access, particularly transportation connections, would be a	The actions proposed in alternative 2 for Golden Gate National Recreation Area would result in long-term, minor to moderate, beneficial impacts to the visitor experience. The visitor experience would be improved regarding the depth and content of educational programming, interpretation, and resource stewardship; along with the preservation and promotion of visitor activities focused on immersion in the park's natural and cultural settings. However, the regulation and	The actions proposed in alternative 3 for Golden Gate National Recreation Area would result in long-term, moderate, beneficial impacts to the visitor experience. The most significant beneficial effect of this alternative would be the increased opportunities for visitors to understand, appreciate, and take part in the preservation of the park's most fundamental resources and values. In addition, this alternative would improve access and connectivity to and between key sites in the park, and reduce use conflicts and

POTENTIAL KEY IMPACTS ON PARK LANDS				
	NO ACTION ALTERNATIVE	**ALTERNATIVE 1 – NPS PREFERRED**	**ALTERNATIVE 2**	**ALTERNATIVE 3**
	desired locations would continue. The no-action alternative for Alcatraz Island would result in long-term, minor to moderate, beneficial impacts from continued opportunities to access the cellhouse and the immediate surrounding landscape. In addition, high quality interpretive and educational programs and materials would continue to be provided. However, minor to moderate adverse impacts on the visitor experience from conflicts with birds, limited access to areas and structures on the island, and some visitor crowding would continue.	beneficial impact on the visitor experience by reducing traffic congestion and use conflicts. Alternative 1 would result in long-term, moderate, beneficial impacts to the visitor experience on Alcatraz Island. The enhancements to the park setting through increased preservation of the structures; the increased access to the island's various layers of historic resources and natural settings; and the purposeful effort to increase programming options and connect with a more diverse audience would help create this beneficial impact.	restrictions on some visitor activities and access to some areas might have a long-term, moderate, adverse impact on repeat visitors. On Alcatraz Island, alternative 2 would result in long-term, minor to moderate, beneficial impacts to the visitor experience given the actions that would increase understanding and appreciation of the island's important role in the marine ecosystem. However, there would be long-term, moderate, adverse impacts due to the increased interaction and related conflicts between visitors and birds during the nesting season, and the restricted access to desired locations and structures on the island.	visitor frustration. However, this alternative would change visitor opportunities at a few areas, leading to long-term, minor to moderate, adverse impacts on visitors who currently frequent these locations. Alternative 3 would result in long-term, moderate to major, beneficial impacts to the visitor experience on Alcatraz Island. This is primarily due to the opportunities to immerse oneself in the historic periods of Alcatraz Island, have access to more of the island's settings and buildings in improved condition, and to participate in stewardship and education activities supported by expanded overnight programs and facilities.
SOCIAL AND ECONOMIC ENVIRONMENT				
	The overall impact to the social and economic environment from the no-action alternative could be long-term, minor to moderate, and beneficial for the local gateway communities and the three adjacent counties. The beneficial impacts would result from maintaining the park's contribution to the local economy and quality of life, existing education and stewardship programs, as well as maintaining existing relationships with other local governments and land managers.	The short-term and long-term beneficial impacts of alternative 1 on the social and economic environment of the gateway communities and three adjacent counties could range from minor to moderate. These beneficial impacts to quality of life and economy could result from (1) a substantial increase in public outreach programs, orientation, and educational or stewardship opportunities, (2) considerable improvements in public accessibility, transportation options, and community trail connections, (3) enhancement of existing equestrian facilities, (4) several community-building components, (5) economic growth via many new engineering and construction contract work, (6) several new opportunities for park partners to use park facilities and expand their operations, and (7) a substantial amount of job creation from increased visitor services throughout the park.	The short-term and long-term beneficial impacts of on the social and economic environment of the gateway communities and three adjacent counties would range from minor to moderate. The beneficial impacts to quality of life and economy could result from (1) site-specific increases in public outreach programs and orientation, (2) a substantial increase in educational and stewardship opportunities, (3) some additional community trail connections, (4) NPS collaborations with several other local governments and land management agencies, (5) limited new engineering and construction contract work for restoration projects, (6) a limited number of new park partners opportunities, and (7) limited job creation from increased visitor services. The long-term adverse impacts on the social and economic conditions of the gateway communities and three adjacent counties could range from minor to moderate, resulting from: (1) a possible reduction in NPS and concession jobs at certain park sites due to closures or facility removal, (2) a possible reduction in opportunities for some park partners, (3) the recommended closure of a State Route 1 segment (Caltrans has decision authority), and (4) removal or relocation of equestrian and educational facilities (at Rancho Corral de Tierra and Slide Ranch).	The short-term and long-term beneficial impacts of alternative 3 on the social and economic environment of the gateway communities and three adjacent counties could range from minor to moderate. The beneficial impacts to qualify of life and economy could result from: (1) an increase in public outreach programs, visitor orientation, educational/stewardship opportunities and additional park programs, (2) improvements in public accessibility and community trail connections, (3) enhancement of existing equestrian facilities, (4) several community-building components, (5) a moderate amount of new engineering and construction contract work for facility and restoration projects, (6) limited new opportunities for park partners to use park facilities and expand their operations, and (7) a small amount of job creation from increases in visitor services at various sites. The adverse impacts could result from removal of work force housing units at Capehart Housing Area and possible restrictions on tour boat operations (from enforcement of historic no trespass zone around Alcatraz Island). These impacts would be long-term, minor, and adverse to the gateway communities.
TRANSPORTATION				
	In Marin County, auto access to the most popular destinations is likely to continue to be difficult during peak periods, while bicycle and pedestrian access would improve, particularly in the Marin Headlands, because of projects outside of this planning process. Existing transit service would continue to enable access to park lands in Marin County for visitors without cars.	In alternative 1, access by land to park sites in Marin County—including improved trails, increased transit services, and wayfinding—would result in a long-term, moderate, beneficial effect, particularly during peak and shoulder seasons, and on holiday weekends. Increased transit service and stops would have a moderately beneficial impact by relieving congestion of the land-	For park lands in Marin County, impacts on access and connectivity for alternative 2 are negligible, with two exceptions. A 50% reduction in parking at Stinson Beach could have either a long-term, major, adverse impact on accessibility and user experience in Stinson Beach during peak periods and holiday weekends by exacerbating an already difficult traffic congestion	In alternative 3, the relocation of parking and access to Fort Funston would have a long-term, minor effect that is both slightly beneficial for preservation of the natural environment and slightly adverse for its impact on visitor access. For Alcatraz Island, this alternative could result in a long-

POTENTIAL KEY IMPACTS ON PARK LANDS				
	NO ACTION ALTERNATIVE	**ALTERNATIVE 1 – NPS PREFERRED**	**ALTERNATIVE 2**	**ALTERNATIVE 3**
	The no-action alternative would have a long-term, minor to major, adverse impact on the access to most popular sites, and a long-term, minor, adverse effect on transportation in other areas, such as the Marin Headlands. Park sites in San Francisco in the north part of the city would see long-term, moderate, beneficial impact to access by land via improved transit implemented by the San Francisco Municipal Transportation Agency. Park lands in San Mateo County would see a long-term minor improvement in access by land because of the Devil's Slide project and accompanying transit stops. Taking no other transportation improvement actions in San Mateo would have a long-term, minor to moderate, adverse effect on access to these park sites. The no-action alternative would have negligible impacts on transportation to or within Alcatraz Island.	based transportation system and by providing more ways for the public to get to park sites. In San Francisco, alternative 1 would have a long-term, moderate, beneficial impact on both visitor connections and the functioning of the transportation system through increased land and water transit and improved trails. In San Mateo County, enhanced trail systems would provide a long-term, moderate to major, beneficial effect on connections by land; there would be a long-term, moderate, beneficial effect on transportation functionality through more transit availability and a minor beneficial impact on parking. At Alcatraz Island, the slight increase in boat and ferry traffic in the Scenic Corridor zone as well as the entry dock area could result in a long-term, minor, beneficial impact by increasing access by water to the island. Re-opening improved areas of the park and increasing year-round trail access would have a long-term, minor, beneficial impact on pedestrian access to park features and circulation on the island.	situation, or a long-term, moderate, beneficial effect if combined effectively with other efforts such as provision of transit, marketing of transit, and enforcement of parking restrictions. Closing a segment of State Route 1 between Muir Beach and Stinson Beach may have a moderate to major, adverse impact on connectivity between these two communities. There are no transportation actions for San Francisco for alternative 2. In San Mateo, the transportation actions in alternative 2 may result in a minor to moderate, beneficial effect on connections by land through enhanced trail systems. The improved access on Alcatraz Island to previously closed areas could result in a long-term, minor, beneficial impact to connectivity by water transit, and access to sites on Alcatraz Island via enhanced trails.	term, moderate, beneficial increase in connectivity through additional ferry embarkation points; and a long-term, moderate, beneficial increase in access to additional historic features over an expanded area of the island because of trail expansion and improvement.
PARK MANAGEMENT, OPERATIONS, AND FACILITIES				
	Inadequate staffing levels would result in continued long-term, moderate, and adverse impacts to operations. Continued partner and volunteer efforts would result in long-term, moderate, beneficial impacts to park operations, although these efforts would be limited by current staffing levels. Inadequate project and operational funding would result in long-term, major, adverse impacts to park facilities throughout the park including Alcatraz Island. The inadequate maintenance and public safety facilities along with their inconvenient locations would result in continued long-term, moderate, and adverse impacts to operations.	Increased number of park staff would result in long-term, moderate, beneficial impacts to operations if appropriate, annual base funding is available. Construction, rehabilitation, restoration, and demolition projects proposed in the alternative would result in long-term, moderate, beneficial impacts to park operations by addressing deferred maintenance. Construction activities would result in short term, minor, adverse impacts on park operations, because of closures during the work. An expanded maintenance facility at Fort Funston and the addition of three "portals" would result in long-term, moderate, beneficial impacts to park operations.	Increased staff would result in long-term, moderate, beneficial impacts to operations if appropriate, annual base funding is available. Construction, stabilization, rehabilitation, restoration, and demolition projects proposed in the alternative would result in long-term, moderate, beneficial impacts to park operations and address deferred maintenance issues. Construction and landscape restoration activities would result in minor, adverse impact in the short term, as some inefficiency would be caused by closure of buildings and lands during construction or restoration. Increased difficulty for public safety personnel to reach the more primitive areas would result in long-term, minor, adverse impacts to operations.	Increased staff would result in long-term, moderate, beneficial impacts to operations if appropriate, annual base funding is available. Construction, stabilization, rehabilitation, restoration, and demolition projects proposed in the alternative would result in long-term, moderate, beneficial impacts to park operations, but would also result in short-term, minor, adverse impacts while the activities are underway, due to road and building closures. Facility use and location changes would result in long-term, moderate, and beneficial impacts to park operations.

The Alternatives for Muir Woods National Monument

6



NO-ACTION ALTERNATIVE

OVERVIEW

Under the no-action alternative, Muir Woods National Monument would continue to be managed to protect the primeval redwood forest in the larger Redwood Creek watershed, and to interpret the monument's natural history, as well as the establishment of the monument, which had a major role in the early American conservation movement.

Muir Woods National Monument would remain a popular international destination and ecological treasure. With trees over 1,000 years old, it preserves a small yet towering vestige of the vast forests of *Sequoia sempervirens* that once graced the slopes and valleys surrounding San Francisco Bay. The monument also supports a diversity of flora and fauna.

The park staff would continue to balance preservation of the redwood ecosystem with providing access to hundreds of thousands of visitors annually. For many visitors, Muir Woods would continue to provide their initial experience with the national park system. Key park objectives would include fostering a conservation ethic among visitors, preserving and restoring habitat for threatened and endangered species, preserving cultural resources such as the Dipsea Trail, supporting public transportation as a way to reduce congestion, and promoting a watershed perspective in land management that includes Mount Tamalpais State Park, two water districts, an organic farm, equestrian stables, and local communities. These are objectives for the entire watershed as well. Overall management of the monument would continue to be guided by the 1980 general management plan.

ARRIVAL

Today, most visitors arrive by personal vehicles and commercial tour buses. Since 2005, a pilot shuttle service has been used during the summer to help reduce traffic congestion. In the no-action alternative, parking areas would continue to be provided adjacent to Redwood Creek and very near the main concentration of redwoods.

The entrance area would continue to be located at the edge of the redwood forest adjacent to Redwood Creek. It includes a parking area, restrooms, and a small visitor information station with a bookstore and fee collection booth. This area is a hub of activity with a mix of pedestrians, automobiles, and buses. Additional parking areas would continue to exist farther down along Redwood Creek and would continue to be used during periods of peak demand. Maintenance and some other operational functions would continue to be located in the Old Inn on the east side of Muir Woods Road.

REDWOOD FOREST AND REDWOOD CREEK

The main trail system would continue to exist as a series of loops running along Redwood Creek, crossing the creek four times on footbridges. Visitors would continue to have opportunities to stroll among the groves of ancient redwoods. A variety of interpretive waysides and scheduled interpretive programs would continue in order to support the visitor's discovery of the monument's resources. Intersecting with the main trail are other trails that would provide visitors with extended hiking opportunities to adjacent public lands. The Administration-Concession Building would continue to provide food, retail services, restrooms, and park offices. The current use of the nearby historic Superintendent's Residence and associated structures would remain.

Since the monument was established, the National Park Service has increased its understanding of a healthy redwood forest ecosystem. Past practices of allowing visitors to drive, picnic, and camp within the forest have been phased out. Natural fires have been suppressed throughout most of the 20th century, but have been slowly reintroduced through the use of prescribed burns to restore more natural conditions, reduce fuel loading, and to enhance the health of the ecosystem. This land management practice would continue. In the 1930s, the Civilian Conservation Corps lined portions of Redwood Creek with rocks as a means to stabilize and contain the flow of water within the existing channel. These actions may have protected selected redwood trees on the banks, but have also eliminated the natural meandering of the creek across a wider floodplain, constraining its role in sustaining a healthy ecosystem.

MUIR WOODS ADDITION (ALSO KNOWN AS CAMINO DEL CANYON, CONLON AVENUE, AND DRUID HEIGHTS)

Over time, additional tracts of land have been acquired to support the administrative functions and visitor use of the monument. Properties in the area referred to as the Muir Woods Addition were acquired by the National Park Service between 1974 and 1984. These properties include the rustic buildings of historic Camp Hillwood (located up Conlon Avenue), Druid Heights (located at the end of Camino del Canyon), and other structures.

Some structures are used for park operations and a native plants nursery, while others are under special use permits, reservation of use and occupancy, or have been vacated and are scheduled for removal. These uses and planned actions would continue under the no-action alternative. The valuable wildlife habitat in this area, including habitat for northern spotted owl and salmonids, would continue to be protected.

COST ESTIMATES

Cost estimates for the no-action alternative are identified in the table below. The costs shown here are not for budgetary purposes; they are only intended to show a relative comparison of costs among the alternatives.

The alternatives describe the maximum potential capital improvements; lesser improvements may be implemented, or built in phases if necessary. The implementation of the approved plan will depend on future funding. The approval of this plan does not guarantee that the funding and staffing needed to implement the plan will be forthcoming. Full implementation of the actions in the approved general management plan could be many years in the future. Additionally, some of the future long-term funding needed to implement the various actions called for in the alternatives is anticipated to come from nonfederal partners, consistent with the park's current practices.

Annual Operating Costs

The annual NPS portion of the Muir Woods National Monument shuttle cost is $340,000. Shuttle costs have been shared with local transportation agencies as a joint solution to alleviating traffic congestion on the State Route 1 corridor.

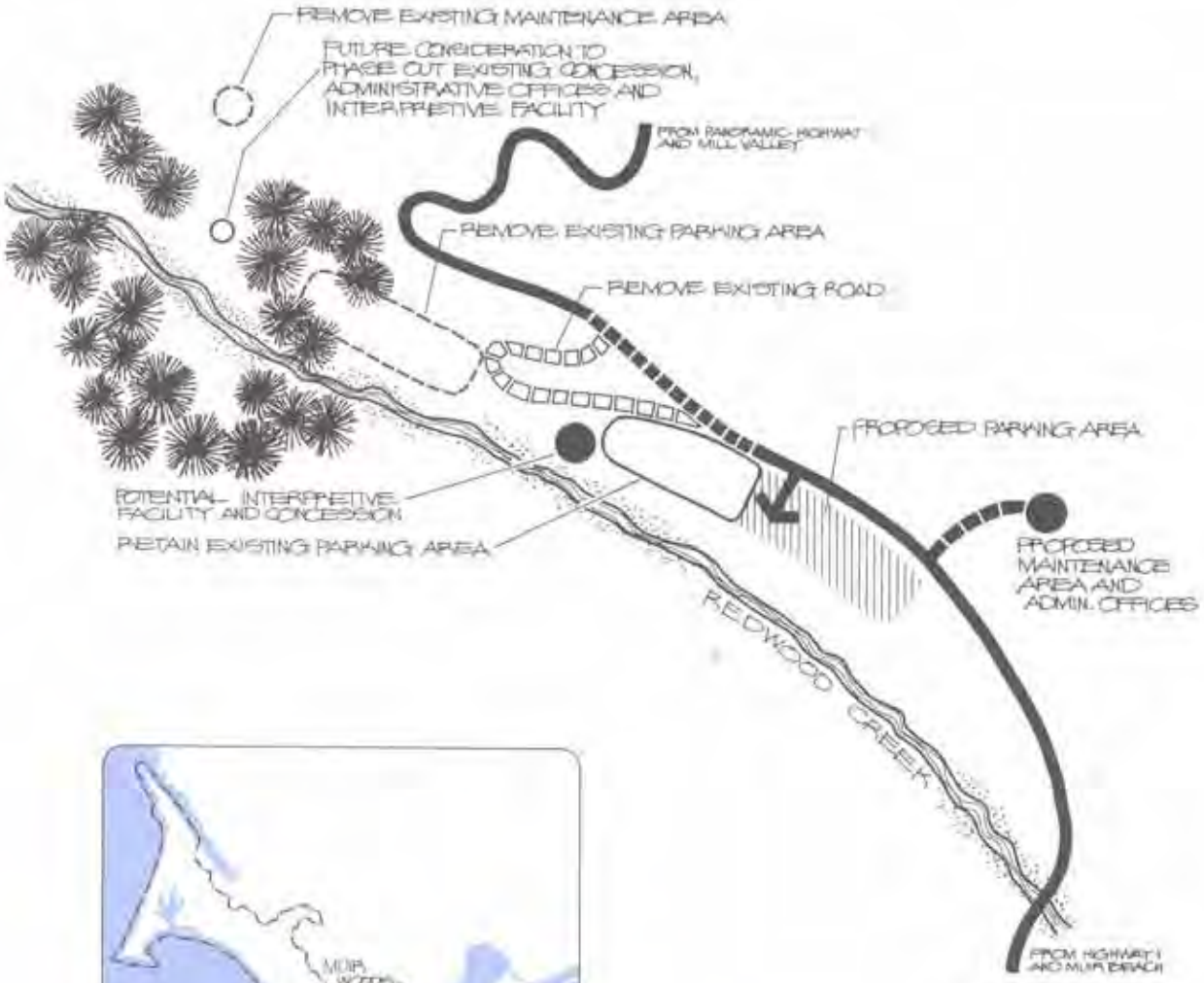
Operating costs and staff numbers for Muir Woods National Monument are included in the table titled Summary of Costs Associated with the Implementation of the Alternatives for Park Lands in Marin, San Francisco, and San Mateo Counties.

One-time Costs

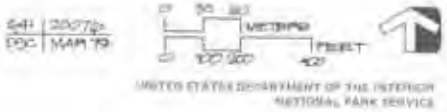
The estimated costs of the no-action alternative reflect the continuation of current management. One-time costs for the no-action alternative are the costs for those projects that are currently approved and funded—any requested but unfunded projects are not considered in this analysis. Therefore, while the action alternatives contain estimates for 20 years of proposed projects, the no-action alternative assumes no new projects would take place except those projects funded in 2009. Examples of currently funded projects include remodeling of the concession facilities, cyclic maintenance, and management of the fee collection program. Total funded one-time costs are $920,000.

Table 21: Costs for the No-action Alternative for Muir Woods National Monument

SUMMARY OF COSTS FOR THE NO-ACTION ALTERNATIVE		
Annual Operational Costs		
Shuttle Operations	**$**	**340,000**
One-time Capital Costs		
Total	**$**	**920,000**







1980 General Management Plan
Muir Woods National Monument

No-Action Alternative

MUIR WOODS

DEVELOPMENT CONCEPT

GOLDEN GATE NATIONAL RECREATION AREA
POINT REYES NATIONAL SEASHORE

ALTERNATIVE 1: CONNECTING PEOPLE WITH THE PARKS

OVERVIEW

In this alternative, the park would offer visitors the opportunity to experience and enjoy the primeval forest ecosystem and understand the monument's place in American conservation history through a variety of enhanced programs, facilities, and trails that access the forest and connect local communities to the park and surrounding open space.

While retaining much of the present system of trails through the forest, some existing facilities and use areas, such as the entrance area and parking lots, would be modified or relocated to reduce their impacts on the ecosystem and improve the park experience.

The monument would continue to welcome a diversity of visitors and support a range of experiences, better serving as a gateway or stepping stone to understanding the national park system.

An offsite welcome center for the shuttle system, with parking and visitor services, would be an important first point for orientation and key to providing sustainable access to the monument.

Collaboration with other public land managers would continue to address watershed restoration and stewardship.

ARRIVAL

Offsite Welcome Center

To enhance the visitor experience and address congestion problems, permanent shuttle service to Muir Woods National Monument would be provided during peak periods throughout the year, supported by a new welcome center in the vicinity of State Route 1 and Highway 101, created in collaboration with Marin County, California State Parks, and Caltrans. Shuttles would travel a distance of about six miles to the monument. Express transit service from downtown San Francisco and improved connections with the regional ferry services would also be pursued. The welcome facility would provide necessary visitor services that could include parking, sheltered waiting areas, restrooms, and orientation to the monument and other regional park destinations. The facility would also connect visitors to other regional and local transportation systems.

Diverse Opportunities Zone

The monument's existing entry area would be redesigned to enhance the visitor's arrival experience, protect resources, and improve safety. Parking at the monument would be reconfigured or relocated using sustainable design practices to reduce impacts to the creek and other sensitive resources. Capacity would meet demand during off-peak periods. Pedestrian access would be improved to offer visitors a more natural experience transitioning into the redwood forest separated from roads and parking.

A modest facility would be provided to receive visitors arriving by different modes of transportation. The services provided could include shuttle dropoff, sheltered waiting areas, orientation, restrooms, food service, and a bookstore. The existing separate structures for fee collection, a bookstore, and restrooms could be replaced as part of the new facility. The goal of the design process would be to accommodate visitor's needs while simultaneously minimizing the overall footprint of development within the old growth forest.

Future use or removal of the Old Inn would be determined through more detailed site planning that would consider its utility for visitor services or operational needs in the redesigned entry area. To allow visitor parking to be reconfigured, the native plant nursery would be relocated to Lower Redwood Creek as part of a stewardship center. Realignment of portions of county-maintained Muir Woods Road would also be explored to improve operational safety and visitor access.

In order to improve pedestrian safety and protect Redwood Creek, the park would collaborate with Marin County to restrict shoulder parking along Muir Woods Road in non-trailhead areas as alternative transportation becomes more readily available.

REDWOOD FOREST AND REDWOOD CREEK

Scenic Corridor Zone (Redwood Creek corridor including the existing wooden arch, several existing buildings, and the main loop trails)

This area would be managed to provide a national park experience within the primeval redwood forest setting. The Administration-Concession Building would transition to support stewardship, interpretive, and educational activities, providing a flexible classroom and program space in the woods. Experiences would immerse visitors in nature (the sights, sounds, smells of the forest) where quiet would be encouraged. Improved accessibility would ensure that all visitors could have these experiences. New restrooms and drinking water would be provided near Bridge 4 to protect resources and enhance visitor comfort.

The historic Superintendent's Residence and nearby structures would be used for administrative purposes. Other structures needed to support visitor uses or park operations would be rehabilitated. Nonhistoric or nonessential structures would be removed.

Natural Zone (all areas beyond the Redwood Creek corridor)

The majority of the monument would be managed to preserve and restore natural systems and contribute to the primeval forest setting. Visitors within this zone would have opportunities for self-discovery and challenge on trails in a more dispersed and wild park setting.

To provide a diverse continuum of experiences, visitors would be introduced to ways of accessing the adjacent landscapes and the recreational opportunities of Mount Tamalpais State Park, Marin Municipal Water District, and Golden Gate National Recreation Area. The Ben Johnson, Fern Creek, Redwood Creek, and Dipsea trails would provide access to a variety of day and overnight recreational experiences.

MUIR WOODS ADDITION (ALSO KNOWN AS CAMINO DEL CANYON, CONLON AVENUE, AND DRUID HEIGHTS)

Diverse Opportunities Zone (Conlon Avenue)

Camp Hillwood and its immediate surroundings would be adaptively used for day use or overnight educational opportunities. The historic values of the camp would be preserved while the facilities would be adapted to contemporary uses.

All existing operational functions within this zone (maintenance and native plants nursery) would be relocated to the Lower Redwood Creek site (former Banducci flower farm) or in potential shared facilities with Mount Tamalpais State Park nearby at Kent Canyon.

Natural Zone (other areas in Camino del Canyon and Druid Heights)

The majority of the area would be managed to preserve the natural environment. The landscape and streams would be restored to an intact habitat. All nonhistoric structures would be removed and Camino del Canyon Road would be downgraded to a trail.

KENT CANYON, MOUNT TAMALPAIS STATE PARK

The park would work with California State Parks to achieve common objectives for this area. Collaboration would focus on maintenance, parking, and trails. Most maintenance functions in the monument would be relocated to facilities potentially shared with Mount Tamalpais State Park.

COST ESTIMATES

Cost estimates for alternative 1 are identified in the table below. The costs shown here are not for budgetary purposes; they are only intended to show a relative comparison of costs among the alternatives.

The alternatives describe the maximum potential capital improvements; lesser improvements may be implemented, or built in phases if necessary. The implementation of the approved plan will depend on future funding. The approval of this plan does not guarantee that the funding and staffing needed to implement the plan will be forthcoming. Full implementation of the actions in the approved general management plan could be many years in the future. Additionally, some of the future long-term funding needed to implement the various actions called for in the alternatives is anticipated to come from nonfederal partners, consistent with the park's current practices.

Annual Operating Costs

The annual cost to operate the shuttle during peak periods is estimated to range from $600,000 to $1,400,000. This is the full cost to operate the shuttle, although historically,

shuttle operation costs have been shared with local transportation agencies as a joint solution to alleviating traffic congestion on the State Route 1 corridor.

One-time Costs

This alternative proposes a variety of enhanced programs, facilities, and trails to welcome a diversity of visitors and support a range of experiences. Many of the facilities would be relocated or modified to reduce impacts on the ecosystem and improve the park experience.

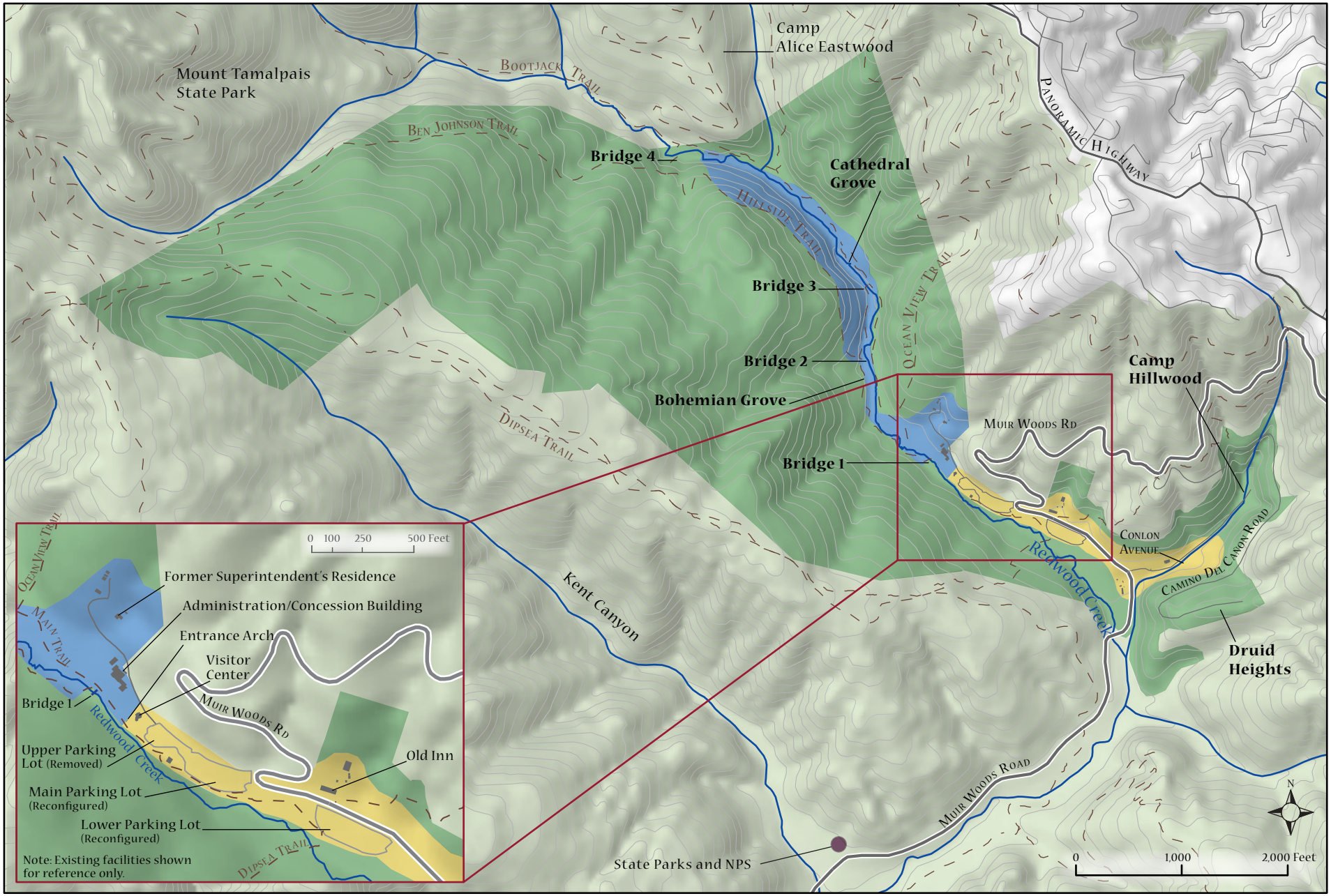
One-time costs of the alternative include a mix of projects including rehabilitation of historic structures, new construction, removal of non-historic facilities, and natural resource restoration. Total one-time costs are estimated at $15.9 million.

Table 22: Costs for Alternative 1 for Muir Woods National Monument

SUMMARY OF COSTS FOR ALTERNATIVE 1	
Annual Operational Costs	
Shuttle Operations	$ 600,000 - 1,400,000
One-time Capital Costs	
FACILITY REHABILITATION	
Entrance area improvements	$7,150,000
Entry drive and parking improvements	$1,300,000
Trail system improvements	$500,000
HISTORIC PRESERVATION	
Administration-Concessions building: rehabilitate for stewardship and education	$500,000
Camp Hillwood rehabilitation	$140,000
Former Superintendent's residence and adjacent structures: rehabilitation	$420,000
NATURAL RESOURCE RESTORATION	
Muir Woods Addition	$2,410,000
Within the Monument	$120,000
FACILITY REMOVAL	
Structures in the Monument and other infrastructure	$250,000
Nonhistoric structures in the Muir Woods Addition	$470,000
NEW CONSTRUCTION	
Off-site welcome center	$2,230,000

SUMMARY OF COSTS FOR ALTERNATIVE 1	
Bridge 4 amenities	$410,000
Total	**$15,900,000**

All costs in 2009 dollars



Management Zones

- Diverse Opportunities
- Scenic Corridor
- Interpretive Corridor
- Evolved Cultural Landscape
- Historic Immersion
- Natural
- Sensitive Resources
- Park Operations

Connecting People with the Parks

Alternative 1

Muir Woods National Monument

United States Department of the Interior · National Park Service
DSC · December 14, 2009 · 112 / 20010

ALTERNATIVE 2: PRESERVING AND ENJOYING COASTAL ECOSYSTEMS

OVERVIEW

Muir Woods National Monument and the Redwood Creek watershed are part of the UNESCO Golden Gate Biosphere Reserve—one of the world's richest reservoirs of plant and animal life. This alternative would seek to restore the primeval character of the old-growth redwood forest. Visitors would be immersed in the forest, and could experience the natural sounds, smells, light, and darkness of the forest.

The experience would be more primitive than it is today; the majority of the built environment—buildings, parking lots, paved trails—would be removed, and all visitors would arrive by shuttle, bicycle, or on foot. The landscape would be "messier" than it is today, but the forest would function more naturally: Redwood Creek would be allowed to meander across the floodplain, flooding the valley bottom, uprooting trees, and opening gaps in the canopy.

Where not in conflict with natural resource goals, historic trails and structures could be retained or adapted for contemporary uses. A light-on-the-land, accessible trail would reach into the heart of the forest. Visitors would engage in participatory stewardship, education, and science that further the preservation of the forest and all its parts—the creek, salmon, spotted owls, bats, natural sounds—as part of the continuing history and evolution of the land preservation and conservation movement.

An offsite welcome center for the shuttle system, with parking and visitor services, would be an important first point for orientation and a key to providing sustainable access to the monument.

Restoration of the Redwood Creek watershed would be accelerated in collaboration with other land managers. Actions would include the removal of unneeded management roads, stabilization of sediment sources, and removal of invasive vegetation, as well as removal of streambank stabilization structures in Redwood Creek, removal and possible relocation of some pedestrian bridges, and restoration of natural floodplain function.

ARRIVAL

Offsite Welcome Center

This area would be the same as in alternatives 1 and 3, except that the shuttle service would run year-round. To the extent feasible, all visitors would come to Muir Woods National Monument either by shuttle service from the new welcome center, or under their own power.

Park Operations Zone (Old Inn area)

The Old Inn and adjacent areas would be used for administration and limited maintenance operations. Only a small parking area would be available for special needs. The park entrance would be relocated to the current lower parking lot and designed to accommodate a modest transit stop for the shuttle. It would also provide basic visitor services such as light snacks and restrooms.

Sensitive Resources Zone (along Redwood Creek)

The existing main entrance area, including the entire upper parking area, restrooms, and visitor center, as well as a major portion of the lower parking lot, would be removed to restore natural conditions, including seasonal flooding.

REDWOOD FOREST AND REDWOOD CREEK

Sensitive Resources Zone (majority of the monument)

The old-growth redwood forest would be managed to achieve the highest level of natural resource integrity. The visitor experience would promote an intimate relationship with the natural resources of the primeval redwood forest. Visitor access would be highly controlled and limited to designated areas and activities. The visitor would have the opportunity to engage in participatory stewardship, and educational and science activities.

The natural conditions of the redwood forest and Redwood Creek would be restored and allowed to continue unimpeded. Floodplain processes and riparian habitat would be restored by removing, realigning, or redesigning trails, bridges, and other impediments to natural processes. Woody debris would accumulate in the creek and on the forest floor.

Visitor services in the forest would be relocated to the transit stop. In consultation with the state historic preservation office and other stakeholders, the existing buildings and other major infrastructure would be removed and the sites restored to their natural conditions. All buildings, except the Old Inn, would be removed, including the former Superintendent’s Residence and the Administration-Concession Building.

The trail system would be redesigned to accommodate fewer visitors in a more intimate and appropriate setting. A simple accessible trail would reach into a portion of the old-growth forest. The existing main trail along the creek would be relocated out of the floodplain, and other trails and bridges could be removed, relocated, or redesigned to allow and promote natural processes. Paved surfaces would be removed.

The trail system throughout the monument would be designed to connect to other trails that would allow it to extend from the redwood forest to the ocean, highlighting the connection between the uplands and the ocean and the role that watershed restoration plays in maintaining healthy ecosystems. A reroute of the Redwood Creek crossing of the Dipsea Trail will be explored to find a more appropriate location with less impact to the natural functions of the creek; the rest of the Dipsea Trail would be maintained along its historic alignment.

MUIR WOODS ADDITION (ALSO KNOWN AS CAMINO DEL CANYON, CONLON AVENUE, AND DRUID HEIGHTS)

Natural Zone

The area would be managed to restore native habitat and natural processes with emphasis on removal of unneeded roads and development (including Druid Heights and Camp Hillwood), stabilization of sediment sources, re-establishment of natural drainage patterns, restoration of the tributary creek, and removal of invasive vegetation that has escaped from developed areas.

All existing operational functions within this zone (maintenance and native plants nursery) would be relocated to the Lower Redwood Creek site (former Banducci flower farm) or in potential shared facilities with Mount Tamalpais State Park nearby at Kent Canyon. Water and sewer systems could be relocated to appropriate sites using sustainable technologies and practices.

KENT CANYON, MOUNT TAMALPAIS STATE PARK

The park would work with California State Parks to achieve common objectives for this area. Collaboration would focus on maintenance, parking, and trails. Most maintenance functions in the monument would be relocated to facilities potentially shared with Mount Tamalpais State Park.

COST ESTIMATES

Cost estimates for alternative 2 are identified in the table below. The costs shown here are not for budgetary purposes; they are only intended to show a relative comparison of costs among the alternatives.

The alternatives describe the maximum potential capital improvements; lesser improvements may be implemented, or built in phases if necessary. The implementation of the approved plan will depend on future funding. The approval of this plan does not guarantee that the funding and staffing needed to implement the plan will be forthcoming. Full implementation of the actions in the approved general management plan could be many years in the future. Additionally, some of the future long-term funding needed to implement the various actions called for in the alternatives is anticipated to come from nonfederal partners, consistent with the park's current practices.

Annual Operating Costs

The annual costs to operate the shuttle year-round are estimated to range from $4,000,000 to $9,500,000. This is the full cost to operate the shuttle, although historically, shuttle operation costs have been shared with local transportation agencies as a joint solution to alleviating traffic congestion on the State Route 1 corridor.

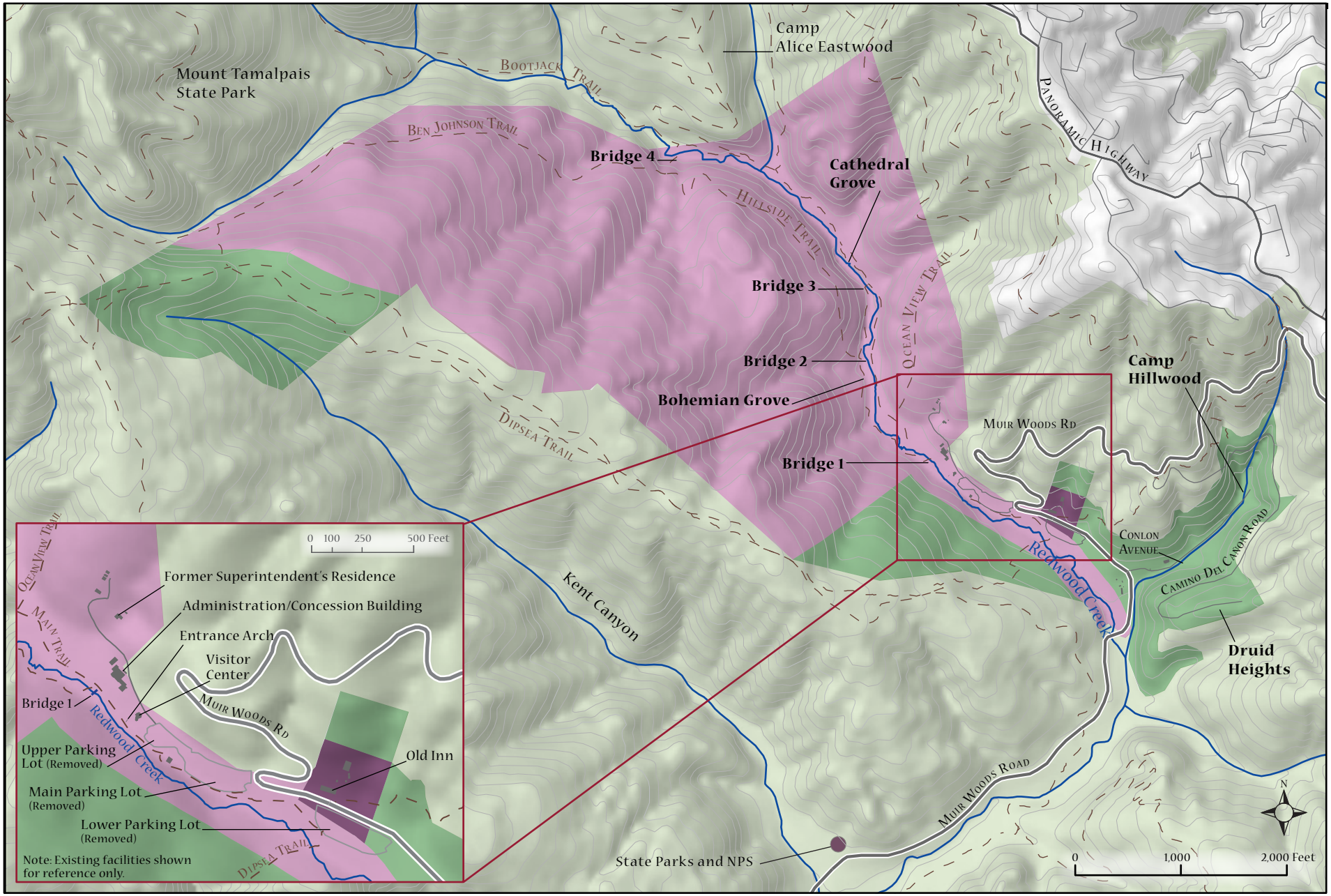
One-time Costs

In order to achieve the goals of alternative 2, a large portion of the built environment would be removed from the redwood forest and addition lands; however, some trails and structures would be adapted for contemporary uses. Much of the cost of this alternative is attributable to the removal of facilities and infrastructure, new welcome centers, and landscape and natural resource restoration. Total one-time costs are estimated at $16.9 million.

Table 23: Costs for Alternative 2 for Muir Woods National Monument

SUMMARY OF COSTS FOR ALTERNATIVE 2	
Annual Operational Costs	
Shuttle Operations	$ 4,000,000 - 9,500,000
One-time Capital Costs	
FACILITY REHABILITATION	
Old Inn modifications	$230,000
Entrance area improvements	$300,000
Entry drive and parking improvements	$570,000
Trail system improvements	$190,000
HISTORIC PRESERVATION	
None	$0
NATURAL RESOURCE RESTORATION	
Muir Woods Addition	$2,470,000
Within the Monument	$2,800,000
FACILITY REMOVAL	
Structures in the Monument and other infrastructure	$4,490,000
Nonhistoric structures in the Muir Woods Addition	$590,000
NEW CONSTRUCTION	
Off-site welcome center	$5,230,000
Total	**$16,870,000**

All costs in 2009 dollars



Management Zones

- Diverse Opportunities
- Scenic Corridor
- Interpretive Corridor
- Evolved Cultural Landscape
- Historic Immersion
- Natural
- Sensitive Resources
- Park Operations

Preserving and Enjoying Coastal Ecosystems

Alternative 2

Muir Woods National Monument

United States Department of the Interior · National Park Service

DSC · December 14, 2009 · 112 / 20011

ALTERNATIVE 3: FOCUSING ON NATIONAL TREASURES THE PREFERRED ALTERNATIVE

OVERVIEW

Muir Woods National Monument is a window into the complex world of nature and conservation. This alternative would present the monument as a contemplative outdoor museum where visitors would discover the primeval redwood forest and the monument's place in the early United States conservation movement.

A system of trails would lead visitors into the forest to feel, see, and learn, in different ways, about the essential qualities of the forest. These include its giant trees, the ecology of Redwood Creek, and William Kent's generous donation of the forest to the American public. Rather than continue to concentrate visitation along a main trail, visitors would be encouraged to take different thematic interpretive trails, some new and some existing, to experience the different parts of the park. Other trails would link the monument with the surrounding Mount Tamalpais State Park.

Some existing facilities and use areas, such as the entrance area and parking lots, would be modified or relocated to reduce their impacts on the ecosystem and improve the park experience.

An offsite welcome center for the shuttle system, with parking and visitor services, would be an important first point for orientation and a key to providing sustainable access to the monument.

Visitors would continue to be drawn to the monument to see the trees, but they would leave with a richer understanding of this precious ecosystem and how the saving of these few acres helped spark conservation across the United States. They would be motivated to return and learn more of the story.

Building on the interagency *Redwood Creek Watershed: Vision for the Future* (2003), and a cooperative management agreement with California State Parks, the National Park Service would continue to collaborate with the public and other land managers to address watershed restoration, stewardship, and recreation.

ARRIVAL

Offsite Welcome Center

To enhance the visitor experience and address congestion problems, permanent shuttle service to Muir Woods National Monument would be provided during peak periods throughout the year, supported by a new welcome center in the vicinity of the Caltrans Manzanita park-and-ride at State Route 1 and Highway 101, created in collaboration with Marin County, California state parks, and Caltrans. Shuttles would travel a distance of about six miles to the monument. Express transit service from downtown San Francisco and improved connections with the regional ferry services would also be pursued. The

welcome facility would provide necessary visitor services that could include parking, sheltered waiting areas, restrooms, and orientation to the monument and other regional park destinations. The facility would also connect visitors to other regional and local transportation systems.

Diverse Opportunities Zone

The monument's existing entry area would be redesigned to enhance the visitor's arrival experience, protect resources, and improve safety. Parking at the monument would be reduced, reconfigured and relocated using sustainable design practices to better protect Redwood Creek and other sensitive resources. Removal of parking would primarily be along the shoulder of Muir Woods Road. Parking supply would continue to meet demand during off-peak periods. Pedestrian access would be improved to offer visitors a more natural experience transitioning into the redwood forest separated from roads and parking.

A modest facility would be provided to receive visitors arriving by different modes of transportation. The services provided could include shuttle dropoff, sheltered waiting areas, orientation, restrooms, food service, and a bookstore. The existing separate structures for fee collection, a bookstore, and restrooms could be replaced as part of the new facility. The goal of the design process would be to accommodate visitor's needs while simultaneously minimizing the overall footprint of development in the park.

Future use or removal of the Old Inn would be determined through more detailed site planning that would consider its utility for visitor services or operational needs in the redesigned entry area. To allow visitor parking to be reconfigured, the native plant nursery would be relocated to Lower Redwood Creek as part of a stewardship center. Realignment of portions of county-maintained Muir Woods Road would also be explored to improve operational safety and visitor access.

In order to improve pedestrian safety and protect Redwood Creek, the park would collaborate with Marin County to restrict shoulder parking along Muir Woods Road in areas without trailheads when alternative transportation becomes more readily available.

REDWOOD FOREST AND REDWOOD CREEK

Interpretive Corridor Zone (large corridor around Redwood Creek)

This area would be managed as a setting where visitors discover and interact with the features of the primeval redwood forest. Each trail within the monument would unveil a different story and experience using creative interpretive approaches that are appropriate to the majestic old-growth forest. The trails would be designed and managed to provide visitors with opportunities to learn, explore, and become immersed in the resources that illustrate a particular theme. Examples of thematic trails could include an ecology-themed trail that leads visitors to examine the forest structure and the dynamic habitats of the creek. Another trail would highlight a century of conservation history and quietly usher visitors into Cathedral Grove. Some trails would start at the main entrance and highlight the main redwood groves along the creek. Others would bring visitors down into the woods from higher in the canyon.

The Dipsea Trail and other trails from Mount Tamalpais State Park also would be highlighted, offering opportunities for self-discovery. The experience would be further reinforced through ranger-led activities that engage the visitor with the monument's natural and cultural resources.

Portions of the main trail and bridges could be relocated to allow for creek and floodplain restoration and improvements to the integrity of the redwood forest ecosystem.

The Administration-Concession Building would transition to support interpretive and educational activities, providing flexible classroom and program space in the woods. Nonhistoric and nonessential additions made to this structure and its surroundings would be removed to reduce development in the monument. The adjacent restroom building would be retained.

The historic structures and features that represent the conservation movement would be preserved and rehabilitated, and used to support visitor programming and services. These include the former Superintendent's Residence, equipment shed, garage, trails, monuments, and named groves. The historic creek stabilization rock work could be removed in targeted areas to restore natural creek functions important to forest health.

The use of contained fires limited to interpretive and educational purposes could be permitted by the Superintendent within this zone.

Sensitive Resources Zone (upper north-facing slopes of the canyon)

These areas would be managed to preserve the redwood forest and natural sounds that provide a backdrop to the adjacent interpretive corridor zone. Visitor access to this area would be carefully managed and limited to retain the pristine setting and protect its resources.

Natural Zone (western portion of the national monument)

This area of the monument would be managed to preserve natural systems and contribute to the primeval forest setting. Visitors within this zone would have opportunities for self-discovery and challenge on the Ben Johnson and Dipsea trails in a more dispersed and wild park setting.

MUIR WOODS ADDITION (ALSO KNOWN AS CAMINO DEL CANYON, CONLON AVENUE, AND DRUID HEIGHTS)

Natural Zone

The area would be managed to provide low impact trail-based day uses and restore native habitat and natural processes with emphasis on removal of roads, nonhistoric structures, stabilization of sediment sources, re-establishment of natural drainage patterns, restoration of the tributary creek, and removal of invasive vegetation that has escaped from developed areas.

Some historic structures and landscape associated with the bohemian community at Druid Heights would be preserved. Camino del Canyon would be converted to a trail with access by foot or light service vehicle. The structures at Camp Hillwood would be preserved to the extent that this would not compromise natural resource values. Use of

the camp would be for educational and interpretive programs consistent with the natural zone. The segment of Conlon Avenue extending from the lift station to the camp would be downgraded and realigned to restore natural processes and conditions in the tributary to Redwood Creek.

Diverse Opportunities Zone (lower Conlon Avenue from Muir Woods Road to the lift station)

A modest parking area and trailhead would be located in this zone. The National Park Service would continue to explore a sustainable wastewater treatment process to replace the existing lift station. Other existing operational functions (maintenance and native plant nursery) would be relocated to the Lower Redwood Creek site (former Banducci flower farm) or in potential shared facilities with Mount Tamalpais State Park nearby at Kent Canyon.

KENT CANYON, MOUNT TAMALPAIS STATE PARK

The park would work with California State Parks to achieve common objectives for this area. Collaboration would focus on maintenance, parking, and trails. Most maintenance functions in the monument would be relocated to facilities potentially shared with Mount Tamalpais State Park.

COST ESTIMATES

Cost estimates for alternative 3 are identified in table 20. The costs shown here are not for budgetary purposes; they are only intended to show a relative comparison of costs among the alternatives.

The alternatives describe the maximum potential capital improvements; lesser improvements may be implemented, or built in phases if necessary. The implementation of the approved plan will depend on future funding. The approval of this plan does not guarantee that the funding and staffing needed to implement the plan will be forthcoming. Full implementation of the actions in the approved general management plan could be many years in the future. Additionally, some of the future long-term funding needed to implement the various actions called for in the alternatives is anticipated to come from nonfederal partners, consistent with the park's current practices.

Annual Operating Costs

The annual costs to operate the shuttle at peak periods throughout the year are estimated to range from $600,000 to $1,400,000. This is the full cost to operate the shuttle, although historically, shuttle operation costs have been shared with local transportation agencies as a joint solution to alleviating traffic congestion on the State Route 1 corridor.

One-time Costs

In alternative 3, Muir Woods National Monument would be presented as an outdoor museum where visitors discover the primeval forest and conservation history. Costs are largely attributable to the proposed welcome centers, rehabilitation of historic structures, and trail system enhancements. Total one-time costs are estimated at $17.8 million.

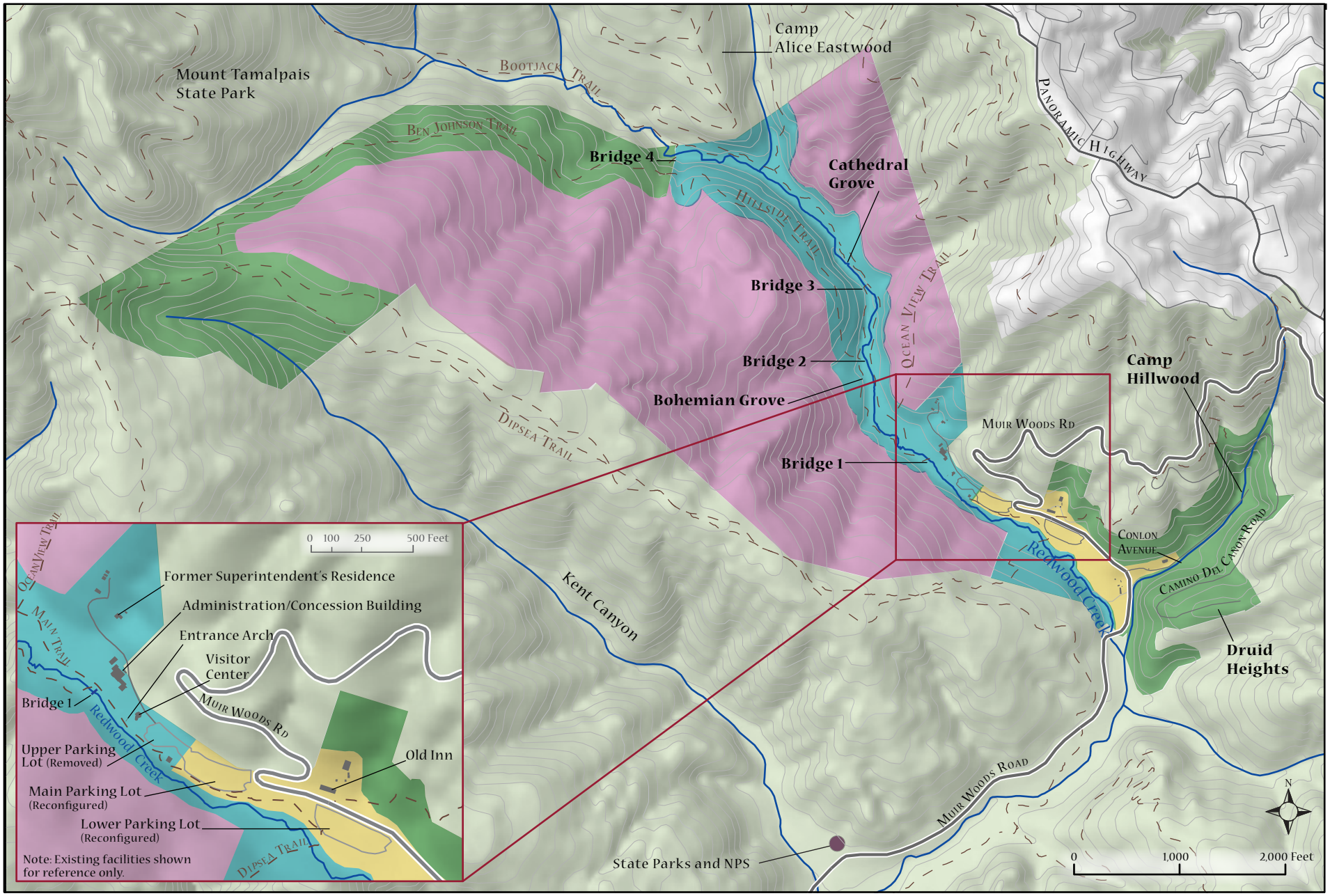
Table 24: Costs for Alternative 3 for Muir Woods National Monument

SUMMARY OF COSTS FOR ALTERNATIVE 3 (NPS Preferred Alternative)	
Annual Operational Costs	
Shuttle Operations	$ 600,000 - 1,400,000
One-time Capital Costs	
REHABILITATION PROJECTS	
Entrance area improvements	$7,150,000
Entry drive and parking improvements	$1,300,000
Trail system improvements	$700,000
HISTORIC PRESERVATION	
Administration-Concessions building: rehabilitate for interpretation and education*	$500,000
Camp Hillwood: rehabilitation*	$150,000
Former Superintendent's residence and adjacent structures: rehabilitation	$340,000
NATURAL RESOURCE RESTORATION	
Muir Woods Addition	$2,500,000
Within the Monument boundary	$2,200,000
FACILITY REMOVAL	
Minor structures and infrastructure removal	$250,000
Nonhistoric structures in the Muir Woods	$470,000

Addition	
NEW CONSTRUCTION	
Off-site welcome center	$2,230,000
Total	**$17,790,000**

All costs in 2009 dollars

*These projects are desirable/lower priority, and while important to full implementation of the alternative, may be accomplished with nonfederal funds or in later phases.



Management Zones

- Diverse Opportunities
- Scenic Corridor
- Interpretive Corridor
- Evolved Cultural Landscape
- Historic Immersion
- Natural
- Sensitive Resources
- Park Operations

Focusing on National Treasures

Alternative 3 – Preferred Alternative

Muir Woods National Monument

United States Department of the Interior · National Park Service
DSC · December 14, 2009 · 112 / 20012



Restored banks of Redwood Creek along with redesigned segments of the main trail improve ecological functions and conditions for visitors in the forest.



A meadow-like pedestrian entrance to the monument is created by reorganizing vehicular circulation and support facilities.

SUMMARY OF COSTS ESTIMATES FOR MUIR WOODS NATIONAL MONUMENT

The cost figures shown here and throughout the plan are intended only to provide conceptual costs for general comparison of alternatives. National Park Service and industry cost estimating guidelines were used to develop the costs (in 2009 dollars) to the extent possible, but the estimates should not be used for budgeting purposes. Specific costs will be determined in subsequent, more detailed planning and design exercises, and after considering the design of facilities, identification of detailed resource protection needs, and changing visitor expectations. Actual costs to the National Park Service will vary depending on when actions are implemented, and on contributions by partners and volunteers.

The alternatives describe the maximum potential capital improvements; lesser improvements may be implemented, or built in phases if necessary. The implementation of the approved plan will depend on future funding. The approval of this plan does not guarantee that the funding and staffing needed to implement the plan will be forthcoming. Full implementation of the actions in the approved general management plan could be many years in the future. Additionally, some of the future long-term funding needed to implement the various actions called for in the alternatives is anticipated to come from nonfederal partners, consistent with the park's current practices.

Table 25: Summary of Costs Associated with the Implementation of the Alternatives for Muir Woods National Monument

	No-action Alternative	Alternative 1	Alternative 2	Alternative 3 (NPS Preferred)
Annual Operational Costs (Shuttle Operations)[1]	$340,000	$600,000 – $1,400,000	$4,000,000 – $9,500,000	$600,000 – $1,400,000
One-time Capital Costs[2]	$920,000	$15,900,000	$16,870,000	$17,790,000

NOTES:

1 The cost of operating the shuttle was estimated by Nelson and Nygaard in 2009 dollars. This is the full cost to operate the shuttle, although historically, the shuttle operations have been a shared cost with local transportation agencies. Marin County and the National Park Service share costs for this as a joint solution to alleviating traffic congestion on the State Route 1 corridor.

2 One-time costs for the no-action alternative only include costs associated with projects already approved and fully funded.

3 All costs are in 2009 dollars.

DEFERRED MAINTENANCE

The "Actions Common to All Alternatives" section, earlier in this document, contained a discussion of facilities that could be removed to reduce maintenance funding needs. However, in addition to removing facilities, expending one-time costs on park facilities would reduce the deferred maintenance by bringing the facilities up to a sustainable condition. Deferred maintenance—or work needed to bring park assets into good condition—exceeds $198.1 million at Golden Gate National Recreation Area and Muir Woods National Monument, according to the 2009 *Park Asset Management Plan*.

Each alternative contains proposals that would reduce total deferred maintenance. Although the reductions in deferred maintenance are similar in amount for each alternative, the alternatives do not all contain the same proposals for reducing deferred maintenance; each alternative proposes different treatments for structures, including rehabilitation or removal.

Park staff continue to seek out additional measures to reduce deferred maintenance at the park. The *Park Asset Management Plan*, in particular, addresses strategies for reducing deferred maintenance.

Table 26: Reductions in Deferred Maintenance Associated with the Implementation of the Alternatives for Muir Woods National Monument

	No-action Alternative	Alternative 1	Alternative 2	Alternative 3 (NPS Preferred)
Muir Woods National Monument	$0	$1,650,000	$2,080,000	$1,650,000

ENVIRONMENTALLY PREFERABLE ALTERNATIVE FOR MUIR WOODS NATIONAL MONUMENT

The environmentally preferable alternative is the alternative that promotes the national environmental policy expressed in the National Environmental Policy Act (Sec. 101(b)). This includes alternatives that

1. fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
2. ensure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings;
3. attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
4. preserve important historic, cultural, and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice;
5. achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities; and
6. enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources" (NPS DO-12 Handbook, Section 2.7D).

The alternatives are very similar with respect to criteria 1, 2, 5, and 6. The park staff continues to work in achieving these factors as a basic course of implementing the legal mandates for Muir Woods National Monument. All the alternatives equally meet the attainment for these four criteria; therefore, the evaluation focuses on criteria 3 and 4.

The no-action alternative represents continuation of the existing management strategy in order to provide a baseline against which to compare the effects of the other (action) alternatives. The no-action alternative is the weakest alternative when considering criteria 3 and 4. In this alternative, the visitor experience is based primarily on self-discovery with some scheduled interpretive programs. The natural and historic resources of the national monument are protected but continue to be impacted by past human disturbance such as stream bank stabilization, locating parking facilities adjacent to Redwood Creek, and locating concession services within the old-growth redwood forest. The new land additions to Muir Woods National Monument lack any planning and guidance regarding the type of visitor opportunities and the level of natural and cultural resource preservation that should be implemented. In the no-action alternative, visitor access to the national monument would continue to be by individual vehicles, tour buses and the park's shuttle bus during the summer season—which contribute to social and environmental problems.

Alternative 2 provides for significant improvements to the natural environment through restoration work that addresses past human disturbances such as removing the bank stabilization, narrowing trails, eliminating the majority of parking, and providing a year-round shuttle system. But in consideration to criteria 3, the alternative limits the range of beneficial uses to those visitors looking to experience a more primitive and natural setting with a focus on education. The no-action alternative provides a greater variety of visitor

opportunities than alternative 2. In regards to criteria 4, alternative 2 proposes to remove important historic and cultural features of our national heritage.

The actions associated with the implementation of alternative 1 improve upon the no-action alternative and alternative 2 by enhancing recreational opportunities such as picnicking, interpretation, and stewardship programs. The social and environmental impacts associated with parking and other past human disturbances would be improved, as well. Alternative 1 provides a good balance of addressing past human disturbances and providing a range of beneficial uses with minimal impacts.

Alternative 3 is very similar to alternative 1 in balancing the restoration of past human disturbances and providing a wider range of beneficial uses. Alternative 3 is better at accomplishing criteria 3 and 4 with the implementation of a comprehensive education and interpretive program, incorporating thematic trails, that would help visitors to easily learn about and explore the natural and cultural resources of the national monument.

After considering the environmental consequences of the alternatives, including consequences to the human environment, the National Park Service has concluded that the NPS preferred alternative, alternative 3 for Muir Woods National Monument, is also the environmentally preferable alternative. This alternative best realizes the full range of national environmental policy goals as stated in section 101 of the National Environmental Policy Act.

SUMMARY TABLES FOR MUIR WOODS NATIONAL MONUMENT

Table 27: Comparison of Alternatives for Muir Woods National Monument

COMPARISON OF ALTERNATIVES FOR MUIR WOODS NATIONAL MONUMENT			
NO ACTION	**ALTERNATIVE 1**	**ALTERNATIVE 2**	**ALTERNATIVE 3 (PREFERRED)**
OVERVIEW			
Management of the monument would continue to provide visitors with self-guiding opportunities to explore the primeval forest. Scheduled interpretive opportunities would continue to be provided. Existing facilities would remain in their current locations.	Alternative 1 would offer visitors the opportunity to experience and enjoy the primeval forest ecosystem and understand the monument's place in American conservation history through a variety of enhanced programs, facilities, and trails that access the forest and connect local communities to the park and surrounding open space. The monument would continue to welcome a diversity of visitors and support a range of experiences, better serving as a gateway or stepping stone to understanding the national park system. Some existing facilities and uses would be modified or relocated to reduce their impacts on the ecosystem and improve the park experience.	Alternative 2 would restore the primeval character of the old-growth redwood forest. Visitors would immerse themselves in the forest to experience the natural sounds, smells, light, and darkness of the forest. The experience would be primitive; buildings, parking lots, and paved trails would be removed, and all visitors would arrive by shuttle, bicycle, or on foot. The landscape would be less controlled, and the forest would function more naturally. Redwood Creek would meander across the floodplain, flooding the valley bottom, uprooting trees, and opening gaps in the canopy.	Alternative 3 would present the monument as a contemplative outdoor museum where visitors could discover and learn about the primeval redwood forest and the monument's place in the U.S. conservation movement. A system of interpretive trails would lead visitors into the forest to touch, see, and learn, about the essential qualities of the forest, including the monument's place in American conservation history. Several existing facilities would be modified or relocated to reduce their impacts on redwood forest ecosystem.

COMPARISON OF ALTERNATIVES FOR MUIR WOODS NATIONAL MONUMENT			
NO ACTION	**ALTERNATIVE 1**	**ALTERNATIVE 2**	**ALTERNATIVE 3 (PREFERRED)**
ARRIVAL			
The monument entrance would remain at the edge of the redwood forest near Redwood Creek and continue to include parking, restrooms, and a small visitor information station. Parking lots further down Redwood Creek would remain. Visitors would continue to arrive by personal vehicle or tour bus, with a shuttle service provided in the summer. Maintenance and operational functions would remain at the Old Inn.	The entrance would be redesigned to enhance visitor experience, protect resources, and improve safety. The parking lot would be reconfigured using sustainable design practices. A welcome center would be provided in the vicinity of State Route 1 and Highway 101 with visitor services including parking, shelter, restrooms, food service, and orientation to the monument and regional park destinations. Shuttle service would be provided during peak periods. Express transit and connections with regional and local transportation systems would be explored.	The entrance would be relocated to the lower parking lot area and designed to accommodate a year-round shuttle service. The majority of parking would be removed. Along Redwood Creek, the main entrance, upper parking lot, restrooms, and visitor center would be removed to restore the area to natural conditions. The Old Inn and adjacent area would be used for administration and maintenance. A welcome center would be provided as described in Alternative 1.	Same as Alternative 1.
REDWOOD FOREST AND REDWOOD CREEK			
The main trail system would continue as a series of loops running along Redwood Creek with connections to other trails. Visitors would have opportunities to stroll in the groves of ancient redwoods. Interpretive waysides and scheduled interpretive programs would support the visitor's discovery of the monument's	The Redwood Creek corridor and main loop trails would be managed to provide a national park experience within a primeval redwood forest setting. The Administration-Concession Building would be used to support interpretive, educational, and stewardship activities. Improve accessibility of	The old-growth forest would be managed to achieve highest level of natural resource integrity. The majority of the built environment would be removed including the Administration-Concession Building. Visitor access to designated areas and activities would be controlled. Visitors	The corridor around Redwood Creek would be managed to allow visitors to discover and interact with the primeval redwood forest. Portions of trails and bridges would be relocated to allow for creek and floodplain restoration and ecosystem improvements. Administration-

COMPARISON OF ALTERNATIVES FOR MUIR WOODS NATIONAL MONUMENT			
NO ACTION	**ALTERNATIVE 1**	**ALTERNATIVE 2**	**ALTERNATIVE 3 (PREFERRED)**
resources. The Administration-Concession Building would continue to provide food, retail services, restrooms, and park offices. The current use of the nearby historic Superintendent's Residence and associated structures would remain. While many past practices have already been phased out, others would continue to affect the healthy functioning of ecosystem.	trails; add new restrooms and drinking water near bridge 4. Use historic Superintendent's Residence for administrative purposes. Rehabilitate other structures for park uses and remove non-historic nonessential structures. Area beyond Redwood Creek corridor would be managed to preserve and restore natural systems. Dispersed trails in a wild park setting would provide opportunities for self-discovery and challenge.	would be encouraged to engage in stewardship, education, and science activities. Floodplain processes would be restored by removing, realigning, or redesigning trails, bridges, and other impediments to natural processes. The trail system would be redesigned to accommodate fewer visitors in a more intimate setting; an accessible trail would provide access to a portion of the old-growth forest. Trails would connect to other trails from ocean to uplands and highlight watershed restoration.	Concession Building would be used for interpretive and educational activities. Non-historic additions to the structure would be removed. Structures representing the conservation movement would be preserved and rehabilitated. The upper north-facing slopes of the canyon would be preserved to protect redwood forest and natural sounds. Visitor access would be carefully managed to protect the pristine natural setting and resources. The western portion would be managed to preserve natural systems and contribute to primeval forest setting. Ben Johnson and Dipsea trails would allow self-discovery in a more dispersed and wild park setting.
MUIR WOODS ADDITION (CAMINO DEL CANYON, CONLON AVENUE, AND DRUID HEIGHTS)			
Structures on these lands would continue to be used for park operations and a native plants nursery; others are under special use permits, reservation of use and occupancy, or have been vacated and are scheduled for removal. These uses and planned actions would	Camp Hillwood would be adaptively used for day use or overnight educational programs. Operational functions at Conlon Avenue would be relocated to other areas. The majority of Camino Del Canyon and Druid Heights would be managed to preserve	These areas would be managed to restore native habitat and natural processes. All operational functions would be relocated. Water and sewer systems would be relocated.	Structures of Camp Hillwood would be preserved to the extent that this would not compromise natural resource values. Use of the camp would be for educational and interpretive programs consistent with the Natural Zone designation. Conlon Avenue would

COMPARISON OF ALTERNATIVES FOR MUIR WOODS NATIONAL MONUMENT			
NO ACTION	**ALTERNATIVE 1**	**ALTERNATIVE 2**	**ALTERNATIVE 3 (PREFERRED)**
continue. The valuable wildlife habitat in this area would continue to be protected.	the natural setting. The natural landscape and streams would be restored and all nonhistoric structures would be removed.		have a modest parking area and trailhead. The Park Service would continue to explore a sustainable wastewater treatment solution to replace the existing lift station. Other operational functions would be relocated. Some historic structures and landscape features at Druid Heights would be preserved. Access would be by foot or light service vehicle. Camino Del Canyon and Druid Heights would be managed to provide trails and restore native habitat and natural processes.
KENT CANYON, MOUNT TAMALPAIS STATE PARK			
	Collaboration with California State Parks would focus on maintenance, parking, and trails. Most maintenance functions would be relocated to shared facilities.	Same as Alternative 1.	Same as Alternative 1.

Table 28: Summary of Potential Key Impacts of Implementing the Alternatives for Muir Woods National Monument

POTENTIAL KEY IMPACTS ON MUIR WOODS NATIONAL MONUMENT				
	NO ACTION	**ALTERNATIVE 1**	**ALTERNATIVE 2**	**ALTERNATIVE 3 – NPS PREFERRED**
NATURAL RESOURCES				
Carbon Footprint and Air Quality	Total gross emissions for Muir Woods National Monument would be estimated at 2,257 MTCE, resulting in long-term, minor, adverse impacts to the monument's carbon footprint. Overall, when compared to background levels of air pollution and GHG emissions in the region or the nation (estimated at 6 billion in 2007), impacts to air quality from the no-action alternative would be long-term, adverse, and negligible. No impairment of air resources would result from this alternative.	The combined effect of the actions included in alternative 1 is estimated to decrease the gross emissions of Muir Woods National Monument by 20% to 1,812 MTCE. This would result in long-term, minor, beneficial impacts on the Park Service's carbon footprint. As in the no-action alternative, impacts to air quality (when compared to background levels of air pollution in the region and nation) would be negligible. No impairment of air resources would result from this alternative.	The combined effect of the actions included in alternative 2 is estimated to decrease the gross emissions of Muir Woods National Monument by 82% to 401 MTCE. This would result in long-term, major, beneficial impacts on the Park Service's carbon footprint. As in the no-action alternative, impacts to air quality (when compared to background levels of air pollution in the region and nation) would be negligible. No impairment of air resources would result from this alternative.	The combined effect of the actions included in alternative 3 is estimated to decrease the gross emissions of Muir Woods National Monument by 20% to 1,813 MTCE. This would result in long-term, minor, beneficial impacts on the Park Service's carbon footprint. As in the no-action alternative, impacts to air quality (when compared to background levels of air pollution in the region and nation) would be negligible. No impairment of air resources would result from this alternative.
Soils and Geologic Resources and Processes	Overall, the impact to geologic resources and soils from the no-action alternative would be long-term, range from minor to moderate adverse to minor beneficial, and be localized and monument-wide. Adverse impacts would occur from the presence and maintenance of existing facilities and visitor use. Beneficial impacts would occur from restoration and education and stewardship activities. No impairment of geologic resources would result from this alternative.	Overall, the impact to soils and geologic resources and processes from alternative 1 would be short- and long-term, range from negligible adverse to minor beneficial, and be localized. Adverse impacts would occur from new recreational development and expanded visitor use. Beneficial impacts would occur from trail relocation, the restoration of disturbed sites, and improved resource understanding and public support. No impairment of geologic resources would result from this alternative.	Overall, the impact to soils and geologic resources and processes from alternative 2 would be short- and long-term, range from minor adverse to moderate beneficial, and localized. Adverse impacts would occur from visitor use and construction. Beneficial impacts would occur from the removal of facilities and structures and restoration of disturbed sites. No impairment of geologic resources would result from this alternative.	Overall, the impact to soils and geologic resources and processes from alternative 3 would be short and long term, range from negligible adverse to moderate beneficial, and be localized. Adverse impacts would occur from new recreational development and visitor use. Beneficial impacts would occur from the removal of facilities and structures and restoration of the upper parking lot and disturbed sites, as well as creek restoration activities. No impairment of geologic resources would result from this alternative.
Water Resources and Hydrologic Processes	Overall, the impact to water resources and hydrologic processes from the no-action alternative would be long-term, range from minor adverse to minor beneficial, and be localized and monumentwide. Adverse impacts would occur from the presence and maintenance of existing facilities (including rock revetment), visitor use. Beneficial impacts would occur from education and stewardship activities. No impairment of water resources would result from this alternative.	Overall, the impact to water-related resources from alternative 1 would be short- and long-term, range from negligible adverse to minor beneficial, and be localized and parkwide. Adverse impacts would occur from the presence and maintenance of existing facilities (including rock revetment), new recreational development and expanded visitor use. Beneficial impacts would occur from trail and road maintenance and the restoration of disturbed sites and removal of the upper parking area. No impairment of water resources would result from this alternative.	Overall, the impact to water-related resources from alternative 2 would be short and long term, range from minor adverse to moderate-major beneficial, and be localized. Adverse impacts would occur from expanded visitor use and restoration activities. Beneficial impacts would occur from the restoration of disturbed sites, removal of structures, facilities, roads, and asphalt parking areas and substantial creek and floodplain restoration. No impairment of water resources would result from this alternative.	Overall, the impact to water-related resources from alternative 3 would be short and long term, range from negligible adverse to moderate beneficial, and be localized. Adverse impacts would occur from the presence and maintenance of existing facilities (including rock revetment), new recreational development and expanded visitor use and construction and restoration activities. Beneficial impacts would occur from the restoration of disturbed sites, removal of the upper parking area, improvements to Redwood Creek and restoration of in the Camino del Canyon and Druid Heights area. No impairment of water resources would result from this alternative.
Habitat (Vegetation and Wildlife)	Overall, the impact to vegetation and wildlife habitat from the no-action alternative would be long-term, range from minor-moderate adverse to minor beneficial, and be localized and monumentwide. Adverse impacts would occur from the presence and maintenance of existing facilities and visitor use. Beneficial impacts would occur from restoration and ongoing management and monitoring activities. No impairment of vegetation or wildlife resources would result from this alternative.	Overall, the impact to vegetation and wildlife habitat from alternative 1 would be short and long term. They would range from negligible adverse to minor or moderate beneficial and would be localized and monumentwide. Adverse impacts would occur from new recreational development and expanded visitor use. Beneficial impacts would occur from the restoration of disturbed sites. No impairment of water resources would result from this alternative.	Overall, the impact to vegetation and wildlife habitat from alternative 2 would be short and long term. They would range from minor adverse to moderate or major beneficial and would be localized and monumentwide. Adverse impacts would occur from visitor use and construction activities. Beneficial impacts would occur from the restoration of disturbed sites and creeks. No impairment of water resources would result from this alternative.	Overall, the impact to vegetation and wildlife habitat from alternative 3 would be short and long term, range from minor adverse to moderate beneficial, and be localized and monumentwide. Adverse impacts would occur from visitor use and construction activities. Beneficial impacts would occur from the restoration of disturbed sites and creeks. No impairment of water resources would result from this alternative.

POTENTIAL KEY IMPACTS ON MUIR WOODS NATIONAL MONUMENT

	NO ACTION	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3 – NPS PREFERRED
Special Status Species (Federal and State Threatened and Endangered Species)	• **Coho salmon and Steelhead trout,** Central California Coast (Federal threatened): "may affect, likely to adversely affect" for project specific actions in the short-term, and "may affect, not likely to adversely affect" for land use and monument management over the long-term. • **Northern spotted owl** (Federal threatened): "may affect, not likely to adversely affect" • **Marbled murrelet** (Federal threatened): "may affect, not likely to adversely affect"	• **Coho salmon and Steelhead trout,** Central California Coast (Federal threatened): "may affect, likely to adversely affect" for project specific actions in the short-term, and "may affect, not likely to adversely affect" for land use and monument management over the long-term. • **Northern spotted owl** (Federal threatened): "may affect, not likely to adversely affect" • **Marbled murrelet** (Federal threatened): "may affect, not likely to adversely affect"	• **Coho salmon and Steelhead trout,** Central California Coast (Federal threatened): "may affect, likely to adversely affect" for project specific actions in the short-term, and "may affect, not likely to adversely affect" for land use and monument management over the long-term. • **Northern spotted owl** (Federal threatened): "may affect, not likely to adversely affect" • **Marbled murrelet** (Federal threatened): "may affect, not likely to adversely affect"	• **Coho salmon and Steelhead trout, Central California Coast** (Federal threatened) "may affect, likely to adversely affect" for project specific actions in the short-term, and "may affect, not likely to adversely affect" for land use and monument management over the long-term. • **Northern spotted owl** (Federal threatened) "may affect, not likely to adversely affect" • **Marbled murrelet** (Federal threatened) "may affect, not likely to adversely affect"
CULTURAL RESOURCES				
Archeological Resources	Because much of the monument has not been surveyed for archeological resources, there is potential for the monument to contain buried prehistoric and historic resources. Such resources could potentially be subject to loss of integrity from natural processes, ongoing agricultural and ranching operations, and inadvertent visitor activity or vandalism. Adverse impacts would be permanent and of minor to moderate intensity. Archeological surveys and/or monitoring would precede any ground disturbing activity. If significant archeological resources could not be avoided, an appropriate mitigation strategy would be developed in consultation with the state historic preservation officer. Any adverse impacts to archeological resources would be permanent and minor to moderate in intensity No impairment of monument resources or values would result from this alternative.	Because much of the monument has not been surveyed for archeological resources, there is potential for the monument to contain buried prehistoric and historic resources. Such resources could potentially be subject to loss of integrity from natural processes, ongoing agricultural and ranching operations, and inadvertent visitor activity or vandalism. Adverse impacts would be permanent and of minor to moderate intensity. There would be more opportunities to identify and evaluate archaeological resources, and provide stabilization, security, or other protection commensurate with their significance and sensitivity – a beneficial impact. Such resources could also be incorporated into visitor interpretive opportunities. Archeological surveys and/or monitoring would precede any ground disturbing activity. If significant archeological resources could not be avoided, an appropriate mitigation strategy would be developed in consultation with the state historic preservation officer. Any adverse impacts to archeological resources would be permanent and minor to moderate in intensity. No impairment of monument resources or values would result from this alternative.	Because much of the monument has not been surveyed for archeological resources, there is potential for the monument to contain buried prehistoric and historic resources. Such resources could potentially be subject to loss of integrity from natural processes, ongoing agricultural and ranching operations, and inadvertent visitor activity or vandalism. Adverse impacts would be permanent and of minor to moderate intensity. Archeological surveys and/or monitoring would precede any ground disturbing activity. If significant archeological resources could not be avoided, an appropriate mitigation strategy would be developed in consultation with the state historic preservation officer. Any adverse impacts to archeological resources would be permanent and minor to moderate in intensity. No impairment of monument resources or values would result from this alternative.	Because much of the monument has not been surveyed for archeological resources, there is potential for the monument to contain buried prehistoric and historic resources. Such resources could potentially be subject to loss of integrity from natural processes, ongoing agricultural and ranching operations, and inadvertent visitor activity or vandalism. Adverse impacts would be permanent and of minor to moderate intensity. There would be more opportunities to identify and evaluate archaeological resources, and provide stabilization, security, or other protection commensurate with their significance and sensitivity – a beneficial impact. Such resources could also be incorporated into visitor interpretive opportunities. Archeological surveys and/or monitoring would precede any ground disturbing activity. If significant archeological resources could not be avoided, an appropriate mitigation strategy would be developed in consultation with the state historic preservation officer. Any adverse impacts to archeological resources would be permanent and minor to moderate in intensity. No impairment of monument resources or values would result from this alternative.
Ethnographic Resources/ Traditional Cultural Properties	Surveys and research are necessary to determine whether resources within the monument are eligible for listing as a traditional cultural property are a prerequisite for understanding the resource's significance, as well as the basis of informed decision-making in the future regarding how the resource should be managed. Such surveys and research would be a negligible to minor, beneficial long-term impact.	Surveys and research are necessary to determine whether resources within the monument are eligible for listing as a traditional cultural property are a prerequisite for understanding the resource's significance, as well as the basis of informed decision-making in the future regarding how the resource should be managed. Such surveys and research would be a negligible to minor, beneficial long-term impact.	Surveys and research are necessary to determine whether resources within the monument are eligible for listing as a traditional cultural property are a prerequisite for understanding the resource's significance, as well as the basis of informed decision-making in the future regarding how the resource should be managed. Such surveys and research would be a negligible to minor, beneficial long-term impact.	Surveys and research are necessary to determine whether resources within the monument are eligible for listing as a traditional cultural property are a prerequisite for understanding the resource's significance, as well as the basis of informed decision-making in the future regarding how the resource should be managed. Such surveys and research would be a negligible to minor, beneficial long-term impact.

POTENTIAL KEY IMPACTS ON MUIR WOODS NATIONAL MONUMENT				
	NO ACTION	**ALTERNATIVE 1**	**ALTERNATIVE 2**	**ALTERNATIVE 3 – NPS PREFERRED**
	No impairment of monument resources or values would result from this alternative.	No impairment of monument resources or values would result from this alternative.	No impairment of monument resources or values would result from this alternative.	No impairment of monument resources or values would result from this alternative.
Historic Structures	The monument would continue to stabilize and preserve historic structures as financial resources and opportunities become available. The monument's historic structures, such as Muir Woods National Monument Historic District and historic buildings at Camp Hillwood, have generally retained their integrity but the incremental and piecemeal approach to preservation and maintenance, as well as their various adaptive uses, has resulted in long-term, minor to moderate, adverse impacts because historic buildings, fabric, and integrity have been lost. No impairment of monument resources or values would result from this alternative.	Historic buildings in the Muir Woods National Monument Historic District and at Camp Hillwood would be rehabilitated and adaptively used for interpretive, educational, recreational, administrative, and stewardship activities/purposes. This would result in long-term, beneficial impacts because their historical and architectural values would be preserved. Plans for evaluating other historic buildings under National Register of Historic Places criteria in the Muir Woods Addition would afford preservation treatment to determined-eligible structures, and a thus result in long-term, beneficial impacts to potentially eligible buildings. Although increased visitation could accelerate the deterioration of historic structures, monitoring human impacts to historic structures, increased ranger patrol, and increased historical interpretation could indirectly discourage vandalism and inadvertent impacts and minimize adverse impacts. Adverse impacts would be long term and negligible to minor in intensity. No impairment of monument resources or values would result from this alternative.	To fully restore the primeval character and natural conditions of the monument, all historic structures in the monument (including unevaluated properties in the Muir Woods Addition area) would be removed under this alternative. These actions would result in permanent adverse impacts of major intensity because historic structures would be lost. No impairment of monument resources or values would result from this alternative.	Actions under alternative 3 would result in long-term, beneficial impacts to historic buildings in the Muir Woods Historic District because their historical and architectural values would be preserved. The majority of the historic Camp Hillwood buildings would be stabilized and adaptively used, resulting in long-term beneficial impacts. However, some buildings at Camp Hillwood could be removed, resulting in permanent adverse impacts of minor intensity. Buildings in the Muir Woods Addition area would be evaluated against National Register of Historic Places criteria, and those determined eligible would be stabilized, resulting in long-term beneficial impacts. Although increased visitation could accelerate the deterioration of historic structures, monitoring human impacts to historic structures, increased ranger patrol, and increased historical interpretation could indirectly discourage vandalism and inadvertent impacts and minimize adverse impacts. Adverse impacts would be long term and negligible to minor in intensity. No impairment of monument resources or values would result from this alternative.
Cultural Landscape Resources	Overall, the cultural landscape at the monument retains its historic natural appearance, and preservation treatment of cultural landscape features is ongoing as opportunities arise. This continuing management under the no-action alternative would result in mostly long-term, negligible, and beneficial impacts, and some individual impacts that are minor and adverse. No impairment of monument resources or values would result from this alternative.	Actions under alternative 1would result in long-term, beneficial impacts to cultural landscape resources because much of the monument's cultural landscape, including historic trails and associated facilities, would be preserved. The introduction of new elements into the cultural landscape, such as restrooms and drinking water facilities, would result in some long-term, adverse impacts of minor intensity. No impairment of monument resources or values would result from this alternative.	To more fully restore the primeval character and natural conditions of the monument, virtually all cultural landscape features, including the historic structures, would be removed under alternative 2. Although some cultural landscape features would be preserved if not in conflict with natural resource goals, many features would be lost and some would be redesigned or relocated. Thus, actions under alternative 2 would result in permanent and long-term adverse impacts of major intensity to the national monument's cultural landscape resources. No impairment of monument resources or values would result from this alternative.	Alternative 3 would provide for the most comprehensive retention, rehabilitation, and preservation of cultural landscape resources in the monument, resulting in overall long-term, beneficial impacts. However, construction of new trails and the relocation or redesign of others, as well as the removal of portions of the CCC-constructed erosion-control stone revetments in Redwood Creek, would result in some permanent and long-term, adverse impacts of minor intensity, because some cultural landscape resources would be lost and the cultural landscape's integrity would be diminished. Therefore, the combined impacts of alternative 3 on the monument's cultural landscape resources would be long term and beneficial; although there would be some permanent and long-term adverse impacts of minor intensity. No impairment of monument resources or values would result from this alternative.
Park Collections	The alternatives for the monument's collections are covered under the environmental consequences in the "Actions Common to All Actions Alternatives" section and by each alternative for Golden Gate National Recreation	The alternatives for the monument's collections are covered under the environmental consequences in the "Actions Common to All Actions Alternatives" section and by each alternative for Golden Gate National	The alternatives for the monument's collections are covered under the environmental consequences in the "Actions Common to All Actions Alternatives" section and by each alternative for Golden Gate National	The alternatives for the monument's collections are covered under the environmental consequences in the "Actions Common to All Actions Alternatives" section and by each alternative for Golden Gate National

POTENTIAL KEY IMPACTS ON MUIR WOODS NATIONAL MONUMENT				
	NO ACTION	**ALTERNATIVE 1**	**ALTERNATIVE 2**	**ALTERNATIVE 3 – NPS PREFERRED**
	Area. No impairment of monument collections would result from this alternative.	Recreation Area. No impairment of monument collections would result from this alternative.	Recreation Area. No impairment of monument collections would result from this alternative.	Recreation Area. No impairment of monument collections would result from this alternative.
VISITOR USE AND EXPERIENCE				
	The no-action alternative would result in long-term, minor to moderate, beneficial impacts from continued opportunities to experience the unique and highly valued characteristics of the primeval forest via hiking trails and educational programs. However, minor to moderate adverse impacts on the visitor experience from visitor crowding, noise, and informal parking during peak times would continue.	Under alternative 1, impacts to the visitor experience would be long term, minor to moderate, and beneficial. The improvements to the arrival experience to the park, along with enhanced educational and interpretive opportunities, directly address the primary interests and concerns of most visitors to the monument.	Alternative 2 would result in long term, minor to moderate, beneficial impacts to the visitor experience, primarily due to enhancements to the monument's natural setting and the promotion of a more authentic and connected visitor experience with the primeval forest. However, long-term, minor to moderate, adverse impacts to the visitor experience would also occur, since some visitors would likely find it challenging to visit given the lack of parking and support facilities, and the increased regulation of visitor access.	Actions proposed in the NPS preferred alternative would result in long term, minor to moderate, beneficial impacts to the visitor experience. This alternative contributes to the purpose of the monument by providing high quality recreation and education opportunities that welcome a wide audience to experience and understand the most important resources and stories of Muir Woods National Monument.
SOCIAL AND ECONOMIC ENVIRONMENT				
	In the context of the local gateway communities and the three adjacent counties, the beneficial impacts to the social and economic environment from the no-action alternative would be long term and minor to moderate. The beneficial impacts could result from maintaining the park's contribution to the local economy and quality of life, existing education and stewardship programs, as well as maintaining collaborative efforts with several local governments and land managers to maintain and expand open land protection in the region.	The beneficial impacts to the quality of life and economy from alternative 1 would be short term to long term, and range from minor to moderate for the gateway communities and three adjacent counties. The beneficial impacts would result from: (1) a substantial increase in public outreach programs, visitor orientation, and new welcoming facilities, (2) improved connections to local and regional transportation systems and reduced traffic congestion, (3) new engineering and construction contracts for facility improvements, and (4) job creation from visitor service increases in the park and from shuttle service expansion. The adverse impacts of alternative 1 could be long term and minor in the context of the gateway communities. The adverse impacts could result from a reduction in local business activity due to park visitors using public transit instead of personal vehicles.	The beneficial impacts to the quality of life and economy from alternative 2 would be short-term to long-term and minor for the gateway communities and three adjacent counties. The beneficial impacts could result from (1) increased cooperation with other local governments and land managers to pursue preservation of additional public lands in the area, (2) contract work created by various reclamation projects, (3) possible new jobs created by the significant expansion in the shuttle service for the park, and (4) the expanded shuttle service that would allow more local residents to access the park and reduce traffic congestion. The adverse impacts from alternative 2 could be long term, ranging from minor to moderate for the gateway communities and three adjacent counties. The adverse impacts could result from a reduction in local business activity from park visitors who would need to take public transit to the park.	The beneficial impacts to the quality of life and economy from alternative 3 could be long-term, ranging from minor to moderate for the gateway communities and three adjacent counties. The beneficial impacts could result from (1) a moderate increase in public outreach, visitor orientation, and new welcoming facilities at the park, (2) improved connections to local and regional transportation systems and less traffic congestion, (3) a modest number of jobs created by expanded visitor welcoming services and expanded shuttle service, and (4) the community's improved awareness, pride, and appreciation of the national significance of the monument. The adverse impacts of alternative 3 could be long term and minor for the gateway communities. The adverse impacts could result from a reduction in local business activity due to park visitors using public transit instead of personal vehicles.
TRANSPORTATION				
	With no further action taken, visitor connections to Muir Woods National Monument and the functionality of the transportation system to the monument could experience a long-term, minor to moderate, adverse impact. Access roads and intersections on State Route 1 between Highway 101 and Muir Woods National Monument would continue to be congested, slowing shuttle service, and making it difficult at peak times for emergency vehicles to travel in	The transportation measures included in this alternative are likely to have a long-term, major, beneficial impact on connections between both ferry and regional bus transit and Muir Woods National Monument and the Muir Woods Shuttle. The shuttle would become the primary mode of access to the monument during peak demand periods. A much larger proportion of visitors could be expected to park	Alternative 2 proposes actions which would significantly alter the transportation system serving Muir Woods National Monument. Redesign of pedestrian access to the monument entrance is likely to have a long-term, moderate, beneficial impact on visitor access and safety. In conjunction with the parking provided at the offsite	The transportation measures included in this alternative are likely to have a long-term, major, beneficial impact on connections between both ferry and regional bus transit and Muir Woods National Monument and the Muir Woods Shuttle. The shuttle would become the primary mode of access to the monument during peak demand periods. A much larger proportion of visitors could be expected to park

POTENTIAL KEY IMPACTS ON MUIR WOODS NATIONAL MONUMENT				
	NO ACTION	**ALTERNATIVE 1**	**ALTERNATIVE 2**	**ALTERNATIVE 3 – NPS PREFERRED**
	the area. The existing parking lots at the monument are likely to continue to fill early in the day from May to September, particularly on the weekends, and the unsafe roadside parking situation could also continue. On a positive note, shuttle service can be expected to see continued increases in ridership, helping reduce road congestion.	remotely and take the shuttle or express service from San Francisco. The reduction in the number of cars on the roads approaching Muir Woods National Monument would have a long-term, moderate, beneficial impact on the functionality of the transportation system by reducing congestion. The reduction in visitor-related congestion would allow the shuttles to stay on schedule, and would allow emergency vehicles improved access to the area. This alternative could have a long-term, minor to moderate, beneficial impact on pedestrian and bicycle access by making the access roads safer for these visitors due to reduced traffic and congestion and reduction of road shoulder parking,, and by re-designing the walkways from the entry area to the monument so they are separated from auto traffic. Even with a 33% reduction in parking, and a projected increase in demand, there would still be adequate parking during the off season (October through April) when the shuttle is not running. During the peak season, the reduction in parking would be offset by an increase in transit service. The reduction in parking could have a long-term, moderate, adverse impact on parking availability on those days when the shuttle is not running.	welcome center and other remote parking lots, and the greatly increased transit service to the monument, this alternative would have a long-term, major, beneficial, impact on availability of transit, improved traffic flow, and number and capacity of transit connections. Removing parking from Muir Woods National Monument is likely to result in a reduction in the number of cars on the roads in southwest Marin, allowing transit to better run on schedule and emergency vehicles to have access, and offering less auto congestion to residents. However, while expanded transportation options may increase visitation, from the point of view of the visitor who arrives at the monument by car and is unable to park, the impact would be long-term, moderate, and adverse, limiting the ability of some visitors to visit the monument. The increase in transit services from San Francisco and the Sausalito Ferry, if fully funded through points in south Marin, is likely to have long-term, major, beneficial effects on the transportation system to the monument as well as throughout the southwest Marin County area, by increasing multimodal opportunities to get to the monument and increasing connectivity to regional transportation. Auto access may experience a long-term, minor to moderate, beneficial impact since there may be much less auto traffic on Muir Woods Road, while bus traffic on State Route 1 would increase significantly.	remotely and take the shuttle or express service from San Francisco. The reduction in the number of cars on the roads approaching Muir Woods National Monument would have a long-term, moderate, beneficial impact on the functionality of the transportation system by reducing congestion. The reduction in visitor-related congestion would allow the shuttles to stay on schedule, and would allow emergency vehicles improved access to the area. This alternative could have a long-term, minor to moderate, beneficial impact on pedestrian and bicycle access by making the access roads safer for these visitors due to reduced traffic and congestion and reduction of road shoulder parking,, and by re-designing the walkways from the entry area to the monument so they are separated from auto traffic. Even with a 33% reduction in parking, and a projected increase in demand, there would still be adequate parking during the off season (October through April) when the shuttle is not running. During the peak season, the reduction in parking would be offset by an increase in transit service. The reduction in parking could have a long-term, moderate, adverse impact on parking availability on those days when the shuttle is not running.
PARK MANAGEMENT, OPERATIONS, AND FACILITIES				
	Continued long-term, moderate, beneficial impacts to operations would result from partner and volunteer efforts. The continued impact of low staffing levels on park operations is moderate, long-term, and adverse. Inadequate project and operational funding would result in major, long-term, adverse impacts to park facilities. Inappropriate space for staff would also result in continued long-term, minor to moderate, adverse impacts to monument operations.	Increased staff would result in moderate, long-term, beneficial impacts, if funded. If funding is available for construction, rehabilitation, restoration, and demolition projects, these projects would result in moderate, long-term, beneficial impacts to park operations. Construction and landscape restoration activities would also result in short-term, minor, adverse impacts while they are underway. However, if funding and needed staffing levels are not made available when these actions are implemented, the proposed actions would have long-term, moderate, adverse effects on park operations.	Increased staff would result in moderate, long-term, beneficial impacts, if funded. If fully funded, construction, rehabilitation, restoration, and demolition projects proposed in the alternative would result in major, long-term, beneficial impacts to park operations. Construction and landscape restoration activities also would result in short-term, minor, adverse impacts to park operations. Removal of much of the development from inside the monument could make public safety responses more difficult, and would result in a minor to moderate, long-term, adverse impact to park operations. However, if funding and needed staffing levels are not made available when these actions are implemented, the proposed actions would have long-term, moderate, adverse effects on park operations.	Increased staff would result in moderate, long-term, beneficial impact if adequate funding is available. If funding is available, construction, rehabilitation, restoration, and demolition projects proposed in the alternative would result in moderate, long-term, beneficial impacts to park operations. Construction and landscape restoration activities also would result in short-term, minor, adverse impacts to park operations while the activities are underway. However, if funding and needed staffing levels are not made available when these actions are implemented, the proposed actions would have long-term, moderate, adverse effects on park operations.

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As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historic places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

NPS 641/108779; NPS 112/108782; August 2011/Printed on recycled paper.

Golden Gate National Recreation Area • Muir Woods National Monument

Draft General Management Plan / Environmental Impact Statement

U.S. Department of the Interior • National Park Service • Denver Service Center