



GOLDEN GATE NATIONAL RECREATION AREA MUIR WOODS NATIONAL MONUMENT

GENERAL MANAGEMENT PLAN/ENVIRONMENTAL IMPACT STATEMENT

VOLUME I

TEAM FINAL
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ABSTRACT

Final 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

Established in 1972, Golden Gate National Recreation Area has been operating under its first general management plan, which was approved in 1980. Muir Woods was declared a national monument in 1908 and is currently managed as part of Golden Gate National Recreation Area.

Since the establishment of Golden Gate National Recreation Area, it has doubled in size and a better understanding of natural and cultural resources and recreational uses has been gained. A new management plan is needed to guide management for the next 20 years.

The purpose of a general management plan / environmental impact statement (GMP/EIS) is to set forth a basic management philosophy for a park and to provide a framework for future decision making. The National Parks and Recreation Act of 1978 (Public Law 95–625) requires the National Park Service to prepare and revise a GMP/EIS for each park that will include: (1) measures to preserve park resources, (2) indications of the types and general intensities of development associated with public enjoyment and use of the park, (3) identification of visitor carrying capacities, and (4) indications of potential external boundary modifications. NPS Director's Order 2: *Park Planning* requires a GMP/EIS to clearly describe the specific resource conditions and visitor experience to be achieved, and identify the kinds of use, management, and development that will be appropriate in achieving and maintaining those conditions.

By NPS policy, environmental impact statements are usually prepared with the general management plan. This allows for compliance with the National Environmental Policy Act (NEPA) that requires that an environmental impact statement be prepared for all major federal actions with the potential to significantly affect the quality of the human environment. It also provides a framework for public participation, development of alternatives, and an evaluation of the environmental consequences. As described in 36 *Code of Federal Regulations* (CFR) 800.8(c), the National Park Service may use the NEPA process to fulfill certain provisions of section 106 of the National Historic Preservation Act related to consultation and public involvement.

General management plans take a comprehensive approach to planning for how to carry out the NPS mission for each individual park. The 1916 Organic Act (39 STAT.535, as amended, 16 *United States Code* [USC] section 1) and other legislation mandates that the National Park Service preserve resources unimpaired for the enjoyment of future generations. Park planning helps define how to best achieve that mandate.

The Final 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 current 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 park 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 NPS 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 history and international significance. Alternative 3, "Focusing on National Treasures," would place an emphasis on the nationally important natural and cultural resources of the park unit. 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 the many different types of park units—all in this national recreation area. All other resources would be managed to complement the nationally significant resources and associated visitor experiences. Alternative 3 is the NPS 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.

1 This Draft Final General Management Plan / Environmental Impact Statement has been distributed to other agencies and
2 interested organizations and individuals for their review and comment. Following distribution of the Final General
3 Management Plan / Environmental Impact Statement and a 30-day no-action period, a record of decision approving a final
4 plan will be signed by the National Park Service, Pacific West Regional Director. The record of decision will document the
5 selection of an alternative for implementation. With the signing of the record of decision, the plan can then be implemented.
6

7 Once the planning process is completed, the selected alternative will become the new management plan for the park and will
8 be implemented over the next 20 years. It is important to note that all of the actions in the selected alternative will require
9 more detailed study and implementation planning.
10

11

12

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13

Golden Gate National Recreation Area Muir Woods National Monument

Team Final General Management Plan /
Environmental Impact Statement

SUMMARY

1 PURPOSE AND NEED

2 The last general management plan for
3 Golden Gate National Recreation Area was
4 completed over 30 years ago.

5
6 Generally, the overall need for a new general
7 management plan includes the following:

- 8
9 ▪ The park has significantly expanded
10 in size and includes many new lands
11 in San Mateo County. This planning
12 process takes a comprehensive
13 parkwide approach that will ensure
14 that the management of natural and
15 cultural resources and visitor
16 experience is consistent and
17 thorough across all park areas.
- 18 ▪ There is an increased public demand
19 for access to, and use of, open spaces
20 within the San Francisco Bay region.
21 The general management plan
22 provides a regional collaborative
23 approach to open space preservation
24 and recreation use.
- 25 ▪ The changing demographics in the
26 Bay Area are bringing notable shifts
27 in park visitation, uses, and trends.
28 The general management plan
29 provides desired conditions that will
30 guide decision making for managing
31 the anticipated increases and changes
32 in visitation.
- 33 ▪ Through research and management
34 practices that have occurred since
35 the 1980 plan, park staff have
36 gathered a considerable amount of
37 new information and knowledge
38 regarding resources and visitor use.
39 This new awareness is reflected in
40 the desired conditions, proposed
41 management actions, and policies of
42 this general management plan.
- 43 ▪ Since the 1980 plan, climate change is
44 better understood and its effects

45 more evident on both ecological
46 systems and cultural resources. The
47 general management plan examines
48 the potential impacts of climate
49 change on park operations and
50 visitor use and identifies direction
51 and management actions to guide
52 efforts to create a more resilient park.

- 53 ▪ How visitors access the park
54 continues to evolve as local
55 transportation infrastructure
56 changes. Strategies that were
57 identified in 1980 continue to be
58 explored. The general management
59 plan identifies new ideas and
60 techniques that address sustainable
61 options for park access and strategies
62 to reduce traffic congestion around
63 and within the park.
- 64 ▪ To comply with federal law, the
65 general management plan specifies
66 the types and intensities of projected
67 development, including anticipated
68 costs. This is important because the
69 availability of federal funds may be
70 limited over time.

71
72 The implementation of the approved plan,
73 no matter which alternative is selected, will
74 depend on future NPS funding levels and
75 servicewide priorities and on partnership
76 funds, time, and effort. The approval of a
77 general management plan does not
78 guarantee that funding and the staffing
79 needed to implement the plan will be
80 forthcoming. Full implementation of the
81 plan could be many years in the future.

84 THE PLANNING AREA

85 This general management plan addresses
86 NPS-administered lands within the
87 legislative boundaries of Golden Gate
88 National Recreation Area and Muir Woods

1 National Monument. The new general
2 management plan will provide park
3 management guidance for the following park
4 sites: (1) those park lands that are not
5 covered by recent land use management
6 plans and agreements, (2) those lands that
7 are newly acquired or in the process of being
8 acquired, and (3) lands and waters that are
9 leased to the National Park Service or are
10 under other management arrangements or
11 easements such as the San Francisco Public
12 Utilities Commission Peninsula Watershed
13 easements. The total area of land and water
14 addressed in this plan is approximately
15 50,000 acres.

16
17 Specifically these areas include the
18 following:

- 19
20 ▪ Alcatraz Island and the surrounding
21 bay environment
- 22 ▪ park lands in Marin County,
23 including Stinson Beach north to the
24 Bolinas-Fairfax Road, Slide Ranch,
25 Muir Beach, Lower Redwood Creek,
26 Golden Gate Dairy, Tennessee
27 Valley, Marin Headlands, and the
28 offshore ocean environment
- 29 ▪ park lands in San Francisco,
30 including Upper Fort Mason, China
31 Beach, Lands End, Fort Miley, Ocean
32 Beach, Fort Funston, and the
33 offshore ocean and bay
34 environments
- 35 ▪ park lands in San Mateo County,
36 including the coastal area bluffs
37 extending south from Fort Funston
38 to Mussel Rock; Milagra Ridge;
39 Shelldance Nursery Area; Sweeney
40 Ridge, including Cattle Hill and
41 Picardo Ranch; Mori Point; Point
42 San Pedro (also known as Pedro
43 Point Headlands); Rancho Corral de
44 Tierra; Montara Lighthouse; Phleger
45 Estate; San Francisco Public Utilities
46 Commission watershed easements;
47 and the offshore ocean environment
- 48 ▪ Muir Woods National Monument

49 Park sites with recent management plans are
50 not addressed in this plan—the Presidio of
51 San Francisco (including the Main Post,
52 Crissy Field, and Baker Beach); Fort Point
53 National Historic Site; Sutro Heights
54 Historic District; Fort Baker (Cavallo Point);
55 Lower Fort Mason (the Fort Mason Center);
56 and the northern district of the park (north
57 of Bolinas-Fairfax Road) that is managed by
58 Point Reyes National Seashore.
59
60

61 **FOUNDATION STATEMENTS**
62 **AND GUIDING PRINCIPLES**

63 **Golden Gate National**
64 **Recreation Area**

65 ***Park Purpose***

66 The purpose of Golden Gate National
67 Recreation Area is to offer national park
68 experiences to a large and diverse urban
69 population while preserving and interpreting
70 the outstanding natural, historic, scenic, and
71 recreational values of the park lands.
72

73 ***Key Interpretive Themes and***
74 ***Associated Resources and Values***

75 **Recreational and Educational**
76 **Opportunities.** The park provides diverse
77 recreational and educational opportunities
78 from contemplative to active pursuits,
79 including participation in stewardship and
80 volunteer activities. Its proximity allows an
81 urban population to connect with nature
82 and history.
83

84 Fundamental resources and values
85 associated with the recreational and
86 educational opportunities include the
87 diverse settings found within the park and
88 access to the park that is supported by a
89 system of trails and scenic park roads.
90

91 **Coastal Corridor.** In a world of diminishing
92 biological diversity and threatened natural
93 resources, the Golden Gate National
94 Recreation Area preserves islands of
95 biodiversity within and near a large urban

1 area. The accelerating rate of global climate
2 change threatens even these remnants.

3
4 Fundamental resources and values
5 associated with the coastal corridor are the
6 ocean and bay environment, the rich variety
7 of coastal ecosystems, large numbers of
8 threatened and endangered species, and
9 fresh and saltwater resources. Historic
10 shipwrecks are also a significant cultural
11 resource within this corridor.

12
13 **Military Installations and Fortifications.**

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

23
24 The cultural landscapes, features, and
25 archeological sites, structures, and museum
26 collections are the fundamental resources
27 and values associated with military
28 installations and fortifications.

29
30 **Alcatraz Island.** The layers of history so
31 evident on the island present visitors with a
32 chance to contemplate the 155-year span of
33 Alcatraz history—from the U.S. Army period
34 through the federal penitentiary era and the
35 American Indian occupation to the current
36 NPS management of the island. As a site of
37 international notoriety, Alcatraz Island
38 provides a powerful opportunity to
39 encourage visitors to confront their personal
40 views on crime and punishment, the judicial
41 system, and freedom.

42
43 The cultural landscapes, historic structures,
44 archeological sites, museum collections, and
45 stories associated with the use of the island
46 as a Civil War period fort, military prison,
47 and federal penitentiary, and as the site of
48 the American Indian occupation of 1969 to
49 1971 are the fundamental resources and
50 values associated with Alcatraz Island.

51 **Scenic Beauty.** The powerful positive
52 influences that park land and undisturbed
53 open space can exert on urban settings and
54 residents constitute an important
55 interpretive message. The scenic beauty of
56 the park's historic and natural undeveloped
57 landscapes inspired a grassroots movement
58 that led to their protection. Proposed
59 development that would have destroyed
60 these lands sparked Bay Area community
61 members to organize and ultimately preserve
62 the open spaces that contribute so much to
63 their quality of life.

64
65 The fundamental resources and values
66 associated with the scenic beauty of the park
67 include the extraordinary setting, which
68 provides a dramatic contrast to urban
69 environments and undeveloped spaces and
70 the compelling historical background that
71 contributes to understanding the history of
72 the area.

73
74 **Physical Landforms.** The park's underlying
75 natural geologic systems and processes, and
76 the resulting effects on people and the
77 environment, link the park to the highly
78 visible and significant geologic forces around
79 the world.

80
81 Geologic resources are the fundamental
82 resources and values associated with this
83 theme.

84
85 **Ohlone and Miwok People.** The natural
86 features and resources of the park, along
87 with its location on the San Francisco Bay
88 estuary, sustained the Ohlone and Miwok
89 people who lived on the lands comprising
90 the park for thousands of years before
91 Europeans arrived. Archeological sites in the
92 park link to these pre-European inhabitants
93 and to their descendants who retain a
94 vibrant culture to this day.

95
96 Archeological sites in the park document the
97 traditional homelands of the Coastal Miwok
98 and Ohlone people and are fundamental
99 resources and values.

100

101

1 **Muir Woods National Monument**

2 **Park Purpose**

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

8
9 **Key Interpretive Theme and**
10 **Fundamental Resources and Values.** The
11 majestic, primeval old-growth redwoods of
12 Muir Woods National Monument invite
13 visitors, in the words of namesake John
14 Muir, to “come to the woods, for here is
15 rest.” The forest ecosystem of these towering
16 trees and the creek beneath them supports
17 an abundance of life. This remnant of the
18 Bay Area’s once abundant redwood forests
19 inspires visitors through its seminal
20 conservation story, today welcoming
21 travelers from around the world to have
22 what is, for many, their first wildlands
23 experience.

24
25 The fundamental resources and values
26 associated with Muir Woods National
27 Monument are old-growth forests and their
28 associated processes and the conservation
29 movement, including both the initial
30 preservation of redwood forests and
31 ongoing actions.

32
33
34 **Guiding Principles**

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

- 42
- 43 ▪ sustainability
- 44 ▪ community-based stewardship
- 45 ▪ civic engagement
- 46 ▪ partnerships

- 47 ▪ regional collaboration
- 48 ▪ inclusion

49
50

51 **ISSUES ADDRESSED IN THE PLAN**

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

- 55
- 56 ▪ Visitor Access: Transportation and
57 Trails
- 58 ▪ Recreation Opportunities and
59 Conflicts
- 60 ▪ Sustainable Natural Resource
61 Preservation and Management
- 62 ▪ Sustainable Cultural Resource
63 Preservation and Management
- 64 ▪ Climate Change
- 65 ▪ Land Acquisition
- 66 ▪ Reaching New Audiences
- 67 ▪ Operational Facilities
- 68 ▪ Scenic Beauty and Natural Character
- 69 ▪ Regional Cooperation
- 70 ▪ National Park Service Identity
- 71 ▪ Partnerships
- 72 ▪ American Indian Values

73
74

75 **ELEMENTS COMMON TO**
76 **ALL ACTION ALTERNATIVES**

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

89

1	Key Elements	50	
2		51	
3	▪ Boundary Adjustments: Proposed	52	▪ American Indian Engagement: This
4	adjustments are predominantly in	53	section documents established
5	San Mateo County. They consist of	54	commitments to working with Coast
6	undeveloped parcels (approximate-	55	Miwok and Ohlone communities to
7	ly 900 acres) and a strip of offshore	56	(1) survey, identify, and inventory
8	areas adjacent to lands already within	57	archeological and ethnographic sites;
9	the park boundary. These	58	(2) develop interpretive and
10	adjustments present opportunities to	59	educational activities for visitors; and
11	preserve critical resources and	60	(3) support the revitalization of
12	habitat links, aid in management, and	61	native communities and their
13	expand recreational opportunities in	62	traditions.
14	the park.	63	
15	▪ Climate Change: Guidance on	64	▪ Ocean Stewardship: This policy
16	managing resources and visitation in	65	addresses the park’s responsibilities
17	the face of climate change builds	66	for managing extensive offshore
18	upon NPS policy, current science,	67	ocean resources. It focuses on four
19	and the park’s Climate Change	68	goals: (1) supporting a seamless
20	Action Plan. The goals are to (1)	69	network of protected area, (2)
21	reduce CO ₂ emissions, (2) educate	70	inventorying and mapping in the
22	and interpret the processes for	71	service of protection, (3) engaging
23	visitors, and (3) assess the impacts	72	the public in stewardship, and (4)
24	and respond to changing conditions.	73	increasing the park’s technical
25	▪ Facilities Not Directly Related to	74	capacity.
26	the Park Mission: This summarizes	75	▪ Park Collections: Primary goals are
27	analyses of facilities that can be	76	to connect people with the park’s
28	removed from the park, generating	77	extensive collection (the fourth-
29	substantial savings in annual	78	largest collection in the national park
30	operational and maintenance costs.	79	system), and to strengthen, preserve,
31	Proposed actions are estimated to	80	and maintain the collection.
32	reduce costs by almost \$7,000,000.	81	
33	▪ Maintenance, Public Safety,	82	▪ Partnerships: Distills the key goals
34	Collections, and Visitor Facilities:	83	employed by the park in developing
35	Through an extensive focused	84	powerful and successful partner-
36	planning effort, the park identified	85	ships.
37	the need for new maintenance	86	▪ Trails: Broad goals and management
38	facilities (at Kent Canyon shared with	87	strategies are identified for the
39	Mount Tamalpais State Park in the	88	creation and maintenance of the
40	Capehart housing area of the Marin	89	extensive trails network, which is one
41	Headlands, and in the Presidio), a	90	of the most important ways that
42	single hub for park law enforcement	91	visitors experience and enjoy the
43	(at Fort Baker), a network of	92	park. The plan includes brief
44	multifunctional satellite offices (most	93	summaries of future efforts in each
45	of which is in place), and a central	94	county.
46	facility for the majority of the park’s	95	▪ Transportation: Broad goals and
47	museum collection (in the Presidio).	96	management strategies are identified
48	This section also describes park goals	97	for pursuing sustainable, multimodal
49	for visitor facilities.	98	access to park sites in partnerships

1 congestion management, the Muir
2 Woods shuttle, intelligent
3 transportation systems, and
4 development of a long-range
5 transportation plan.

- 6 ■ **User Capacity:** The park’s proposed
7 commitments for managing user
8 capacity, also known as carrying
9 capacity, are described in part 7.
10 Indicators and standards are
11 identified for Alcatraz and Muir
12 Woods.

13
14
15 **MANAGEMENT ALTERNATIVES**

16 **No-action Alternative**

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

22
23 **Key Elements**

24
25 **Park Lands:** In Marin County, Golden Gate
26 National Recreation Area forms the
27 southern core of a large network of regional,
28 state, and federal protected lands and waters
29 (many of which are recognized as part of the
30 UNESCO Golden Gate Biosphere Reserve).
31 Under the no-action alternative, the park
32 would continue to manage this large expanse
33 of preserved natural landscape containing
34 scattered concentrations of developed
35 facilities to provide visitors with multiple
36 opportunities for recreation through miles
37 of trails, preserved historic military
38 fortifications, and scenic and historic
39 landscapes.

40
41 The county features some of the most varied
42 landscapes in Golden Gate National
43 Recreation Area, including lush woodlands,
44 rugged coasts, sandy beaches, meadows,
45 marshes, grasslands, and coastal shrubs. As a
46 result, visitors can experience an array of
47 wildlife and several different habitats in one
48 brief hike.

49
50 Much of this area has been managed as part
51 of Golden Gate National Recreation Area
52 since the park was established in 1972.
53 Management of this land would continue to
54 be guided by the park’s 1980 General
55 Management Plan and subsequent, more-
56 detailed implementation plans.

57
58 A diverse set of park partners—many housed
59 in historic structures—would continue to
60 provide programs and facilities for visitor
61 education and enjoyment. These facilities
62 and programs currently include a hostel,
63 environmental education and arts
64 programming, equestrian facilities, and a
65 marine mammal rehabilitation center. Park-
66 managed visitor facilities would continue to
67 include a visitor center, scenic overlooks,
68 trails, campsites, and parking areas at
69 recreational beaches.

70
71 National Park Service maintenance facilities,
72 collections, staff housing, administrative
73 offices, and various partner offices would
74 also continue to operate where currently
75 located in the park.

76
77 **Park Lands in San Francisco:** Park lands in
78 San Francisco ring the northern and western
79 shores of the City of San Francisco,
80 preserving a coastal greenbelt next to dense
81 urban neighborhoods. These lands would
82 continue to be major attractions to tourists
83 and central to the quality of life for local
84 citizens. They offer city dwellers places to
85 recreate, rejuvenate, and learn about the
86 fascinating natural and cultural history of the
87 region. Management of these lands and
88 marine/bay waters would continue to focus
89 on preserving natural, cultural, and scenic
90 resources and providing a variety of
91 recreational uses in the varied settings along
92 San Francisco Bay and the Pacific coast.

93
94 **Park Lands in San Mateo County:**
95 Stretching south along the San Mateo coast
96 to Rancho Corral de Tierra and inland to the
97 Phleger Estate, the southern park lands
98 feature a remarkable wealth of natural and
99 historic resources. These lands support an

1 abundance of plants and wildlife and tell the
2 story of the people who have shaped this
3 peninsula over many generations.

4
5 Park lands in San Mateo County serve a
6 large and diverse local population and
7 present many opportunities for visitors to
8 explore and appreciate these park lands.

9
10 Currently, the National Park Service
11 presence in San Mateo County is limited,
12 sites are not always well identified, and there
13 are few basic facilities to support access.

14 Management of park lands in San Mateo
15 County is guided by the authorizing
16 legislation for the park and the management
17 policies common to units of the national
18 park system. This management approach
19 would continue under the no-action
20 alternative, with the exception of Sweeney
21 Ridge—for which a general management
22 plan amendment was approved in 1985 to
23 provide specific management guidance—and
24 Mori Point—for which a detailed landscape
25 restoration plan was recently executed.

26
27 Site planning for enhancing visitor facilities,
28 such as the planning recently completed at
29 Mori Point, would continue.

30
31 The park would also continue to consult
32 with other agencies to achieve fundamental
33 park goals regarding the San Francisco
34 Public Utilities Commission Peninsula
35 Watershed, where the park holds scenic and
36 recreational easements.

37
38 **Alcatraz Island:** Under the no-action
39 alternative, the island would continue to be
40 managed to preserve historic and natural
41 resources, and provide public access to a
42 variety of settings and experiences where
43 appropriate and safe. The primary visitor
44 experience would be day use, beginning with
45 a ferry ride from San Francisco. The Alcatraz
46 Island experience would continue to be
47 centered on the federal penitentiary;
48 however, other periods of island history and
49 bird life would also be interpreted.
50 Scheduled evening tours of Alcatraz Island

51 would continue to provide visitors with this
52 unique opportunity.

53
54 The deterioration of buildings and
55 landscapes (accelerated by the harsh island
56 environment) and the protection of areas for
57 bird nesting habitat would continue to limit
58 visitor access to much of the island.
59 Rehabilitation of historic buildings and
60 landscaped areas would continue to be
61 somewhat piecemeal and subject to available
62 funding.

63
64 Many areas of Alcatraz Island would
65 continue to be closed during breeding
66 season to protect waterbird colonies from
67 human disturbance. In areas open to the
68 public, western gulls would continue to be
69 managed under an existing agreement with
70 the U.S. Fish and Wildlife Service in
71 accordance with the Migratory Bird Treaty
72 Act, through the use of bird exclusion
73 measures and other deterrents to protect
74 visitor health and safety. Education and
75 stewardship opportunities would inform
76 visitors about the importance of the island to
77 nesting birds and what the public can do to
78 help protect them.

79
80 **Muir Woods National Monument:** Under
81 the no-action alternative, Muir Woods
82 National Monument would continue to be
83 managed to protect the primeval redwood
84 forest in the larger Redwood Creek
85 watershed and to interpret the monument's
86 natural history, as well as the establishment
87 of the monument, which had a major role in
88 the early U.S. conservation movement.

89
90 Muir Woods National Monument would
91 remain a popular international destination
92 and ecological treasure, supporting a
93 diversity of flora and fauna, in addition to
94 *Sequoia sempervirens*, the old-growth
95 redwoods.

96
97 The park staff would continue to balance
98 preservation of the redwood ecosystem with
99 providing access to hundreds of thousands
100 of visitors annually. For many visitors, Muir
101 Woods National Monument would continue

1 to provide their initial experience with the
 2 national park system. Overall, management
 3 of the monument would continue to be
 4 guided by the 1980 General Management
 5 Plan. Key park objectives would include
 6 fostering a conservation ethic among
 7 visitors, preserving and restoring habitat for
 8 threatened and endangered species,
 9 supporting public transportation as a way to
 10 reduce congestion, and promoting a
 11 watershed perspective in land management
 12 that includes Mount Tamalpais State Park,
 13 two water districts, an organic farm,
 14 equestrian stables, and local communities.

15
 16 **Some Potential Impacts of the**
 17 **No-action Alternative**

- 18 ▪ Current conditions would continue
 19 to cause loss of habitat integrity;
 20 however, restoration efforts and
 21 educational activities would result in
 22 some beneficial impacts.
- 23 ▪ Continued piecemeal approach to
 24 preservation and maintenance of
 25 historic buildings and structures
 26 would result in long-term, minor to
 27 moderate, adverse impacts on those
 28 structures.
- 29 ▪ Continuation of current conditions
 30 would result in long-term, moderate,
 31 adverse impacts on park collections.
- 32 ▪ Continuation of existing
 33 opportunities would result in long-
 34 term, minor to moderate, beneficial
 35 impacts on visitor experience;
 36 however, minor to moderate, adverse
 37 impacts would continue from
 38 congestion, use conflicts, and limited
 39 access to some areas.
- 40 ▪ Existing transit service would have a
 41 long-term, minor to major, adverse
 42 impact on access to popular sites, and
 43 minor impacts on transportation in
 44 other areas.
- 45 ▪ Existing staffing levels would result
 46 in continued long-term, moderate,
 47 adverse impacts on park operations;
 48 volunteer programs would continue

- 49 to have beneficial impacts on
 50 operations.
- 51 ▪ Existing funding would result in
 52 long-term, major, adverse impacts on
 53 park facilities; existing facilities
 54 would result in long-term, moderate,
 55 adverse impacts on operations.

56
 57
 58 **Alternative 1: Connecting**
 59 **People with the Parks**

60 Alternative 1 is the NPS preferred alternative
 61 for park lands in Marin, San Francisco, and
 62 San Mateo counties. The preferred
 63 alternative for Alcatraz Island and Muir
 64 Woods National Monument is alternative 3.

65
 66 **Concept**

67 The emphasis of this alternative is to reach
 68 out and engage the community and other
 69 visitors in the enjoyment, understanding,
 70 and stewardship of park resources and
 71 values. Park management would focus on
 72 ways to attract and welcome people; connect
 73 people with the resources; and promote
 74 enjoyment, understanding, preservation, and
 75 health—all as ways to reinvigorate the
 76 human spirit. Visitor opportunities would be
 77 relevant to diverse populations now and in
 78 the future.

79
 80 **Goals**

81 **Visitor Experience.**

- 82 ▪ Actively seek opportunities to
 83 respond to the needs and interests of
 84 the diversity of visitors.
- 85 ▪ Encourage visitors to engage in a
 86 wide range of opportunities and
 87 experiences in a diversity of settings.
- 88 ▪ Enhance outreach and access to and
 89 within park lands and make them
 90 welcoming places to visit.
- 91 ▪ Foster the visitor’s deep personal
 92 connection to the park and discovery
 93

of the values and enjoyment of the natural and cultural environment.

- Encourage hands-on stewardship through visitor opportunities that promote personal health and responsibility.

Cultural Resources.

- Maximize adaptive reuse and rehabilitation stabilization and interpretation of cultural resources (structures, landscapes, archeological sites, ethnographic resources, and museum collections) to support visitor enjoyment, understanding, and community connections.
- Work with the public, park partners, local communities, historical organizations, and regional collaborators to steward, preserve, and protect cultural resources.
- Preserve and protect cultural resources so that visitors can connect with and appreciate these resources and their histories.

Natural Resources.

- Maintain the integrity and diversity of natural resources and systems and mitigate the effects of climate change and urban pressures.
- 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.
- Increase visitor understanding, awareness, and support for park resources through education and interpretive opportunities that include messages about the sensitivity of park resources, park regulations, and appropriate visitor behaviors.

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 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,

1 and healthy outdoor recreation, including
2 offering nature experiences to city children
3 and their families. Existing and new facilities,
4 including a state-of-the-art museum
5 collection facility, would support visitor
6 enjoyment, learning, and community-based
7 natural and cultural resource stewardship.
8 Recreational and stewardship opportunities
9 would promote healthy parks and healthy
10 communities. This alternative would engage
11 the community to revitalize coastal park
12 areas such as Ocean Beach, Fort Funston,
13 and Lands End, incorporating measures to
14 address sustainability and climate change.

15
16 Park managers would continue to improve
17 trails and trailheads throughout the San
18 Francisco park lands to make the park
19 accessible to the broadest array of visitors.
20 Sites would be connected to each other and
21 to communities by the trail system and the
22 city’s transit and multimodal access systems.

23
24 **Park Lands in San Mateo County**
25 **(Preferred Alternative):** Park lands and
26 ocean environments would be managed as
27 part of a vast network of protected lands and
28 waters, some recognized as part of the
29 UNESCO Golden Gate Biosphere Reserve.
30 Park managers would emphasize
31 connectivity, preservation, and restoration
32 of the area’s vital ecosystems through
33 collaborative partnerships with other land
34 management agencies. Strategic adjustments
35 to the park’s boundary would enhance the
36 long-term preservation of ecological values
37 and significant cultural resources.

38
39 This alternative would focus on the
40 importance of improving access and
41 community engagement in these newest
42 park lands. Key efforts would include
43 improving the visibility and identity of NPS
44 sites. Park trails would be improved to create
45 a sustainable system that provides
46 opportunities to enjoy park sites, connects
47 with local communities, and contributes to
48 an exceptional regional trail network.
49 Equestrian facilities would continue to have
50 an important role in recreation and
51 stewardship. A comprehensive trail plan

52 would be prepared to help achieve these
53 goals. Park managers would work with
54 county transit providers to improve transit
55 connections to local trailheads and east–west
56 transit between bayside communities and
57 State Route 1.

58
59 The addition of signs and trailheads would
60 help visitors find their way to various park
61 sites and help them gain an understanding of
62 the park’s diverse natural and cultural
63 resources. Equestrian needs would be
64 incorporated in trailhead and trail design.

65
66 There could be additional facilities that
67 welcome visitors to the park. This alternative
68 would promote visitor information and
69 orientation centers in Pacifica and in coastal
70 communities. These facilities could be
71 shared with San Mateo County Department
72 of Parks, California State Parks, Monterey
73 Bay National Marine Sanctuary, local
74 governments, and other organizations.

75
76 **Alcatraz Island:** Alcatraz Island would be
77 managed to provide an expanded variety of
78 settings and experiences that would connect
79 visitors to the greater breadth of the island’s
80 resources and history. The park would seek
81 to enrich the scenic, recreational, and
82 educational opportunities in the heart of San
83 Francisco Bay.

84
85 Visitors would have access to the majority of
86 the island’s historic structures and
87 landscapes to experience the layers of island
88 history and its natural resources and settings.
89 Many of the indoor and outdoor spaces
90 currently inaccessible to visitors would be
91 reopened to expand the range of available
92 activities.

93
94 All historic structures would be preserved—
95 most would be rehabilitated and adaptively
96 reused for visitor activities and park
97 operations. Food service, meeting and
98 program space, and overnight
99 accommodations (possibly including a
100 hostel or camping area) would be provided.

101

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

8
 9 **Muir Woods National Monument:** The
 10 park would offer visitors the opportunity to
 11 experience and enjoy the primeval forest
 12 ecosystem and understand the monument’s
 13 place in U.S. conservation history through a
 14 variety of enhanced programs, facilities, and
 15 trails that access the forest and connect local
 16 communities to the park and surrounding
 17 open space.

18
 19 While much of the present system of forest
 20 trails would be retained, some existing
 21 facilities and use areas, such as the entrance
 22 area and parking lots, would be modified or
 23 relocated to reduce ecosystem impacts and
 24 improve the park experience.

25
 26 The monument would continue to welcome
 27 a diversity of visitors and support a range of
 28 experiences, better serving as a gateway or
 29 stepping stone to understanding the national
 30 park system.

31
 32 An off-site welcome center for the shuttle
 33 system, including parking and visitor
 34 services, would be an important first point
 35 for orientation and a key to providing
 36 sustainable access to the monument.

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

41
 42 **Some Potential Impacts**
 43 **of Alternative 1**

- 44 ▪ Elimination of unneeded roads and
 45 removal of unneeded structures
 46 would result in long-term beneficial
 47 impacts on vegetation and wildlife;
 48 cultural resources could be adversely
 49 impacted; some construction
 50 activities would have short-term

51 adverse impacts; education and
 52 stewardship programs would result
 53 in long-term, minor to moderate,
 54 beneficial impacts both locally and
 55 parkwide.

- 56 ▪ Strengthening the integrity and
 57 adaptive use of historic structures
 58 would result in general overall long-
 59 term, beneficial impacts, although
 60 some localized loss of historic fabric
 61 would occur.
- 62 ▪ Establishing a curatorial and research
 63 facility would have a long-term,
 64 beneficial impact on park collections.
- 65 ▪ New facilities, increased diversity of
 66 opportunities, and purposeful effort
 67 to engage more diverse audiences
 68 would result in long-term, moderate,
 69 beneficial impacts on visitor services.
- 70 ▪ Improved access to park sites,
 71 increased transit services, and
 72 improved trails would result in long-
 73 term, minor to major, beneficial
 74 impacts on transportation.
- 75 ▪ An increase in park staffing would
 76 result in long-term, moderate,
 77 beneficial impacts on park
 78 operations.
- 79 ▪ Activities that address deferred
 80 maintenance issues and proposed
 81 changes to facilities would result in
 82 long-term, moderate, beneficial
 83 impacts on park operations.

84
 85
 86 **Alternative 2: Preserving and**
 87 **Enjoying Coastal Ecosystems**

88 **Concept**

89 The emphasis of this alternative is to
 90 preserve, enhance, and promote dynamic
 91 and interconnected coastal ecosystems in
 92 which marine resources are valued and
 93 prominently featured. Recreational and
 94 educational opportunities would allow
 95 visitors to learn about and enjoy the ocean
 96 and bay environments and gain a better

1 understanding of the region’s international
 2 significance and history. Facilities and other
 3 built infrastructure could be removed to
 4 reconnect fragmented habitats and to
 5 achieve other ecosystem goals.

6
 7 **Goals**

8 **Visitor Experience.**

- 9
- 10 ▪ Connect visitors with resources and
 11 the park through expanded and
 12 diverse science and stewardship
 13 programs that are focused on
 14 preservation and restoration of
 15 coastal and marine resources and
 16 address the implications of climate
 17 change.
- 18 ▪ Provide greater opportunities for
 19 visitors to explore wild areas and
 20 immerse themselves in nature.
- 21 ▪ Manage low-impact visitor use that
 22 enhances the qualities of solitude,
 23 quiet, and naturalness in sensitive
 24 natural resource areas and
 25 accommodate active recreational
 26 pursuits in other areas.
- 27 ▪ Increase visitor understanding,
 28 awareness, and support for coastal
 29 resources through participation in
 30 programs about human interaction
 31 with, and dependency on, natural
 32 resources.

33
 34 **Cultural Resources.**

- 35
- 36 ▪ Incorporate the history of
 37 conservation and the collections
 38 related to natural resources to raise
 39 awareness of ongoing efforts to
 40 conserve marine ecosystems.
- 41 ▪ In park interpretation and education
 42 programs, emphasize sites and stories
 43 connected to coastal resources,
 44 including shipwrecks, archeological
 45 sites, agricultural lands and uses,
 46 coastal defense, and lighthouses, so
 47 visitors can connect with those
 48 resources.

- 49 ▪ Maximize adaptive reuse and
 50 rehabilitation of cultural resources to
 51 support visitor enjoyment,
 52 understanding, and community
 53 connections.
- 54 ▪ Work with interested groups and
 55 populations to preserve and protect
 56 cultural resources.
- 57 ▪ Preserve and protect cultural
 58 resources so that visitors can connect
 59 with and appreciate these resources
 60 and their history.

61
 62 **Natural Resources.**

- 63
- 64 ▪ Reconnect fragmented habitat within
 65 and adjacent to the park to
 66 strengthen the integrity and
 67 resiliency of the coastal ecosystem to
 68 respond to climate change and urban
 69 pressures.
- 70 ▪ Optimize recovery of special status
 71 species and survival of wide-ranging
 72 wildlife.
- 73 ▪ Restore natural processes and/or
 74 allow these processes to evolve
 75 unimpeded to the greatest degree
 76 feasible.
- 77 ▪ Promote partnerships to help the
 78 park become a center for innovative
 79 coastal science, stewardship, and
 80 learning.

81
 82 **Key Elements**

83
 84 **Park Land in Marin County:** In this
 85 alternative, management would strive to
 86 further preserve and restore the dynamic,
 87 interconnected coastal ecosystems at the
 88 core of protected lands through
 89 collaborative regional partnerships. Partners
 90 would work on common goals to sustain the
 91 area’s native biodiversity, reconnect
 92 fragmented habitats and migration
 93 corridors, minimize the impact of invasive
 94 species, manage for changing fire regimes,
 95 protect threatened and endangered species,
 96 and restore naturally functioning

1 ecosystems. Proactive management would
2 work to build resiliency to climate change
3 into the natural environment.

4
5 Marin County park lands and waters would
6 be highlighted as living laboratories,
7 engaging visitors in participatory science,
8 education, and stewardship to nurture
9 personal connections with nature and
10 inspire advocacy.

11
12 Opportunities to explore trails and beaches
13 would further highlight the coastal natural
14 and cultural resources of the park. Cultural
15 resource sites and history would emphasize
16 human occupation of the coastal
17 environment, as reflected in lighthouses,
18 coastal defense structures, archeological
19 sites, and agricultural land uses.

20
21 **Park Lands in San Francisco:** While
22 welcoming visitors to the park, this
23 alternative would focus on engaging visitors,
24 local communities, and partners in
25 participatory science, education, and
26 stewardship focused on the coastal
27 environment.

28
29 Park management, in collaboration with
30 community partners, would demonstrate
31 leadership in proactive adaptation and
32 management in the face of climate change
33 and accelerated sea level rise. Interpretive
34 messages would reach visitors enjoying the
35 coastal environment along the San Francisco
36 Bay Trail and the California Coastal Trail.
37 Cultural resource sites and stories would
38 also highlight the human connection to the
39 coastal environment; sites would include
40 information about archeological sites,
41 European exploration, maritime history, and
42 coastal defense.

43
44 **Park Lands in San Mateo County:** As in the
45 other alternatives, park lands and ocean
46 environments in San Mateo County would
47 be managed as part of a vast network of
48 protected lands and waters. In this
49 alternative, however, park managers would
50 emphasize work to preserve and restore
51 these interconnected coastal ecosystems

52 through collaborative partnerships with
53 other land management agencies in the
54 region. Together, these groups would work
55 to sustain the area's native biodiversity,
56 reconnect fragmented habitats and
57 migration corridors, minimize the impact of
58 invasive species, manage for changing fire
59 regimes, and restore naturally functioning
60 ecosystems. Proactive management would
61 build into the environment greater resiliency
62 to climate change.

63
64 Park lands in San Mateo County provide an
65 extensive wildlife corridor that includes
66 habitat for threatened and endangered
67 species. These lands would serve as living
68 laboratories, engaging visitors in
69 participatory science, education, and
70 stewardship—activities that nurture
71 personal connections with nature and
72 inspire advocacy.

73
74 Exploration along the vast network of trails
75 would further highlight the park's diverse
76 ecosystems and rich cultural resources.
77 Cultural resource sites and history—
78 archeological sites, European exploration,
79 agricultural land uses, coastal defense sites,
80 and the lighthouse—would emphasize
81 human occupation of the coastal environ-
82 ment. Most cultural resources would be
83 stabilized if not in conflict with natural
84 resource restoration.

85
86 Land protection strategies would seek to
87 reconnect fragmented endangered species
88 habitat and strive to remove features that
89 impede movement or migration of species,
90 or disrupt ecological functions.

91
92 **Alcatraz Island:** The island's inhospitable
93 and isolated—yet strategic—location at the
94 entry to the Golden Gate and San Francisco
95 Bay would be highlighted. The island's past
96 and present significance to colonial nesting
97 birds and its layers of human history—the
98 Civil War fortress, the lighthouse, the prison
99 and penitentiary—all derive from its position
100 in the bay.

101

1 The island’s changing natural and built
2 landscape would continue to evolve, further
3 enhancing habitat for nesting birds. Only
4 those buildings and features necessary to
5 maintain the island’s national historic
6 landmark status would be preserved; the
7 natural elements would reclaim other
8 features as part of the wilding of Alcatraz
9 Island.

10
11 Visitors would be immersed in opportunities
12 that showcase the island’s isolation, its
13 natural resources, and all the layers of
14 history that can be found at the Main Prison
15 Building. Visitor experiences would include
16 outdoor learning and natural and cultural
17 resource stewardship programming
18 delivered in partnership with Bay Area
19 nonprofits.

20
21 While access would be managed to protect
22 sensitive resources, visitors would be able to
23 more freely explore, discover, and
24 experience nature reclaiming Alcatraz
25 Island, and understand the role the island
26 plays in the broader marine ecosystem
27 (reaching from San Francisco Bay to the
28 Farallon Islands) as a result of its strategic
29 location.

30
31 **Muir Woods National Monument:** Park
32 management would seek to restore the
33 primeval character of the old-growth
34 redwood forest. Visitors would be immersed
35 in the forest and could experience the
36 natural sounds, smells, light, and darkness of
37 the forest. The experience would be more
38 primitive than it is today; the majority of the
39 built environment—buildings, parking lots,
40 paved trails—would be removed, and all
41 visitors would arrive by shuttle, bicycle, or
42 on foot. The landscape would be “messier”
43 than it is today, but the forest would
44 function more naturally: Redwood Creek
45 would be allowed to meander across the
46 floodplain, flooding the valley bottom,
47 uprooting trees, and opening gaps in the
48 canopy.

49
50 Where not in conflict with natural resource
51 goals, historic trails and structures could be

52 retained or adapted for contemporary uses.
53 A light-on-the-land, accessible trail would
54 reach into the heart of the forest. Visitors
55 would engage in participatory stewardship,
56 education, and science that further the
57 preservation of the forest and all its parts—
58 the creek, salmon, spotted owls, bats, natural
59 sounds—as part of the continuing history
60 and evolution of land preservation and the
61 conservation movement.

62
63 An off-site welcome center for the shuttle
64 system including parking and visitor services
65 would be an important first point for
66 orientation and a key to providing
67 sustainable access to the monument.

68
69 Restoration of the Redwood Creek
70 watershed would be accelerated in
71 collaboration with other land managers.
72 Actions would include the removal of
73 unneeded management roads, stabilization
74 of sediment sources, and removal of invasive
75 vegetation, as well as removal of streambank
76 stabilization structures in Redwood Creek,
77 removal and possible relocation of some
78 pedestrian bridges, and restoration of
79 natural floodplain function.

80
81 ***Some Potential Impacts***
82 ***of Alternative 2***

83 ▪ Elimination of unneeded roads and
84 removal of unneeded structures
85 would result in long-term beneficial
86 impacts on vegetation and wildlife;
87 cultural resources could be adversely
88 impacted; some construction and
89 restoration activities (such as the
90 removal of structures) would have
91 short-term adverse impacts;
92 education and stewardship programs
93 would result in long-term, minor-to
94 moderate, beneficial impacts both
95 locally and parkwide.

96 ▪ Actions could result in impacts on
97 historic structures that range from
98 long term and beneficial (because of
99 improved treatment) to permanent
100 and adverse because of adaptive use

1 and potential damage through coastal
2 erosion.

- 3 ■ This alternative would result in both
4 beneficial and adverse, long-term,
5 moderate impacts on the cultural
6 landscape at Alcatraz Island.
- 7 ■ Establishing a curatorial and research
8 facility would have a long-term,
9 beneficial impact on park collections.
- 10 ■ Regulation and restrictions on some
11 visitor activities and access to some
12 areas might have a long-term,
13 moderate, adverse impact on the
14 visitor experience. On Alcatraz
15 Island, increased conflicts between
16 visitors and an expanding bird
17 population could result in long-term,
18 moderate, adverse impacts on the
19 visitor experience. At Muir Woods,
20 exclusive access by shuttle could
21 reduce the number of visitors to the
22 monument.
- 23 ■ A reduction in parking at Stinson
24 Beach could have a long-term, major,
25 adverse impact or a long-term,
26 moderate, beneficial impact on
27 transportation, depending on
28 concurrent efforts.
- 29 ■ An increase in park staffing would
30 result in long-term, moderate,
31 beneficial impacts on park
32 operations.
- 33 ■ Activities that address deferred
34 maintenance issues would result in
35 long-term, moderate, beneficial
36 impacts on park operations; difficulty
37 for public safety personnel to reach
38 more primitive areas would result in
39 long-term, minor, adverse impacts on
40 operations.

41
42
43 **Alternative 3: Focusing on**
44 **National Treasures**

45 Alternative 3 is the NPS preferred alternative
46 for Alcatraz Island and Muir Woods
47 National Monument. The preferred

48 alternative for park lands in Marin, San
49 Francisco, and San Mateo counties is
50 alternative 1.

51
52 **Concept**

53 The emphasis of this alternative is to focus
54 on, or showcase, the park’s nationally
55 important natural and cultural resources.
56 The fundamental resources of each
57 showcased site would be managed at the
58 highest level of preservation to protect the
59 resources in perpetuity and to promote
60 appreciation, understanding, and enjoyment
61 of those resources. Visitors would have the
62 opportunity to explore the wide variety of
63 experiences that are associated with many
64 different types of national parks—all in
65 Golden Gate National Recreation Area and
66 Muir Woods National Monument. All other
67 resources would be managed to complement
68 the nationally significant resources and the
69 associated visitor experience.

70
71 **Goals**

72 **Visitor Experience.**

- 73
- 74 ■ Provide visitors with opportunities to
75 explore, learn, and enjoy the park’s
76 unique resources and history.
- 77 ■ Allow the park’s distinctive resources
78 and associated history to shape
79 recreational opportunities.
- 80 ■ Emphasize active public participation
81 in stewardship programs at
82 showcased sites.
- 83 ■ Provide visitors with opportunities
84 for understanding and enjoying
85 national park experiences.

86
87 **Cultural Resources.**

- 88
- 89 ■ Emphasize the preservation of
90 fundamental cultural resources that
91 contribute to the national
92 significance of the park, including
93 national historic landmarks. Manage
94 all other resources to complement

1 the significant resources and visitor
2 experience.

- 3 ■ Tie associated cultural resources,
4 museum collections, and stories to
5 showcased sites.
- 6 ■ Preserve and protect cultural
7 resources to highlight the
8 interpretive and educational values
9 and provide, wherever possible,
10 direct contact with the resources.

11 **Natural Resources.**

- 12 ■ Emphasize the preservation of
13 fundamental natural resources that
14 contribute to the significance of each
15 park unit. Manage all other resources
16 to complement distinctive resources
17 and experiences.
- 18 ■ Protect or restore the integrity of
19 fundamental natural resources and
20 processes that support the
21 significance of each park unit.
- 22 ■ Manage distinctive natural resources
23 to ensure their ecological integrity
24 while providing opportunities to
25 engage visitors in hands-on
26 stewardship and exploration.

27 **Key Elements**

28 **Park Lands in Marin County:** The park
29 would continue to be a welcoming place
30 with a vast network of open space that
31 protects natural and cultural resources and
32 offers many forms of recreation in a setting
33 of national importance. The park would
34 highlight several nationally important sites,
35 including Muir Woods, the Golden Gate,
36 and the historic Army posts on Marin
37 Headlands.

38 Although this alternative shares many
39 characteristics of alternatives 1 and 2, the
40 management of Marin Headlands historic
41 core would be very different. Sheltering the
42 best-preserved collection of seacoast
43 fortifications in the country, the Marin
44 Headlands tell the story of two centuries of

45 evolving weapons technology and the
46 nation’s unwavering efforts to protect the
47 Golden Gate. As a result, this alternative
48 would focus on immersing visitors in its
49 compelling sites and history, actively using
50 and interpreting preserved structures and
51 landscapes ranging from Battery Townsley
52 to the Nike Missile Launch Site.

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

57 **Park Lands in San Francisco:** The focus
58 would be on the collection of historic sites
59 and the dynamic coastal landscape that
60 defines San Francisco’s coastline from Fort
61 Mason to Fort Funston. Visitors would be
62 welcomed to the park, with a focus on the
63 nationally important sites that are connected
64 by the San Francisco Bay Trail and
65 California Coastal Trail, thus creating a
66 scenic and historic corridor.

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

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

81 **Park Lands in San Mateo County:** As in the
82 other alternatives, park lands and ocean
83 environments in San Mateo County would
84 be managed as part of a vast network of
85 protected lands and waters. This alternative,
86 however, would highlight how this “quilt” of
87 undeveloped land has been protected by
88 numerous organizations. Over the past
89 decades, the National Park Service, local
90 governments, private land trusts, and

1 dedicated individuals have collaborated to
2 acquire and preserve this “wilderness” next
3 door.

4
5 Today, these lands are a national treasure of
6 recreational, natural, and cultural resources.
7 Several nationally significant historic sites
8 are in San Mateo County, along with habitat
9 for numerous endangered species. Many of
10 these important resources are managed by
11 other agencies on nearby sites. This
12 alternative would focus on protecting
13 resources in the park while developing
14 recreational and interpretive connections
15 between sites managed by other land
16 managers.

17
18 Park management would also look beyond
19 the immediate park lands to explore the
20 potential to stimulate regional landscape
21 management and enhance heritage tourism.
22 To do so, park managers would work with
23 communities between Pacifica and Santa
24 Cruz to support strategies such as special
25 designations. The highway is one of the
26 distinguishing and unifying features of the
27 rural coast that is characterized by forested
28 hills, small-scale agriculture, and seaside
29 communities.

30
31 **Alcatraz Island (Preferred Alternative):**
32 This is the preferred alternative for Alcatraz
33 Island. This alternative would immerse
34 visitors extensively in all of Alcatraz Island’s
35 historic periods—the Civil War military
36 fortifications and prison, the federal
37 penitentiary, and American Indian
38 occupation. Alcatraz Island’s history would
39 be interpreted, first and foremost with
40 tangible and accessible historic resources,
41 including the structures, cultural landscape,
42 archeological sites, and museum collection.
43 These resources contribute to the island’s
44 national historic landmark status and its
45 recognition as an international icon.

46
47 The visitor’s immersion in Alcatraz Island
48 history would begin from an embarkation
49 site in San Francisco. The primary
50 embarkation site would remain on San
51 Francisco’s northern waterfront where

52 visitor services, including education about
53 Alcatraz and orientation to Golden Gate
54 National Recreation Area, could be
55 enhanced. Visitors would ascend to the
56 Main Prison Building through a landscape of
57 preserved historic structures and features.
58 While the primary visitor experience would
59 focus on the federal penitentiary, visitors
60 also would be exposed to other periods of
61 history, literally and programmatically.

62
63 This alternative would require evaluator
64 excavations, extensive stabilization,
65 rehabilitation, and restoration of historic
66 buildings and small-scale landscape features,
67 and archeological sites, as well as creative
68 interpretative and educational programs and
69 visitor services. Park managers would create
70 additional opportunities for cultural
71 resource stewardship programs.

72
73 Visitors would have opportunities to learn
74 about the natural history of San Francisco
75 Bay. The colonial waterbird habitat that has
76 grown in regional importance would be
77 protected, enhanced, and interpreted.
78 Visitors could explore the island perimeter,
79 managed to protect sensitive bird
80 populations while providing opportunities
81 to observe them or participate in steward-
82 ship activities. The large population of gulls
83 would be managed to reduce conflicts in
84 primary visitor use areas like the Parade
85 Ground.

86
87 **Muir Woods National Monument**
88 **(Preferred Alternative):** This is the
89 preferred alternative for Muir Woods
90 National Monument. Alternative 3, this
91 alternative, would present the monument as
92 a contemplative outdoor museum where
93 visitors would discover the primeval
94 redwood forest and the monument’s place in
95 the early U.S. conservation movement.

96
97 The system of trails would continue to lead
98 visitors into the forest to feel, see, and learn,
99 in different ways, about the essential
100 qualities of the forest. These qualities
101 include its giant trees, the ecology of
102 Redwood Creek, and William Kent’s

1	generous donation of the forest to the	51	
2	American public. Rather than continue to	52	
3	concentrate visitation along a main trail,	53	
4	visitors would be encouraged to take	54	
5	different thematic interpretive trails, some	55	
6	new and some existing, to experience the	56	
7	different parts of the park. Other trails	57	
8	would be enhanced to better link the	58	
9	monument with the surrounding Mount	59	
10	Tamalpais State Park.		
11		60	
12	Some existing facilities and use areas, such as	61	
13	the entrance area and parking lots, would be	62	
14	modified or relocated to reduce their	63	
15	impacts on the ecosystem and improve the	64	
16	park experience.	65	
17		66	
18	To enhance visitor experience and address	67	
19	congestion problems, permanent shuttle	68	
20	service to Muir Woods National Monument	69	
21	would be provided during peak periods	70	
22	throughout the year. The existing transit hub	71	
23	in the vicinity of State Route 1 and Highway	72	
24	101 could continue to serve as a shuttle	73	
25	intercept facility.	74	
26		75	
27	Visitors would continue to be drawn to the	76	
28	monument to see the old-growth redwoods,	77	
29	but they would leave with a richer	78	
30	understanding of this precious ecosystem	79	
31	and how the saving of these few acres helped	80	
32	spark conservation across the United States.	81	
33	They would be motivated to return and learn	82	
34	more of the story. In addition, a	83	
35	comprehensive user capacity strategy would	84	
36	help the park monitor and adaptively	85	
37	manage crowding, user conflicts, and	86	
38	impacts on resources.	87	
39			
40	The National Park Service would continue	88	
41	to collaborate with the public and other land	89	
42	managers to address watershed restoration,	90	
43	stewardship, and recreation.	91	
44		92	
45	<i>Some Potential Impacts of</i>	93	
46	<i>Alternative 3</i>	94	
47	▪ Because nationally significant	95	
48	buildings would be rehabilitated and	96	
49	showcased, this alternative would	97	
50	have comprehensive, long-term,	98	
	beneficial impacts on 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 on cultural		
	landscapes.		
	▪ Elimination of unneeded roads and		
	removal of unneeded structures		
	would result in long-term beneficial		
	impacts on vegetation and wildlife;		
	cultural resources could be adversely		
	impacted— 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.		
	▪ Management of sensitive coastal		
	resource areas around Alcatraz		
	Island may require removal of		
	contributing historical archeological		
	resources; beneficial to the coastal		
	natural resources, but an adverse		
	impact to historic properties.		
	▪ Evaluatory excavations, stabilization,		
	and preservation of archeological		
	sites and structures would provide		
	conservation, stewardship, and		
	interpretive benefits previously		
	unrealized for these properties and		
	for the visitor experience; this would		
	result in a long-term, beneficial		
	impact to cultural resources.		
	▪ 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,		

1 and help preserve fundamental
 2 resources would result in long-term,
 3 moderate, beneficial impacts on
 4 visitor experience; some changes to
 5 existing opportunities would result in
 6 long-term, minor to moderate,
 7 adverse impacts on those who use
 8 those areas now.

- 9 ■ Improving the main ferry
 10 embarkation facility would have a
 11 long-term, moderate, beneficial
 12 impact on transportation to Alcatraz
 13 Island; trail expansion and
 14 improvement on the island would
 15 also have a long-term, beneficial
 16 impact.
- 17 ■ An increase in park staffing would
 18 result in long-term, moderate,
 19 beneficial impacts on park
 20 operations.
- 21 ■ Activities that address deferred
 22 maintenance issues and changes to
 23 facilities would result in long-term,
 24 moderate, beneficial impacts on park
 25 operations.

26
 27
 28 **ESTIMATED COSTS OF**
 29 **THE ALTERNATIVES**

30 The costs of the proposals within each
 31 alternative are summarized in the following
 32 table. The last column, “Total, Preferred
 33 Alternative,” represents the costs associated
 34 with implementation of alternative 3—the
 35 preferred alternative—for Alcatraz Island
 36 and Muir Woods National Monument and
 37 alternative 1, the preferred alternative, for
 38 park lands in Marin, San Francisco, and San

39 Mateo counties, as well as the costs common
 40 to all alternatives.

41
 42 The alternatives describe the maximum
 43 potential capital improvements; lesser
 44 improvements may be implemented, or
 45 constructed in phases if necessary. The
 46 implementation of the approved plan will
 47 depend on future funding. The approval of
 48 this plan does not guarantee that the funding
 49 and staffing needed to implement the plan
 50 will be forthcoming. Full implementation of
 51 the actions in the approved general manage-
 52 ment plan could be many years in the future.
 53 Additionally, some of the future long-term
 54 funding needed to implement the various
 55 actions in the alternatives is anticipated to
 56 come from nonfederal partners, consistent
 57 with current practices of the park.
 58

59 Following distribution of the *Final General*
 60 *Management Plan / Environmental Impact*
 61 *Statement* and a 30-day no-action period, a
 62 record of decision approving a final plan will
 63 be signed by the National Park Service,
 64 Pacific West Regional Director. The record
 65 of decision will document the selection of an
 66 alternative for implementation. With the
 67 signing of the record of decision, the plan
 68 can then be implemented.

69
 70 Once the planning process is completed, the
 71 selected alternative will become the new
 72 management plan for the park and will be
 73 implemented over the next 20 years. It is
 74 important to note that many of the actions in
 75 the selected alternative will require more
 76 detailed study and implementation planning.
 77

ES-1. 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 ¹	\$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 ²)	334 (+0)	380 (+46)	369 (+35)	377 (+43)	380 (+46)
One-time Capital Costs³					
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	\$49,710,000	\$50,250,000	\$78,210,000	\$49,710,000
Muir Woods National Monument	\$920,000	\$15,900,000	\$16,870,000	\$15,560,000	\$15,560,000
Common to All Action Alternatives	\$0	\$33,200,000	\$33,200,000	\$33,200,000	\$33,200,000
Total One-time Capital Costs ⁴	\$10,460,000	\$160,000,000	\$137,760,000	\$181,350,000	\$152,850,000

All costs in 2009 dollars; Acquisition costs for proposed boundary adjustments are not included in this presentation of costs.

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 in contrast to costs for other alternatives that include all major projects forecast over the next 20 years.

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.

ES-2. ESSENTIAL/PRIORITY* ONE-TIME CAPITAL COSTS FOR THE PREFERRED ALTERNATIVE

	Facility Rehabilitation	Historic Preservation	Natural Resource Restoration	Facility Removal	New Construction	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	\$4,220,000	\$500,000	\$980,000	\$25,630,000
Muir Woods National Monument	\$9,150,000	\$340,000	\$4,700,000	\$720,000	\$0	\$14,910,000
Common to All Action Alternatives	\$0	\$14,740,000	\$0	\$0	\$0	\$14,740,000
Total One-time Capital Cost	\$20,650,000	\$61,810,000	\$8,920,000	\$1,220,000	\$980,000	\$93,580,000

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

ES-3. 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	\$11,730,000	\$0	\$0	\$3,370,000	\$24,080,000
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	\$30,290,000	\$0	\$0	\$20,000,000	\$59,270,000

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

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INTRODUCTION

1 Over 30 years ago, the National Park Service
2 (NPS) adopted a plan outlining the future of
3 Golden Gate National Recreation Area, then
4 a new and different park that brought the
5 national park system to a large urban area.
6 Because of the size and diversity of the San
7 Francisco Bay Area community and the
8 National Park Service commitment to a
9 pioneering public involvement process, it
10 took five years to prepare the plan. This
11 diligence paid off and the final plan won the
12 unanimous support of the community. This
13 plan, along with several amendments, has
14 firmly guided the preservation and
15 enhancement of Golden Gate National
16 Recreation Area for three decades.
17
18 It is not unusual for many long-range plans
19 to just sit on the shelf and gather dust—
20 usually as a result of inadequate funding to
21 implement the dreams they offer, but also
22 because of changing conditions and fading
23 public support. When the future of the
24 Presidio's Crissy Field was being discussed
25 early in the planning process, one member of
26 the park's advisory commission confided
27 that the National Park Service would never
28 get the funds to improve it, especially
29 considering demolition and toxic cleanup
30 costs. Today Crissy Field stands as an
31 international standard for waterfront
32 restoration and is a top tourist destination.
33
34 Success stories like Crissy Field happen
35 because of the appeal and popularity of the
36 park resources, enhanced by the efforts of
37 the Golden Gate National Parks
38 Conservancy and the resultant financial
39 support of generous members of the
40 community.
41
42 When considering the transformational
43 expectations offered by the 1980 General
44 Management Plan, it has been a remarkable
45 success. In addition to Crissy Field, the
46 visions for Alcatraz Island, Fort Mason, Cliff

47 House, Fort Baker, and much of the Marin
48 Headlands have been achieved.
49
50 Today, Golden Gate National Recreation
51 Area constitutes one of the largest urban
52 national parks in the world, extending north
53 of the Golden Gate Bridge to Tomales Bay in
54 Marin County and south to Half Moon Bay
55 in San Mateo County. These lands are
56 coastal preserves that encompass many miles
57 of bay and ocean shoreline.
58
59 The park has an abundance of historical and
60 cultural assets, including sites such as early
61 fortifications on Alcatraz Island, Forts
62 Cronkhite and Barry in the Marin
63 Headlands, Fort Mason, Fort Point, and the
64 Presidio of San Francisco. These sites
65 comprise a variety of archeological
66 resources, military batteries, and other
67 historic structures that present a rich history.
68 Chronicles of American Indian settlements,
69 the frontier of the Spanish Empire, the
70 Mexican Republic, evolution of U.S. coastal
71 fortifications, maritime history, 19th century
72 and early 20th century agriculture and
73 ranching, the U.S. Army in World War I and
74 World War II, the California Gold Rush,
75 Buffalo Soldiers, and the growth of San
76 Francisco are told in the settings in which
77 they occurred.
78
79 Golden Gate National Recreation Area is
80 also rich in natural resources. The park
81 includes 19 types of ecosystems in numerous
82 distinct watersheds and is home to over
83 1,200 known plant and animal species. The
84 park provides habitat for many sensitive,
85 rare, threatened, or endangered species,
86 including the mission blue butterfly,
87 northern spotted owl, and California red-
88 legged frog. Coho salmon and steelhead
89 trout inhabit the clean waters of Redwood
90 Creek as it flows through Muir Woods
91 National Monument.
92

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

8
9 Each year, park visitors contribute hundreds
10 of millions of dollars to the Bay Area
11 economy. This money directly sustains the
12 revenue stream and jobs at hotels,
13 restaurants, and stores that serve park
14 visitors. Economic modeling indicates that
15 in 2010, the park's visitors spent \$260 million
16 in the local economy and supported 1,500
17 local jobs (Stynes 2011).

18
19 In looking back at the 1980 General
20 Management Plan and where the park is
21 today, there appears to be only one major
22 goal yet to be accomplished—the ambitious
23 transportation proposals contained in the
24 document. Lack of funding and
25 jurisdictional issues have hindered their
26 accomplishment. However, one of the
27 principal goals of this element of the plan
28 was to provide access to the park for under-
29 represented populations—other strategies
30 have apparently made progress in reaching
31 that goal.

32
33 General observations indicate that
34 increasing numbers of young people—many
35 of them minorities—have been visiting the
36 park. It can be safely assumed that this
37 apparent trend is strengthened by the many
38 educational and volunteer programs
39 managed by the park and park partners.

40
41 It is our goal to continue this trend. Golden
42 Gate National Recreation Area and Muir
43 Woods National Monument are in one of
44 the most demographically diverse regions in

45 the United States. In addition, demographic
46 trends forecast a dramatic increase in the
47 diversity of the statewide population and in
48 the number of residents who are less than 18
49 years of age. As a result, the park is uniquely
50 situated to reconnect people with the
51 national parks, with a goal of reaching a 21st
52 century audience—more diverse and
53 younger than today's national park visitor—
54 and sustaining their engagement.

55
56 The impacts of Golden Gate NRA are not
57 contained solely within its borders. The park
58 plays a large role in contributing to the
59 quality of life of Bay Area residents by
60 providing open space as well as recreational
61 opportunities and community outreach,
62 education, and resource stewardship
63 programs. In terms of economics, the park
64 has the potential to generate economic
65 activity in a variety of ways which benefit the
66 gateway communities in the three adjacent
67 counties.

68
69 Even before the 1980 General Management
70 Plan was approved, the park was growing.
71 Legislation for a boundary expansion was
72 passed by Congress in 1978, and since then
73 various acts of Congress have added many
74 additional acres to the park. Research and
75 management activities have revealed new
76 resource values, both cultural and natural.
77 Visitation has increased and new activities
78 have put unanticipated pressures on park
79 resources. In short, today's park is vastly
80 different from the one covered in the 1980
81 General Management Plan. The first plan
82 served to shape a new park and reach a
83 consensus on the definition of its identity.
84 This document will serve to fine tune and
85 expand the vision for an already mature
86 national park and will shape and define new
87 areas being added to the park.

PURPOSE AND NEED

1 The purpose of this general management
2 plan (GMP) is to guide planning and
3 decision making at Golden Gate National
4 Recreation Area and Muir Woods National
5 Monument for the next 20 years. The first
6 general management plan, completed in
7 1980, is now more than 30 years old. Since
8 the completion of that first plan, the issues,
9 opportunities, and challenges associated
10 with the park and monument have
11 significantly changed. In addition, park
12 managers have had 30 years to better
13 understand the natural and cultural
14 resources of the park and monument and the
15 changing needs of park visitors.

16
17 This new *General Management Plan /*
18 *Environmental Impact Statement (GMP/EIS)*
19 will serve as a foundation and framework for
20 the management of these park lands. The
21 plan articulates the desired future conditions
22 for park resources and visitor experience
23 that will best fulfill the legislative and
24 presidential mandates that established these
25 park units as part of the national park
26 system.

27
28 This plan has been developed by an
29 interdisciplinary team in consultation with
30 NPS offices; park partners; tribal, federal,
31 state, and local agencies; and other
32 interested parties. There has been
33 substantial input and participation from the
34 general public. These public involvement
35 and consultation efforts helped to ensure
36 that the decisions made through this
37 planning process are widely supported and
38 sustainable over time. A completed general
39 management plan represents an agreement
40 with the citizens of the United States about
41 how these lands and facilities will be
42 managed. The plan will be a blueprint for the
43 future.

44
45 The “Planning Issues” section of this general
46 management plan provides details of issues,

47 opportunities and challenges. Generally, the
48 overall need for a new general management
49 plan has arisen because of the following:

- 50
51 ▪ The park has significantly expanded
52 in size and includes many new lands
53 in San Mateo County. This planning
54 process is based on a comprehensive
55 look at the park as a whole rather
56 than its individual pieces. This
57 comprehensive parkwide approach
58 will help ensure that management of
59 the natural and cultural resources
60 and visitor experience are consistent
61 across all park areas.
- 62 ▪ There is an increased public demand
63 for access to and use of open spaces
64 within the ever-growing San
65 Francisco Bay region (Bay Area). The
66 general management plan provides a
67 regional collaborative approach to
68 open space preservation.
- 69 ▪ The changing demographics in the
70 Bay Area are bringing notable shifts
71 in park visitation, uses, and trends.
72 The general management plan
73 provides desired conditions that will
74 guide the decision making needed to
75 manage the anticipated increase in
76 visitation.
- 77 ▪ Through research and park
78 management over the years the park
79 staff has gathered a considerable
80 amount of new information and
81 knowledge regarding resources and
82 visitor use. This new awareness is
83 incorporated into the desired
84 conditions, proposed management
85 actions, and policies of this general
86 management plan.
- 87 ▪ In recent years, climate change has
88 become better understood and its
89 effects more evident on both
90 ecological systems and cultural
91 resources. The general management

1 plan looks at the potential impacts of
2 climate change to park operations
3 and visitor use and identifies the
4 management actions necessary to
5 guide efforts to minimize the park’s
6 carbon footprint.

- 7 ■ Visitor access to the park continues
8 to evolve as the local transportation
9 infrastructure changes. The strategies
10 that were identified in 1980 continue
11 to be explored; new ideas and
12 techniques are also identified to help
13 address sustainable options for park
14 access and strategies to reduce traffic
15 congestion around and within the
16 park.
- 17 ■ To comply with federal law, the plan
18 specifies the types and intensities of
19 projected development, including
20 anticipated costs. This is important,

21 as the availability of federal funds
22 may be limited over time.

23

24 This general management plan addresses
25 these overall issues and the detailed issues
26 identified in the “Planning Issues” section;
27 the alternatives suggest ways to address
28 these issues over the next 20 years.

29

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

GUIDING PRINCIPLES FOR PARK MANAGEMENT

1 In addition to the many laws, policies, and
2 directives that govern management of all
3 units of the national park system, the
4 leadership at Golden Gate National
5 Recreation Area and Muir Woods National
6 Monument has highlighted some of the
7 principles that are most deeply rooted and
8 distinctive at this park. These originate from
9 the 1916 Organic Act, which established the
10 National Park Service to “...*promote and*
11 *regulate the use of the Federal areas known as*
12 *national parks, monuments, and*
13 *reservations...by such means and measures as*
14 *to... conserve the scenery and the natural and*
15 *historic objects and the wild life therein and to*
16 *provide for the enjoyment of the same in such*
17 *manner and by such means as will leave them*
18 *unimpaired for the enjoyment of future*
19 *generations.”*

20

21

22 **SUSTAINABILITY**

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

33

34

35 **COMMUNITY-BASED STEWARDSHIP**

36 We are committed to ongoing involvement
37 of individuals and organizations in
38 understanding, caring for, and preserving
39 the park’s natural habitats, historic places,
40 and trails. This community stewardship
41 brings the commitment to preserve our
42 common heritage and public lands—
43 national treasures that can best be sustained
44 by the efforts of many.

45 **CIVIC ENGAGEMENT**

46 We are dedicated to ongoing, dynamic
47 conversations about the contemporary
48 relevance of park resources. We will also
49 provide opportunities for meaningful
50 involvement to promote better
51 understanding and communication, discuss
52 concerns, and express values and
53 preferences when park decisions and
54 policies are being developed and
55 implemented.

56

57

58 **PARTNERSHIPS**

59 We will continue to build on the legacy of
60 the many partnerships that have enhanced
61 our ability to protect resources and serve the
62 public since the park was established.
63 Through mutual collaboration, shared
64 values, and learning, these partnerships have
65 created outcomes beyond any one
66 organization’s individual capacity.
67 Partnerships will continue to be an
68 important way to accomplish the park’s
69 mission and build a community of
70 stewardship.

71

72

73 **REGIONAL COLLABORATION**

74 In working to preserve our park’s resources
75 unimpaired for future generations, we will
76 establish and maintain cooperative
77 relationships with managers of adjacent
78 public lands and watersheds; tribal, state,
79 and local governments; community
80 organizations; and private landowners. We
81 will collaborate with others to ensure that
82 watersheds, ecosystems, historic properties,
83 prehistoric sites, viewsheds, and trail and
84 transportation systems that extend beyond
85 park boundaries are considered holistically,
86 in order to best preserve important park
87 resources, provide equitable and sustainable

1 access, and advance the goal of creating a
2 seamless network of protected lands.

3

4

5 **INCLUSION**

6 Recognizing the special opportunities and
7 obligations resulting from our location
8 within a region of great demographic and
9 socioeconomic diversity, we will strive to
10 ensure that Golden Gate National

11 Recreation Area is a “park for all.” Working
12 *with*, rather than *for*, various community
13 partners, we will undertake proactive
14 strategies that make the park welcoming and
15 accessible to those at every economic strata,
16 people with disabilities, and ethnic and
17 cultural communities who have not
18 traditionally visited national parks in
19 numbers proportionate to the changing
20 demographics of California and the nation.

THE PLANNING AREA

<p>1 This new general management plan</p> <p>2 addresses the lands administered by the</p> <p>3 National Park Service within the legislative</p> <p>4 boundaries of Golden Gate National</p> <p>5 Recreation Area and Muir Woods National</p> <p>6 Monument. Over the last 15 years, park staff</p> <p>7 have completed numerous land use and site</p> <p>8 plans for areas in Golden Gate National</p> <p>9 Recreation Area. These plans and associated</p> <p>10 environmental impact documents are</p> <p>11 current and therefore these areas are not</p> <p>12 included in the planning area for this</p> <p>13 updated general management plan.</p> <p>14</p> <p>15 The new general management plan will</p> <p>16 provide park management with guidance for</p> <p>17 the following park sites: (1) those park lands</p> <p>18 that are not covered by recent land use</p> <p>19 management plans and agreements, (2) those</p> <p>20 lands that are newly acquired or in the</p> <p>21 process of acquisition, (3) lands and waters</p> <p>22 that are leased to the National Park Service</p> <p>23 or are under other management arrange-</p> <p>24 ments or easements (such as the San</p> <p>25 Francisco Public Utilities Commission</p> <p>26 Peninsula Watershed easements). The total</p> <p>27 area of land and water addressed in this plan</p> <p>28 is approximately 50,000 acres.</p> <p>29</p> <p>30 Specifically these areas are the following:</p> <p>31</p> <ul style="list-style-type: none"> 32 ▪ Alcatraz Island and the surrounding 33 bay environment 34 ▪ park lands in Marin County, 35 including Stinson Beach to Bolinas- 36 Fairfax Road; Slide Ranch; Muir 37 Beach; Lower Redwood Creek; 38 Golden Gate Dairy; Tennessee 39 Valley; Marin Headlands; and the 40 offshore ocean and bay environment 41 ▪ park lands in San Francisco, 42 including Upper Fort Mason, China 43 Beach, Lands End, Fort Miley, Ocean 44 Beach, Fort Funston, and the 45 offshore ocean and bay environment 	<p>46</p> <p>47</p> <p>48</p> <p>49</p> <p>50</p> <p>51</p> <p>52</p> <p>53</p> <p>54</p> <p>55</p> <p>56</p> <p>57</p> <p>58</p> <p>59</p> <p>60</p> <p>61</p> <p>62</p> <p>63</p> <p>64</p> <p>65</p> <p>66</p> <p>67</p> <p>68</p> <p>69</p> <p>70</p> <p>71</p> <p>72</p> <p>73</p> <p>74</p> <p>75</p> <p>76</p> <p>77</p> <p>78</p> <p>79</p> <p>80</p> <p>81</p> <p>82</p> <p>83</p> <p>84</p> <p>85</p> <p>86</p> <p>87</p> <p>88</p>	<ul style="list-style-type: none"> ▪ 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; Point San Pedro (also known as Pedro Point Headlands); Rancho Corral de Tierra; Montara Lighthouse; the Phleger Estate; and the offshore ocean environment ▪ San Francisco Public Utilities Commission Peninsula Watershed easements ▪ all lands within Muir Woods National Monument <p>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/EIS planning area. These park areas will not be revisited in this plan.</p> <ul style="list-style-type: none"> ▪ Presidio of San Francisco and Crissy Field ▪ Baker Beach ▪ Lobos Creek Valley ▪ Fort Point National Historic Site ▪ Sutro Historic District, including 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 <i>Point Reyes National Seashore / Golden Gate National Recreation</i>
--	---	---

1	<i>Area Northern District General</i>	21	Management Plan Final
2	<i>Management Plan)</i>	22	Environmental Impact Statement
3		23	▪ Wetland and Creek Restoration at
4	The park staff is currently working on a	24	Big Lagoon, Muir Beach Final
5	variety of detailed project and program	25	Environmental Impact Statement
6	implementation plans. The implementation	26	▪ Marin Equestrian Plan /
7	plans cover topics such as detailed actions	27	Environmental Assessment
8	for natural and cultural resource restoration	28	▪ Headlands Institute Campus
9	and preservation, visitor use, transportation,	29	Improvement and Expansion Plan
10	and park operations. There are several major	30	▪ Dog Management Plan for Golden
11	project and program implementation plans	31	Gate National Recreation Area /
12	that are in the process of being prepared or	32	Environmental Impact Statement
13	implemented. In the preparation of this	33	▪ Doyle Drive – South Access to the
14	general management plan, the planning team	34	Golden Gate Bridge
15	coordinated with the development of these	35	▪ Point Reyes National Seashore
16	plans to ensure consistency. Ongoing	36	General Management Plan
17	planning efforts include the following:	37	
18		38	
19	▪ Marin Headlands and Fort Baker		
20	Transportation Infrastructure and		



Map 1. GMP Planning Area

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.





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

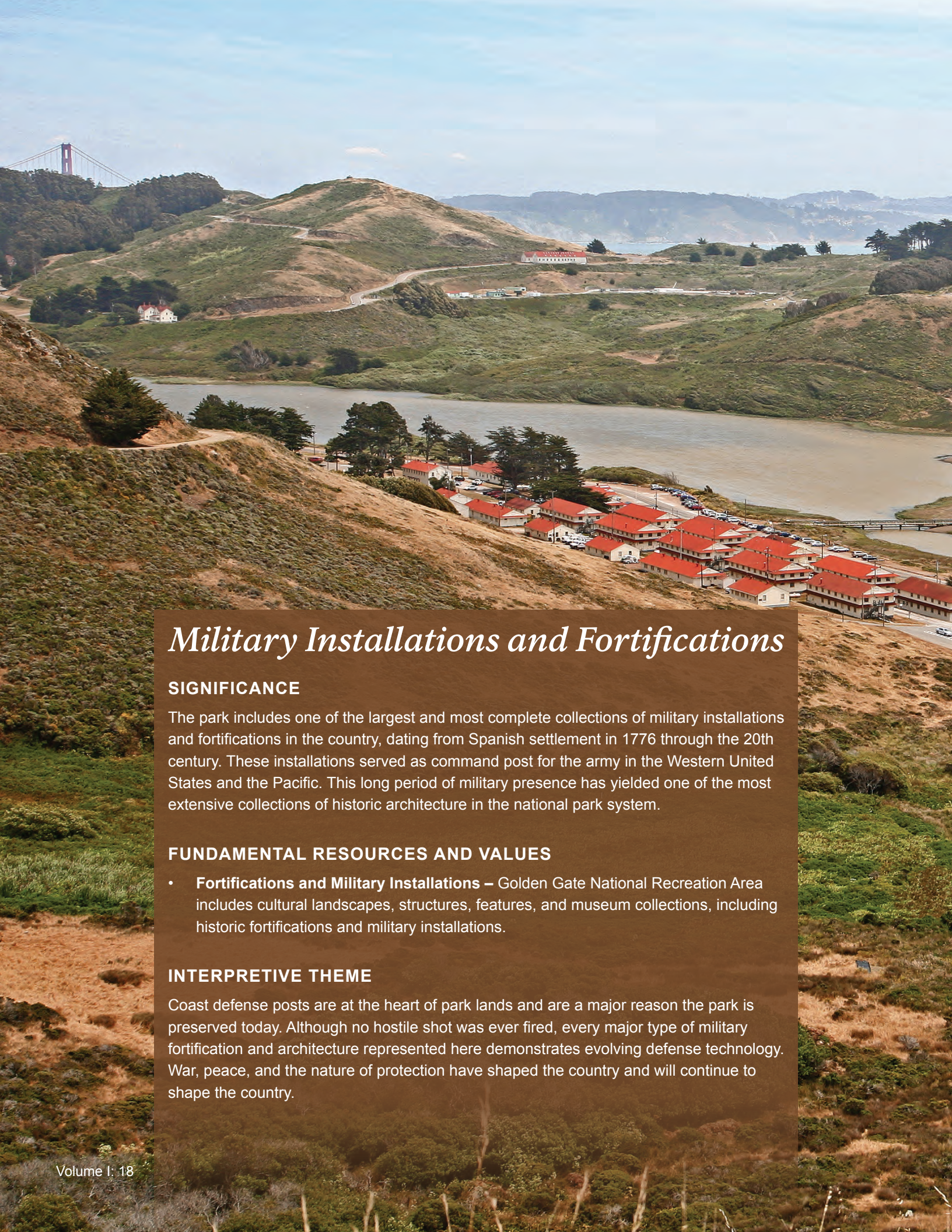
The remnant undeveloped coastal corridor of marine, estuarine, and terrestrial ecosystems supports exceptional native biodiversity and provides refuge for one of the largest concentrations of rare, threatened, and endangered species in the national park system.

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 and 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 offer visitors the opportunity to learn about the 155-year span of Alcatraz history—from the U.S. Army period through the federal penitentiary era and the American Indian occupation to current NPS management of the island. As a site of international notoriety, Alcatraz Island challenges visitors to contemplate their personal views on crime and punishment, the U.S. 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

SIGNIFICANCE

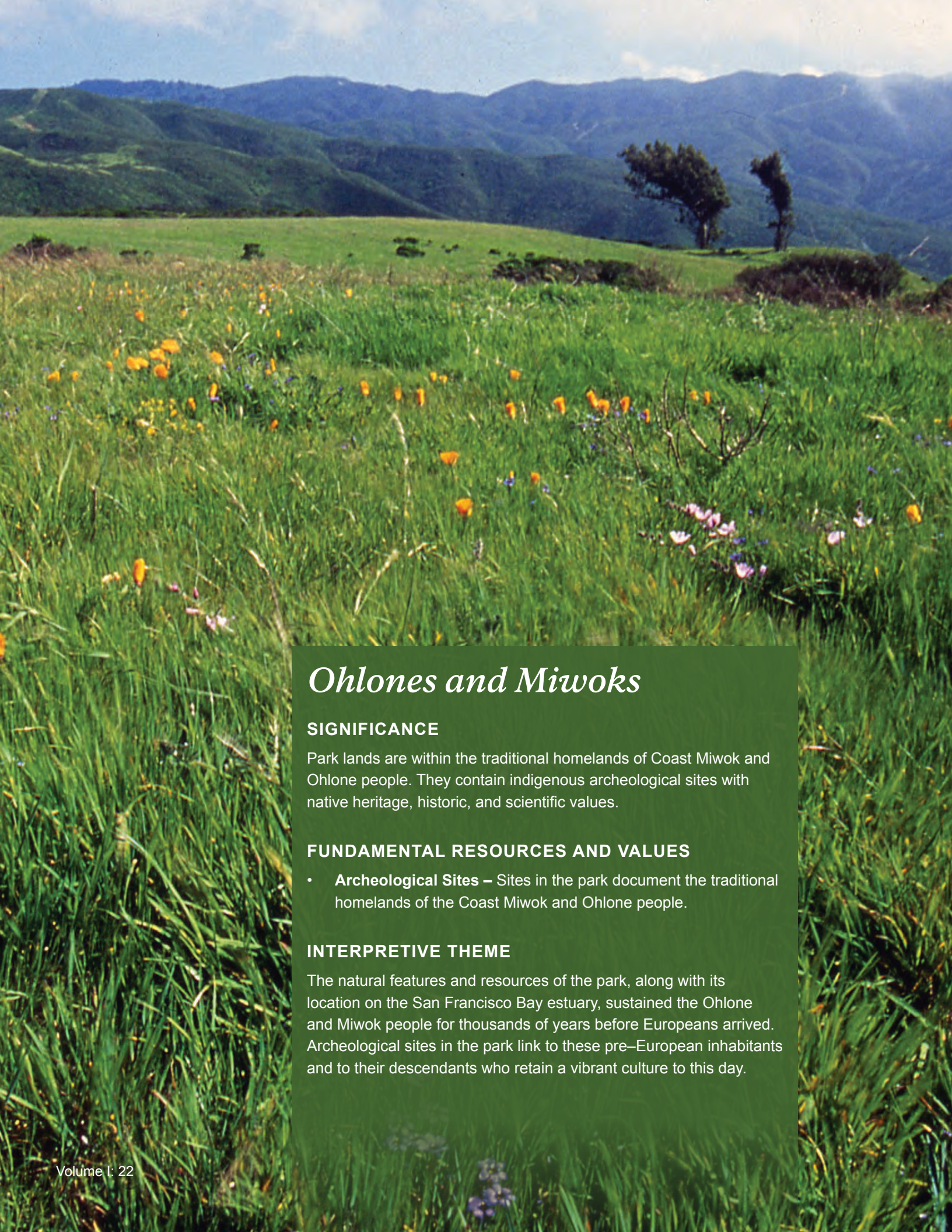
The convergence of the San Andreas Fault, San Francisco Bay at the Golden Gate, and the California coastline creates a dynamic environment of exceptional scientific value.

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.



Ohlones and Miwoks

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 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 forest, 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 U.S. 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 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

1 Special mandates are park-specific
2 requirements that expand on the park’s
3 legislated purpose. These mandates
4 generally require the National Park Service
5 to perform some particular action as
6 directed through congressional legislation.
7 Administrative commitments are agreements
8 that have been reached through formal,
9 documented processes, and include
10 agreements such as a conservation easement.
11 The ongoing mandates and commitments
12 for Golden Gate National Recreation Area
13 are described in this section.

16 LAND ACQUISITION

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

- 21 ▪ Public Law 92-589, the enabling
22 legislation for Golden Gate National
23 Recreation Area, specifies that “any
24 lands or interests owned by the State
25 of California, or any political
26 subdivision thereof, may only be
27 acquired by donation” (see appendix
28 A).
- 29 ▪ Public Law 95-625, Sec. 317(e),
30 specifies that Golden Gate National
31 Recreation Area (through the
32 Secretary of the Interior) “shall
33 accept and manage any land and
34 improvements adjacent to the
35 recreation area which are donated by
36 the State of California or its political
37 subdivisions.”
- 38 ▪ Public Law 96-199, Sec. 103(b),
39 specifies spending limits on land
40 acquisition.

43 MANAGEMENT AND 44 ADMINISTRATION

- 45 ▪ Public Law 95-625, Sec. 317(f),
46 specifies that “no fees or admissions
47 shall be charged, except to portions
48 under lease or permit for a specific
49 purpose. The Secretary [of the
50 Interior] may authorize reasonable
51 charges for public transportation.”
- 52 ▪ Public Law 106-291, Sec. 140, gives
53 the park authority for fee-based
54 education, interpretive, and visitor
55 service functions within Crissy Field
56 and Fort Point areas of the Presidio.
- 57 ▪ Public Law 96-199, Sec. 103(b),
58 specifies spending limits on park
59 development.
- 60 ▪ Golden Gate National Recreation
61 Area signed a memorandum of
62 understanding (MOU) for the United
63 Nations Educational, Scientific, and
64 Cultural Organization’s (UNESCO)
65 Golden Gate Biosphere Reserve that
66 requires the recreation area to
67 cooperate with reserve partners and
68 promote reserve activities. The
69 biosphere was designated in 1988.
- 70 ▪ Golden Gate National Recreation
71 Area acquired several parcels of park
72 land through donations from the City
73 and County of San Francisco. These
74 parcels include portions of the areas
75 known as Sutro Heights, Fort
76 Funston, and Ocean Beach. The City
77 and County of San Francisco
78 included certain reservations,
79 restrictions, conditions, and rights of
80 reverter in the deeds of transfer and
81 agreements for these lands.
- 82 ▪ These reservations include, but are
83 not limited to: (1) easements for
84 roads and railways, utilities

1 infrastructure, and subsurface sewer
2 tunnels; (2) that these properties be
3 used for recreation or park purposes;
4 (3) where consistent with the law, the
5 National Park Service shall not
6 charge fees for admission to the
7 donated lands; (4) the National Park
8 Service will inform and consult with
9 the Department of City Planning on
10 all matters related to construction on
11 donated lands; and (5) that the area
12 known as Sutro Heights shall be
13 forever kept as a free public park or
14 resort under the name Sutro Heights.

- 15 ■ An agreement between the City of
16 San Francisco and the National Park
17 Service provides for consultation
18 through the Department of City
19 Planning on proposed construction
20 within lands transferred by the city to
21 Golden Gate National Recreation
22 Area and establishes cooperation
23 regarding maintenance of certain
24 roads and bridges. This agreement
25 was initially created in 1975.

28 **SAN FRANCISCO PENINSULA** 29 **WATERSHED EASEMENTS**

30 The San Francisco Peninsula Watershed is
31 home to three drinking water reservoirs and
32 is managed by the San Francisco Public
33 Utilities Commission (SFPUC) for
34 watershed protection as a water supply
35 resource with limited public access. Located
36 in San Mateo County, 13 miles south of San
37 Francisco, the watershed consists of
38 approximately 23,000 acres of forested hills,
39 coastal scrub, and grasslands.

40
41 On January 15, 1969, the United States of
42 America was granted easements on
43 watershed lands owned by the City and
44 County of San Francisco. Two separate
45 easements, a scenic easement and a scenic
46 and recreation easement, were granted by
47 San Francisco and accepted by the Secretary
48 of the Interior. In 1980, the watershed lands
49 were added to the Golden Gate National

50 Recreation Area's authorized boundary and
51 the park was charged with the responsibility
52 of ensuring that conditions of the easements
53 are upheld.
54

55 The scenic easement generally includes
56 Crystal Springs and San Andreas reservoirs
57 and the area to their west (approximately
58 19,000 acres). The primary purpose of this
59 easement is to preserve the property in its
60 natural state while permitting "the
61 collection, storage, and transmission of
62 water and protection of water quality and
63 other purposes which shall be compatible
64 with said use and preserving said land as
65 open space land."
66

67 The scenic and recreation easement
68 generally includes the area within the
69 watershed east of the Crystal Springs and
70 San Andreas reservoirs (approximately 4,000
71 acres). The primary purpose of this
72 easement is to preserve the property in its
73 natural state while permitting "the
74 collection, storage, and transmission of
75 water and protection of water quality;
76 outdoor recreation; ecological preservation
77 and other purposes which shall be
78 compatible with preserving said land as open
79 space land for public use and enjoyment."
80

81 The scenic and recreation easement also
82 grants the public "the right, subject to rules
83 and regulations as may be imposed and
84 published by (the SFPUC), to enter the
85 premises for recreational purposes."
86

87 Both easements contain numerous
88 restrictions on use or modifications of the
89 property and require park approval for
90 certain actions (appendixes I and J). Golden
91 Gate National Recreation Area has the right
92 and obligation to monitor use of the land for
93 consistency with the terms of the two
94 easements. Golden Gate National
95 Recreation Area and the San Francisco
96 Public Utilities Commission entered into a
97 joint communications procedures agreement
98 in 1997 for routine work and special projects
99 within the San Francisco Peninsula
100 Watershed.

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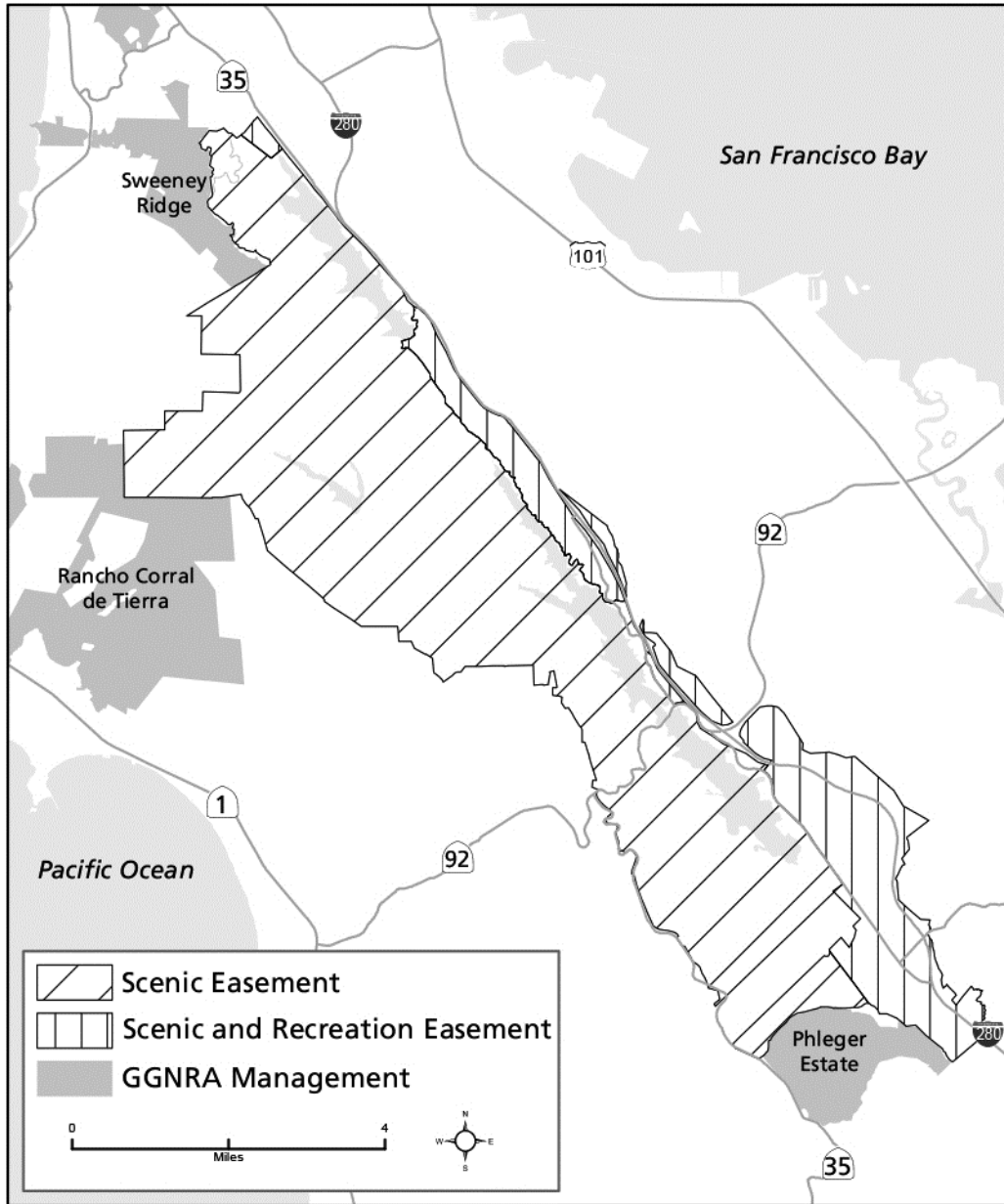


FIGURE 1. SAN FRANCISCO PENINSULA WATERSHED EASEMENTS

6
7
8

1 **TIDELANDS AND SUBMERGED**
2 **LANDS LEASE**

3 Golden Gate National Recreation Area
4 leases tidelands and submerged lands from
5 the California State Lands Commission.
6 These include all offshore areas adjacent to
7 park lands in Marin and San Francisco
8 counties. The current term of the lease
9 began June 1, 2009, and extends through
10 May 31, 2058. Under the conditions of the
11 lease, public access to and use of the existing
12 beaches and strands shall remain open and
13 available for public use subject to reasonable
14 regulation. The recreation area is required to
15 notify the state within 10 days in the event
16 that the public is charged any direct or
17 indirect fee for the use and enjoyment of the
18 leased areas. The lease also specifies that
19 hunting on leased lands is prohibited.
20

21 The primary management purposes are to
22
23 ▪ enhance public safety, use, and
24 enjoyment of the subject lands and
25 waters
26 ▪ protect and conserve the
27 environment and any cultural and
28 historical resources that may be
29 present
30 ▪ preserve the subject lands in their
31 natural state and protect them from
32 development and uses that would
33 destroy their scenic beauty and
34 natural character
35 ▪ provide for recreation and
36 educational opportunities
37 ▪ manage the subject lands consistent
38 with the administration and
39 management of Golden Gate
40 National Recreation Area, so long as
41 it is not inconsistent with California
42 state law.
43
44

45 **LIGHTHOUSES**

46 In September 2006, the U.S. Coast Guard
47 (USCG) notified the park of their plan to
48 excess and transfer five lighthouses and
49 navigational aids to the Department of the
50 Interior in compliance with the park’s
51 enabling legislation (Public Law 92 as
52 amended under Public Law 96-607) and the
53 2000 National Historic Lighthouse
54 Preservation Act. The properties include
55 Point Bonita Lighthouse, Point Diablo, and
56 Lime Point in Marin County; the Montara
57 Lighthouse in San Mateo County; and the
58 Alcatraz Island lighthouse in San Francisco.
59

60 Following transfer to the park, the U.S.
61 Coast Guard will continue to use the five
62 sites as navigational aids under an NPS
63 permit. The properties require substantial
64 environmental cleanup and structural
65 improvements to ensure public safety and
66 visitor access in the future. The National
67 Park Service and the U.S. Coast Guard are
68 cooperating to complete due diligence
69 reports including environmental testing and
70 analysis, building condition assessments, and
71 developing cost estimates to determine
72 remediation and structural safety
73 requirements.
74

75 The park staff anticipates additional
76 planning for the long-term preservation and
77 use of the five lighthouses and is seeking
78 funding prior to transfer. At the time of this
79 writing, the time frame and milestones for
80 the property excess and transfer from the
81 Coast Guard have not been established.
82
83

84 **OTHER EASEMENTS**

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

PLANNING ISSUES

1 Just as citizens helped to establish Golden
2 Gate National Recreation Area, citizens
3 helped identify the needs and opportunities
4 that will shape the future management of the
5 park. In 2006, more than 4,000 copies of the
6 first GMP newsletter were distributed
7 through a mailing list and park partners and
8 at park visitor centers, popular park
9 destinations, and park events. The
10 newsletter asked people for their opinions
11 on what they value and enjoy most about the
12 park, their concerns and suggestions for
13 management, their ideas for the future of the
14 park, and for any other comments they
15 wanted to provide to the planning team. The
16 park staff held six public open house events
17 in April 2006 to gather additional input from
18 the public. A scoping roundtable was
19 attended by representatives of many local
20 and regional jurisdictions, resource and
21 regulatory agencies, and other public land
22 managers. Discussion groups with
23 environmental, historic, and community
24 organizations and meetings with American
25 Indian tribal representatives, park partners,
26 and park founders were held to gather
27 information. In addition, meetings with NPS
28 staff were conducted as part of the scoping
29 process.

30
31 The information gathered during these
32 activities was used to develop and clarify the
33 important planning issues. Exploring
34 different ways to address the issues was the
35 basis for developing the range of
36 management concepts and the creation of
37 the different management alternatives.

40 ISSUES TO BE ADDRESSED

41 Visitor Access: Transportation 42 and Trails

43 The current system of access to the park and
44 monument do not fully address the needs of

45 some park visitors or adequately protect
46 park resources. The reliance on cars and the
47 lack of affordable transit options excludes
48 some visitors, adds to roadway congestion,
49 and increases emissions, resulting in a
50 greater carbon footprint. This also creates
51 problems with informal parking, public
52 safety, visitor experience, and access for
53 park neighbors. In some places, the
54 condition of trails and their lack of
55 connectivity to desired destinations do not
56 meet all visitor and resource protection
57 needs. Connections from communities
58 within the region to the park are not
59 adequate. There is a need for improved, safe
60 trail connections among park sites and
61 communities to provide seamless, safe,
62 direct access alternatives. Visitor
63 information and directional signs are
64 inadequate, which leads to visitor frustration
65 and underutilization of park resources. The
66 general management addresses visitor access
67 to and within the park to improve visitor
68 experience, improve connections among
69 park sites and the larger community, and
70 protect resources

73 Recreation Opportunities 74 and Conflicts

75 Park use has increased in recent years,
76 especially by traditional recreational users
77 such as hikers, bicyclists, and equestrians.
78 New activities such as boardsailing and
79 mountain biking have developed and
80 evolved since the 1980 General Management
81 Plan was completed. There is interest in
82 expanding current uses, including bicycling,
83 hang gliding, dog walking, individual and
84 group camping, group day use/picnicking,
85 and hiking, and introducing new and
86 different types of recreation. Requests to use
87 the park and monument as venues for
88 special events continue to increase. Conflicts
89 between users—primarily between

1 equestrians, mountain bikers, dog walkers,
2 and hikers—have increased as overall park
3 use has increased. There is concern about
4 resource impacts associated with existing
5 recreation activities, including habitat
6 fragmentation, eroding trails, wildlife
7 disturbance and harassment, litter,
8 vandalism and graffiti, and vegetation
9 trampling. The general management plan
10 addresses recreational opportunities by
11 identifying the types of use, desired
12 experiences, and support facilities that are
13 appropriate for different park areas and sites
14 in response to visitor demand and resource
15 sensitivity.

18 **Sustainable Natural Resource** 19 **Preservation and Management**

20 Golden Gate National Recreation Area is
21 rich in natural resources: it comprises 19
22 types of ecosystems in numerous distinct
23 watersheds and is home to rare, threatened,
24 and endangered plant and animal species.
25 The park is incorporated into the UNESCO
26 Golden Gate Biosphere Reserve, designated
27 by UNESCO’s Man and the Biosphere
28 Programme—a program that provides a
29 global network of sites representing the
30 world’s major ecosystem types. Historically,
31 the lands within the park have been used for
32 ranching, dairy farming, and military
33 activities; this use has resulted in the
34 modification of many of the area’s natural
35 ecosystems. Fire suppression and other
36 management activities have also influenced
37 natural ecosystems. Invasive plants from
38 adjacent urban communities have taken root
39 within the park.

41 The general management plan addresses
42 how park staff can preserve fundamental
43 natural resources, as the fragility of those
44 resources becomes better understood at the
45 same time that visitation is increasing. The
46 plan provides direction for preserving and
47 managing fundamental natural resources of
48 the park in a sustainable manner and
49 provides direction for encouraging ongoing
50 public stewardship.

51 Ocean resources, including natural marine
52 resources and submerged cultural resources,
53 are at risk due to a variety of threats. The
54 effects of global climate change, sea level
55 rise, changes in storm patterns, and ocean
56 acidification, confounds many of these
57 threats. Natural sediment transport, which
58 affects shoreline and beach dynamics, is
59 affected by activities outside park
60 boundaries, including sand mining,
61 dredging, dredge disposal, shoreline
62 stabilization structures, and altered flow
63 regimes. Overflights, boating, and other uses
64 of marine habitats cause disturbance to
65 marine species. Invasive nonnative species
66 inhabit the park’s ocean and estuarine
67 waters, displacing native species.
68 Recreational and commercial fisheries may
69 impact nearshore fish populations and
70 ecosystem dynamics. Water quality is
71 threatened by pollution from runoff,
72 landslides, shoreline development, sewage
73 outfalls, vessel traffic, oil spills, and
74 contaminants exposed from dredging.
75 Potential wave and tidal energy
76 developments may alter habitat and disrupt
77 physical processes. Numerous aquatic
78 environments are in need of restoration.
79 Currently, the park has limited enforcement
80 capacity for marine and estuarine resource
81 protection.

83 Alcatraz Island is a unique part of Golden
84 Gate National Recreation Area. Accounts of
85 early explorers describe the island as having
86 little plant life and being covered with bird
87 guano. Construction of fortifications during
88 the Civil War and later the federal
89 penitentiary changed the landscape
90 substantially, sharpening the incline of
91 shoreline cliffs and flattening the slopes.
92 Most of the existing plants on Alcatraz
93 Island are a result of prison gardens or other
94 means of importation, including soils
95 brought from Angel Island during fort
96 construction. Since the closure of the prison,
97 many bird species have made the island
98 home. Waterbirds and terrestrial landbirds
99 (songbirds) have taken advantage of planted
100 and unmanaged vegetation on the island.
101 The seabirds and waterbirds are colonial

1 nesting species that are highly susceptible to
 2 disturbance. Coupled with limited
 3 preservation of historic landscape features,
 4 the extent of seabird habitat has grown
 5 sharply since 1972. The result is tension
 6 between habitat protection and visitor
 7 access to many of the island’s historic points.

8
 9 Muir Woods National Monument preserves
 10 one of the last remaining old-growth
 11 redwood forests in the Bay Area. From its
 12 inception, Muir Woods National Monument
 13 was designed to protect the “primeval
 14 character” of the redwood forests, and
 15 today, ecological integrity is a major driving
 16 force behind management of the monument.
 17 Surrounding Muir Woods National
 18 Monument are mostly protected lands,
 19 including other units of Golden Gate
 20 National Recreation Area and lands
 21 managed by California State Parks (Mount
 22 Tamalpais State Park) and the Marin
 23 Municipal Water District.

24
 25 Muir Woods National Monument is entirely
 26 within the watershed of Redwood Creek,
 27 which originates on Mount Tamalpais (over
 28 2,400 feet in elevation), flows through the
 29 heart of the national monument, bisects
 30 Frank Valley, and discharges into the Pacific
 31 Ocean at Muir Beach, approximately 3 miles
 32 below Muir Woods National Monument.
 33 The Redwood Creek watershed—extending
 34 from Mount Tamalpais to Muir Beach—is a
 35 delicate ecosystem that includes the
 36 northern spotted owl, coho salmon, and
 37 steelhead trout, and demands utmost care
 38 and vigilance. The Civilian Conservation
 39 Corp (CCC) implemented projects to
 40 harden the banks of the creek to direct the
 41 flow of water away from redwood groves.
 42 The stream stabilization on Redwood Creek
 43 has impacted the natural functions of the
 44 creek.

45
 46
 47 **Sustainable Cultural Resource**
 48 **Preservation and Management**

49 The park has a large collection of historic
 50 structures and archeological sites within a

51 mosaic of cultural and natural landscapes.
 52 The majority of these cultural resources are
 53 nationally significant; however, their
 54 condition varies. The identification of
 55 appropriate preservation treatments,
 56 including sustainable adaptive uses of these
 57 resources, poses a substantial challenge.
 58 Cultural resources and archeological sites
 59 are impacted in a variety of ways such as
 60 through weathering, increases in visitor use,
 61 erosion, vandalism, and deferred
 62 maintenance. There is a continued need for
 63 developing baseline documentation of
 64 historic structures, cultural landscapes, and
 65 archeological inventories throughout the
 66 park. The park staff continues to work to
 67 balance the preservation needs of the park’s
 68 natural and cultural resources. Still, there is a
 69 need to identify priorities when such balance
 70 is not clear. The general management plan
 71 addresses how to preserve fundamental
 72 cultural resources where visitation is
 73 increasing with the understanding of the
 74 fragility and significance of those resources.
 75 The general management plan provides
 76 direction for preserving and managing
 77 fundamental cultural resources of the park
 78 in a sustainable manner and provides
 79 direction for encouraging ongoing public
 80 stewardship.

81
 82 Golden Gate National Recreation Area
 83 houses its museum collections in 15 separate
 84 facilities throughout the park that function
 85 as visitor centers, interpretive exhibits, or
 86 dedicated storage areas. Of the four largest
 87 storage repositories, three are in buildings
 88 owned by the Presidio Trust with no lease
 89 agreements in place. One of these structures,
 90 that was removed in 2010 to make way for
 91 the Doyle Drive Project, houses the park’s
 92 archeology lab. The park museum
 93 collections are in a vulnerable position due
 94 to temporary space and deteriorating
 95 structural conditions. The current
 96 conditions for museum collections in the
 97 park do not meet NPS standards for long-
 98 term preservation, protection, and use of
 99 museum collections. Staffing for the
 100 museum collections has not been stable, thus
 101 precluding reliable access for researchers,

1 the public, and park staff. Although planning
2 has been underway, a suitable location for
3 the park's museum collections has yet to be
4 determined.

5
6 Alcatraz Island is a designated national
7 historic landmark because of its national
8 significance in the areas of military history
9 and social history (penology: the study of
10 incarceration). Although Alcatraz Island is a
11 highly visible and popular site in San
12 Francisco Bay, many of its buildings,
13 archeological sites, and landscape features
14 are deteriorating, and sections of its
15 shoreline are eroding. The park lacks the
16 funding and personnel to protect and
17 preserve all of the island's historic resources.
18 In addition, some conflict has arisen over
19 management strategies for protecting the
20 island's cultural and natural resources (e.g.,
21 protecting important bird nesting habitat), as
22 preservation of nesting habitat can inhibit
23 historic preservation. The general
24 management plan provides direction for
25 preserving and managing historic structures,
26 archeological sites, cultural landscapes, and
27 museum collections.

28
29

30 **Climate Change**

31 Climate change may have begun to affect
32 both park resources and visitors. The effects
33 are predicted to include changes in
34 temperature, precipitation, evaporation rate,
35 ocean and atmospheric chemistry, local
36 weather patterns, and increases in storm
37 intensities and sea levels. These effects will
38 likely have direct implications for resource
39 management and park operations and
40 influence the way visitors experience the
41 park. Sustaining and restoring park
42 resources will require the National Park
43 Service to address many challenges,
44 including fiscal and ecological threats and
45 threats to the integrity of cultural and
46 natural resources. Proactive planning and
47 management actions will allow the park to
48 avoid, mitigate, adapt to, and interpret these
49 effects.

50

51 The National Park Service recognizes that
52 the major drivers of climate change are
53 outside the control of the agency. However,
54 climate change is a phenomenon whose
55 impacts throughout the national park system
56 cannot be discounted. The National Park
57 Service has identified climate change as one
58 of the major threats to natural park units and
59 has developed a Climate Change Response
60 Strategy (NPS 2010) and Action Plan (NPS
61 2012a) that focus on science, adaptation,
62 mitigation, and communication, and identify
63 near-term priorities for the agency. Some
64 climate change impacts are already
65 occurring or are expected in Golden Gate
66 National Recreation Area and Muir Woods
67 National Monument in the time frame of
68 this plan. Therefore, this general
69 management plan provides guidance on how
70 to assess, respond to, and interpret the
71 impacts of global climate change on park
72 resources and identifies objectives for
73 reducing greenhouse gas emissions.

74
75

76 **Land Acquisition**

77 The 1978 National Parks and Recreation Act
78 (16 *United States Code* [USC] 1a-7) requires
79 general management plans to address
80 potential modifications to park boundaries.
81 Current or potential changes in adjacent
82 land uses could pose threats to the
83 fundamental resources of the park and could
84 limit the park's ability to protect the
85 resources that support park purpose and
86 significance.

87

88 The diversity of park lands presents
89 challenges for land and boundary
90 management. The park needs to strengthen
91 its strategic approach to land acquisition and
92 park boundary changes and management in
93 coordination with agencies and owners of
94 property within the park boundary. A
95 reassessment of guidelines and priorities is
96 needed.

97

98 Golden Gate National Recreation Area and
99 Muir Woods National Monument are
100 portions of a larger area of protected open

1 space in the Bay Area. The natural and
 2 cultural resources of the park would face a
 3 greater threat if not for the many other open
 4 space areas that contribute to the integrity of
 5 coastal ecosystems, scenic beauty,
 6 recreational opportunities, and preservation
 7 of historic resources. The general
 8 management plan addresses future land
 9 protection and boundary changes that
 10 support both preservation of the park’s
 11 fundamental resources and regional
 12 conservation priorities.

13
 14
 15 **Reaching New Audiences**

16 Visitation at many park sites does not reflect
 17 changing regional or state demographics.
 18 Some groups may not be aware of the park,
 19 feel a direct connection to it, or view the
 20 park as a recreational opportunity or a
 21 resource to be protected. Changing
 22 technology can also influence the park’s
 23 relevancy to future generations. Reaching
 24 these audiences is essential to effective park
 25 management and to achieving civic
 26 engagement and community-based
 27 stewardship goals. The general management
 28 plan includes strategies to help engage new
 29 audiences.

30
 31
 32 **Operational Facilities**

33 Park resources, visitor safety, and visitor
 34 experience have suffered because of the lack
 35 of adequate operational facilities in
 36 appropriate locations. Golden Gate National
 37 Recreation Area has expanded in size in
 38 recent years, especially to the south in San
 39 Mateo County; the current distribution of
 40 facilities is no longer effective or efficient for
 41 day-to-day operations. Park maintenance
 42 and public safety functions are scattered
 43 throughout the park and are often located at
 44 sites and facilities that were not intended for
 45 such uses. Often, these functions operate out
 46 of makeshift facilities because they have
 47 been displaced by other park uses or outside
 48 forces, or have outgrown previous spaces.
 49 These operations have been forced to adapt

50 to conditions that do not adequately meet
 51 their space, size, function, mobility, and
 52 security requirements. The general
 53 management plan identifies a strategy and
 54 actions for placement of operational
 55 facilities.

56
 57
 58 **Scenic Beauty and Natural Character**

59 The park’s scenic beauty and natural
 60 character provide opportunities for visitors
 61 to experience dramatic settings. The park’s
 62 varied landscapes are the stage for
 63 multisensory experiences that are a hallmark
 64 of the Bay Area. Preserving these important
 65 scenic resources and making them available
 66 to the public are primary reasons the park
 67 was established. The National Park Service
 68 needs to protect these resources from
 69 degradation that can result from modern
 70 intrusions, including new development on
 71 the surrounding lands and waters. The
 72 general management plan provides guidance
 73 in the preservation and enhancement of
 74 scenic resources.

75
 76
 77 **Regional Cooperation**

78 Visitor experience and resource protection
 79 in the park are affected by a variety of
 80 outside influences. Watersheds, viewsheds,
 81 soundscapes, ecosystems, and trail and
 82 transportation systems all extend beyond
 83 park boundaries; their management and
 84 preservation require cooperation with other
 85 adjacent public land managers, local
 86 jurisdictions, and private landowners. The
 87 park is in an urban/suburban setting, which
 88 places demands on park lands and resources
 89 (particularly by local public utilities). The
 90 park staff cannot successfully manage the
 91 natural and cultural resources and visitor
 92 experience by looking only within the park
 93 boundary. The general management plan
 94 provides guidance on improving
 95 communication, coordination, and
 96 participation with public and private
 97 stakeholders with the goal of protecting
 98 ecosystems, watersheds, viewsheds, and

1 visitor opportunities that cross jurisdictional
2 boundaries.

3

4

5 **National Park Service Identity**

6 For a variety of reasons, the park does not
7 have an easily recognized identity as part of
8 the national park system. These reasons
9 include the large number of points of entry
10 with minimal or no identifying entry
11 features; the lack of NPS staff presence in
12 many locations; the close juxtaposition of
13 city, county, and state lands with NPS lands;
14 and the lack of clearly marked park
15 boundaries. The general management plan
16 provides guidance on improving and
17 promoting the recognition of Golden Gate
18 National Recreation Area and Muir Woods
19 National Monument as national park system
20 units and as areas where many visitors are
21 first introduced to the concept and values of
22 the national park system.

23

24

25 **Partnerships**

26 Partners are fundamental to long-term
27 sustainability of the park. They help the
28 National Park Service manage natural and
29 cultural resources, deliver public programs,
30 reach new audiences, and remain relevant
31 and inclusive. They also help the park staff
32 innovate and build community support. The
33 National Park Service cannot fully
34 accomplish parts of its mission without
35 partners. Despite the many commonalities
36 and objectives shared by the park staff and
37 park partners, the current set of partners
38 creates a diversity of goals and interests that
39 may not be compatible with park goals.
40 Partners' needs cannot always be
41 accommodated in the park. The general
42 management plan provides guidance on
43 partnership development and management
44 that enables NPS managers to make effective
45 decisions and foster flexible, productive
46 relationships that strengthen the purpose
47 and mission of the park.

48

49 **American Indian Values**

50 Since the late 1990s, the park staff has
51 worked with American Indian groups,
52 including the Federated Indians of Graton
53 Rancheria (the federally recognized tribe
54 comprised of park-associated Coast Miwoks
55 and Southern Pomos), the many Ohlone
56 tribes seeking federal recognition, and
57 Ohlone individuals who partake in the
58 stewardship of Ohlone heritage. Park lands
59 in Marin County are the aboriginal
60 homelands of Coast Miwoks. Park lands in
61 San Francisco and San Mateo counties are
62 the aboriginal homelands of Ohlones. The
63 park staff desires to build on the relationship
64 and civic engagement with American Indians
65 in three broad activity areas: cultural
66 resource management, interpretation and
67 education, and revitalization of community
68 and tradition. The general management plan
69 provides guidance for integrating American
70 Indian values with the management of
71 resources and visitor experience.

72

73

74 **ISSUES THAT ARE NOT** 75 **ADDRESSED**

76 **Dog Management**

77 This general management plan does not
78 make decisions about dog walking in the
79 park. The National Park Service is
80 conducting a separate planning process to
81 develop a dog management plan that will
82 decide how best to manage dog walking. The
83 dog management plan will identify a range of
84 alternatives, evaluate them, solicit public
85 review, and make decisions. The planning
86 team for the general management plan
87 worked in close coordination with the dog
88 management planning team to ensure
89 consistency between the plans. The National
90 Park Service could make minor changes to
91 the preferred alternative in the general
92 management plan to make the plan
93 consistent with the final dog management
94 plan.

RELATIONSHIP OF THIS PLAN TO OTHER PLANS

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

11
12 The complex physical and political
13 landscape of the San Francisco Bay Area has
14 produced an environment where a multitude
15 of planning takes place regarding
16 transportation, conservation, recreation,
17 growth and development, and coastal and
18 ocean resources. Most of these public and
19 private land and marine areas are covered by
20 approved plans prepared by a host of
21 federal, state, regional, and local agencies.
22 Management of these lands and waters
23 could influence or be influenced by actions
24 presented in this *General Management Plan /*
25 *Environmental Impact Statement*. The
26 following narrative briefly describes the
27 various planning efforts and projects at the
28 federal, park, state, and county levels and
29 how they may be influenced by the general
30 management plan.

31 32 33 **NPS LAND USE PLANS FOR GOLDEN** 34 **GATE NATIONAL RECREATION AREA** 35 **SITES NOT INCLUDED IN THE** 36 **GENERAL MANAGEMENT PLAN**

37 Many of the park sites within Golden Gate
38 National Recreation Area have recent
39 management plans and environmental
40 documents that provide updated guidance in
41 how the lands will be managed. The
42 following NPS management plans and
43 decisions were reviewed in preparation of
44 the general management plan to ensure a
45 coordinated management of park lands. For

46 a complete understanding of how all lands
47 and marine areas will be managed at Golden
48 Gate National Recreation Area, the
49 managers will be guided by this new general
50 management plan in addition to the plans
51 that cover park sites outside this planning
52 process. Each of these plans followed a
53 prescribed planning process that involved
54 public participation in their development.
55 Following are descriptions of the
56 management plans that, together with this
57 plan, provide guidance for managing the
58 park.

59 60 61 **Point Reyes National Seashore and** 62 **Golden Gate National Recreation** 63 **Area Northern District Draft** 64 **General Management Plan**

65 The current guiding document for Point
66 Reyes National Seashore and Golden Gate
67 National Recreation Area is the 1980 *Golden*
68 *Gate National Recreation Area / Point Reyes*
69 *National Seashore General Management Plan*
70 and its subsequent amendments. Since the
71 1980 plan was approved, Point Reyes
72 National Seashore has managed the lands of
73 the Northern District of Golden Gate
74 National Recreation Area from the Bolinas-
75 Fairfax road northward. The 1980 General
76 Management Plan is being updated through
77 the GMP/EIS planning process for Point
78 Reyes National Seashore and the Northern
79 District of Golden Gate National Recreation
80 Area. The staff at Golden Gate National
81 Recreation Area participated in the planning
82 process for Golden Gate National
83 Recreation Area Northern District and
84 worked to ensure consistency between the
85 plans.

86

1 **Fort Baker Plan and Final**
2 **Environmental Impact Statement**
3 **(2000)**

4 In 1995, the remaining military land at Fort
5 Baker was determined to be excess to the
6 needs of the military by the Department of
7 Defense’s Base Realignment and Closure
8 Committee. As a requirement of that
9 determination, the land was transferred to
10 the National Park Service, consistent with
11 Public Law 92-589. The Fort Baker site
12 includes a historic district listed in the
13 National Register of Historic Places
14 containing 45 contributing features
15 (including post–Civil War era coastal
16 fortifications), a marina and waterfront area
17 at Horseshoe Cove, and important open
18 space and scenic and natural areas including
19 habitat for the federally listed endangered
20 mission blue butterfly. The purpose of the
21 2000 Environmental Impact Statement was
22 to identify the following:

- 23
- 24 ▪ the program and types of uses that
- 25 would be accommodated in historic
- 26 buildings and generate adequate
- 27 revenue for building rehabilitation
- 28 and preservation
- 29 ▪ improvements to facilitate public
- 30 uses, including new construction and
- 31 removal of buildings, landscape
- 32 treatments, trails, parking,
- 33 circulation, and locations and
- 34 patterns of use
- 35 ▪ waterfront improvements
- 36 ▪ opportunities for habitat restoration
- 37 ▪ an approach to the protection,
- 38 rehabilitation, and maintenance of
- 39 historic and natural resources

40

41 The highlights of the plan included
42 development of a conference and retreat
43 center, improvements to the Bay Area
44 Discovery Museum, and retention of the
45 USCG Golden Gate Station. The plan
46 provided guidance for restoration of the
47 historic parade ground, use of the historic
48 boat shop as a public center; improvements

49 to the marina; restoration of the beach;
50 protection of mission blue butterfly habitat;
51 and preservation of fortifications, batteries,
52 and historic landscapes. Implementation of
53 this plan contributes to the diversity of
54 recreational opportunities provided at
55 Golden Gate National Recreation Area and
56 preserves military structures and landscapes
57 that reflect the military history of the site.
58 Actions in the GMP alternatives are
59 consistent with the *Fort Baker Plan and Final*
60 *Environmental Impact Statement*.

61

62

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

65 Fort Mason is part of the San Francisco Port
66 of Embarkation National Historic Landmark
67 District, historically serving as a major point
68 of embarkation for U.S. troops. In 1972, the
69 U.S. Army transferred responsibility for its
70 maintenance, restoration, and use of the
71 long-time military base to the National Park
72 Service as part of Golden Gate National
73 Recreation Area. In 1975, a nonprofit group
74 expressed an interest in moving to the lower
75 part of Fort Mason, and the Fort Mason
76 Foundation, a private nonprofit
77 organization, was created by San Francisco
78 civic and business leaders to negotiate with
79 the National Park Service on behalf of the
80 nonprofit community. In 2004, following an
81 environmental assessment and public review
82 process, the National Park Service entered
83 into a long-term lease with the Fort Mason
84 Center to continue its public programming
85 and management of Lower Fort Mason and
86 to invest in the capital improvements needed
87 for historic building preservation. The long-
88 term lease accommodates continued use of
89 Building E by San Francisco Maritime
90 National Historical Park. The alternatives in
91 this general management plan are consistent
92 with this environmental assessment and
93 long-term lease.

94

1 **Presidio General Management Plan**
2 **Amendment and Environmental**
3 **Impact Statement (1994)**

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

22
23 Once the general management plan
24 amendment was created, difficult issues
25 remained regarding how to fund
26 implementation of the plan. The National
27 Park Service recognized that implementing
28 the amendment would require innovative
29 approaches and unique authorities to
30 manage those aspects of the amendment.
31 The National Park Service also recognized
32 that the costs associated with this unit were
33 high and uncharacteristic for the National
34 Park Service. In 1996, Congress established
35 the Presidio Trust pursuant to the Presidio
36 Trust Act for the purpose of preserving,
37 enhancing, and maintaining the Presidio as a
38 park, using revenues from its leasable assets
39 to fund that effort. In response to competing

40 public policy goals, Congress gave the
41 Presidio Trust the unique responsibility to
42 reduce and eventually eliminate the costs of
43 the Presidio to the federal government while
44 retaining the Presidio within Golden Gate
45 National Recreation Area.

46
47 The Presidio Trust assumed jurisdiction
48 over 80% of the Presidio of San Francisco
49 (referred to as Area B) on July 1, 1998, and
50 the National Park Service retains jurisdiction
51 over the coastal areas and Lobos Creek and
52 dunes (referred to as Area A). The general
53 management plan amendment initially
54 guided the Presidio Trust's planning and
55 decision making. In 2000, the trust decided
56 to develop a long-term management plan
57 that would set the parameters within which
58 the trust would balance its preservation and
59 financial responsibilities (figure 1).

60
61 The general management plan amendment
62 guidance for Area A, managed by the
63 National Park Service, provides for natural
64 resource restoration, education, and
65 outdoor recreation along the coastal areas of
66 San Francisco Bay and the Pacific Ocean.
67 Major sites within Area A include Crissy
68 Field, Fort Point National Historic Site,
69 Baker Beach, and Lobos Creek and dunes.

70
71 For Area A, the actions proposed in this
72 general management plan are consistent
73 with the amendment that covers
74 management of the lands within the Presidio
75 of San Francisco. The waters of the Pacific
76 Ocean and San Francisco Bay that are
77 adjacent to the Presidio have been zoned in
78 the new general management plan.

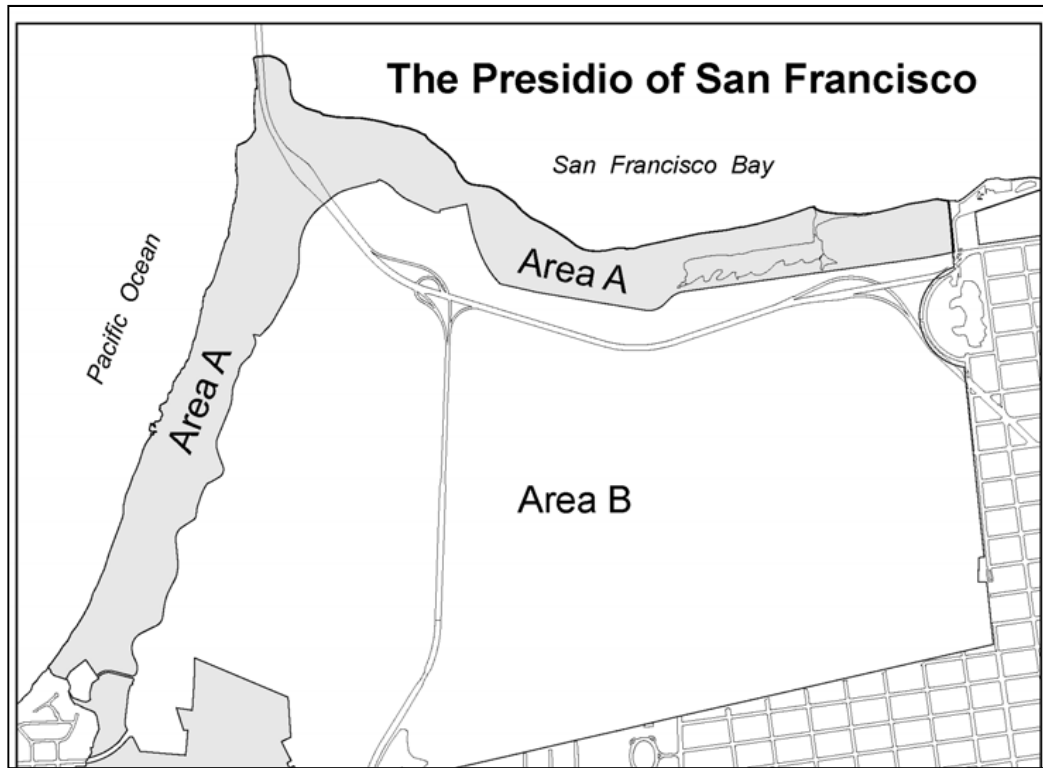


FIGURE 2. AREAS A AND B OF THE PRESIDIO OF SAN FRANCISCO

1 **Sutro Historic District**
2 **Comprehensive Design and**
3 **Environmental Assessment (1993)**

4 *The Sutro Historic District Comprehensive*
5 *Design and Environmental Assessment*
6 provides management guidance for
7 landscape rehabilitation of the Adolph Sutro
8 Historic District. The plan retains the
9 historic character while making changes to
10 the property for new uses and interpretation
11 for park visitors. The National Park Service
12 continues to manage the Sutro Historic
13 District structures, landscape, and
14 archeological sites, including Cliff House,
15 Sutro Baths, and Sutro Heights Park. The
16 landscape adjacent to the historic district
17 includes the Lands End Lookout Visitor
18 Center, trails, and parking. The extended
19 area is managed for natural and scenic
20 values. The actions proposed in this general

21 management plan recognize that the natural
22 attributes and biotic systems of the larger
23 surrounding park landscape contribute to
24 the historical significance of the historic
25 district. The alternatives are consistent with
26 the environmental assessment.

27
28

29 **CURRENT PLANS FOR OTHER PUBLIC**
30 **LANDS NOT MANAGED BY THE**
31 **NATIONAL PARK SERVICE**

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

35 *The Presidio Trust Management Plan*
36 (PTMP) is an update of the 1994 General
37 Management Plan Amendment for the
38 portion of the Presidio transferred to the
39 Presidio Trust jurisdiction in 1998. The act

1 directs the Presidio Trust to manage Area B
 2 in accordance with the park purposes
 3 identified in the enabling legislation for
 4 Golden Gate National Recreation Area and
 5 the general objectives of the amendment.
 6 The latter were defined in Trust Board
 7 Resolution 99-11 (General Objectives). The
 8 *Presidio Trust Management Plan* provides an
 9 updated land use policy framework for Area
 10 B of the Presidio wholly consistent with the
 11 amendment’s general objectives, and which
 12 retains and builds on the amendment’s
 13 policies and principles. Since the time the
 14 amendment was adopted and the Presidio
 15 Trust Act was enacted, key land use and
 16 financial conditions have changed. The
 17 *Presidio Trust Management Plan* took into
 18 account the new Trust Act requirements,
 19 conditions that had changed since the
 20 amendment was adopted, new policies and
 21 management approaches, and provides a
 22 level of flexibility not contemplated in the
 23 amendment. The *Presidio Trust Management*
 24 *Plan* describes the planning principles that
 25 help the Presidio Trust realize its goals of
 26 preserving and enhancing park resources,
 27 bringing people to the park, and making the
 28 lands under the trust jurisdiction financially
 29 self-sufficient. The *Presidio Trust*
 30 *Management Plan* sets forth land-use
 31 preferences and development guidelines for
 32 each of its seven planning districts. The
 33 *Presidio Trust Management Plan* is the plan
 34 that the Presidio Trust looks to in making
 35 management and implementation decisions
 36 in Area B that are consistent with the
 37 purposes of Golden Gate National
 38 Recreation Area enabling legislation and the
 39 general objectives of the amendment.

40
 41 The actions proposed in this general
 42 management plan are consistent with the
 43 *Presidio Trust Management Plan*.

44
 45
 46 **OTHER NATIONAL PARK**
 47 **SERVICE PLANS**

48 In addition to the overall vision and
 49 management plans previously described, the
 50 National Park Service develops detailed

51 project and program implementation plans
 52 in order to apply the goals and objectives of
 53 those broader plans. The implementation
 54 plans cover topics such as natural and
 55 cultural resource restoration and
 56 preservation, visitor use, transportation, and
 57 park operations. An overall description of
 58 each plan or program in the following list,
 59 along with its relationship to this general
 60 management plan, is provided in
 61 appendix B.
 62
 63

64 **NPS Trails and Transportation**
 65 **Plans and Programs**

- 66 ▪ Marin Headlands and Fort Baker
 67 Transportation Infrastructure and
 68 Management Plan Final
 69 Environmental Impact Statement
- 70 ▪ Trails Forever Program, in
 71 partnership with the Golden Gate
 72 National Parks Conservancy

73
 74
 75 **NPS Restoration Plans**

- 76 ▪ Alcatraz Island Historic Preservation
 77 and Safety Construction Program
 78 Environmental Impact Statement
- 79 ▪ Easkoot Creek Restoration at Stinson
 80 Beach Environmental Assessment
- 81 ▪ Lower Redwood Creek Floodplain
 82 and Salmonid Habitat Restoration,
 83 Banducci Site Environmental
 84 Assessment
- 85 ▪ Lower Redwood Creek Interim
 86 Flood Reduction Measures and
 87 Floodplain / Channel Restoration
 88 Environmental Assessment
- 89 ▪ Mori Point Restoration and Trail
 90 Plan Environmental Assessment
- 91 ▪ Ocean Park Stewardship Action Plan,
 92 National Park Service
- 93 ▪ Pacific Ocean Park Strategic Plan,
 94 National Park Service

1	▪ Redwood Creek Watershed: Vision for the Future (2003)	44	NPS Plans in the Process of Being Developed
2		45	
3	▪ Wetland and Creek Restoration at Big Lagoon, Muir Beach Final Environmental Impact Statement	46	▪ Dog Management Plan / Environmental Impact Statement for Golden Gate National Recreation Area
4		47	
5		48	
6		49	
7		50	▪ Golden Gate National Recreation Area – Long Range Transportation Plan
8	NPS Program Implementation Plans	51	
9	▪ Alcatraz Development Concept Plan and Environmental Assessment	52	
10		53	▪ Alcatraz Ferry Embarkation Environmental Impact Statement
11	▪ Bay Area Museum Resource Center Plan	54	
12		55	
13	▪ Golden Gate National Recreation Area Climate Change Action Plan, NPS Climate Friendly Parks Program, NPS Climate Change Response Strategy, NPS Climate Change Action Plan, NPS Green Parks Plan	56	
14		57	Other NPS General Management Plans
15		58	
16		59	▪ 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.
17	▪ Comprehensive Interpretive Plan for the Golden Gate National Parks	60	
18		61	
19		62	
20	▪ Fire Management Plan / Final Environmental Impact Statement for Golden Gate National Recreation Area	63	
21		64	
22		65	
23	▪ Golden Gate National Recreation Area – Park Asset Management Plan	66	
24		67	▪ 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.
25		68	
26	▪ Marin Equestrian Stables Plan and Environmental Assessment	69	
27		70	
28		71	
29		72	
30		73	
31		74	
32	NPS Park Partner Plans	75	
33	▪ Headlands Center for the Arts Master Plan	76	
34		77	OTHER FEDERAL PLANS
35	▪ Headlands Institute Campus Improvement and Expansion Plan	78	
36		79	▪ National Oceanic and Atmospheric Administration (NOAA)—Joint Management Plan for Cordell Bank, Gulf of the Farallones, and Monterey Bay National Marine Sanctuaries
37	▪ Marine Mammal Center Site and Facilities Improvements Project Environmental Assessment	80	
38		81	
39		82	
40	▪ Slide Ranch Master Plan and Environmental Assessment	83	▪ Natural Resource Trustee Agencies—Cosco Busan Oil Spill Final Damage Assessment and Restoration Plan (2012)
41		84	
42		85	
43		86	
		87	
		88	

1 STATE AND REGIONAL PLANS	43	▪ Statewide Historic Preservation Plan for California, 2006–2010
2	44	
3	45	
4	46	
5	47	COUNTY AND LOCAL PLANS
6	48	▪ Central Marin Ferry Connection Project
7	49	
8	50	▪ Fitzgerald Marine Reserve Master Plan
9	51	
10	52	▪ Huddart and Wunderlch Parks Master Plan
11	53	
12	54	▪ Marin County Bicycle and Pedestrian Master Plan
13	55	
14	56	▪ Marin County Local Coastal Program Unit 1
15	57	
16	58	▪ Marin Countywide Plan as amended
17	59	
18	60	▪ Midcoast Action Plan for Parks and Recreation: Planning Team Report
19	61	
20	62	▪ City of Pacifica Pedro Point Headlands Coastal Trail Connection
21	63	
22	64	▪ PG&E Jefferson-Martin 230kV Transmission Line Proposed Settlement and Environmental Assessment
23	65	
24	66	▪ Regional Bicycle Plan for the San Francisco Bay Area
25	67	
26	68	▪ San Francisco General Plan
27	69	
28	70	▪ San Francisco Public Utilities Commission – Peninsula Watershed Management Plan (2004)
29	71	
30	72	▪ San Mateo County Comprehensive Bicycle Route Plan
31	73	
32	74	▪ San Mateo County Trails Plan
33	75	
34	76	▪ San Mateo Countywide Transportation 2010 Plan
35	77	
36	78	▪ San Pedro Valley County Park
37	79	
38	80	▪ Sausalito General Plan
39	81	
40	82	▪ Extension of San Francisco Municipal Railway’s Historic Streetcar Environmental Impact Statement
41	83	
42		

RELATED LAWS AND NATIONAL PARK SERVICE POLICIES

1 Many park management directives are
2 specified in laws and policies guiding the
3 National Park Service and are not subject to
4 alternative approaches. For example, there
5 are laws and policies about managing
6 environmental quality (such as the Clean Air
7 Act, the Endangered Species Act, Executive
8 Order 13112, “Invasive Species,” and
9 Executive Order 11990, “Protection of
10 Wetlands”); laws governing the preservation
11 of cultural resources (such as the National
12 Historic Preservation Act and the Native
13 American Graves Protection and
14 Repatriation Act); and laws about providing
15 public services (such as the Americans with
16 Disabilities Act). In other words, a general
17 management plan is not needed to decide
18 that it is appropriate to protect endangered
19 species, control nonnative species, protect
20 historic and archeological sites, conserve
21 artifacts, or provide access for disabled
22 persons. Laws and policies have already
23 addressed those and many other issues.
24 Although attaining some conditions set forth
25 in these laws and policies may have been
26 temporarily deferred in the park because of
27 funding or staffing limitations, the National
28 Park Service will continue to strive to
29 implement these requirements with or
30 without a new general management plan.
31 However, the general management plan
32 provides an opportunity to develop more
33 detailed interpretations needed in order to
34 apply them in specific situations, and this is
35 best decided during the development of the
36 general management plan or during other
37 planning processes.

38
39 There are other laws and executive orders
40 that are applicable solely or primarily to
41 units of the national park system. These
42 include the 1916 Organic Act that created
43 the National Park Service; the General
44 Authorities Act of 1970; the Act of March 27,
45 1978 (also called the Redwoods National
46 Park Expansion Act), relating to the

47 management of the national park system;
48 and the National Parks Omnibus
49 Management Act (1998).

50
51 The National Park Service Organic Act (16
52 USC 1) provides the fundamental
53 management direction for all units of the
54 national park system:

55
56 *[P]romote and regulate the use of the*
57 *Federal areas known as national*
58 *parks, monuments, and reservations*
59 *. . . by such means and measure as*
60 *conform to the fundamental purpose*
61 *of said parks, monuments and*
62 *reservations, which purpose is to*
63 *conserve the scenery and the natural*
64 *and historic objects and the wild life*
65 *therein and to provide for the*
66 *enjoyment of the same in such*
67 *manner and by such means as will*
68 *leave them unimpaired for the*
69 *enjoyment of future generations.*

70
71 The National Park System General
72 Authorities Act (16 USC 1a-1 et seq.) affirms
73 that while all national park system units
74 remain “distinct in character,” they are
75 “united through their interrelated purposes
76 and resources into one national park system
77 as cumulative expressions of a single
78 national heritage.” The act makes it clear
79 that the National Park Service Organic Act
80 and other protective mandates apply equally
81 to all units of the system. Further, amend-
82 ments state that NPS management of park
83 units should not “derogate[e] . . . the purposes
84 and values for which these various areas
85 have been established.”

86
87 The National Park Service also has
88 established policies for all units under its
89 stewardship. These are identified and
90 explained in a guidance manual entitled NPS
91 *Management Policies 2006*. The action
92 alternatives considered in this document

1 (alternatives 1, 2, and 3), as well as the no-
2 action alternative (current management),
3 incorporate and comply with the provisions
4 of these mandates and policies. Appendix C
5 details key NPS policies and their desired
6 conditions and strategies.

7
8 Section 1.4 of *NPS Management Policies 2006*
9 requires analysis of potential effects to
10 determine whether alternatives would
11 impair park resources and values.

12
13 The fundamental purpose of the national
14 park system, established by the Organic Act
15 and reaffirmed by the General Authorities
16 Act, as amended, begins with a mandate to
17 conserve resources and values. National
18 Park Service managers must always seek
19 ways to avoid, or to minimize to the greatest
20 degree practicable, adverse impacts on
21 resources and values. Although Congress has
22 given the National Park Service the
23 management discretion to allow certain
24 impacts within a unit, that discretion is
25 limited by the statutory requirement that the
26 National Park Service must leave resources
27 and values unimpaired unless a particular

28 law directly and specifically provides
29 otherwise.

30
31 The prohibited impairment is an impact that,
32 in the professional judgment of the
33 responsible NPS manager, would harm the
34 integrity of resources and values, including
35 the opportunities that otherwise would be
36 present for the enjoyment of those resources
37 or values (*NPS Management Policies 2006*
38 section 1.4.5). An impact would be more
39 likely to constitute impairment if it (1)
40 results in a moderate or major adverse effect
41 on a resource or value whose conservation is
42 necessary to fulfill specific purposes
43 identified in the establishing legislation or
44 proclamation of the area, (2) is key to the
45 natural or cultural integrity of the area or to
46 opportunities for enjoyment of the area, or
47 (3) is identified as a goal in the area's general
48 management plan or other relevant NPS
49 planning documents.

50
51 A written determination on nonimpairment
52 will ultimately be prepared for the selected
53 alternative and appended to the Record of
54 Decision for the *Final General Management*
55 *Plan / Environmental Impact Statement*.



INTRODUCTION

1 The development of the alternatives for this
2 general management plan began with
3 publication of newsletter 1 (spring 2006) and
4 public open house events that asked people
5 what they valued and enjoyed most about
6 Golden Gate National Recreation Area and
7 Muir Woods National Monument.
8 Additionally, the public was asked for their
9 concerns and suggestions about the future
10 management of the park. The public
11 response was analyzed and reported in
12 newsletter 2 (spring 2007). During this time,
13 the planning team met with park staff, park
14 partners, and other stakeholders to collect
15 information on existing conditions and
16 related issues.

17
18 Throughout the scoping process, the
19 planning team collected and analyzed
20 information about the park’s natural and
21 cultural resources, and about visitor
22 characteristics and use patterns. Guided by
23 public input and the results of the analysis,
24 the planning team defined the issues that the
25 new general management plan would
26 address. Next, the planning team explored
27 different ways to address the issues. This
28 exploration formed a set of concepts that
29 would be used to develop the alternatives for
30 the general management plan. The planning
31 team developed four management concepts,
32 each exploring a different possible future for
33 Golden Gate National Recreation Area and
34 Muir Woods National Monument. These
35 management concepts were presented to the
36 public in newsletter 3 (fall 2007). The
37 management concepts were as follows:

- 38
39 1. Concept 1: Connecting People with
40 the Parks
- 41 2. Concept 2: Preserving and Enjoying
42 Coastal Ecosystems
- 43 3. Concept 3: Focusing on National
44 Treasures
- 45 4. Concept 4: Collaborating Regionally

46 The planning team used these management
47 concepts to guide development of the
48 preliminary alternatives for the general
49 management plan. Each preliminary
50 alternative consisted of two main
51 components. First, there was a management
52 concept that created a general theme for the
53 overall management of the park. Second,
54 management zones were created that
55 identified a range of potential desired
56 conditions for natural and cultural
57 resources, opportunities for visitor
58 experiences, and general levels of
59 development and visitor use and services
60 based on the purpose and significance of the
61 park. These management zones were then
62 applied to the park in different ways to
63 reflect the concept of each alternative.

64
65 Eight management zones were developed for
66 this general management plan. The desired
67 conditions are different in each management
68 zone and reflect the focus of that particular
69 zone. Guided by each management concept,
70 zones were applied to the park in different
71 configurations, forming the basis of the
72 preliminary alternatives. The preliminary
73 alternative maps reflected the intent of each
74 concept and described how the zones would
75 be allocated.

76
77 As the preliminary alternatives were being
78 developed, it became apparent to the
79 planning team that the fourth management
80 concept, “Collaborating Regionally,” was a
81 philosophy that applied to the overall
82 management of the park and was applicable
83 in all of the alternatives, rather than a
84 specific park vision used to guide develop-
85 ment of one alternative. Therefore, the park
86 managers adopted the “Collaborating
87 Regionally” concept as a *guiding principle* for
88 managing the park and did not further
89 develop a fourth preliminary alternative.

90
91 Once developed, the three preliminary
92 alternatives were described in detail in

1 newsletter 4 (spring 2008) and shared with
2 the public. The planning team hosted local
3 workshops to explain and test the
4 alternatives with the public. Using the public
5 comments, the planning team worked to
6 strengthen the alternatives and identify the
7 NPS preferred alternative. With the
8 alternatives approved by park managers, the
9 planning team began preparation of this
10 *Final General Management Plan /*
11 *Environmental Impact Statement.*
12
13 This general management plan presents the
14 alternatives with their zone maps and
15 supporting narratives, including the NPS
16 preferred alternative, for future management
17 of Golden Gate National Recreation Area
18 and Muir Woods National Monument. Also
19 included is a description of current

20 conditions, representing the management
21 direction and trends that are based on the
22 1980 *General Management Plan* and its
23 subsequent amendments. The description of
24 the current conditions serves as a basis of
25 comparison with the three alternatives and is
26 referred to as the “No-action Alternative.”
27 The other alternatives are referred to as
28 “Action Alternatives.”
29
30 The next section presents the three
31 management concepts that were used to
32 guide development of the alternatives for the
33 general management plan. This is followed
34 by an explanation of how the NPS preferred
35 alternatives were identified. Then the reader
36 is presented with detailed descriptions of the
37 eight management zones.

CONCEPTS FOR FUTURE MANAGEMENT

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

13
14

15 **CONCEPT 1: CONNECTING PEOPLE** 16 **WITH THE PARKS (EVOLVED INTO** 17 **ALTERNATIVE 1)**

18 The emphasis of this concept is to reach out
19 and engage the community and other
20 visitors in the enjoyment, understanding,
21 and stewardship of park resources and
22 values. Park management would focus on
23 ways to attract and welcome visitors,
24 connect people with resources, and promote
25 understanding, enjoyment, preservation, and
26 health—all as ways to reinvigorate the
27 human spirit. Visitor opportunities would be
28 relevant to diverse populations now and in
29 the future.

30
31

32 **Rationale**

33 This concept emphasizes park
34 management's commitment to the founding
35 idea of "parks to the people," and the park's
36 fundamental purpose of bringing national
37 park experiences to a large and diverse
38 urban population. Improving connections
39 between the park and the people is
40 fundamental to achieving the park's purpose
41 and to maintaining the public's continued
42 interest and support.

43
44

45 **Goals**

46 ***Visitor Experience***

- 47 ▪ Actively seek opportunities to
48 respond to the needs and interests of
49 the diversity of visitors.
- 50 ▪ Encourage visitors to engage in a
51 wide range of opportunities and
52 experiences in a diversity of settings.
- 53 ▪ Enhance outreach and access to and
54 within the park and monument and
55 make them welcoming.
- 56 ▪ Foster the visitor's deep personal
57 connection to the park and discovery
58 of the values and enjoyment of the
59 natural environment.
- 60 ▪ Encourage hands-on stewardship
61 through visitor opportunities that
62 promote personal health and
63 responsibility.

64

65 ***Cultural Resources***

- 66 ▪ Maximize adaptive reuse,
67 rehabilitation, stabilization, and
68 interpretation of cultural resources
69 (structures, landscapes, archeological
70 sites, ethnographic resources, and
71 museum collections) to support
72 visitor enjoyment, understanding,
73 and community connections.
- 74 ▪ Work with the public, park partners,
75 local communities, historical
76 organizations, and regional
77 collaborators to steward, preserve,
78 and protect cultural resources.
- 79 ▪ Preserve and protect cultural
80 resources so that visitors can connect
81 with and appreciate these resources
82 and their stories.

83

1 **Natural Resources**

- 2 ▪ Maintain the integrity and diversity
3 of natural resources and systems and
4 mitigate the effects of climate change
5 and urban pressures.
- 6 ▪ Enhance the public’s access to
7 natural resources to promote visitor
8 understanding and appreciation.
- 9 ▪ Integrate natural resource
10 preservation and concepts with
11 visitor stewardship opportunities to
12 deepen visitor understanding.
- 13 ▪ Increase visitor understanding,
14 awareness, and support for park
15 resources through education and
16 interpretive opportunities that
17 include messages about the
18 sensitivity of park resources, park
19 regulations, and appropriate visitor
20 behavior.

23 **CONCEPT 2: PRESERVING AND**
24 **ENJOYING COASTAL ECOSYSTEMS**
25 **(EVOLVED INTO ALTERNATIVE 2)**

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

41 **Rationale**

42 The concept creates a vision for
43 intentionally connecting resources and
44 systems to form contiguous habitat from the
45 ocean to the coastal hills. The more
46 connected the water and land base, the

47 better the ability for ecosystems to adjust
48 and adapt, thus increasing their resiliency to
49 urban pressures and climate change. This
50 concept also responds to the public’s strong
51 interest in having more natural wildlands in
52 proximity to the urban communities of the
53 San Francisco Bay Area.

56 **Goals**

57 **Visitor Experience**

- 58 ▪ Connect visitors with resources and
59 the park through expanded and
60 diverse science and stewardship
61 programs that are focused on
62 preservation and restoration of
63 coastal and marine resources and
64 address the implications of climate
65 change.
- 66 ▪ Provide greater opportunities for
67 visitors to explore wild areas and
68 immerse themselves in nature.
- 69 ▪ Manage low-impact visitor use that
70 enhances the qualities of solitude,
71 quiet, and naturalness in sensitive
72 natural resource areas and
73 accommodate active recreational
74 pursuits in other areas.
- 75 ▪ Increase visitor understanding,
76 awareness, and support for coastal
77 resources through participation in
78 narratives and programs about
79 human interaction with and
80 dependency on natural resources.

82 **Cultural Resources**

- 83 ▪ Incorporate the history and
84 collections related to natural
85 resources to raise awareness of the
86 ongoing efforts of the United States
87 to conserve marine ecosystems.
- 88 ▪ In park interpretation and education
89 programs, emphasize sites and the
90 history connected to coastal
91 resources, including shipwrecks,
92 archeological sites, agricultural lands

1 and uses, coastal defense, and
2 lighthouses, so visitors can connect
3 with those resources.

- 4 ■ Maximize adaptive reuse and
5 rehabilitation of cultural resources to
6 support visitor enjoyment,
7 understanding, and community
8 connections.
- 9 ■ Work with interested groups and
10 populations to preserve and protect
11 cultural resources.
- 12 ■ Preserve and protect cultural
13 resources so that visitors can connect
14 with and appreciate these resources.

15 **Natural Resources**

- 17 ■ Reconnect fragmented habitat within
18 and adjacent to the park to
19 strengthen the integrity and
20 resiliency of the coastal ecosystem to
21 respond to climate change and urban
22 pressures.
- 23 ■ Optimize recovery of special status
24 species and survival of wide-ranging
25 wildlife.
- 26 ■ Restore natural processes and/or
27 allow these processes to evolve
28 unimpeded to the greatest degree
29 feasible.
- 30 ■ Promote partnerships to help the
31 park become a center for innovative
32 coastal science, stewardship, and
33 learning.

34 **CONCEPT 3: FOCUSING ON** 35 **NATIONAL TREASURES** 36 **(EVOLVED INTO ALTERNATIVE 3)**

37 The emphasis of this concept is to focus on
38 the park's nationally important natural and
39 cultural resources. The fundamental
40 resources of each showcased site would
41 continue to be managed at the highest level
42 of preservation to protect the resources in
43 perpetuity and to promote appreciation,
44 understanding, and enjoyment of those
45 resources.

46 resources. Visitors would have the
47 opportunity to explore the wide variety of
48 experiences that are associated with many
49 different types of national parks—all in this
50 park. All other resources would be managed
51 to complement nationally significant
52 resources and associated visitor experience.

53 **Rationale**

54 The concept highlights the park's variety of
55 nationally significant resources. By
56 distinguishing the nationally significant
57 resources and promoting the NPS identity,
58 the objective of bringing exemplary national
59 park experiences to an urban population
60 would be met. The concept would also allow
61 the National Park Service to focus
62 management of park resources, visitor
63 experience, and partnerships, giving priority
64 to the most significant sites.

65 **Goals**

66 **Visitor Experience**

- 67 ■ Provide visitors with opportunities to
68 explore, learn, and enjoy the park's
69 unique resources and history.
- 70 ■ Allow the park's distinctive resources
71 and associated narratives to shape
72 recreational opportunities.
- 73 ■ Emphasize active public participation
74 in stewardship programs at the
75 showcased sites.
- 76 ■ Provide visitors with opportunities
77 for understanding and enjoying the
78 national park experience.

79 **Cultural Resources**

- 80 ■ Emphasize the fundamental
81 resources that contribute to the
82 national significance of the park,
83 including national historic
84 landmarks. Manage all other
85 resources to complement significant
86 resources and visitor experience.

1	▪ Tie the associated cultural resources,	14	park unit. Manage all other resources
2	museum collections, and histories to	15	to complement the distinctive
3	the showcased sites.	16	resources and experiences.
4	▪ Preserve and protect cultural	17	▪ Protect or restore the integrity of
5	resources to highlight the	18	fundamental natural resources and
6	interpretive and educational values	19	processes that support the
7	and provide, wherever possible,	20	significance of each park unit.
8	direct contact with the resources.	21	▪ Manage distinctive natural resources
9		22	to ensure their ecological integrity
10	Natural Resources	23	while providing opportunities to
		24	engage visitors in hands-on
11	▪ Emphasize the preservation of	25	stewardship and exploration.
12	fundamental natural resources that	26	
13	contribute to the significance of each		

ACTIONS AND ALTERNATIVES CONSIDERED BUT DISMISSED FROM FURTHER CONSIDERATION

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

- 4
- 5 1. Connecting People with the Parks
- 6 2. Preserving and Enjoying Coastal
7 Ecosystems
- 8 3. Focusing on National Treasures
- 9 4. Mosaic of National Park Experiences
- 10 5. Collaborating Regionally

11
12 A number of other concepts were developed
13 in early brainstorming sessions: *Golden Gate*
14 *National Recreation Area is a Crown Jewel, A*
15 *Park for the Next Century, The Park as an*
16 *Experiment/Living Laboratory, A Center of*
17 *Hands-On Learning and Action, Healthy*
18 *People/Healthy Parks, and Sustainability in*
19 *Action*. Each of these concepts eventually
20 evolved into ideas built into the remaining
21 concepts, became guiding principles, or were
22 recognized as NPS policy; therefore, they
23 were not retained as individual alternative
24 concepts.

25
26 As the planning team developed the five
27 concepts into alternatives, two of the early
28 concepts were dismissed from further
29 consideration: *Mosaic of National Park*
30 *Experiences* and *Collaborating Regionally*.

31 32 33 **MOSAIC OF NATIONAL PARK** 34 **EXPERIENCES**

35 *Mosaic of National Park Experiences*
36 envisioned Golden Gate National
37 Recreation Area and Muir Woods as
38 providing visitors with opportunities to
39 explore different types of national parks
40 within the park. Park areas would be
41 designated to promote distinct types of
42 national park settings and visitor experience

43 based on the primary natural and cultural
44 resources and key interpretive themes. For
45 example, one area of the park would be
46 managed as a marine preserve, another park
47 area managed as a national seashore, and
48 one as a national historical park. Visitors
49 would have the opportunity to explore the
50 wide variety of national park experiences at
51 one park. However, the planning team
52 determined that this concept had more
53 utility as a marketing strategy, rather than as
54 a management concept. In addition, this
55 alternative duplicated several elements of
56 alternatives. For example, parts of this
57 concept are evident in *Focusing on National*
58 *Treasures*, as it centers on the best that each
59 area has to offer. Therefore, the *Mosaic*
60 concept was dismissed from consideration
61 and not brought forward to the public.

62 63 64 **COLLABORATING REGIONALLY**

65 The second dismissed concept,
66 *Collaborating Regionally*, was shared with
67 the public in newsletter 3 (fall 2007). The
68 emphasis of the concept was to manage the
69 park and monument as the core of extensive
70 public lands, connecting all parks and open
71 spaces and other resources as a seamless
72 whole, regardless of land ownership and
73 boundaries. Collaboration among land
74 managers would integrate NPS management
75 of the park with that of surrounding natural
76 and cultural resources and visitor
77 opportunities. However, the planning team
78 determined that this concept was applicable
79 to all alternatives. The concept was
80 eventually identified as an overall
81 management philosophy applicable to all the
82 alternatives. As a result, this alternative
83 duplicated core elements of the other
84 alternatives. The *Collaborating Regionally*
85 concept was therefore incorporated as a
86 guiding principle for park management;

1 integrated into all alternatives, and was not
2 carried forward as a distinct land use
3 alternative. Additionally, specific actions
4 promoting collaboration among land
5 managers are included within each
6 alternative. A few of the many examples of
7 these actions include trail connections to
8 public lands and communities; multiagency
9 visitor centers and maintenance facilities,
10 collaborative ocean stewardship, and
11 cooperative interpretation and planning for
12 cultural resource preservation.

13

14

15 **FULL RESTORATION OF BUILDINGS**
16 **AND LANDSCAPES ON ALCATRAZ**
17 **ISLAND**

18 An early version of “Alternative 3: Focusing
19 on National Treasures,” originally contained

20 a high level of restoration of historic
21 resources on Alcatraz Island. Given the
22 economic infeasibility due to the high cost of
23 fully restoring numerous buildings and
24 features, and too great an environmental
25 impact to breeding colonies of waterbirds,
26 the planning team revised the proposal to be
27 more financially achievable and sustainable.
28 The result is a more focused approach,
29 highlighting the buildings and landscape
30 areas that contribute most to visitor
31 experience and national historic landmark
32 status, while minimizing impacts to wildlife.
33 Costs were reduced by two-thirds through
34 this approach. The revised alternative 3
35 mandates restoration of only select parts of
36 buildings and emphasizes stabilization and
37 rehabilitation for other historic resources.

IDENTIFICATION OF THE NATIONAL PARK SERVICE PREFERRED ALTERNATIVES

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

18
19 The topics that the planning team used to
20 evaluate the relative advantages among the
21 alternatives were as follows:

- 22
- 23 ▪ Strengthen the integrity and
24 resiliency of coastal ecosystems.
- 25 ▪ Strengthen the integrity of resources
26 that contribute to the National
27 Register of Historic Places, national
28 historic districts, and national
29 historic landmarks.
- 30 ▪ Support a diversity of recreational
31 opportunities and national park
32 experiences.
- 33 ▪ Improve and promote public
34 understanding of park resources,
35 identity, and NPS values.
- 36 ▪ Provide visitors with safe and
37 enjoyable access and circulation to
38 and within the park.

39
40 The evaluation of the advantages and costs
41 of each alternative were initially identified by
42 park managers during a week-long
43 workshop, with several follow-up meetings
44 to further refine the NPS preferred

45 alternative. The CBA process indicated the
46 following:

47

48 **Alternative 1** represents the greatest
49 advantage for the park lands of Golden
50 Gate National Recreation Area in
51 Marin, San Francisco, and San Mateo
52 counties.

53

54 **Alternative 3** represents the greatest
55 advantage for Alcatraz Island and Muir
56 Woods National Monument.

57

58 The CBA evaluation was an important step
59 in identifying and refining the NPS preferred
60 alternatives. Critical changes to the NPS
61 preferred alternatives were made to
62 incorporate ideas from the other alternatives
63 where they were consistent with the
64 management concept and provided
65 additional advantages to the park. The
66 process of shaping the preferred alternatives
67 continued well after the CBA workshop
68 through additional public comment and
69 consultation with the staff at the NPS Pacific
70 West Regional Office.

71

72 In September 2011, Golden Gate National
73 Recreation Area released the Draft General
74 Management Plan Environmental Impact
75 Statement for public review and comment.
76 During the public comment period, 542
77 pieces of correspondence were received
78 from agencies, organizations, and private
79 individuals.

80

81 Overall, there was considerable support for
82 the plan and the alternatives analyzed. The
83 National Park Service has responded to all
84 substantive comments raised by the public as
85 part of finalizing the GMP/EIS. In general,
86 the planning team responded to comments
87 by:

88

PART 2: BUILDING MANAGEMENT ALTERNATIVES

1	▪ modifying the alternatives as	8	▪ explaining why the comments do not
2	requested	9	warrant further agency response,
3	▪ developing and evaluating suggested	10	citing sources, authorities, or reasons
4	alternatives	11	that support the agency's position
5	▪ supplementing, improving, or	12	
6	modifying the analysis	13	
7	▪ making factual corrections		

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

Resource	Diverse Opportunities Zone	Scenic Corridor Zone	Evolved Cultural Landscape Zone	Historic Immersion Zone	Interpretive Corridor	Natural Zone	Sensitive Resources Zone	Park Operations Zone
SUMMARY	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.	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.	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.	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.	(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.	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 various 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 by means of fencing off sensitive areas. Modest facilities that support management and visitor use within this zone, such as a trailhead, could be placed on the periphery of the 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, possibly by fencing off sensitive areas. 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 addressed.	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 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.	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.	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	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.	Natural resource integrity would be maintained and restored while providing for visitor opportunities and park operations.	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.	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.	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.

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Resource	Diverse Opportunities Zone	Scenic Corridor Zone	Evolved Cultural Landscape Zone	Historic Immersion Zone	Interpretive Corridor	Natural Zone	Sensitive Resources Zone	Park Operations Zone
			resource objectives.					
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.	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.	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.	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.	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 hazards. Impacted areas would be restored to the greatest extent possible. Geologic and paleontological features and resources would be protected from visitor use impacts.	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.	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.	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. 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.	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.	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.	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.	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.	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.	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.	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 visitor use impacts.	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.	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.	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.	Not Applicable.	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.	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 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.

TABLE 1. MANAGEMENT ZONES

Resource	Diverse Opportunities Zone	Scenic Corridor Zone	Evolved Cultural Landscape Zone	Historic Immersion Zone	Interpretive Corridor	Natural Zone	Sensitive Resources Zone	Park Operations Zone
							the marine areas are specifically managed for sensitive cultural resources.	
Coastal Ecosystems: Vegetation	<p>Native vegetation and vegetation communities (including aquatic vegetation) would be preserved to the greatest extent possible.</p> <p>Species that can withstand and support intense visitor use may be desired in developed areas or areas that receive high levels of trampling. Nonnative invasive plants could be present, but would be suppressed and actively managed.</p>	<p>Native vegetation and vegetation communities (including aquatic vegetation) would be preserved to the greatest extent possible.</p> <p>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. Nonnative invasive plants could be present, but would be suppressed and actively managed in the park.</p>	<p>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 on adjacent native vegetation. Nonnative 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.</p>	<p>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 on adjacent native vegetation. Nonnative 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.</p>	<p>Native vegetation and vegetation communities (including aquatic vegetation) would be preserved to the greatest extent possible with the goal of conserving native biodiversity. Nonnative invasive plants could be present, but would be contained and actively managed with the goal of eradication in the monument.</p>	<p>Native vegetation and vegetation communities (including aquatic vegetation) would be preserved to the greatest extent possible with the goal of conserving native biodiversity. Nonnative invasive plants could be present, but would be contained and actively managed with the goal of eradication in the park.</p>	<p>Native vegetation and vegetation communities (including aquatic vegetation) would be preserved to the greatest extent possible with the goal of conserving native biodiversity. Nonnative invasive plants could be present, but would be contained and actively managed with the goal of eradication in the park.</p>	<p>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. Nonnative invasive plants could be present, but would be suppressed and actively managed in the park.</p>
Coastal Ecosystems: Aquatic and Terrestrial Wildlife	<p>Native wildlife and wildlife habitat would be protected from visitor use impacts to the greatest extent possible and wildlife watching opportunities would be available. Nonnative 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.</p>	<p>Native wildlife and wildlife habitat would be protected from visitor use impacts to the greatest extent possible. Nonnative 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.</p>	<p>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. Nonnative invasive animals would be managed to the extent feasible, with emphasis on species that have inordinate impacts on native communities or public safety.</p>	<p>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. Nonnative 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.</p>	<p>Native wildlife and wildlife habitat would be protected from visitor use impacts to the greatest extent possible. Nonnative invasive animals would be managed to the extent feasible, with emphasis on species that have inordinate impacts on native communities or public health.</p>	<p>Native wildlife communities and ecosystem processes would be preserved and restored to the greatest extent possible. Nonnative invasive animals would be managed with the goal of eradication in the park.</p>	<p>Native wildlife communities and ecosystem processes would be preserved and promoted to the greatest extent possible. Nonnative invasive animals would be managed with the goal of eradication in the park.</p>	<p>Native wildlife communities would be protected to the greatest extent possible. Nonnative 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.</p>
Natural Sounds (soundscapes and lightsapes)	<p>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</p>	<p>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 be minimized as</p>	<p>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</p>	<p>The natural soundscape would often be mixed with sounds from human activity, visitor use, and development. Noise impacts on wildlife behavior and habitat could exist in some areas. These impacts would be minimized as much as possible while providing for</p>	<p>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</p>	<p>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.</p>	<p>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.</p> <p>Dark night skies and natural</p>	<p>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</p>

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	<p>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.</p> <p>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.</p>	<p>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.</p> <p>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.</p>	<p>nighttime and off-peak times, the natural soundscape could predominate. In areas away from roads, there could be frequent and prolonged noise-free intervals.</p> <p>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 on 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.</p>	<p>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.</p> <p>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.</p>	<p>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.</p> <p>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.</p>	<p>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.</p>	<p>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.</p>	<p>natural soundscape could predominate, with occasional noise-free intervals.</p> <p>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.</p>
Threatened and Endangered Species and their Habitat	T&E species and their habitats would be managed to support species requirements.	T&E species and their habitats would be managed to support species requirements.	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.	T&E species and their habitats would be managed to support species requirements.	T&E species and their habitats would be managed to support species requirements.	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.	T&E species and their habitats would be proactively managed to support species requirements, including recovery actions.	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.	The scenic qualities of cultural resources or designated cultural landscapes would be managed to preserve their visual and historic characteristics.	Cultural resources would be preserved through adaptive reuse. Historic values and characteristics would be preserved for interpretation and enjoyment.	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.	Cultural resources would be preserved by managing for adaptive reuse. Historic values and characteristics would be preserved for interpretation and enjoyment.	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.	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.	Cultural resources could be preserved by adaptive reuse for the purposes of park operations and administration.

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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.)	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.)	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.)	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.)	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.)	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.)	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.)	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 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.	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.	Cultural landscapes would be rehabilitated for appropriate contemporary use of the landscape while preserving those features that convey historical, cultural, or architectural values.	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.	Cultural landscapes would be rehabilitated in collaboration with, and where they complement, natural resource objectives to preserve their significant features.	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.	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.	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.	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.	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.	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.	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.	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.	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.	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 would remain in situ and undisturbed, unless removal of artifacts or intervention into cultural material is justified by preservation	Archeological resources would remain in situ and undisturbed, unless removal of artifacts or intervention into cultural material is justified by preservation	Archeological resources would remain in situ and undisturbed, unless removal of artifacts or intervention into cultural material is justified by preservation	Archeological resources would remain in situ and undisturbed, unless removal of artifacts or intervention into cultural material is justified by preservation	Archeological resources would remain in situ and undisturbed, unless removal of artifacts or intervention into cultural material is justified by preservation	Archeological resources would remain in situ and undisturbed, unless removal of artifacts or intervention into cultural material is justified by preservation	Archeological resources would remain in situ and undisturbed, unless removal of artifacts or intervention into cultural material is justified by preservation	Archeological resources and submerged cultural resources would remain in situ and undisturbed, unless removal of artifacts or intervention into cultural

TABLE 1. MANAGEMENT ZONES

Resource	Diverse Opportunities Zone	Scenic Corridor Zone	Evolved Cultural Landscape Zone	Historic Immersion Zone	Interpretive Corridor	Natural Zone	Sensitive Resources Zone	Park Operations Zone
	treatment, protection, research, stabilization, data recovery, 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. Strategic surveys would be conducted in those areas where visitor use, management zone practices, natural process policies (unimpediment, restoration, vegetation removal), or park or partner undertakings threaten sensitive archeological areas. Significant findings would be incorporated into current park planning strategies upon discovery.	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.	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.	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.	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.	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. Active management of nonnative vegetation which results in ground disturbance or ground clearance, and areas whose natural processes are left unimpeded, would require strategic archeological survey to identify archeological resources placed in vulnerable positions by these policy or project undertakings.	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. Historic archeological sites in sensitive coastal resource zones may require evaluation to determine if they constitute stressor to natural resources and need to be removed. For example, large historic trash deposits along the littoral of Alcatraz Island.	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 made available for research, exhibits, and interpretive programs in order to inform and engage the public in ongoing stewardship.	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.	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.	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.	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.	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.	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.	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	People could participate in a range of recreational, interpretive, and educational opportunities supported by a variety of visitor services.	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.	Visitors would have the opportunity to explore designated portions of historic landscapes and structures while participating in contemporary activities.	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.	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	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	Visitors would have the opportunity to experience the fundamental resources in the zone in limited areas and during specific times as determined by the park to ensure preservation of the resources. Visitors would be	Visitors would have the opportunity for limited and controlled access to these areas for purposes of orientation, organized meetings, and access to park administration.

TABLE 1. MANAGEMENT ZONES

Resource	Diverse Opportunities Zone	Scenic Corridor Zone	Evolved Cultural Landscape Zone	Historic Immersion Zone	Interpretive Corridor	Natural Zone	Sensitive Resources Zone	Park Operations Zone
					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.	self-reliance. Visitor use would be managed to ensure that activities and their intensities are compatible with protecting resource integrity.	encouraged to understand and value the sensitive nature of these resources with highly controlled and managed access to ensure that visitor activities and their intensities are compatible with protecting resource integrity.	
Types of Activities	<p>The following recreational activities typically occur in this zone, but are not a full listing of all allowed activities:</p> <ul style="list-style-type: none"> ▪ beach activities such as informal 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 could be allowed when appropriate, but measures would be taken to mitigate impacts on resources and other visitors during these events. 	<p>The following recreational activities typically occur in this zone, but are not a full listing of all allowed activities:</p> <ul style="list-style-type: none"> ▪ beach activities such as informal 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 could be allowed when appropriate, but measures would be taken to mitigate impacts on resources and other visitors during these events. 	<p>The following recreational activities typically occur in this zone, but are not a full listing of all allowed activities:</p> <ul style="list-style-type: none"> ▪ beach activities such as informal 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 could be allowed when appropriate, but measures would be taken to mitigate impacts on resources and other visitors during these events. 	<p>The following recreational activities typically occur in this zone, but are not a full listing of all allowed activities:</p> <ul style="list-style-type: none"> ▪ 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 could be allowed when appropriate, but measures would be taken to mitigate impacts on resources and other visitors during these events. 	<p>The following recreational activities typically occur in this zone, but are not a full listing of all allowed activities:</p> <ul style="list-style-type: none"> ▪ walking, hiking, sightseeing, and wildlife viewing ▪ programs and special events could include environmental education, stewardship, history, and science 	<p>The following recreational activities typically occur in this zone, but are not a full listing of all allowed activities:</p> <ul style="list-style-type: none"> ▪ 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, special and organized events could be allowed when appropriate, but measures would be taken to mitigate impacts on resources and other visitors during these events. 	<p>NPS-authorized visitor activities or activities requiring an NPS permit could include the following:</p> <ul style="list-style-type: none"> ▪ beach activities such as guided walks ▪ marine activities such as boating, kayaking, and sightseeing along the perimeter, and guided tours within the sensitive resources zone ▪ land-related activities such as hiking, walking, sightseeing, and bird and wildlife viewing along the perimeter, and guided tours within the sensitive resource zone ▪ other kinds of activities such as guided trips through historic sites and participation in citizen science and stewardship programs 	<p>The following recreational activities typically occur in this zone, but are not a full listing of all allowed activities:</p> <ul style="list-style-type: none"> ▪ stewardship activities <p>Special organized events would be permitted where compatible with park operations. Group sizes could be limited.</p>

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Resource	Diverse Opportunities Zone	Scenic Corridor Zone	Evolved Cultural Landscape Zone	Historic Immersion Zone	Interpretive Corridor	Natural Zone	Sensitive Resources Zone	Park Operations Zone
Interpretation / Education / Orientation	<p>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.</p> <p>A high level of visitor orientation and interpretive services would be available in this zone.</p> <p>Communication of interpretive themes would occur through many interpretive methods.</p>	<p>A high level of visitor orientation and interpretive services would be available in this zone.</p> <p>Communication of interpretive themes would occur through a broad array of interpretive methods.</p>	<p>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.</p> <p>A moderate to high level of visitor orientation and interpretive services would be available in this zone.</p> <p>Communication of interpretive themes would occur through a broad array of interpretive methods.</p>	<p>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.</p> <p>A high level of visitor orientation and interpretive services would be available in this zone.</p> <p>Communication of interpretive themes would occur through a broad array of interpretive methods.</p>	<p>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.</p> <p>A moderate to high level of interpretive and education services would be available in this zone.</p> <p>Communication of interpretive themes would occur through a broad array of interpretive methods.</p> <p>The use of contained fires limited to interpretive and educational purposes could be permitted by the superintendent.</p>	<p>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.</p> <p>A low to moderate level of guided/unguided interpretive services would be available in this zone.</p> <p>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.</p>	<p>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.</p> <p>A low to moderate level of guided/unguided interpretive services would be available in this zone.</p> <p>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.</p>	<p>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.</p> <p>Communication of interpretive themes would not be emphasized in this zone.</p>
Scenic Views	<p>Outstanding views of natural, cultural, and scenic resources would be an integral part of the visitor experience of this zone.</p>	<p>Outstanding views of natural, cultural, and scenic resources would be an integral part of the visitor experience of this zone.</p>	<p>Outstanding views of natural, cultural, and scenic resources may be available and would enhance the visitor experience in this zone.</p>	<p>Outstanding views of cultural resources would be an integral part of the visitor experience of this zone.</p>	<p>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.</p>	<p>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.</p>	<p>Outstanding views of natural, cultural, and scenic resources may be available if unobstructed views occur naturally.</p>	<p>Outstanding views of natural, cultural, and scenic resources may be available if unobstructed views occur naturally.</p>
Natural Sounds (soundscapes and lightscapes)	<p>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.</p> <p>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.</p>	<p>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</p>	<p>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.</p> <p>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</p>	<p>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.</p> <p>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</p>	<p>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</p>	<p>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</p>	<p>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.</p>	<p>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.</p> <p>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</p>

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Resource	Diverse Opportunities Zone	Scenic Corridor Zone	Evolved Cultural Landscape Zone	Historic Immersion Zone	Interpretive Corridor	Natural Zone	Sensitive Resources Zone	Park Operations Zone
		needed. Nocturnal lightscapes would be preserved and restored to the extent possible.	interpretation while minimizing light pollution. Nocturnal lightscapes would be preserved and restored to the extent possible.	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.	needed. Nocturnal lightscapes would be preserved and restored to the extent possible.	environmental leadership and to educate the public about light pollution.		demonstrate environmental leadership and educate the public about 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.	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.	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.	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.	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.	Challenge, risk, and testing of outdoor skills would be available in this zone. There would be limited universal access opportunities. Time commitment to experience this area would typically be an hour or more.	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.	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	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.	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.	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.	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.	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.	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.	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.	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 could include a diversity of facilities to welcome, orient, and support visitors.	Development may include road and trail corridors and associated day use facilities that support and direct visitor use.	Development may include a blend of historic and compatible modern structures to support visitor use and services.	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.	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).	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.	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.	Development patterns would include a diversity of facilities to support visitor services and park administration
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.	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.	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.	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.	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;	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	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.	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

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Resource	Diverse Opportunities Zone	Scenic Corridor Zone	Evolved Cultural Landscape Zone	Historic Immersion Zone	Interpretive Corridor	Natural Zone	Sensitive Resources Zone	Park Operations Zone
			Vehicular and nonvehicular access would be provided to and throughout the zone.		nonvehicular access would be the primary mode of transportation throughout the zone.	points.		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	<p>The following types of facilities could be provided:</p> <ul style="list-style-type: none"> 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) 	<p>The following types of facilities could be provided:</p> <ul style="list-style-type: none"> 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) 	<p>The following types of facilities could be provided:</p> <ul style="list-style-type: none"> 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) 	<p>The following types of facilities could be provided:</p> <ul style="list-style-type: none"> 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) 	<p>The following types of facilities could be provided:</p> <ul style="list-style-type: none"> 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 	<p>The following types of facilities could be provided:</p> <ul style="list-style-type: none"> 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) 	<p>The following types of facilities could be provided:</p> <ul style="list-style-type: none"> 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) 	<p>The following types of facilities could be provided:</p> <ul style="list-style-type: none"> administrative offices, maintenance and storage facilities, parking, pedestrian walkways, waste water and utility management facilities, and other operational needs
Commercial Services and Nonprofit Programming	<p>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.</p> <p>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.</p>	<p>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.</p> <p>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.</p>	<p>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.</p> <p>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.</p>	<p>Necessary and appropriate commercial services offerings that may be available include: limited food/beverage/retail, equipment rentals, guides, recreational, and equestrian.</p> <p>Nonprofit programming could be focused in the areas of environmental, educational, and interpretive. Certain buildings may be leased for compatible uses.</p>	<p>Commercial services would be minimal. Nonprofit programming in the area of education and interpretation may be available.</p>	<p>Commercial services would be minimal. Nonprofit programming in the area of education and interpretation may be available.</p>	<p>Commercial services and nonprofit programming would be minimal.</p>	<p>No visitor support services or nonprofit programming would be expected in this zone.</p>



INTRODUCTION

1 While three different concepts for
2 management are presented in the three
3 action alternatives described in this
4 document, there is some overarching
5 management direction that will continue to
6 guide the park and monument, regardless of
7 the alternative selected. Some of these
8 actions have developed through time from
9 the founding principles of the park and
10 monument; some are currently underway;
11 and some are required by law or policy. The
12 actions discussed in this section will occur
13 regardless of the management alternative
14 selected.
15
16

17 The following topics are included in this
18 section:

- 19
- 20 ▪ Boundary Adjustments
- 21 ▪ Climate Change
- 22 ▪ Maintenance, Public Safety,
23 Collections, and Visitor Facilities
- 24 ▪ Facilities Not Directly Related to the
25 Park Mission
- 26 ▪ American Indian Engagement
- 27 ▪ Ocean Stewardship
- 28 ▪ Park Collections
- 29 ▪ Partnerships
- 30 ▪ Trails
- 31 ▪ Transportation
- 32

BOUNDARY ADJUSTMENTS

1 The 1978 National Parks and Recreation Act
2 (16 USC 1a-7) requires general management
3 plans to address potential modifications to
4 park boundaries. Park boundaries are often
5 initially drawn to reflect a wide range of
6 practical considerations, and they do not
7 necessarily reflect natural or cultural
8 resource features, administrative
9 considerations, or changing land uses.
10 Current or potential changes in adjacent
11 land uses could pose threats to park
12 resources and limit the staff's ability to
13 strengthen the fundamental resources that
14 support the park purpose and significance.

15
16 Golden Gate National Recreation Area and
17 Muir Woods National Monument are part
18 of a larger area of protected open space in
19 the Bay Area. The natural and cultural
20 resources of the park would pose a greater
21 threat if not for the many other open space
22 areas that contribute to the integrity of
23 coastal ecosystems, scenic beauty,
24 recreational opportunities, and the
25 preservation of historic resources.

28 GOALS

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

- 32
33 ■ Strengthen the diversity of park
34 settings and opportunities supporting
35 the park purpose to encourage,
36 attract, and welcome diverse current
37 and future populations while
38 maintaining the integrity of the park's
39 natural and cultural resources.
- 40 ■ Strengthen the integrity and
41 resilience of coastal ecosystems by
42 filling habitat gaps, creating habitat
43 links, providing for the recovery of
44 special status species and the survival
45 of wide-ranging wildlife. In addition,

46 boundary modifications would
47 restore natural processes and
48 ecosystem capacity to respond to the
49 effects of climate change. Boundary
50 adjustments would be guided by
51 science-based approaches that build
52 on the goals of cooperative regional
53 efforts.

- 54 ■ Preserve nationally important natural
55 and cultural resources related to the
56 park's purpose.

57
58 In addition to following this guidance, the
59 park staff would play a partnership role in
60 regional land and marine area protection
61 efforts. This role includes coordinating and
62 developing multiple strategies with adjacent
63 public land managers and open space
64 organizations when land acquisition goals
65 and objectives can be shared.

66
67 Any proposed boundary changes would be
68 critically evaluated to confirm that such
69 actions contribute to achieving the park's
70 mission and resource protection goals and
71 that the park is not accepting undue
72 management burdens. Proposed land
73 acquisitions must be feasible to administer
74 considering their size, configuration, costs,
75 and ownership. In addition, changes could
76 be made if the land acquired was needed to
77 address operational and management issues,
78 such as visitor access, or to have logical and
79 identifiable boundaries. The potential
80 boundary modifications would continue to
81 be made with regional collaboration in mind,
82 while working to strengthen and protect the
83 park's natural, cultural, recreational, and
84 scenic resources.

85
86

1 PROPOSED BOUNDARY 2 ADJUSTMENTS

3 In compliance with federal law (PL 95-625,
4 and PL 101-628) and NPS *Management*
5 *Policies 2006*, the park has evaluated six
6 properties using the three established
7 criteria for inclusion within the official
8 boundary. The lands and waters proposed
9 here for inclusion within the park boundary
10 either

- 11
- 12 1. include significant resources or
- 13 opportunities for public enjoyment
- 14 related to the purposes of the park;
- 15 or
- 16 2. address operational and
- 17 management issues such as access
- 18 and boundary identification by
- 19 topographic or other natural features
- 20 or roads; or
- 21 3. protect park resources critical to
- 22 fulfilling park purposes.

23
24 The planning team also has

- 25
- 26 ■ determined that the areas are feasible
- 27 to administer;
- 28 ■ determined that other alternatives
- 29 for management and resource
- 30 protection are not adequate;
- 31 ■ consulted affected agencies and
- 32 others; and
- 33 ■ estimated acquisition costs, if any.

34
35 Descriptions of the proposed boundary
36 adjustments and evaluations of how they
37 meet the criteria and determinations are
38 below. It is the planning team's conclusion
39 that each proposed boundary adjustment
40 meets the federal criteria and is consistent
41 with the park-specific goals stated above. See
42 map 2 for the location of these properties.

43
44

45 Offshore Ocean Environment, 46 San Mateo County

47 *Description*

48 The park includes several coastal properties
49 in San Mateo County. The western
50 boundaries of these properties end at the
51 line of mean high tide in the Pacific Ocean.
52 The proposed boundary adjustment would
53 place the new boundary 0.25 mile from the
54 line of mean high tide to include offshore
55 areas (about 2,008 acres). Boundary
56 adjustments are proposed for offshore areas
57 adjacent to lands within the existing NPS
58 boundary.

59 60 *Criteria*

- 61 ■ **Significance:** The offshore areas
- 62 proposed for inclusion within the
- 63 boundary support an abundance of
- 64 significant resources including
- 65 marine mammals, seabirds, and
- 66 intertidal resources. Portions of the
- 67 areas are within Monterey Bay
- 68 National Marine Sanctuary,
- 69 California's James V. Fitzgerald
- 70 Marine Reserve, two state marine
- 71 protected areas, and a special
- 72 protected area at Egg Rock-Devil's
- 73 Slide that is managed by the Bureau
- 74 of Land Management (BLM). Known
- 75 submerged or intertidal
- 76 cultural resources include
- 77 shipwrecks and features of a whaling
- 78 station. These are also popular
- 79 recreational areas for exploring tide
- 80 pools and for boating, fishing,
- 81 swimming, and surfing. Each winter,
- 82 the Mavericks Surf Contest, featuring
- 83 many of the world's best big-wave
- 84 surfers, takes place at the southern
- 85 extremity of this zone.
- 86 ■ **Operational Issues:** Unlike San
- 87 Francisco and Marin counties where
- 88 the official boundary extends 0.25
- 89 mile beyond the line of mean high
- 90 tide, the park boundary in San Mateo
- 91 County ends at mean high tide. This
- 92 exclusion restricts coordinated

1 management of marine resources and
 2 visitor activities with other federal
 3 and state agencies. Lack of a
 4 consistent boundary also poses
 5 difficulties in coordinating with
 6 county public safety departments for
 7 visitor protection services such as
 8 rescues. Questions about jurisdiction
 9 have complicated the park’s rescue
 10 and recovery efforts.

- 11 ■ **Protects Park Resources—Fulfills**
 12 **Park Purpose:** Protection of
 13 significant offshore resources and
 14 provision of appropriate recreational
 15 opportunities are part of the park’s
 16 legislated purpose. Resource
 17 protection would be enhanced by
 18 including this parcel within the park
 19 boundary. The effects of climate
 20 change (especially sea level rise) and
 21 development of the NPS Pacific West
 22 Region’s strategic plan for Pacific
 23 Ocean parks, make inclusion of these
 24 areas within the boundary a timely
 25 objective.

26
 27 **Determinations**

28 Administration of these areas through
 29 cooperative management would be feasible.
 30 Park management of similar areas in San
 31 Francisco and Marin counties has not been
 32 an undue burden for park staff, due in large
 33 part, to collaboration with other agencies.
 34 Adding these areas to the park would
 35 enhance the value of current collaborative
 36 actions, rather than substitute management
 37 by the National Park Service alone. The
 38 proposal has the support of related agencies.
 39 Acquisition through a California state tide
 40 and submerged lands lease would have no
 41 cost. Management of the areas added to the
 42 park boundary would be guided by the
 43 park’s ocean stewardship policy, the
 44 mandates of the National Marine Sanctuary
 45 Act, and the primary management purposes
 46 identified in the California state leases that
 47 the park retains over other portions of the
 48 offshore ocean and bay environment in San
 49 Francisco and Marin counties. If acquired, a

50 portion of the area would be managed
 51 according to the sensitive resources zone
 52 description. The remaining area would be
 53 managed according to the scenic corridor
 54 zone description. The National Park Service
 55 anticipates this proposal would require a
 56 legislative boundary change.
 57
 58

59 **Gregerson Property,**
 60 **San Mateo County**

61 **Description**

62 The property forms a long rectangle of about
 63 206 acres with three sides in common with
 64 the park’s 4,200-acre Rancho Corral de
 65 Tierra unit. It is owned by the Peninsula
 66 Open Space Trust (POST), who acquired it
 67 in 2007. The trust maintains the property as
 68 conservation land. The property is
 69 undeveloped, with the exception of a
 70 caretaker residence and paved access road
 71 that crosses the property from north to
 72 south. The only access to the property is
 73 from the south on a park road.
 74

75 **Criteria**

- 76 ■ **Significance:** The property has many
 77 of the same qualities and
 78 characteristics as Rancho Corral de
 79 Tierra, which was determined
 80 eligible for inclusion in the park in
 81 the *San Mateo County Boundary*
 82 *Study* (NPS 2001). The study
 83 determined that Rancho Corral de
 84 Tierra is a logical and understandable
 85 southern entryway into the park and
 86 an unusually large piece of significant
 87 scenic and ecological resources that
 88 is firmly linked to existing park lands.
 89 Rancho Corral de Tierra was
 90 included in the park boundary in
 91 2005 through Public Law 109-131.
 92 Like Rancho Corral de Tierra, the
 93 Gregerson property contains habitat
 94 for federally listed plant and animal
 95 species and provides connectivity in
 96 an important wildlife corridor. The
 97 property also possesses scenic vistas

1 to the southeastern coast, and has
2 high potential for recreation,
3 including a trail along the ridge
4 connecting to a future Bay Area
5 Ridge Trail segment.

- 6 ■ **Operational Issues:** The access road
7 would be beneficial for park
8 management purposes. It runs along
9 a low ridge, connecting the park’s
10 access road with the upper reaches of
11 Rancho Corral de Tierra and the
12 adjacent SFPUC watershed lands. In
13 addition to improving access for
14 managers, the property would
15 simplify and reduce the length of the
16 park’s perimeter.
- 17 ■ **Protects Park Resources—Fulfills
18 Park Purpose:** Protection of
19 federally listed species and provision
20 of appropriate recreational
21 opportunities are part of the park’s
22 legislated purpose. Resource
23 protection and trail-based recreation
24 would be enhanced by including this
25 parcel within the park boundary.

26 **Determinations**

28 Administration of this small undeveloped
29 property as part of the larger Rancho Corral
30 de Tierra unit would be feasible. The road
31 and other structures (residence, well, septic
32 system, and solar power complex) are in
33 good condition and could be used for park
34 operations, environmental education, or
35 other park purposes. The trust acquired this
36 property with the objective of permanent
37 protection, which it has identified as best
38 being achieved through fee transfer to the
39 National Park Service for inclusion in
40 Golden Gate National Recreation Area. An
41 access easement alone is not considered
42 satisfactory because use of the property by
43 others would continue to compromise the
44 NPS ability to maintain security at the main
45 gate. This proposal has support from the
46 trust and San Mateo County, which manages
47 nearby lands. The cost of acquisition has not
48 been determined. If acquired, the area would
49 be managed according to the natural zone

50 description. The National Park Service
51 anticipates this would be a minor boundary
52 adjustment.

53 54 55 **Margins of Rancho Corral de Tierra, 56 San Mateo County**

57 **Description**

58 These two areas (about 58 acres) are at the
59 margins of agricultural lands owned by the
60 Peninsula Open Space Trust and are
61 immediately adjacent to the park’s 4,200-
62 acre Rancho Corral de Tierra unit. The
63 northern area is maintained as an open field
64 with a light vegetation cover, but is not
65 cultivated due to poor soil conditions. The
66 southern area is primarily gently sloping
67 hillsides adjacent to cultivated fields. Both
68 areas abut State Route 1 and have informal
69 access roads from it.

70 71 **Criteria**

- 72 ■ **Significance:** Like the Gregerson
73 property, these areas have some of
74 the same qualities and characteristics
75 as Rancho Corral de Tierra, which
76 was determined eligible for inclusion
77 in the park in a 2001 boundary
78 adjustment authorized by Congress.
79 These areas may contain habitat for
80 federally listed plant and animal
81 species and provide connectivity in
82 an important wildlife corridor. The
83 properties also possess scenic vistas
84 to the coast and have high potential
85 to serve as the critically needed
86 principal trailheads providing safe,
87 direct access from State Route 1 and
88 logical connections to existing
89 recreational trails on Rancho. The
90 northern area has been classified as
91 “unique farmland” (of lesser quality
92 than “prime farmland” due to
93 substantial limitations for the
94 production of crops.) The southern
95 area includes soils with unique and
96 lesser classifications in addition to a
97 small area of prime farmland, which

1 could constrain development of
 2 nonagricultural facilities.

3 ■ **Operational Issues:** These two
 4 properties are highly suitable for
 5 providing the principal vehicular
 6 access points to Rancho from State
 7 Route 1. There are good sight lines
 8 from State Route 1 to the properties,
 9 along with other favorable
 10 conditions for roadway
 11 improvements to enable safe, logical,
 12 vehicular access and egress. Creation
 13 of a trailhead with a parking area (20–
 14 60 vehicles) and essential visitor
 15 facilities, such as restrooms and
 16 orientation kiosks, is feasible on each
 17 property without impacting the
 18 highly scenic coastal landscape. The
 19 size of these areas has been kept to
 20 the minimum necessary to facilitate
 21 development of a trailhead and a
 22 connecting trail on each property.
 23 Development of these principal
 24 trailheads would enhance
 25 management of Rancho by reducing
 26 visitor reliance on existing trailheads
 27 that are on local streets in the
 28 community. Furthermore, the
 29 trailheads would reduce conflicts
 30 with visitors in the existing
 31 equestrian stables areas and avoid
 32 conflicts with ongoing agricultural
 33 operations and have the potential to
 34 be served by existing transit.

35 ■ **Protects Park Resources—Fulfills**
 36 **Park Purpose:** Protection of
 37 federally listed species and provision
 38 of appropriate recreational
 39 opportunities are part of the park’s
 40 legislated purpose. Resource
 41 protection and trail-based recreation
 42 would be enhanced by including this
 43 parcel within the park boundary.

44 **Determinations**

46 Administration of these areas as part of the
 47 larger Rancho unit would be feasible. The
 48 two trailheads are critically important to
 49 providing appropriate public access and

50 enjoyment of Rancho, and would not pose
 51 undue management burdens on Golden
 52 Gate National Recreation Area. It is likely
 53 that these objectives could be accomplished
 54 with less-than-fee acquisition, such as trail
 55 easements over a portion of the property;
 56 however, a boundary adjustment is desirable
 57 to facilitate expenditure of federal funds for
 58 development of the trailheads, connecting
 59 trail, and long-term land management. This
 60 proposal has support from POST, the
 61 agricultural operator, California State Parks,
 62 San Mateo County, and the local
 63 community. If acquired, the area would be
 64 managed according to the natural zone
 65 description. The cost of acquisition has not
 66 been determined. The National Park Service
 67 anticipates this would be a minor boundary
 68 adjustment.

71 **Additions to Cattle Hill: Vallemar**
 72 **Acres and State Route 1 Frontage,**
 73 **Pacifica**

74 **Description**

75 Vallemar Acres and the State Route 1
 76 Frontage parcel are both at the edges of
 77 Cattle Hill, a prominent coastal landform in
 78 Pacifica. As such, they share similar
 79 characteristics and are evaluated together.
 80 Vallemar Acres consist of about 61 acres of
 81 sloping undeveloped land owned by the City
 82 of Pacifica and is contiguous to the city’s
 83 adjacent Cattle Hill property, proposed for
 84 donation. It is part of the lower southern
 85 slope of Cattle Hill and extends down to the
 86 property lines of residences on the north
 87 side of Fassler Avenue, which ends at an
 88 unimproved trailhead. The State Route 1
 89 Frontage parcel consists of about 6 acres of
 90 sloping undeveloped land at the western end
 91 of Cattle Hill along State Route 1. It is owned
 92 by the state and managed by Caltrans.

93 **Criteria**

94 ■ **Significance:** Cattle Hill was
 95 evaluated in 1998 boundary study
 96 authorized by an act of Congress,
 97

1 then added to the park in 2000 (U.S.
2 House 1998). It protects habitat for
3 federally listed species, preserves
4 outstanding scenic values, and
5 connects to the extensive open space
6 and network of trails of Sweeney
7 Ridge including designated segments
8 of the Bay Area Ridge Trail. These
9 two adjoining parcels are extensions
10 of the distinct landform possessing
11 the same natural resource values as
12 Cattle Hill and Sweeney Ridge—
13 coastal scrub with documented and
14 potential habitat for federally listed
15 San Francisco garter snake and
16 California red-legged frog. As
17 integral parts of the scenic coastal
18 hill, they present ready opportunities
19 for enhanced trailheads and access to
20 existing trails and contribute to the
21 open space values of the adjacent
22 public lands.

- 23 ■ **Operational Issues:** Inclusion of
24 these parcels would establish a more
25 logical park boundary that
26 corresponds with the main extent of
27 the landform. Inclusion would also
28 eliminate intervening ownerships
29 and could prevent the development
30 of unauthorized trails and access
31 points with related impacts on
32 resources. Slope stability would need
33 to be evaluated.
- 34 ■ **Protects Park Resources—Fulfills
35 Park Purpose:** Protection of
36 significant resources and provision of
37 appropriate recreational
38 opportunities are part of the park’s
39 legislated purpose. Resource
40 protection and trail-based recreation
41 would be enhanced by including this
42 parcel within the park boundary.

43 **Determinations**

45 Administration of these parcels as part of
46 Sweeney Ridge would be feasible. The
47 resources are in good condition and no need
48 for remedial actions has been identified. The
49 City of Pacifica staff works closely with the

50 park staff on resource management and
51 visitor services. The city had understood that
52 the parcel was already included in the
53 boundary and supports this proposal as a
54 donation, along with the proposed donation
55 of the adjacent city-owned Cattle Hill
56 property. Appropriate acquisition methods
57 could be either fee or less than fee with
58 appropriate easements for trails, trailheads,
59 and habitat management. Caltrans, which
60 manages the frontage property for the state
61 of California, has plans to improve State
62 Route 1 as it passes the base of Cattle Hill.
63 This project (Calera Parkway) is in the early
64 design stages, but is unlikely to affect the
65 frontage parcel, which rises sharply from the
66 roadway. Caltrans has not expressed any
67 objections to this proposal. The park seeks
68 to include the frontage parcel within the
69 boundary to facilitate cooperative
70 management and provide for a future
71 trailhead. The National Park Service
72 anticipates this would be a minor boundary
73 adjustment.

74 **McNee Ranch, San Mateo County**

75 **Description**

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

91 **Criteria**

- 92
- 93
- 94 ■ **Significance:** The property possesses
95 extensive natural biodiversity,
96 especially on the serpentine soils of
97 the lower slopes where such

1 endangered species as Hickman’s
 2 cinquefoil (*Potentilla hickmanii*) and
 3 San Mateo thornmint
 4 (*Acanthomintha duttonii*) are found.
 5 The ranch connects to ecosystems
 6 and landscapes under NPS
 7 management. In addition, visitors
 8 enjoy sweeping vistas of the Pacific
 9 Coast and rugged coastal hills from a
 10 network of multiuse trails and
 11 unpaved roads. These routes connect
 12 Pacifica with the coast-side
 13 communities of Montara and Moss
 14 Beach, and lead to the highest points
 15 on Montara Mountain. These trails
 16 are important to the potential east-
 17 west connection that will enable
 18 hikers to cross from San Francisco
 19 Bay to the Pacific Ocean. The
 20 property is also adjacent to public
 21 lands managed by Caltrans at Devil’s
 22 Slide, which have high ecological
 23 value and may be opened to
 24 recreational use. The segment of Old
 25 San Pedro Mountain Road (now a
 26 multiuse trail) that crosses the
 27 property may be eligible for the
 28 national register.

29 ■ **Operational Issues:** Inclusion of the
 30 property within the park would
 31 facilitate cooperative management of
 32 resources and visitors. The property
 33 is the only state park land adjacent to
 34 the Golden Gate National Recreation
 35 Area that is not also within the
 36 federal authorized boundary.
 37 Cooperative management is
 38 especially critical for the Martini
 39 Creek watershed, which is divided
 40 nearly equally between NPS and state
 41 park ownership. An equestrian
 42 facility is immediately adjacent to the
 43 creek on NPS land. A heavily used
 44 bridge carries Old San Pedro
 45 Mountain Road across the creek.

46 ■ **Protects Park Resources—Fulfills**
 47 **Park Purpose:** Protection of
 48 significant resources and provision of
 49 appropriate recreational
 50 opportunities are part of the park’s

51 legislated purpose. Cooperative
 52 management to achieve common
 53 goals would be enhanced by
 54 including this parcel within the park
 55 boundary.

56
 57 **Determinations**

58 McNee Ranch is the only state park land
 59 adjacent to Golden Gate National
 60 Recreation Area that is not also within the
 61 federal authorized boundary. The park seeks
 62 to include the property within its authorized
 63 boundary to facilitate cooperative
 64 management, provide consistency, and
 65 enhance recognition of this property as part
 66 of the larger area of protected lands. This is
 67 not a proposal for acquisition. This proposal
 68 corrects a technical error that omitted
 69 McNee Ranch from the park when Montara
 70 State Beach was included in the park
 71 boundary in 1980. Montara State Beach was
 72 expanded to include McNee Ranch
 73 sometime afterwards. As is the case with
 74 other California state parks in the boundary,
 75 administration (cooperative management)
 76 would not be an additional burden. No
 77 other management alternatives were
 78 considered. The California Department of
 79 Parks and Recreation supports this proposal.
 80 There would be no acquisition costs. The
 81 National Park Service anticipates this
 82 proposal would require a legislative
 83 boundary adjustment.

84
 85
 86 **POTENTIAL FUTURE**
 87 **BOUNDARY ADJUSTMENTS**

88 The National Park Service does not manage
 89 all the lands within the legislative boundaries
 90 of Golden Gate National Recreation Area;
 91 there are public lands within the boundaries
 92 that are managed by other agencies. Golden
 93 Gate National Recreation Area staff will
 94 continue to monitor these lands and
 95 coordinate with these land managers in a
 96 way that maintains and enhances the values
 97 that contributed to the lands being included
 98 in the boundary. Some of these efforts could

1 lead to eventual acquisition by the National
2 Park Service.

3
4 Several areas are of great interest to the
5 National Park Service and appear to meet
6 NPS criteria for boundary adjustments. The
7 park would continue working with open
8 space partners to pursue protection of these
9 properties, possibly including an NPS
10 boundary adjustment, guided by the goals
11 expressed earlier, and will study additional
12 opportunities to protect significant
13 prehistoric and historic resources adjacent
14 to park lands at the Phleger Estate, the
15 Fitzgerald Marine Reserve, Mori Point, and
16 Bolinas Lagoon.

17

18

19 **Priority Conservation Areas**

20 Four areas adjacent to the park were
21 identified as Priority Conservation Areas
22 through a regional planning effort led by the
23 Association of Bay Area Governments and
24 documented in *Golden Lands, Golden*
25 *Opportunities* (Bay Area Open Space Council
26 2009). Multiple strategies and multiple land
27 managers could have a role in managing
28 these lands. At this time, no specific
29 boundary adjustments are proposed by the
30 park in these areas. However, anticipated
31 studies would evaluate which specific
32 properties within these areas would be most
33 appropriately managed by the National Park
34 Service.

35

36 **Marin City Ridge, Marin County**

37 Undeveloped lands adjacent to the Marin
38 Headlands unit could enhance protection
39 for the natural, scenic, and recreational
40 resources of the park while improving trail
41 connections into an underserved
42 community. These sites were evaluated in a
43 boundary study in 2005 and determined
44 appropriate for inclusion in the park.

45

46 **Pacifica Conservation Area (South of** 47 **Mussel Rock to McNee Ranch),** 48 **San Mateo County**

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

56

57 **Montara Mountain Complex,** 58 **San Mateo County**

59 Undeveloped parcels adjacent to Rancho
60 Corral de Tierra could strengthen protection
61 of threatened and endangered species and
62 contribute to regional conservation efforts
63 focused on preserving large natural resource
64 corridors and scenic beauty.

65

66 **Gateway to San Mateo County**

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

73

74 **Foothill Parcel Adjacent to Rancho** 75 **de Tierra, San Mateo County**

76 This parcel, adjacent to Denniston Creek, is
77 the site of the adobe complex of Francisco
78 Guerro y Palomares, the original grantee of
79 Rancho Corral De Tierra in 1839. This
80 important archeological site has
81 exceptionally high potential to reveal
82 information about Mexican-California
83 ranchos and to supplement the park's
84 interpretation of this important era of
85 California history. Addition to the national
86 park would achieve the purpose of
87 protecting this significant cultural resource
88 and strengthening the diversity of the park's
89 visitor opportunities.

90

91

1 **Upland Goals Conservation Areas**

2 A science-based approach toward
3 identifying biologically important lands for
4 protection in the San Francisco Bay Area
5 was developed by the Bay Area Open Space
6 Council (Weiss et al. 2008), with
7 participation of NPS staff. The result is a
8 network of conservation areas based on
9 computer models that strive to achieve
10 conservation goals for targeted vegetation
11 types and individual species, along with
12 assessments of viability, ecological integrity,
13 and level of connectivity of conservation
14 lands. The model output identifies lands
15 adjacent to the park that would help sustain
16 diverse and healthy communities of plant,
17 fish, and wildlife resources in the nine-
18 county Bay Area. Some of these areas
19 overlap with Priority Conservation Areas.
20

21 ***Stinson Beach Environs***

22 Currently, undeveloped lands near
23 Panoramic Highway have been identified as
24 essential conservation areas and would
25 enhance the park's protection of contiguous
26 coastal biological resources.
27

28 ***Lower Redwood Creek***

29 Lands along the Redwood Creek corridor
30 below its intersection with State Route 1
31 have been identified as essential
32 conservation areas and would help enhance
33 the park's protection of contiguous stream
34 resources and associated threatened and
35 endangered species.
36

37 ***Nyhan Creek***

38 Lands along the Nyhan Creek corridor from
39 its headwaters to the Bay Area have been
40 identified as an essential conservation area
41 and would help the park contribute to the
42 protection of contiguous stream resources
43 within the region.
44

45 ***Mori-Milagra-Sweeney Connector***

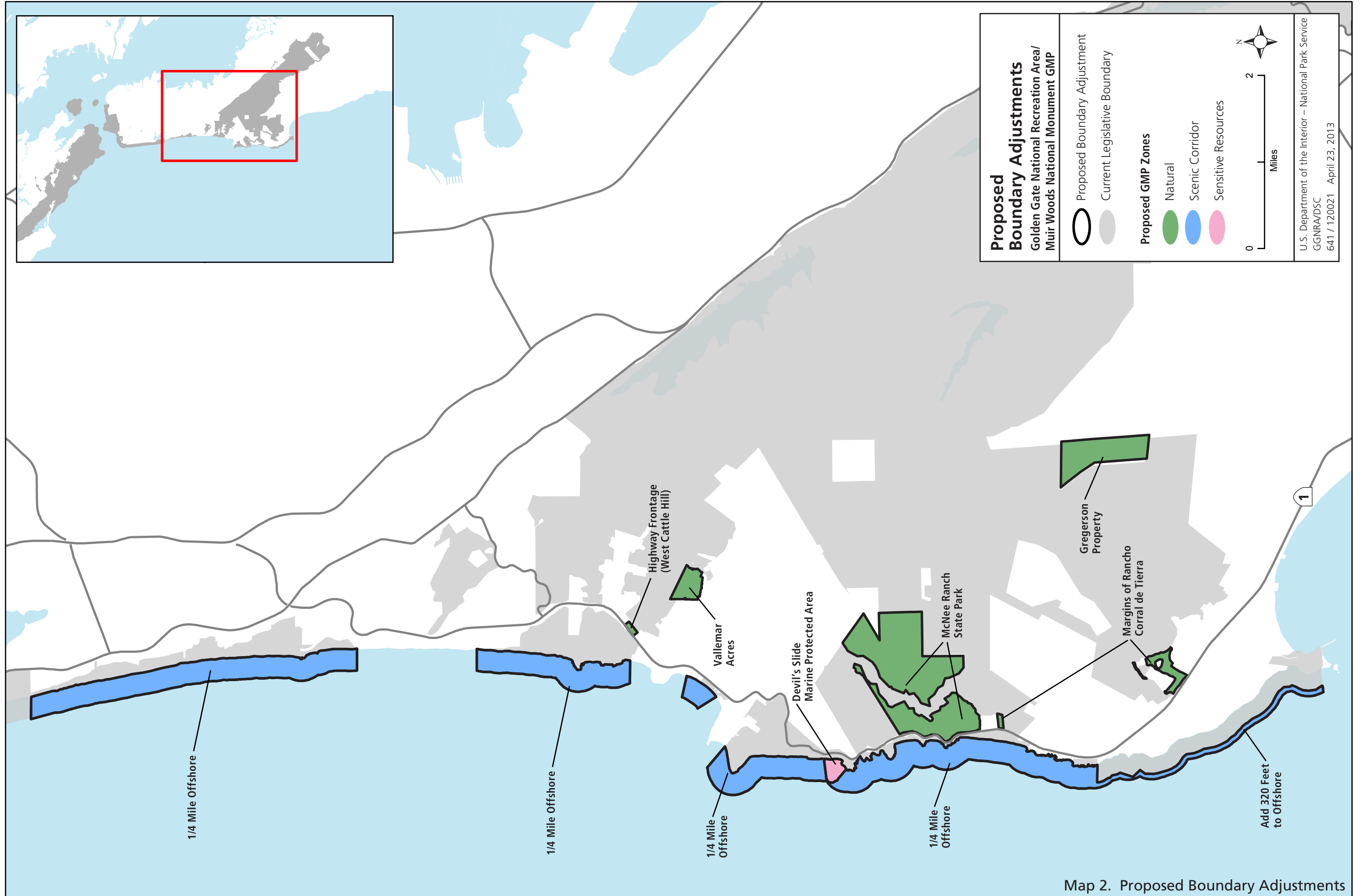
46 Currently, undeveloped lands in the Pacifica
47 area have been identified as essential
48 conservation areas; their protection would
49 help the park increase the long-term
50 resiliency of small natural areas such as
51 Milagra Ridge, as well as secure important
52 habitat corridors to facilitate species and
53 community movements over time and space.
54

55 ***San Pedro Mountain and Rancho
56 Corral de Tierra Environs, South
57 to Highway 92***

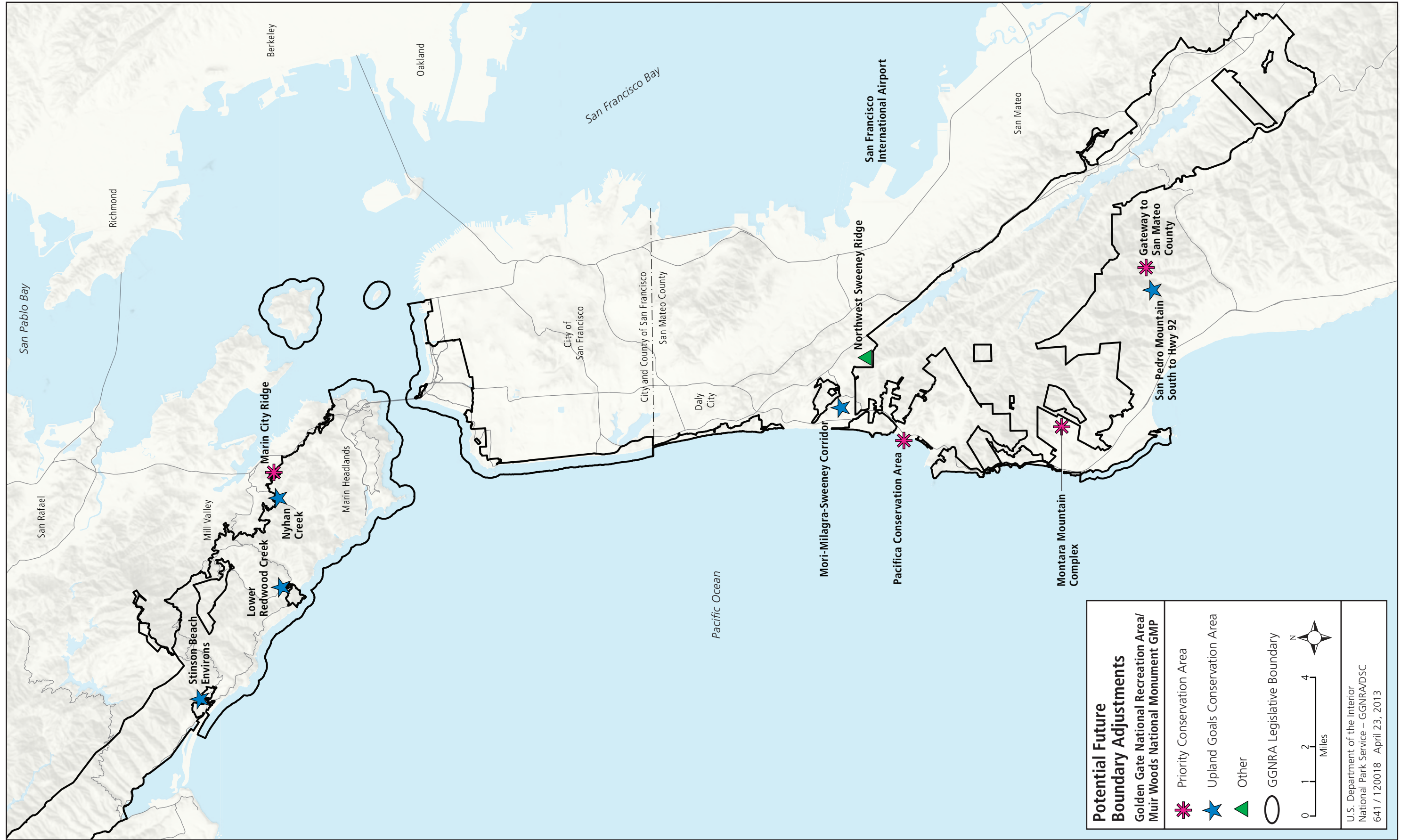
58 Currently, undeveloped lands in the
59 Montara, Moss Beach, and Half Moon Bay
60 areas have been identified as essential
61 conservation areas; their protection would
62 help the park increase the core of protected
63 lands along the spine of the San Francisco
64 peninsula. Similar to those in the Pacifica
65 area, these protected areas would provide
66 important habitat corridors to facilitate
67 species and community movements over
68 time and space.
69

70 ***Northeast Sweeney Ridge***

71 Owned by the City and County of San
72 Francisco, the property is adjacent to park
73 land, sharing two sides with Sweeney Ridge.
74 It contains county jails 3 and 7, along with a
75 plant nursery and cultivated fields. A large
76 portion of the 145-acre property, roughly 50
77 acres, is undeveloped and relatively
78 undisturbed. This undeveloped area is
79 contiguous with the extensive coastal
80 ecosystems that the National Park Service
81 manages on Sweeney Ridge. It has similar
82 scenic qualities and habitat values, including
83 potential habitat for threatened and
84 endangered species. Inclusion of the
85 undeveloped area in the park's boundary
86 would enable the National Park Service to
87 receive it, should the City and County of San
88 Francisco declare the property excess.



Map 2. Proposed Boundary Adjustments



Map 3. Potential Future Boundary Adjustment

CLIMATE CHANGE

1	The National Park Service has developed	46	▪ Educate and Interpret
2	goals to guide the way climate change will be	47	The park staff will help park visitors
3	addressed. Sustaining and supporting the	48	understand the process of global
4	resiliency of park resources in the face of	49	warming, climate change, the threats
5	climate change will require the National	50	to the park, and how they can
6	Park Service to address many challenges.	51	respond. Visitors are inspired to
7	The general management plan describes the	52	action through leadership and
8	approach that the park would take to reduce	53	education.
9	emissions, educate visitors on the topic, and	54	
10	adapt to the effects of climate change during	55	Through the efforts of employees,
11	the next 20 years. Some existing information	56	partners, and educational and
12	on the carbon footprint and sea level rise	57	interpretive media, park staff can
13	and coastal vulnerability for the park may be	58	engage visitors on the topic of
14	found in volume II of the general	59	climate change, provide the latest
15	management plan. In addition, the park	60	park research and monitoring data
16	maintains a Climate Change Action Plan that	61	and trends, inform the public about
17	outlines the actions that would be taken to	62	what response is being taken at the
18	accomplish these broad goals.	63	park, and inspire visitors to aid in
19		64	that response.
20		65	
21	GOALS	66	▪ Assess Impacts and Respond to
22	▪ Reduce CO ₂ Emissions	67	Changing Conditions
23	The park will become a carbon	68	The park staff will proactively
24	neutral park by 2016 by reducing the	69	monitor, plan, and adapt to the
25	CO ₂ emissions of NPS and partner	70	effects of climate change by using the
26	operations, increasing the use of	71	best information as it becomes
27	renewable energy and other	72	available.
28	sustainable practices, and reducing	73	
29	visitor emissions by lessening	74	Climate change is a global
30	dependency on personal	75	phenomenon, outside the control of
31	automobiles.	76	the National Park Service. The park
32		77	cannot control the impacts of
33	National parks can demonstrate how	78	climate change on the park through
34	to minimize their contribution to	79	its own emissions reductions and
35	global warming through practices	80	education practices. However, the
36	such as energy efficiency and use of	81	park staff would do their part to
37	renewable energy. Because emissions	82	improve conditions and demonstrate
38	from visitor driving are estimated to	83	environmental leadership.
39	contribute to more than 90% of park	84	
40	emissions, the park staff and partners	85	NPS staff would use and promote
41	would assist in reducing visitor	86	innovation, best practices, and
42	greenhouse gases by providing	87	partnerships to respond to the
43	opportunities for alternative	88	challenges of climate change and its
44	transportation options.	89	effects on park resources. By using
45		90	and developing tools and monitoring

1 methods, including seeking outside
 2 assistance, the park staff can better
 3 respond to climate change. The park
 4 staff would interpret climate change
 5 science and develop management
 6 strategies, which may include
 7 projecting expected changes. The
 8 park staff would coordinate with
 9 other agencies in developing tools
 10 and strategies to help identify and
 11 manage climate change impacts. By
 12 adopting the best information on
 13 climate change as it becomes
 14 available, the park staff would be
 15 positioned to respond quickly and
 16 appropriately to the local effects of
 17 climate change.

18
 19 The park staff may choose to use an
 20 adaptive management framework to
 21 respond to the effects of climate
 22 change. Temperature and
 23 precipitation changes may require
 24 that the park manages for native
 25 biodiversity and ecosystem function
 26 instead of managing for natural
 27 communities. In most cases park
 28 managers would allow natural
 29 processes to continue unimpeded,
 30 except when public health and safety
 31 or the park’s fundamental resources
 32 and values are threatened. Scenario
 33 planning would likely play a pivotal
 34 role in developing the park’s
 35 responses to climate change.

36
 37 The park staff would coordinate
 38 with neighboring communities while
 39 implementing adaptation strategies
 40 that support the protection,
 41 preservation, and restoration of
 42 coastal wetlands and coastal
 43 processes, and can serve as vital tools
 44 in buffering coastal communities
 45 from the effects of climate change
 46 and sea level rise.

47
 48

49 **MANAGEMENT STRATEGIES**

50 To meet the above goals, a more detailed
 51 management approach would be developed
 52 and would be an evolving process. The park
 53 staff would use local, regional, and larger-
 54 scale monitoring, modeling, and mapping
 55 evaluations. Through this data gathering, the
 56 park staff would identify and refine the
 57 assessment of park lands and resources that
 58 are vulnerable to sea level rise, extreme
 59 storms, and associated coastal erosion.
 60 Projections and observations of other
 61 climate change effects, including changes in
 62 weather, local climatic conditions, and
 63 phenology, would be gathered. Based on this
 64 information, combined with the results of
 65 targeted monitoring, park managers could
 66 position themselves to respond and adapt
 67 according to changing conditions—
 68 functioning as an early detection system.

69
 70 The following approaches and management
 71 actions could be implemented to respond to
 72 the effects of climate change on park
 73 resources.

74
 75
 76 **Natural Resources**

- 77 ▪ Reduce current and future stressors
 78 to the resource and the environment;
 79 this would improve the condition of
 80 the resource and build resiliency in
 81 the ecosystem that would help
 82 minimize future adverse effects of
 83 climate change.
- 84 ▪ Determine which species and
 85 habitats are most vulnerable to the
 86 effects of climate change (e.g.,
 87 changes in temperature, increased
 88 storms, flooding and erosion, and
 89 ocean acidification) and evaluate the
 90 appropriateness of added protection
 91 for these resources.
- 92 ▪ Collect and/or document resources
 93 that would be otherwise lost to the
 94 effects of the climate change (e.g.,
 95 fossils, unique geologic resources,
 96 unique biological resources).

1	▪ Sustain native biodiversity.	39
2	▪ Reduce habitat fragmentation and	40
3	increase habitat connectivity and	41
4	movement corridors.	42
5	▪ Restore and enhance habitats.	43
6	▪ Focus on ecosystem management	44
7	and natural processes.	45
8	▪ Restore naturally functioning	46
9	ecosystems.	47
10	▪ Manage for biological diversity.	48
11	▪ Minimize impact of invasive species.	49
12	▪ Plan for post-disturbance	50
13	management.	51
14	▪ Employ adaptive management.	52
15	▪ Manage for realistic outcomes	53
16	(triage).	54
17		55
18		56
19	Cultural Resources	57

20	▪ Reduce current and future stressors	61
21	to the resource; this would improve	62
22	the condition of the resource and	63
23	help to minimize future adverse	64
24	effects from climate change.	65
25	▪ Develop proactive triage criteria that	66
26	would assist park staff in prioritizing	67
27	preservation treatments and other	68
28	management actions. The decision	69
29	on how to best treat a resource facing	70
30	potential adverse effects from climate	71
31	change should be based on (1)	72
32	significance of the resource, (2)	73
33	feasibility of the preservation action,	74
34	(3) cost of the treatment/action, and	75
35	(4) confidence in the data used to	76
36	determine potential effects of sea	77
37	level rise or climate change on the	78
38	resource.	79

▪ Give highest priority to preserving	39
cultural resources and artifacts	40
in situ, coupled with sustainable	41
efforts (intervention techniques) to	42
mitigate and reduce any stressors that	43
might adversely affect the resource.	44
▪ Pursue managed retreat when the	45
results of the triage process indicate	46
that preservation treatment or	47
relocation is not practical.	48
▪ Pursue recordation and relocation of	49
the resources with high significance	50
and technically and economically	51
feasible treatment and relocation	52
options, and where there is high	53
confidence in the predicted effects of	54
sea level rise or other climate change	55
impacts.	56
▪ Conduct strategic surveys of	57
uninventoried park lands within	58
zones of climate change effects to	59
document the resources involved.	60

Visitor Experience

▪ Continue to provide a range of	63
experiences by transitioning	64
recreational use away from locations	65
where changes in resource	66
conditions no longer support such	67
uses.	68
▪ Remove existing visitor facilities and	69
discontinue recreational uses where	70
continued use is unsafe, infeasible, or	71
undesirable due to changing	72
environmental conditions. Do not	73
plan new construction in areas that	74
are subject to changing	75
environmental conditions.	76
▪ Evaluate and support changing	77
visitor use patterns, as appropriate.	78

MAINTENANCE, PUBLIC SAFETY, COLLECTIONS, AND VISITOR FACILITIES

1 Park maintenance, public safety, and
2 collections storage functions are scattered
3 throughout the park at sites and facilities
4 that in many cases were not intended for
5 these uses. These functions have had to
6 adapt to conditions that do not adequately
7 meet their space, size, function, mobility,
8 and security requirements. Maintenance and
9 public safety operations have also had to
10 relocate numerous times, requiring them to
11 reprogram their operations each time,
12 resulting in many inefficiencies. Consigning
13 the park's museum collection to multiple
14 storage facilities jeopardizes long-term
15 preservation and restricts the availability of
16 the collection for research, education, and
17 interpretive programming, thus limiting its
18 usefulness to the public and park personnel.

19
20 The following section proposes a
21 comprehensive approach to building and
22 facility uses necessary to meet the existing
23 and projected needs of these operational
24 functions in conjunction with all
25 alternatives. The actions proposed are based
26 on a thorough analysis of park programs and
27 facilities, including the possibilities for
28 placing functions outside park boundaries.
29 The park has other operational facilities
30 such as staff offices, housing, native plant
31 nurseries, and horse patrol facilities. The
32 locations of these facilities vary among the
33 alternatives and are addressed in the
34 description of the alternatives.

35 36 37 **GOALS FOR MAINTENANCE 38 AND PUBLIC SAFETY**

39 The large scale of the park, with sites
40 distributed across three counties, poses a
41 distinct challenge to providing facilities for
42 maintenance and public safety operations.
43 Over the years, a system organized around
44 centralized facilities supported by smaller

45 satellite sites has been an effective and
46 successful means to manage the park. It is
47 proposed to continue this organizational
48 concept, but to more permanently establish
49 the sites of the centralized facilities. This
50 action will allow the park to gain efficiencies
51 through consolidation of some functions in
52 central facilities and still retain the flexibility
53 to meet dispersed maintenance and safety
54 needs through satellite offices.

55 56 57 **Management Strategies**

58 ***Centralized Maintenance Facilities***

59 New maintenance facilities would be
60 established in the park. North of the Golden
61 Gate Bridge, a new centralized facility would
62 be constructed in part of the Capehart
63 housing area of the Marin Headlands. This
64 new facility (about 45,000 square feet in size)
65 would be a state-of-the-art, environmentally
66 sustainable complex that would
67 accommodate the park's buildings and
68 utilities, roads, and Marin grounds
69 functions. The project would include
70 demolition of selected housing units and
71 new construction of shops, offices, covered
72 storage, parking, and work yards.
73 Maintenance operations presently at Fort
74 Baker (Building 513) and Fort Cronkhite
75 (Buildings 1046, 1070, Nike missile launch
76 site) would be relocated to this new facility.
77 The estimated cost of demolition and
78 construction of a maintenance facility at
79 Capehart is \$16,630,000. This project could
80 take place many years in the future, and
81 therefore, interim maintenance facilities
82 could be identified if needed.

83
84 South of the Golden Gate Bridge, the
85 National Park Service would rehabilitate a
86 building in the Presidio to house the
87 centralized maintenance functions for Area

1 B, the part of the Presidio for which the
2 Presidio Trust is responsible. Reuse of the
3 building would be contingent upon an
4 agreement between the National Park
5 Service and the Presidio Trust and NPS
6 confirmation of feasibility. Existing NPS
7 maintenance operations, currently spread
8 among several Presidio buildings, would be
9 consolidated at one site. The estimated cost
10 for the maintenance facility is \$7,680,000. If
11 the project is not determined feasible, other
12 alternatives would be developed.

13
14 At Muir Woods National Monument,
15 essential public safety and maintenance
16 functions would continue to be adjacent the
17 monument entrance. These functions could
18 remain in existing structures or be
19 incorporated into the new welcome center.
20 However, the other maintenance operations
21 would move from the Old Inn and lower
22 Conlon Avenue areas to a new facility shared
23 with California State Parks in Kent Canyon.
24 This action is dependent upon an
25 interagency agreement with California State
26 Parks.

27 **Public Safety Hub**

28
29 A single centralized operational hub would
30 be developed at Fort Baker to meet park law
31 enforcement needs. These functions would
32 be in Building 507. Park wildland fire
33 functions (offices, garaged vehicles, and fire
34 caches) would be relocated from Fort
35 Cronkhite Buildings 1068 and 1069. These
36 functions would move to the former Nike
37 missile launch site near the Marine Mammal
38 Center that would be vacated by the current
39 roads operation. The historic fire station
40 would remain at Fort Cronkhite. Dispatch
41 and communications operations that serve
42 the park and the Presidio would remain at
43 Presidio Building 35 in the Main Post area.
44 The estimated cost of rehabilitating Building
45 507 at Fort Baker for a public safety function
46 is \$1,830,000.

47 **Satellite Offices**

48
49 A well-distributed system of park operations
50 satellite offices already exists in Marin and
51 San Francisco counties. These sites would
52 need minor improvements to function more
53 efficiently. Satellites would be extended into
54 San Mateo County by adapting existing park
55 sites for these uses, or through partnerships
56 with other agencies. Typically, each satellite
57 site may have the capacity to collocate
58 functions from several different divisions.
59 The following is a list of satellite locations:

- 60
61 ■ Stinson Beach – No change is
62 anticipated to the scale of the office,
63 which serves both maintenance and
64 public safety functions.
- 65
66 ■ Marin Headlands – Law enforcement
67 would continue to have access to
68 offices used by the wildland fire
69 program in Fort Cronkhite.
- 70
71 ■ Presidio of San Francisco – Public
72 safety would continue to have access
73 to offices by the U.S. Park Police.
- 74
75 ■ Alcatraz Island – Public safety offices
76 would remain in Building 64 and
77 maintenance facilities would be
78 expanded in the rehabilitated
79 Quartermaster Warehouse.
- 80
81 ■ Fort Mason – Maintenance and
82 public safety would continue to have
83 administrative offices at park
84 headquarters in Fort Mason.
85 Grounds maintenance facilities
86 would remain.
- 87
88 ■ Fort Miley – Maintenance and public
89 safety facilities would continue at
90 East Fort Miley.
- 91
92 ■ Fort Funston – The existing public
93 safety and maintenance offices would
94 remain. A small building for heavy
95 equipment would be constructed.
- 96
97 ■ San Mateo County north of Devil’s
98 Slide – Maintenance and public
99 safety offices could be sited at the
100 current Sheldance Nursery area or at
101 San Pedro Valley County Park in
102 Pacifica.

- 1 ▪ San Mateo County south of Devil’s
2 Slide – A new satellite office for
3 maintenance and public safety offices
4 would be developed at a place yet to
5 be determined.

6
7
8 **GOALS FOR COLLECTION**
9 **STORAGE FACILITIES**

10 The majority of the park’s collection would
11 be consolidated in one building in the
12 Presidio that formerly served as stables for
13 the U.S. Cavalry. When rehabilitated, the
14 building would provide adequate space for
15 the collection and meet national standards
16 for security, fire protection, and environ-
17 mental control. This consolidated facility
18 would also provide public space for exhibits
19 and programs that engage visitors in
20 memorable and meaningful learning
21 opportunities based on the collection. The
22 estimated cost of this facility is \$7,060,000.
23 This action is dependent upon an inter-
24 agency agreement with the Presidio Trust,
25 consistent with the 2001 Presidio Trust Act
26 (section 103[b]) that authorizes the Presidio
27 Trust to transfer administration of
28 properties within the Presidio, which are
29 surplus to the needs of the trust and which
30 serve essential purposes of Golden Gate
31 National Recreation Area.

32
33 Development of the facility would augment
34 ongoing improvements to collections
35 storage such as installation of space-saving
36 storage equipment and use of a historic
37 battery in the Marin Headlands to provide
38 space for over-sized museum objects.

39
40
41 **GOALS FOR VISITOR-SERVING**
42 **FACILITIES**

43 While striving for excellence in visitor
44 services, the park will limit new visitor
45 facility development to that which is
46 necessary and appropriate beyond the
47 network of existing facilities in places like
48 Muir Woods, the Marin Headlands, Crissy

49 Field, Lands End, and Alcatraz Island.
50 Facilities will be designed, built, and
51 maintained in accordance with accepted
52 NPS standards for quality, sustainability,
53 accessibility, and the NPS commitment to
54 visitor satisfaction. As appropriate, visitor-
55 serving facilities may include information
56 services, interpretive exhibits, original
57 artifacts, audiovisual programs, sales of
58 educational materials and theme-related
59 items, and other staffed or self-help
60 programs and spaces necessary for a high-
61 quality visitor experience. Additionally, the
62 need for restrooms, food service, and other
63 basic visitor requirements will be considered
64 during the planning and design stage.

65
66 Development of new visitor-serving facilities
67 could be accomplished in partnership with
68 other organizations such as the Presidio
69 Trust and Parks Conservancy. Given the
70 speed of technological changes in
71 information dissemination, the park will stay
72 attuned to the state-of-the-art, pursuing
73 interactive digital technologies to serve
74 diverse users outside traditional visitor
75 centers.

76
77 The new visitor-serving facilities proposed
78 in the management alternatives, some of
79 which involve adaptive use of historic
80 structures, have been evaluated using an
81 NPS-created visitor center planning model
82 approved for the purposes of inclusion in
83 this plan. Additional planning, design, and
84 compliance would be required for
85 implementation.

86
87 This section also includes broad goals for
88 visitor-serving facilities in the park such as
89 contact stations. Proposed actions are
90 addressed in the description of alternatives.

91
92
93 **COSTS OF ELEMENTS COMMON TO**
94 **ALL ACTION ALTERNATIVES**

95 Cost estimates for actions common to all the
96 alternatives are identified in table 2.

97

1 The actions common to all alternatives
2 describe the maximum potential capital
3 improvements; lesser improvements may be
4 implemented, or built in phases if necessary.
5 The implementation of the approved plan
6 will depend on future funding. The approval
7 of this plan does not guarantee that the
8 funding and staffing needed to implement
9 the plan will be forthcoming. Full

10 implementation of the actions in the
11 approved general management plan could be
12 many years in the future. Additionally, some
13 of the future long-term funding needed to
14 implement the various actions called for in
15 the alternatives is anticipated to come from
16 nonfederal partners, consistent with the
17 park's current practices.

TABLE 2. ESSENTIAL/PRIORITY* ONE-TIME CAPITAL COSTS FOR ELEMENTS COMMON TO ALL ALTERNATIVES

Essential/Priority Projects*	
Presidio: Cavalry Stables: collection storage facility	\$7,060,000
Presidio centralized maintenance facility in San Francisco	\$7,680,000
Total	\$14,740,000

*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 general management plan, but may be accomplished with nonfederal funds or many years in the future

FACILITIES NOT DIRECTLY RELATED TO THE PARK MISSION

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

10
11 According to the 2009 Park Asset
12 Management Plan, the total assets of the
13 park require \$24.6 million in annual
14 operations and maintenance; yet, typically,
15 only \$5.3 million has been allocated toward
16 that need. This leaves a gap of nearly \$20
17 million each year. Related to the inability to
18 fund all maintenance needs is \$198.1 million
19 in deferred maintenance backlog related to
20 park and partner assets. The \$6.0 million
21 typically allocated from special project
22 funding each year for this need does not
23 adequately reduce the deferred maintenance
24 backlog.

25
26 This general management plan proposes to
27 remove assets that are in poor condition and
28 are not contributing to the preservation of
29 natural or cultural resources or supporting
30 visitor experience. Disposal of unneeded
31 assets would allow funding and staff
32 resources to be redistributed to higher value
33 assets.

34
35 While developing GMP alternatives, the
36 planning team identified facilities that did
37 not contribute to the park mission. Further
38 evaluation with an interdisciplinary team led
39 to the identification of assets proposed for
40 removal and the development of the
41 following strategies. Before any facility
42 would be scheduled for removal,
43 appropriate National Environmental Policy
44 Act of 1969 (NEPA) and National Historic
45 Preservation Act of 1966 (NHPA)
46 determinations would be completed.

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

53 54 55 **GOALS**

- 56 ▪ Address the gap between
57 maintenance funding and
58 maintenance needs by reducing the
59 number of park assets that require
60 ongoing maintenance.
- 61 ▪ Continue to address deferred
62 maintenance by reducing the number
63 of park assets.
- 64 ▪ Support asset management strategies
65 identified in the park asset
66 management plan.
- 67 ▪ Enhance the preservation of natural
68 and cultural resources, support the
69 visitor experience, and support park
70 and partner operational needs
71 through asset removal.

72 73 74 **MANAGEMENT STRATEGIES**

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

78
79 **Muir Woods National Monument**
80 **Maintenance Facilities:** The park staff has
81 identified inefficient and deteriorating
82 structures to be removed from the
83 monument. Removal would allow further
84 natural resource restoration and a reduced
85 development footprint consistent with the
86 action alternatives. Through this action,
87 there is potential for deferred maintenance
88 reductions of \$40,000.

1 **Camino del Canyon and Conlon Avenue**
2 **Structures:** The park staff has proposed
3 removal of deteriorating structures that do
4 not contribute to the history of the park.
5 Removal would be in concert with natural
6 resource restoration objectives, including
7 habitat restoration and restoration of the
8 natural functioning of the tributary creek.
9 Through this action, there is potential for
10 deferred maintenance reductions of
11 \$210,000.
12

13 **Lower Redwood Creek and Tennessee**
14 **Valley Structures:** Facilities that do not
15 support the park mission and some that are
16 in deteriorated condition were identified for
17 removal. Removal of these structures would
18 allow extensive natural resource restoration,
19 including a return of natural watershed
20 processes, preservation of outstanding

21 natural features, and protection of
22 threatened and endangered species such as
23 the coho salmon and red-legged frog.
24 Riparian areas adjacent to Tennessee Valley
25 would also be enhanced through facility
26 removal. Through this action, there is
27 potential for deferred maintenance
28 reductions of \$600,000.
29

30 **Structures in Marin County:** Park lands,
31 including Capehart Housing and associated
32 sheds and outbuildings north of Bunker
33 Road were identified for removal to improve
34 the scenic entrance to Rodeo Valley. Other
35 structures were identified for removal in
36 support of the cultural landscape and for
37 habitat restoration. Through this action,
38 there is potential for deferred maintenance
39 reductions of \$670,000.

AMERICAN INDIAN ENGAGEMENT

1 Since the late 1990s, the NPS staff has
2 worked with the Federated Indians of
3 Graton Rancheria (the federally recognized
4 tribe composed of park-associated Coast
5 Miwoks and Southern Pomos), with the
6 many Ohlone tribes seeking federal
7 recognition, and with Ohlone individuals
8 who partake in the stewardship of Ohlone
9 heritage. Park lands in Marin County are the
10 aboriginal homelands of Coast Miwoks.
11 Park lands in San Francisco and San Mateo
12 counties are the aboriginal homelands of
13 Ohlones. The park staff would continue to
14 work with Coast Miwoks and Ohlones in the
15 three broad activity areas in which it has
16 worked with them to date: cultural resource
17 management, interpretation and education,
18 and revitalization of community and
19 tradition.

22 GOALS

23 ▪ Inventory Archeological and
24 Ethnographic Sites
25 The park staff, together with tribal
26 representatives, would complete
27 strategic surveys to inventory
28 fundamental native resources and
29 determine treatment for sites that
30 become threatened by natural or use
31 vectors. The park would participate
32 with tribes in preservation-oriented
33 regional collaborations. American
34 Indians are permitted by law,
35 regulation, or policy to pursue
36 customary religious, subsistence, and
37 other cultural uses of resources with
38 which they are traditionally
39 associated. Recognizing that its
40 resource protection mandate affects
41 this human use and cultural context
42 of park resources, the National Park
43 Service would plan and execute
44 programs in ways that safeguard
45 cultural and natural resources while

46 reflecting informed concern for the
47 contemporary peoples and cultures
48 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 American
Indian 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.

84 MANAGEMENT STRATEGIES

85 To provide direction for these activities, the
86 National Park Service would work to
87 establish and implement a set of protocols
88 that would institutionalize the way that park
89 staff engage American Indians in the park.

1	Each protocol agreement would be tailored	33	
2	to the specific type of relationship that the	34	
3	National Park Service and the tribe have	35	
4	developed or are in the process of	36	
5	developing. Protocols and agreements could	37	
6	be developed that may include the following	38	
7	elements or stipulations:	39	
8		40	
9	▪ Establish a government-to-	41	
10	government relationship with the	42	
11	tribe by first contacting or notifying	43	
12	the tribal chair when issues arise.	44	
13	▪ Establish contacts by the park	45	
14	superintendent (or designated staff)	46	
15	with specific tribal representatives or	47	
16	tribal council office(s) designated by	48	
17	the tribal council or tribal	49	
18	chairperson to deal with specific park	50	
19	proposals (or issues) that may arise.	51	
20	(The agreement should include a list	52	
21	of the types of proposed NPS	53	
22	activities for which the tribe would	54	
23	like to be contacted.)	55	
24	▪ Conduct routine notification of	56	
25	appropriate tribal officials	57	
26	(designated by the tribal council or	58	
27	tribal chairperson) by the park	59	
28	regarding park planning, project	60	
29	development, or environmental	61	
30	impact assessments. (Appropriate		
31	methods for this preliminary		
32	notification should be summarized in		
			the agreement—e.g., letter, telephone
			contact, meeting with tribal chair,
			cultural committee, tribal council.)
			▪ Schedule 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 six months).
			▪ Exchange information and research
			results and technical assistance
			between the National Park Service
			and the tribe.
			▪ Develop a time frame 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 American Indian 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

1 INTRODUCTION

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

13
14 With its boundary typically extending a
15 quarter of a mile offshore, Golden Gate
16 National Recreation Area manages miles of
17 coastline and the associated marine and
18 estuarine resources inside San Francisco Bay
19 and along the outer coast. The park holds a
20 lease from the State Lands Commission for
21 management of tidelands and submerged
22 lands within the park boundary to 1,000 feet
23 offshore. In certain areas, the park shares
24 overlapping management authority with the
25 Gulf of the Farallones and Monterey Bay
26 national marine sanctuaries.

27
28 Ocean resources, including natural marine
29 resources and submerged cultural resources,
30 are at risk due to a variety of threats. The
31 effects from global climate change, sea level
32 rise, changes in storm patterns, and ocean
33 acidification compounds many of these
34 threats. Natural sediment transport, which
35 affects shoreline and beach dynamics, is
36 affected by sand mining, dredging, dredge
37 disposal, shoreline stabilization structures,
38 and altered flow regimes such as dams.
39 Overflights, boats, and other uses of marine
40 habitats cause disturbance to marine species.
41 Invasive nonnative species inhabit the park’s
42 ocean and estuarine waters, displacing native
43 species. Recreational and commercial
44 fisheries may impact nearshore fish
45 populations and ecosystem dynamics. Water

46 quality is threatened by pollution from
47 surface runoff, landslides, shoreline
48 development, sewage outfalls, vessel use and
49 traffic, oil, chemical and cargo spills, and
50 contaminants exposed from dredging.
51 Potential wave and tidal energy
52 developments may alter habitat and disrupt
53 physical processes.

54
55 Effective management of the park’s natural
56 and cultural ocean resources requires a
57 strategic approach. In 2006, the National
58 Park Service developed an *Ocean Park*
59 *Stewardship Action Plan* (NPS 2007) to
60 respond to the issues and threats previously
61 described. In 2007, the Pacific West and
62 Alaska Regions of the National Park Service
63 developed a strategic plan for Pacific Ocean
64 parks (NPS 2007), which provided guidance
65 and implementation details for achieving the
66 goals of the servicewide plan. The strategic
67 approach outlined in this plan is consistent
68 with the policies and priorities of Executive
69 Order 13547, “Stewardship of the Ocean,
70 Our Coasts, and the Great Lakes.”

71 72 73 GOALS AND MANAGEMENT 74 STRATEGIES

75 In order to be an effective steward of the
76 park’s natural and cultural ocean resources,
77 park staff must research, monitor, and
78 protect these resources, expand current and
79 explore new partnerships with other
80 agencies and organizations, and
81 communicate an ocean stewardship message
82 to visitors, park managers, and the public. To
83 accomplish this, park staff must develop a
84 plan and then pursue funding and leverage
85 partnerships.

86 87 *Goal 1. Support a Seamless Network of* 88 *Ocean Protected Areas*

89 In order to effectively and efficiently manage
90 the park’s ocean resources, park staff must

1	work with other agencies that have shared	52	wetland habitats and will assess the
2	goals and objectives for marine resource	53	long-term viability and cost
3	protection. This local network currently	54	effectiveness of any new restoration
4	includes Gulf of the Farallones National	55	opportunities in taking present and
5	Marine Sanctuary, Monterey Bay National	56	future climate change influences into
6	Marine Sanctuary, Cordell Bank National	57	consideration.
7	Marine Sanctuary, Point Reyes National	58	
8	Seashore, Farallon National Wildlife Refuge,	59	Strategy 2.5. Park staff will continue to
9	Bolinas Lagoon Open Space Preserve,	60	work with the State Lands Commission
10	James V. Fitzgerald Marine Reserve, and	61	to obtain additional state lease of all
11	portions of California Coastal National	62	tidelands and submerged lands within
12	Monument.	63	the park’s legislated boundary.
13		64	
14	Strategy 1.1. To ensure that the network	65	Strategy 2.6. Park staff will pursue the
15	is seamless in practice, park staff will	66	necessary authorization to correct
16	work to expand current collaboration	67	coastal boundary deficiencies with
17	and strengthen communication with	68	respect to mean high tide line.
18	federal, state, and local agencies with	69	
19	overlapping and adjacent jurisdiction	70	Strategy 2.7. Park staff will increase
20	and with nongovernment organizations	71	public awareness of park jurisdiction by
21	for management of ocean resources.	72	working with the National Oceanic and
22		73	Atmospheric Administration and the
23	Goal 2. Inventory, Map, and Protect	74	Federal Aviation Administration to
24	Ocean Parks	75	include park boundaries and special
25	In collaboration with other agencies and	76	closure areas on nautical and aviation
26	organizations managing ocean resources,	77	charts.
27	park staff will further develop their	78	
28	understanding of the park’s natural and	79	Strategy 2.8. Park staff will work
29	cultural ocean resources.	80	proactively with the National Oceanic
30		81	and Atmospheric Administration, the
31	Strategy 2.1. Through collaboration	82	Bureau of Ocean Energy Management,
32	with other agencies and organizations,	83	Regulation, and Enforcement, and the
33	the park will continue to conduct and	84	Federal Energy Regulatory
34	support regional baseline inventories,	85	Commission, and other agencies where
35	monitoring, and mapping of marine and	86	appropriate, in addressing planning
36	estuarine resources.	87	efforts as they relate to renewable ocean
37		88	energy.
38	Strategy 2.2. Park staff will identify and	89	
39	quantify threats to marine resources,	90	Strategy 2.9. Park staff will work with
40	including those associated with climate	91	local, regional, and state agencies to
41	change and land- and water-based	92	reduce point and nonpoint pollution
42	activities.	93	sources within and adjacent to the park
43		94	and improve water quality in the marine
44	Strategy 2.3. Through the establishment	95	and estuarine waters by implementing
45	of sensitive resource zones and special	96	best management practices.
46	closure areas, the park will protect the	97	
47	most sensitive biological resources from	98	Strategy 2.10. Park staff will work with
48	disturbance.	99	the NPS Submerged Resources Center,
49		100	State Lands Commission, the National
50	Strategy 2.4. Park staff will engage in	101	Oceanic and Atmospheric
51	restoration of estuarine and coastal	102	Administration, and other agencies to

1 identify and formally assess the
2 condition and value of submerged
3 shipwrecks and other submerged
4 archeological resources, and strategize
5 for their protection, treatment, and
6 interpretation.

7
8 **Goal 3. Engage Visitors and the Public in**
9 **Ocean Park Stewardship**

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

20
21 Strategy 3.1. Through collaboration
22 with park partners, park staff will work
23 to improve public understanding of the
24 park as an ocean park through
25 expanded interpretation and outreach
26 through media and new technologies.

27
28 Strategy 3.2. Park staff will collaborate
29 with the NPS Pacific Coast Science and
30 Learning Center to expand
31 communication of ocean science and
32 research to park staff, visitors and the
33 general public.

34
35 Strategy 3.3. Park staff will continue to
36 engage students and visitors in ocean
37 stewardship through the Crissy Field
38 Center, park partners, and other
39 organizations through educational
40 programs.

41
42 Strategy 3.4. Park staff will support the
43 Bay Water Trail as a form of sustainable
44 recreation and collaborate with other
45 organizations to outreach to trail users
46 to ensure protection of marine and
47 estuarine resources.

48

49 **Goal 4. Increase Technical Capacity for**
50 **Ocean Exploration and Stewardship**

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

56
57 Strategy 4.1. Through joint research
58 programs with other agencies and
59 organizations, park staff will facilitate
60 research that improves our
61 understanding of ocean resources.

62
63 Strategy 4.2. Park staff will partner with
64 regional agencies on research and
65 modeling of, and management response
66 to, sediment dynamics and other coastal
67 and ocean processes within the San
68 Francisco littoral cell.

69
70 Strategy 4.3. Park staff will actively
71 support ocean stewardship programs of
72 park partners, such as California
73 Seabird Protection Network, Gulf of
74 the Farallones National Marine
75 Sanctuary Beach Watch program, and
76 Point Reyes Bird Observatory
77 Conservation Science's Alcatraz Island
78 seabird program.

79
80 Strategy 4.4. Park staff will continue to
81 partner with regional, state, and federal
82 agencies to monitor and model sea level
83 rise and other local effects of climate
84 change and assess effects on ocean and
85 coastal resources.

86
87 Strategy 4.5. Park staff will partner with
88 local and regional scientific and political
89 entities to develop protection,
90 mitigation, adaptation and restoration
91 strategies and provide guidance on
92 management of park resources that may
93 be affected by climate change, including
94 inundation and accelerated coastal
95 erosion associated with sea level rise,
96 increased storm wave energy and
97 altered flow regimes.

PARK COLLECTIONS

1	INTRODUCTION	44	
2	The park collections represent the fourth	45	
3	largest in the national park system, reflecting	46	
4	more than 200 years of the area’s history.	47	
5	The park’s legacy is reflected through	48	
6	artifacts relating to American Indian culture,	49	
7	the evolution of military history from	50	
8	Spanish Colonial times to the coastal defense	51	
9	and Cold War periods, the advances of	52	
10	maritime history and westward expansion,	53	
11	and the park’s relationship with the	54	
12	surrounding San Francisco Bay Area	55	
13	communities. Highlighting this rich	56	
14	chronicle of history are significant	57	
15	collections from Alcatraz Island, the U.S.	58	
16	Army, the Nike Missile Site; archeological	59	
17	remains from every episode of the park’s	60	
18	history; and archival photographs, oral	61	
19	histories, architectural drawings, and	62	
20	documents. The park’s natural specimen	63	
21	collections reflect the unique geologic	64	
22	features and fragile biodiversity of the	65	
23	central California coastal ecosystems.	66	
24		67	
25	To convey the diversity and scope of the	68	
26	collections and their representation of the	69	
27	park’s cultural and natural resource heritage,	70	
28	these goals allow the collections to be better	71	
29	understood through continued access,	72	
30	study, interpretation, and education, while	73	
31	ensuring their preservation.	74	
32		75	
33	The goals that follow broaden the scope of	76	
34	collection management for long-term	77	
35	preservation and for the use of the	78	
36	collections in interpretive and educational	79	
37	programs.	80	
38		81	
39		82	
40	GOALS AND MANAGEMENT	83	
41	STRATEGIES	84	
42	▪ Preserve and Maintain the	85	
43	Collections	86	
			Establish a curatorial and research facility that permits 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 “Maintenance, Public Safety, Collections, and Visitor Facilities” 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 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

1	and make them accessible to staff,	23	▪ Strengthen the Collection
2	visitors, researchers, and scholars.	24	Strengthen the park’s collection by
3	Develop a research and scholar’s	25	focusing on representations of the
4	program that expands our	26	park’s themes and varied resources.
5	knowledge and understanding of the	27	Strengthen the park collections’
6	park collections. Using evolving	28	comprehensiveness and
7	technologies, develop partnerships	29	representation of the park’s
8	with and links to local and national	30	significance and varied resources
9	organizations to place the collections	31	through the targeted collection of
10	in a broader historical and scientific	32	materials that are missing,
11	context.	33	misrepresented, or underrepresented
12	Provide outreach opportunities to a	34	in the collections.
13	wider community and national	35	Establish a set of protocols with the
14	audiences through virtual	36	repositories that maintain the park’s
15	technologies and traveling exhibits.	37	natural history specimen collections
16	These technologies and exhibits	38	that allow access for park staff,
17	would inform and orient visitors,	39	visitors, researchers, and scholars.
18	increase understanding and	40	Define parkwide policies for future
19	appreciation of park resources, and	41	collection and storage of the park’s
20	improve public use and accessibility	42	natural history specimens.
21	of the park collections.	43	
22			

PARTNERSHIPS

1	When people engage with the park through	47	
2	participation in a park or park partner	48	
3	program, they make an emotional	49	
4	connection to the park. This connection	50	
5	often creates an appreciation and support	51	
6	for the national park and its resources.	52	
7	Golden Gate National Recreation Area has	53	
8	effectively created and maintained	54	
9	partnerships that have increased the number	55	
10	and diversity of channels through which the	56	
11	community and visitors can engage with the	57	
12	park, thus extending the opportunity of	58	
13	engagement to more people, in more ways.	59	
14	These opportunities not only strengthen ties	60	
15	to Golden Gate National Recreation Area,	61	
16	they help to strengthen Americans' ties to	62	
17	the national park system.	63	
18		64	
19	The entire organization at Golden Gate	65	
20	National Recreation Area works to facilitate	66	
21	and maintain partnership opportunities by	67	
22	incorporating partnership development into	68	
23	every aspect of the organization. This	69	
24	includes specifically recruiting and training	70	
25	for partnering skills, organizing park staff in	71	
26	a way that facilitates partnerships, and	72	
27	actively seeking partners in the search for	73	
28	solutions to park management issues. Park	74	
29	managers are constantly evolving the	75	
30	partnership concept and exploring	76	
31	partnership practices from around the globe	77	
32	to gather innovative partnership ideas and	78	
33	best practices. The park aspires to continue	79	
34	its role as a learning laboratory in developing	80	
35	powerful and successful partnerships in a	81	
36	national park. The park staff will continue its	82	
37	focus on partnership development by	83	
38		84	
39	▪ Identifying Partnership	85	
40	Opportunities	86	
41	A partnership solution will be	87	
42	actively considered when	88	
43	undertaking park management	89	
44	issues. The decision to establish a	90	
45	specific partnership is guided by a		
46	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 under-
			standing 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
			unequal or dominated by any one
			player.
			▪ Being Innovative in Crafting
			Partnerships
			Partnerships may often be limited in
			vision, or substantially 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.

1	▪ Sharing a Vision	25	
2	The partners collaborate in	26	understand and embrace the mission
3	developing and refining a shared	27	and role of each partner and their
4	vision of the need that is to be	28	contribution to stewardship of park
5	fulfilled and the work that is to be	29	resources and visitor opportunities.
6	accomplished through the	30	Good park partnerships represent a
7	partnership. The shared vision is	31	delicate balance between
8	reflected both in the broad body of	32	maintaining one’s own identity and
9	work and in each project or initiative	33	adding value to a collective effort of
10	that is undertaken. Each partnership	34	park stewardship.
11	will require a culture of full	35	
12	engagement from the very beginning	36	▪ Committing to Actively Managing
13	that leads to collective enthusiasm	37	Partnerships
14	and clear results.	38	All partners will invest time and
15		39	resources in revisiting the
16	▪ Maintaining Clear Expectations	40	partnership as needed to ensure it is
17	Partnerships will require formal	41	on track and meeting the objectives.
18	written agreements and work plans	42	If a partnership is underperforming
19	that define mutual interests and	43	or not performing, Golden Gate
20	expectations, the roles and	44	National Recreation Area managers
21	responsibilities of each partner, and	45	will reinvigorate, restructure, or end
22	clear accountability for the work to	46	the partnership—redirecting the
23	be performed. The staff of each	47	resources to a more successful or
24	partner organization needs to truly	48	new partner.

TRAILS

1 INTRODUCTION

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

9
10 The park's extensive network of trails allows
11 millions of people to discover the natural
12 world and deepen their awareness of the
13 grandeur and fragility of park landscapes
14 and resources. Sustainably designed and
15 maintained trails welcome public use while
16 protecting habitat and landscape and, in
17 some cases, are historic resources
18 themselves. Trails can support healthy
19 lifestyles and offer a nonmotorized way to
20 get to the park and its destinations.

21
22 A system of ranch and military roads
23 inherited when the park was established in
24 1972 is the basis for much of the current trail
25 system. Since then, park managers, with
26 partners and the community, have planned
27 and completed many improvements to park
28 trails to better serve the public and protect
29 park resources.

30
31 Much of the trail system still requires
32 upgrading to improve conditions, provide
33 more sustainable alignments, and to fill gaps
34 in the system. In new areas where the park is
35 expanding, such as Rancho Corral de Tierra,
36 a thorough evaluation and plan would be
37 required following this general management
38 plan to guide needed improvements.

39
40 The successful Trails Forever initiative that
41 was launched in 2003 with a focus on the
42 California Coastal Trail is the most current
43 and best example of the potential of public-
44 community collaboration to establish a
45 network of exceptional trails. Looking

46 beyond the trails to incorporate caring for
47 the setting through which they travel has
48 integrated improvements to the natural and
49 cultural resources along trail corridors into
50 the trail projects. This approach has
51 expanded the benefits and reach of the
52 program and has inspired an unprecedented
53 level of volunteer support that is key to the
54 ongoing success of the program.

55
56 Golden Gate National Recreation Area's
57 trail system would provide a sustainable
58 network for visitors to access, enjoy, and
59 understand the diversity of park settings
60 while protecting park resources. The
61 recreation area's trails would connect
62 communities to the park, and park sites and
63 destinations to each other, to adjacent public
64 lands, and to the regional network of trails.

67 GOALS AND MANAGEMENT 68 STRATEGIES

- 69
- 70 ■ Provide a system of trails integrated
71 with the trail network beyond park
72 boundaries, with coordinated
73 regulations and supported by
74 accurate maps and consistent signs.
 - 75 ■ Continue to coordinate with other
76 agencies and organizations to
77 complete a comprehensive regional
78 and national trail system that
79 includes the California Coastal Trail,
80 Bay Area Ridge Trail, San Francisco
81 Bay Trail, Juan Bautista de Anza
82 National Historic Trail, American
83 Discovery Trail, and San Francisco
84 Bay Water Trail.
 - 85 ■ Establish and maintain a trail system
86 that offers a diversity of park
87 experiences, including walking,
88 hiking, scenery viewing, learning,
89 horseback riding, bicycling; trails of
varying lengths and loop

- 1 configurations, varying degrees of
2 challenge; access to a diversity of
3 park settings; and opportunities for
4 universal access where appropriate.
- 5 ■ Locate, design, and maintain new or
6 improved trails and trailheads using
7 best practices and sustainable design
8 to protect the park’s natural and
9 cultural resources, provide enjoyable
10 and safe access, and reduce ongoing
11 maintenance requirements.
 - 12 ■ Integrate improvements to the
13 surrounding cultural landscape and
14 natural habitats when creating or
15 rehabilitating trails and, where
16 appropriate, convert unnecessary
17 management roads to trails.
 - 18 ■ Create trails and trailheads that
19 promote nonmotorized travel to and
20 within the park, reducing the carbon
21 footprint and supporting healthy
22 communities.
 - 23 ■ Establish a coordinated system of
24 signs to provide wayfinding
25 information, support understanding
26 of the park history and resources,
27 and communicate regulations.
 - 28 ■ Create and support partnerships and
29 community involvement in trail
30 planning and ongoing stewardship,
31 while continuing to engage the
32 community through the Trails
33 Forever initiative.
 - 34 ■ Complete strategic archeological
35 surveys of the trail system to ensure
36 that cultural resources are
37 considered in the planning and
38 design process.

41 **Marin County Trails**

42 The Marin County trail system is well
43 established. For much of Golden Gate

44 National Recreation Area’s Marin County
45 lands, trail improvements have been
46 identified in recent plans and trail system
47 improvements are ongoing. Future efforts
48 would focus on continuing to improve
49 existing trails, including sustainable
50 alignments and design, improving
51 connectivity and accessibility, and providing
52 wayfinding signs.

53 54 55 **San Francisco City and County Trails**

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

65 66 67 **San Mateo County Trails**

68 In established areas of the park (Mori Point,
69 Milagra Ridge, Sweeney Ridge) future
70 efforts would focus on continuing to
71 improve existing trails, including sustainable
72 alignments and design, improved
73 connectivity and accessibility, and provision
74 of wayfinding signs. Safe trailheads,
75 appropriate for both local and regional
76 visitors, would be provided. Where
77 appropriate, unnecessary management roads
78 would be converted to trails. A more
79 comprehensive approach to trail planning
80 would be required for new areas coming into
81 park management (Point San Pedro, Rancho
82 Corral de Tierra) and areas where trail
83 deficiencies have not been addressed
84 (Phleger Estate).

TRANSPORTATION

1 Continued transportation planning and 44
 2 management is key to providing the broadest 45
 3 range of access for all visitors to Golden 46
 4 Gate National Recreation Area while 47
 5 reducing the park’s carbon footprint. To 48
 6 protect the park’s natural and cultural 49
 7 resources and provide a high-quality visitor 50
 8 experience, addressing congestion, 51
 9 improving safety, and facilitating access/
 10 circulation to and within the park must 52
 11 remain important components of park
 12 planning. Access to the park must be 53
 13 provided and improved via alternative 54
 14 modes such as transit, bicycle, ferries, and 55
 15 trails. These transportation strategies were 56
 16 highlighted in the 1980 General 57
 17 Management Plan for the park and they are 58
 18 even more relevant today in the face of 59
 19 climate change. 60
 20
 21 The park would pursue sustainable, 61
 22 multimodal access to park sites in 62
 23 partnership with other organizations. By 63
 24 improving trails, roads, and transit 64
 25 connections, a network of equitable energy 65
 26 efficient, low-emissions multimodal 66
 27 transportation options would provide an 67
 28 enjoyable access to park sites. 68
 29
 30

GOALS

- 32 ▪ Reduce greenhouse gas emissions. 74
- 33 ▪ Create enjoyable and welcoming 75
 34 transportation experiences for all 76
 35 visitors. 77
- 36 ▪ Preserve and protect park resources 78
 37 by minimizing transportation 79
 38 impacts. 80
- 39 ▪ Create equitable and convenient 81
 40 multimodal transportation options to 82
 41 and within the park. 83
 84
- 42 ▪ Inspire an environmental 85
 43 consciousness by demonstrating 86

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.

1	▪ Pursue Online Trip	51	range of these tools to offset
2	Planning/Wayfinding	52	congestion at park sites.
3	The park would continue to pursue	53	
4	improved mapping capabilities to	54	▪ Expand the Muir Woods Shuttle
5	enable visitor trip planning,	55	The park staff would continue to
6	integrated interpretive information	56	collaborate with Marin County to
7	and route planning, and other	57	improve the Muir Woods shuttle
8	interactive tools. These ongoing	58	service.
9	improvements would be both online	59	
10	and at park and gateway sites. These	60	▪ Employ Intelligent Transportation
11	website improvements would	61	Systems
12	facilitate a broader understanding of	62	Intelligent transportation systems
13	park resources and the full array of	63	use technology to improve
14	transportation modes available to	64	transportation efficiency such as
15	access them. Online trip planning	65	electronic highway message signs
16	would be linked or integrated with	66	with up-to-date travel information
17	existing regional trip planning	67	or electronic bus stop signs with up-
18	systems and other new technology	68	to-the-minute information about bus
19	encouraging use of alternative modes	69	arrivals. These tools help travelers
20	of access where available.	70	plan their trip and often help
21		71	travelers choose alternative routes or
22	▪ Employ Tools for Congestion	72	modes to avoid congestion. As a
23	Management	73	result, the total distribution of
24	Congestion management or	74	travelers is spread more evenly
25	transportation demand management	75	across the system and the system
26	is a collection of management tools	76	functions more efficiently. Park
27	focused on shifting personal travel	77	managers would continue to work
28	patterns to off-peak periods, more	78	with Caltrans and other agencies to
29	efficient modes (such as public	79	employ tools to support the Muir
30	transit and ridesharing) and	80	Woods shuttle service and other
31	alternative modes (such as cycling	81	alternative transportation access to
32	and walking) to offset vehicle	82	park sites.
33	congestion, particularly during peak	83	
34	periods. Tools could include	84	▪ Implement the Marin Headlands and
35	improving and promoting transit	85	Fort Baker Transportation Infra-
36	options, implementing a reservation	86	structure and Management Plan of
37	system, shifting employee work	87	2009
38	hours, and employing congestion	88	Continue to implement actions that
39	fees (such as parking fees). In	89	provide improved access to and
40	addition to parking fees included in	90	within the Marin Headlands and
41	the <i>Marin Headlands and Fort Baker</i>	91	Fort Baker for a variety of users, and
42	<i>Transportation Infrastructure and</i>	92	to initiate these improvements in a
43	<i>Management Plan Final</i>	93	way that minimizes impacts on the
44	<i>Environmental Impact Statement</i>	94	rich natural and cultural resources of
45	(2009), the other sites where parking	95	the park.
46	fees would be considered include	96	
47	Stinson Beach, Tennessee Valley,	97	▪ Improve Mobility, Access,
48	Lands End, Fort Mason, Fort	98	Connectivity, and Collaboration
49	Funston, and Muir Woods. The park		
50	staff would continue to explore a full		

1	Mobility, access, and connectivity	39	
2	form the keystone of the park and	40	
3	monument’s multimodal transpor-	41	
4	tation system. Although cars will	42	
5	continue to be an important part of	43	
6	the transportation system, the park	44	
7	staff is committed to reducing	45	
8	dependence on the automobile by	46	
9	increasing the efficiency of other	47	
10	modes of travel. Creating practical	48	
11	transportation choices and	49	
12	educating the public of their viability	50	
13	and desirability will increase use of	51	
14	modes other than cars. The park	52	
15	staff will continue to collaborate	53	
16	with regional partners to achieve the	54	
17	vision of creating a seamless	55	
18	multimodal transportation system to	56	
19	access the park for residents and	57	
20	visitors in the Bay Area. This	58	
21	collaboration extends to applying	59	
22	universal design principles, which	60	
23	provide access for people with	61	
24	disabilities.	62	
25		63	
26	▪ Develop a Long Range	64	
27	Transportation Plan	65	
28	Golden Gate National Recreation	66	
29	Area is developing the first park-	67	
30	level long-range transportation plan.	68	
31	An important component of this	69	
32	process is the creation of a list of	70	
33	prioritized future transportation	71	
34	projects, or the transportation	72	
35	improvement plan. Together, they	73	
36	would articulate the transportation	74	
37	priorities of the park.	75	
38		76	
		77	
			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.
			▪ Improve Nonmotorized
			Transportation Access.
			Implement actions that will provide
			improved nonmotorized transpor-
			tation access to and within park sites.
			The implementation of these actions
			will lead to a more seamless network
			of separated and on-road bicycle and
			pedestrian facilities meant to reduce
			vehicle trips, reduce traffic
			congestion, and improve safe trans-
			portation options while protecting
			park resources. Management tools
			may include road and intersection
			designs that improve access and
			safety while minimizing increased
			speeds and impacts on park
			resources; completing a system of
			multiuse trails and paths; improved
			bicycle and pedestrian facilities;
			improved wayfinding and signs; and
			implementation of traffic-calming
			measures, among others.

ALTERNATIVES FOR PARK LANDS IN MARIN,
SAN FRANCISCO, AND SAN MATEO COUNTIES

4



NO-ACTION ALTERNATIVE

1 **PARK LANDS IN MARIN COUNTY**

2 **Overview**

3 In Marin County, Golden Gate National
4 Recreation Area forms the southern core of
5 a large network of regional, state, and federal
6 protected lands and waters (many of which
7 are recognized as part of the UNESCO
8 Golden Gate Biosphere Reserve). Under the
9 no-action alternative, the park would
10 continue to manage this large expanse of
11 preserved natural landscape, with scattered
12 concentrations of developed facilities, to
13 provide visitors with multiple opportunities
14 for recreation, miles of trails, preserved
15 historic military fortifications, and scenic
16 and historic landscapes.

17
18 The county features some of the most varied
19 landscapes in Golden Gate National
20 Recreation Area, including lush woodlands,
21 rugged coasts, sandy beaches, meadows,
22 marshes, grasslands, and coastal shrubs. As a
23 result, visitors can experience an array of
24 wildlife and several different habitats in one
25 brief hike.

26
27 Much of this area has been managed as part
28 of Golden Gate National Recreation Area
29 since the park was established in 1972.
30 Management of this land would continue to
31 be guided by the park's 1980 General
32 Management Plan and subsequent land use
33 and implementation plans (as described in
34 the "Relationship of This Plan to Other
35 Plans" section in part 1 and in appendix B).

36
37 A diverse set of park partners—many housed
38 in historic structures—would continue to
39 provide programs and facilities for visitor
40 education and enjoyment. These facilities
41 and programs currently include a hostel,
42 environmental education and arts
43 programming, equestrian facilities, and a
44 marine mammal rehabilitation center. Park-

45 managed visitor facilities would continue to
46 include a visitor center, scenic overlooks,
47 trails, campsites, and parking areas at
48 recreational beaches.

49
50 National Park Service maintenance facilities,
51 staff housing, administrative offices, and
52 various partner offices would also continue
53 to be located in the park.

54 55 56 **Stinson Beach North to** 57 **Bolinas-Fairfax Road**

58 This developed area would continue to be
59 managed to support intensive use as a scenic
60 recreational beach receiving a high number
61 of visitors. A variety of facilities would
62 support activities that include picnicking,
63 beach recreation, and water recreation
64 (surfing, windsurfing, and boogie boarding).
65 Two public bus routes currently serve this
66 area. Easkoot Creek and the dunes would
67 continue to be managed to preserve and
68 enhance natural habitat. Areas of the park
69 east of Bolinas Lagoon would be managed
70 for their natural resource values and would
71 have few trails or other visitor facilities.

72
73 This area would continue to be managed to
74 protect and restore coastal ecosystems and
75 contribute to the restoration of natural
76 processes that affect Bolinas Lagoon.
77 Partnerships with neighboring land
78 managers would be strengthened to achieve
79 these goals across the broader landscape.

80 81 82 **State Route 1 and** 83 **Panoramic Highway Area**

84 Stretches of these roads pass through or
85 alongside park lands. The roads are not
86 under federal jurisdiction; however, as the
87 underlying land manager, the National Park
88 Service would continue to cooperate with

1 Caltrans and Marin County for management
2 of the road infrastructure and rights-of-way
3 to protect park resources and preserve the
4 scenic rural character of the setting.

5
6 In general, the park land in this area would
7 continue to be managed to preserve and
8 enhance natural and cultural resources and
9 offer access to park sites and recreational
10 activities.

11

12

13 **Slide Ranch**

14 This area would continue to be managed by
15 a park partner to operate an environmental
16 and farm education center in a natural
17 landscape with public access to trails and the
18 shoreline. Slide Ranch would provide day
19 and overnight experiences for program
20 participants and promote healthy eating,
21 healthy living, and environmental awareness.
22 The rocky shoreline and natural area
23 surrounding the program site would
24 continue to be managed by the park to
25 protect natural and ecological values and
26 provide access on existing trails.

27

28

29 **Lower Redwood Creek** 30 **(formerly Banducci flower farm** 31 **and surrounding area)**

32 This area would continue to be managed to
33 preserve and enhance natural processes in
34 the creek, floodplain, and surrounding
35 natural landscape. The National Park
36 Service would work with other land
37 managers in the restoration and preservation
38 of the watershed and in the protection of
39 threatened and endangered species like
40 coho salmon and the red-legged frog. Land
41 and water management would be consistent
42 with the *Lower Redwood Creek Floodplain*
43 *and Salmonid Habitat Restoration Plan* and
44 the *Redwood Creek Watershed: Vision for the*
45 *Future* plan. Existing residential structures
46 could continue to provide housing for
47 volunteers who contribute to site restoration
48 and stewardship.

49

50 **Muir Beach**

51 This small but popular beach lies at the
52 mouth of Redwood Creek and at the
53 confluence of several park trails. In the no-
54 action alternative, the National Park Service
55 would continue to support recreation,
56 hiking, access to the beach. The park staff
57 would continue extensive wetland and creek
58 restoration of the area.

59

60

61 **Golden Gate Dairy and Vicinity**

62 The developed area along State Route 1
63 would be managed to support a small
64 equestrian facility and the Muir Beach
65 Volunteer Fire Department, which would
66 continue to be housed in historic ranch
67 buildings. Park housing would continue to
68 be provided in nonhistoric structures. A
69 small buffer area protects a tributary to
70 Redwood Creek. The surrounding uplands
71 would be managed to provide trail
72 connections through a natural coastal
73 landscape. Recent trail and trailhead
74 improvements connect this area to the Dias
75 Ridge Trail.

76

77

78 **Tennessee Valley and Surrounding** 79 **Parklands (from Oakwood Valley to** 80 **the ocean, and northwest to** 81 **Highway 1)**

82 A major trailhead, multiple trails, Haypress
83 Meadow hike-in campground, and an
84 equestrian center are in the upper end of the
85 valley. A site in the lower valley contains a
86 nursery operation, the park's small horse
87 patrol, an environmental education
88 program, and the Youth Conservation Corps
89 seasonal group campsite. This area would
90 continue to be managed in a way that
91 accommodates these intense and varied
92 visitor uses. The management of equestrian
93 facilities in this area would reflect the
94 equestrian management environmental
95 assessment that is underway.

96

1 The majority of the valley would be managed
 2 as a natural landscape with a trail system that
 3 provides access to a variety of destinations
 4 and landscapes. Remnants of former
 5 agricultural uses, including farm ponds,
 6 fence lines, and nonnative trees, would
 7 remain in the landscape. The creek corridor
 8 and shoreline would continue to be
 9 managed to protect sensitive natural
 10 resources. Tennessee Valley is not currently
 11 served by transit. In addition, the trail
 12 connections are poor between Tennessee
 13 Valley, Oakwood Valley, and the Tamalpais
 14 Valley community along Tennessee Valley
 15 Road.

16
 17
 18 **Marin City Ridge and Gerbode Valley**
 19 **(the coastal ridges and valleys)**

20 This extensive area would continue to be
 21 managed to preserve natural resources and
 22 processes, restore native habitats, and
 23 protect sensitive species, in addition to
 24 coastal fortifications, while providing trail
 25 use, trail improvements, and primitive
 26 camping. The Marin City Ridge will
 27 continue to be managed as part of the
 28 adjacent Marin Headlands in order to
 29 protect and restore natural habitats and
 30 support public access on the trails that
 31 connect to the community.

32
 33
 34 **Fort Barry and Fort Cronkhite**

35 In this area, historic structures and their
 36 settings would be preserved or adaptively
 37 reused for recreation, education, and other
 38 uses, including park operations. Adaptive
 39 use of historic structures would continue to
 40 be the foundation of the robust program of
 41 park partners who preserve buildings and
 42 offer programs that further the mission of
 43 the park. Planned road, trail, and transit
 44 projects will improve access for visitors and
 45 partners (e.g., *Marin Headlands and Fort*
 46 *Baker Transportation Infrastructure and*
 47 *Management Plan Final Environmental*
 48 *Impact Statement*).

49

50 Park operations in the area currently include
 51 a fire station, roads and maintenance
 52 facilities, staff offices, and a native plant
 53 nursery.

54

55 Recreational experiences supported in the
 56 area would continue to include beach
 57 activities, hiking, bicycle riding, horseback
 58 riding, picnicking, and environmental
 59 education.

60

61 The upland areas would be managed to
 62 preserve natural resources and processes,
 63 continue habitat restoration, protect
 64 sensitive species and habitats, and allow
 65 continued trail use.

66

67

68 **Capehart Housing Area**

69 The National Park Service would continue
 70 to manage this area of housing on the north
 71 and south side of Rodeo Creek, at the
 72 intersection of the two roads that access
 73 Rodeo Valley, to provide workforce housing
 74 for park and partner staff. This area is named
 75 Capehart after the senator who sponsored
 76 the military housing act.

77

78

79 **Conzelman, Bunker, and McCullough**
 80 **Roads (including Battery Spencer**
 81 **and Hawk Hill)**

82 This area would continue to be managed to
 83 preserve historic and natural resources and
 84 scenic views of the Golden Gate and Pacific
 85 Ocean. The coastal defense fortifications
 86 would continue to be accessible and
 87 interpreted while protecting sensitive
 88 species and native habitats. Currently, scenic
 89 driving, bicycling, and walking the California
 90 Coastal Trail are popular activities. Planned
 91 road, trail, and transit projects will improve
 92 access for visitors and reduce congestion at
 93 scenic overlooks (e.g., *Marin Headlands and*
 94 *Fort Baker Transportation Infrastructure and*
 95 *Management Plan Final Environmental*
 96 *Impact Statement*).

97

98

1 **Kirby Cove**

2 This area would continue to provide a small
3 campground and group picnic area. The
4 beach would be accessible on foot or by
5 nonmotorized boats. The historic coastal
6 fortifications and forest would be preserved.
7
8

9 **Point Bonita Lighthouse Complex**

10 The lighthouse and several structures,
11 including a small outbuilding, bridge, and
12 access trail, would continue to be preserved.
13 Visitors would be immersed in an authentic
14 historic setting with interpretation about the
15 site's maritime and military history. Access
16 would continue to be highly managed.
17
18

19 **Offshore Ocean and
20 Bay Environment**

21 The National Park Service has jurisdiction
22 through a management lease with the State
23 of California over a 1,000-foot-wide band of
24 coastal waters immediately offshore. The
25 area includes a variety of marine habitat. The
26 shoreline in Point Bonita Cove would
27 continue to be closed to public access year-
28 round to protect the harbor seal haul-out,
29 except for approved research. Park
30 management of these areas would continue
31 to accommodate public uses such as boating.
32 The park staff would continue to encourage
33 and support research, inventory,
34 monitoring, and consultation and
35 cooperation with other resource managing
36 agencies.
37
38

39 **PARK LANDS IN SAN FRANCISCO**

40 **Overview**

41 San Francisco park lands in the planning
42 area include Upper Fort Mason, China
43 Beach, Lands End, East and West Fort
44 Miley, Ocean Beach, and Fort Funston.
45

46 The following areas that have recently
47 completed land use plans or are
48 implementing recently completed plans are
49 not included in this plan: Lower Fort Mason
50 (the Fort Mason Center), the Presidio
51 (including Crissy Field), Fort Point National
52 Historic Site, Sutro Historic District (Sutro
53 Heights Park, Sutro Baths, and the adjacent
54 parking lot and trail), and Cliff House.
55

56 Park lands in San Francisco ring the
57 northern and western shores of the City of
58 San Francisco, preserving a greenbelt next to
59 dense urban neighborhoods. These lands
60 would continue to be major attractions to
61 tourists and central to the quality of life for
62 local citizens. They offer city dwellers places
63 to recreate, rejuvenate, and learn about the
64 fascinating natural and cultural history of the
65 region. For visitors, the park lands help
66 define San Francisco as one of the most
67 beautiful cities in the world.
68

69 Management of these lands and marine/bay
70 waters would continue to focus on
71 preserving natural, cultural, and scenic
72 resources, and providing a variety of
73 recreational uses in the varied settings along
74 San Francisco Bay and the Pacific coast.
75
76

77 **Upper Fort Mason**

78 Fort Mason would continue to be managed
79 to preserve the historic district and to
80 adaptively use the many historic military
81 structures for a variety of park and park
82 partner uses, including staff offices,
83 maintenance, community garden, and a
84 program center for other park partners. A
85 hostel would continue to be the primary
86 public use in the historic structures. The
87 National Park Service manages a leasing
88 program that provides the opportunity for
89 the San Francisco community to live in
90 historic residences, much like army
91 personnel before them, while providing a
92 source of funds for preservation and
93 maintenance. The Fort Mason Post
94 Exchange would continue to be available to

1 the public for events such as weddings and
2 conferences.

3
4 The “Great Meadow” would continue to
5 provide a flexible space that accommodates
6 a range of informal uses and occasional large
7 special events. The San Francisco Bay Trail
8 through Fort Mason would continue to
9 provide a continuous waterfront multiuse
10 promenade that links to San Francisco
11 Maritime National Historical Park and many
12 park destinations along the city and Presidio
13 waterfront. Planning is underway to bring
14 water shuttle access to a pier at Lower Fort
15 Mason. The City of San Francisco is also
16 evaluating Bus Rapid Transit Service along
17 Van Ness Avenue to terminate at an
18 improved transit hub at North Point
19 Boulevard, immediately adjacent to Fort
20 Mason.

21

22

23 **China Beach**

24 This area would continue to be managed for
25 the recreational enjoyment of the small
26 secluded beach and to provide opportunities
27 for bird watching. Park facilities such as
28 picnicking, restrooms, and showers would
29 continue to be provided. The area’s natural
30 resources would be managed for native
31 vegetation and slope stability.

32

33

34 **Lands End**

35 Only the northern area of Lands End is
36 covered in this plan. This area would
37 continue to be managed to preserve and
38 enhance the rugged coastal landscape and its
39 natural appearance and to provide trail
40 access. Public safety staff would continue to
41 be at this site. The southern portion of Lands
42 End (Sutro Historic District including Cliff
43 House) is not part of this plan. This area was
44 recently transformed by the addition of a
45 new parking lot, promenade, scenic
46 overlooks, and extensive renovation of the
47 Monterey cypress forest.

48

49

50 **Fort Miley**

51 Fort Miley is divided into East Fort Miley
52 and West Fort Miley by the active Veterans
53 Administration Medical Center hospital.
54 Park managers would continue to preserve
55 the historic structures and landscapes,
56 providing for both public and park
57 operation uses. East Fort Miley would
58 continue to be managed as a small
59 maintenance center housed in historic
60 structures with public access to an
61 unimproved landscape setting primarily
62 through the hospital campus.

63

64 The West Fort Miley historic forest would
65 continue to provide an outdoor skills and
66 fitness course and a small picnic area set
67 among historic fortifications with
68 spectacular coastal views. The historic
69 Marine Exchange Lookout Building
70 (Octagon House) would remain unused.

71

72

73 **Ocean Beach**

74 Ocean Beach would continue to be managed
75 to provide a recreational beach that
76 accommodates high levels of diverse use,
77 while preserving its natural values, including
78 habitat for shorebirds such as the threatened
79 western snowy plover. It would continue to
80 provide a long trail connection between Fort
81 Funston and Cliff House, as well as preserve
82 the historic O’Shaughnessy seawall and
83 promenade. The National Park Service
84 would continue to collaborate with the City
85 and County of San Francisco on Ocean
86 Beach management issues.

87

88

89 **Fort Funston**

90 This park unit would continue to provide
91 trail and beach access for a variety of
92 recreational uses, including dog walking and
93 hang gliding. It would also preserve
94 important natural and cultural resources,
95 including endangered species habitat and
96 historic coastal defense fortifications.
97 Former military structures support park

1 operations and partner programs such as
2 environmental education and a native plant
3 nursery.

6 **Offshore Ocean and** 7 **Bay Environment**

8 The National Park Service has jurisdiction
9 through a management lease with the State
10 of California over a 1,000-foot-wide band of
11 coastal waters immediately offshore. The
12 area includes a variety of marine habitat.
13 Park management of these areas would
14 continue to accommodate public uses such
15 as boating. The park staff would continue to
16 encourage and support research, inventory,
17 monitoring, and consultation and
18 cooperation with other resource managing
19 agencies.

22 **PARK LANDS IN** 23 **SAN MATEO COUNTY**

24 **Overview**

25 At the time the 1980 General Management
26 Plan was developed, Golden Gate National
27 Recreation Area did not manage any land in
28 San Mateo County. Since that time, NPS-
29 managed land within the designated park
30 boundary has grown to include almost
31 30,000 acres in San Mateo County.

32
33 Stretching along the San Mateo coast to
34 Rancho Corral de Tierra and inland to the
35 Phleger Estate, the southern park lands
36 feature a remarkable wealth of natural and
37 historic resources. From rugged coastal
38 bluffs and windswept ridgelines to a
39 redwood forest, wetlands, and streams, these
40 lands support an abundance of plants and
41 wildlife and tell the story of the people who
42 have shaped this peninsula over generations.

43
44 Golden Gate National Recreation Area park
45 lands in San Mateo County serve a large and
46 diverse local population, offering many
47 opportunities for recreation and enjoyment.

48 Whether enjoying the trails, strolling the
49 beaches, or taking in panoramic views up
50 and down the Pacific coast, there are
51 unlimited ways to explore and appreciate
52 these park lands.

53
54 Currently the NPS presence in San Mateo
55 County is limited, sites are not well
56 identified, and there are few basic facilities
57 to support access. Management of park
58 lands in San Mateo County is guided by the
59 park's authorizing legislation and the
60 management policies common to units of the
61 national park system. This management
62 approach would continue under the no-
63 action alternative, with the exception of
64 Sweeney Ridge, for which a general
65 management plan amendment was approved
66 in 1985 to provide specific management
67 guidance.

68
69 Site planning for the enhancement of visitor
70 facilities, such as the planning recently
71 completed for Mori Point, would continue.
72 Park management would also continue to
73 consult with other agencies to achieve
74 fundamental park goals regarding the San
75 Francisco Public Utilities Commission
76 Peninsula Watershed, where the park holds
77 scenic and recreational easements.

80 **Parcels South of Fort Funston** 81 **to South of Mussel Rock**

82 The National Park Service manages
83 approximately 30 acres in two parcels in this
84 geologically dynamic coastline: one parcel
85 south of Thornton State Beach and one
86 parcel south of Mussel Rock. No
87 improvements for public access have been
88 made by the National Park Service, and
89 there is no active NPS presence in this area.
90 In the absence of a general management
91 plan, management is guided by the park's
92 authorizing legislation (its purpose) and the
93 management policies common to units of the
94 national park system. This would continue
95 under the no-action alternative.

1 **Milagra Ridge**

2 This area would continue to be managed to
3 protect and restore natural habitat
4 (including endangered species habitat), to
5 protect historic coastal defense
6 fortifications, and to provide public access
7 through a system of trails so people can
8 enjoy the site and its scenic beauty. Recent
9 acquisition by the park of a conservation
10 easement on the northwest slope allows
11 potential development of a Bay Area Ridge
12 Trail connection to the coast.
13
14

15 **Shelldance Nursery Area**

16 Portions of the Shelldance Nursery area
17 were added to the park in 1988 and 1993.
18 This small area would continue to be
19 managed for trail access, including a
20 trailhead and trails to Sweeney Ridge; office
21 space and storage of park maintenance
22 equipment; and to accommodate a
23 commercial nursery.
24
25

26 **Sweeney Ridge (including 27 Cattle Hill and Picardo Ranch)**

28 Sweeney Ridge was added to the park in
29 1984. The area would continue to be
30 managed for natural values and protection of
31 historic resources such as the San Francisco
32 Bay Discovery Site National Historic
33 Landmark and the 20th century Nike
34 facilities. Cattle Hill is expected to be
35 transferred to the National Park Service by
36 the City of Pacifica in the near future and
37 recent collaboration has provided trail and
38 habitat improvements on this site. Picardo
39 Ranch and the western extension of Cattle
40 Hill are both private lands not managed by
41 the National Park Service at this time.
42 Picardo Ranch includes the lower slopes of
43 Cattle Hill, and its trails connect to Sweeney
44 Ridge. Currently, an equestrian facility
45 provides horse boarding. Land and
46 conservation easement acquisition would be
47 a priority for the park.
48

49 **Mori Point**

50 Mori Point was added to the park in 2002.
51 This site would continue to be managed to
52 preserve and enhance habitat for threatened
53 and endangered species (San Francisco
54 garter snake, California red-legged frog) and
55 to restore natural functions to a highly
56 degraded site. A network of hiking trails,
57 including the California Coastal Trail, is
58 under development to provide visitors
59 access to the area's scenic beauty.
60 Management of this site would be guided by
61 the *Mori Point Restoration and Trail Plan*
62 *Environmental Assessment*.
63
64

65 **Point San Pedro**

66 These rugged coastal areas are not managed
67 by the National Park Service. However, they
68 will be greatly affected by the opening of the
69 State Route 1 tunnel now under
70 construction and may be added to the park
71 within the planning horizon of the general
72 management plan. The City of Pacifica
73 manages Point San Pedro to preserve its
74 natural features and open space. Lands in
75 this area are in public and private ownership.
76
77

78 **Rancho Corral de Tierra**

79 One of the largest areas of open space near
80 San Francisco, this 4,200-acre area
81 encompasses the majority of an 1839
82 Mexican Land Grant and was added to the
83 park in 2011. The isolated and undisturbed
84 condition of the land provides unique and
85 productive habitat for a diverse array of
86 plant and animal species, including several
87 threatened and endangered species. The
88 headwaters of four major coastal watersheds
89 are contained within this property,
90 providing important riparian habitat and a
91 scenic backdrop that visually distinguishes
92 the San Mateo mid-coast region.
93

94 Limited public access would continue to be
95 provided for recreation such as hiking and
96 horseback riding. The area would be

1 managed to provide these current uses, such
2 as equestrian facilities, and anticipated new
3 public uses in a way that maintains and
4 protects resources.

7 **Montara Lighthouse**

8 The site is presently managed by the U.S.
9 Coast Guard. Under an agreement with
10 California State Parks, a hostel is operated in
11 several structures related to the lighthouse.
12 Day use of the site is focused on scenic
13 beauty and lighthouse history. Transfer of
14 this site to the park is anticipated within the
15 planning horizon of the general management
16 plan. If this occurs, the site would be
17 managed for its current uses.

20 **Phleger Estate**

21 This area was added to the park in 1994. It
22 would continue to be managed to preserve
23 the cultural and natural resources of this
24 1,000-acre, second-growth redwood forest
25 and to provide access to the regional trail
26 system.

29 **San Francisco Public Utilities 30 Commission Peninsula Watershed 31 Easements**

32 These 23,000 acres are managed by the San
33 Francisco Public Utilities Commission to
34 protect San Francisco's water supply and the
35 scenic, ecological, and cultural resources of
36 the watershed. Management is guided by the
37 commission's *Peninsula Watershed*
38 *Management Plan*. Golden Gate National
39 Recreation Area manages two easements
40 over the peninsula watershed: a scenic
41 easement and a scenic and recreation
42 easement that provide preservation of
43 natural values and limited recreational use.
44 Compatible recreational, educational, and
45 scientific uses are highly controlled. Primary
46 public access is on trails along the eastern
47 edge of the watershed where the trails are

48 easily accessible from adjacent communities.
49 Access on the 10-mile Cahill Ridge
50 alignment of the Bay Area Ridge Trail is
51 provided by guided tours. The San Francisco
52 Public Utilities Commission and National
53 Park Service cooperate to ensure that
54 ongoing water operations and other
55 allowable uses are compatible with the
56 preservation and access components of the
57 easements. The peninsula watershed forms
58 the core of the UNESCO Golden Gate
59 Biosphere Reserve, an area rich in native
60 plant and animal life.

63 **Offshore Ocean Environments**

64 In areas where the park boundary coincides
65 with the Fitzgerald Marine Reserve, the two
66 organizations would continue to cooperate
67 in the implementation of the provisions of
68 the California State Marine Life Protection
69 Act. The reserve area between Montara State
70 Beach and Ross Cove has been designated as
71 the Montara State Marine Reserve: no
72 fishing, harvesting, or collecting would be
73 allowed in this area. The reserve area
74 between Ross Cove and Pillar Point Harbor
75 has been designated as the Pillar Point
76 Marine Conservation Area; some fishing
77 would be allowed in this area.

80 **COST ESTIMATES**

81 Cost estimates for the no-action alternative
82 are identified in table 4. The costs shown
83 here are not for budgetary purposes; they are
84 only intended to show a relative comparison
85 of costs among the alternatives.
86 The alternatives describe the maximum
87 potential capital improvements; lesser
88 improvements may be implemented or built
89 in phases if necessary. The implementation
90 of the approved plan will depend on future
91 funding. The approval of this plan does not
92 guarantee that the funding and staffing
93 needed to implement the plan will be
94 forthcoming. Full implementation of the
95 actions in the approved general management
96 plan could be many years in the future.

1 Additionally, some of the future long-term
 2 funding needed to implement the various
 3 actions called for in the alternatives is
 4 anticipated to come from nonfederal
 5 partners, consistent with the park’s current
 6 practices.

7
 8
 9 **Annual Operating Costs**

10 The operating budget for fiscal year 2009
 11 was \$28.0 million. This includes operations
 12 costs for Golden Gate National Recreation
 13 Area (including Alcatraz Island) and Muir
 14 Woods National Monument.

15
 16
 17 **Staffing**

18 The no-action alternative assumes that
 19 current staffing levels would be maintained
 20 at 335 full-time equivalent (FTE) is one
 21 person working 40 hours per week for one
 22 year or the equivalent). The FTE number
 23 does not include volunteer positions or
 24 positions funded by partners. FTE salaries
 25 and benefits are included in the annual
 26 operating cost.

29 **One-time Costs**

30 The estimated costs of the no-action
 31 alternative reflect the continuation of
 32 current management. One-time costs for the
 33 no-action alternative are the costs for those
 34 projects that are currently approved and
 35 funded—any requested but unfunded
 36 projects are not considered in this analysis.
 37 Therefore, while the action alternatives
 38 contain estimates for 20 years of proposed
 39 projects, the no-action alternative assumes
 40 no new projects would take place except
 41 those projects funded in 2009. The costs
 42 include such projects as preservation of
 43 seacoast fortifications, trail realignment, and
 44 photovoltaic panel installation. Nonfacility
 45 projects currently include conservation of
 46 museum collections, visitor use management
 47 and monitoring, and restoration of native
 48 plants. Total one-time costs of the no-action
 49 alternative are \$5.3 million.

50
 51 In the no-action alternative, the current level
 52 of facilities would be continued.
 53 Improvements to facilities would include
 54 deferred maintenance and rehabilitation
 55 projects.

**TABLE 4. COSTS ASSOCIATED WITH 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

1 **MANAGEMENT ZONES FOR THE**
2 **NO-ACTION ALTERNATIVE**
3 **(FROM THE 1980 GENERAL**
4 **MANAGEMENT PLAN)**

5 **Natural Resource Zones**

6 ***Intensive Landscape***
7 ***Management Zone***

8 Lands within this zone occur entirely within
9 southern reaches of the park and basically
10 include all areas where nonnative vegetation
11 predominates. Although all of these areas
12 have been substantially modified through
13 human activities, many of them still contain
14 isolated populations of natural wildlife and
15 vegetation, which will be carefully preserved.
16 When choices are available in these zones
17 they should favor native species wherever
18 possible. Within this category the following
19 two subzones have been recognized.

20
21 *Natural Appearance Subzone: (Ocean Beach,*
22 *Fort Funston, Lands End, and Rodeo Lagoon*
23 *picnic area)—*To many park users, lands in
24 this subzone may appear to be as natural as
25 wilderness areas at Point Reyes, but they are
26 in fact human-created landscapes, which in
27 many cases will require the same degree of
28 maintenance as an urban park setting. The
29 primary management goal in these areas will
30 be to continue to accommodate relatively
31 high use levels with a commitment to
32 intensive maintenance in order to retain the
33 appearance of a natural landscape. Examples
34 of intensive measures that will be required in
35 this subzone include reforestation of
36 Monterey cypress and stabilization and
37 maintenance of planted sand dunes.

38
39 *Urban Landscape Subzone: (Crissy Field, West*
40 *Fort Mason, Fort Barry parade ground, Stinson*
41 *Beach developed areas)—*This subzone is
42 characterized by familiar elements found in
43 traditional city parks—well-tended trees,
44 shrubs, and flowers; irrigated and mowed
45 lawns; and hard-surfaced areas for walking
46 and congregating. These areas are designed

47 for intensive use and should look complete
48 only when filled with people. Primary
49 resource management activities will include
50 mowing, irrigation, weeding, fertilization,
51 replanting, and trash pickup.

52
53 ***Natural Landscape Management***
54 ***Zone (Marin Headlands and***
55 ***Stinson Beach area)***

56 In this zone, natural resources and processes
57 will remain as undisturbed as possible given
58 a relatively high level of natural park uses
59 (hiking, primitive camping, etc.).
60 Management activities will be directed
61 primarily at protecting wildlife and
62 vegetation from misuse and overuse and at
63 maintaining a variety of landscape settings
64 conducive to recreation (open grasslands as
65 well as forests).

66
67 ***Special Protection Zone***

68 This zone includes lands that have received
69 legislative or special administrative
70 recognition of exceptional natural qualities
71 requiring strict protection measures. Further
72 analysis of park resources in the future could
73 result in additional lands being placed in this
74 category.

75
76 *National Monument Subzone: (Muir Woods)—*
77 Although contained within the boundary of
78 Golden Gate National Recreation Area,
79 Muir Woods retains its special status as a
80 national monument, the sole purpose of
81 which is to protect a stand of virgin coast
82 redwoods for public enjoyment of their
83 scientific, scenic, and educational values.

84
85 *Biotic Sensitivity Subzone: (shoreline and*
86 *stream courses)—*This subzone, derived from
87 high sensitivity ratings in the information
88 base, generally identifies those natural
89 resources in the park that are particularly
90 sensitive to human use or are especially
91 valuable from an ecological or scientific
92 point of view. Use and development in these
93 areas should be either discouraged or

1 mitigated sufficiently to avoid substantial
2 levels of deterioration.

3
4 Most of the areas covered by this subzone
5 are water courses or bodies of water
6 recognized for their importance in
7 sustaining wildlife and vegetation. Because
8 the lands near these resources have been and
9 will continue to be the most attractive
10 locations for use and minor development,
11 mitigation measures will be particularly
12 important. Siting of minor facilities will be
13 crucial. For example, placing a campground
14 directly on the bank of a stream could cause
15 unacceptable impacts that could be avoided
16 by shifting the facility only several hundred
17 feet.

18

19

20 **Historic Resource Zones**

21 ***Preservation Zone (Fort Point, ships, 22 lighthouses, fortifications, historic 23 buildings at Alcatraz Island)***

24 Spaces and objects placed in this category
25 are managed and used primarily for the
26 purpose of facilitating public enjoyment,
27 understanding, and appreciation of their
28 historic values. Management activities will
29 include the protection of structures from
30 influences and uses that could cause
31 deterioration and the presentation of tours,
32 exhibits, or other appropriate interpretive
33 efforts.

34

35 Because of the unusually large number of
36 historic structures in the parks, many that
37 are suitable for adaptive use have been
38 placed in this category simply because a use
39 has not yet been specifically identified for
40 them. Undoubtedly, some of these will be
41 adapted for management or visitor uses in
42 the future, but in the meantime they will be
43 simply protected from damage and
44 deterioration.

45

46 ***Enhancement Zone (Sutro Baths, 47 Sutro Heights, Cliff House, Aquatic 48 Park)***

49 All of the areas within this subzone were
50 developed originally as recreation spaces
51 and still derive their primary value from
52 recreation use. Management practices will
53 be directed at preserving the basic integrity
54 of their settings and specific structures
55 within them. Enhancement of the usability
56 and attractiveness of these partially rundown
57 and deteriorated areas will be accomplished
58 through the addition of elements and the
59 practice of maintenance activities similar to
60 those described for the urban landscape
61 subzone.

62

63 ***Adaptive Use Zone (Alcatraz Island 64 grounds, north and east Fort Mason, 65 Haslett Warehouse, East Fort Miley, 66 areas of Marin Headlands)***

67 This subzone defines structures or spaces of
68 historic value that have been or will be
69 adapted for recreation, park management,
70 and related activities. Although as much
71 historic integrity as possible will be retained
72 throughout all areas of the park, the interior
73 spaces of structures included in this zone
74 may be modified considerably to
75 accommodate recreation, education, and
76 other park-related uses. Exterior settings
77 may also be modified to include site
78 improvements such as landscaping in cases
79 where modification is deemed necessary to
80 properly accommodate public use.

81

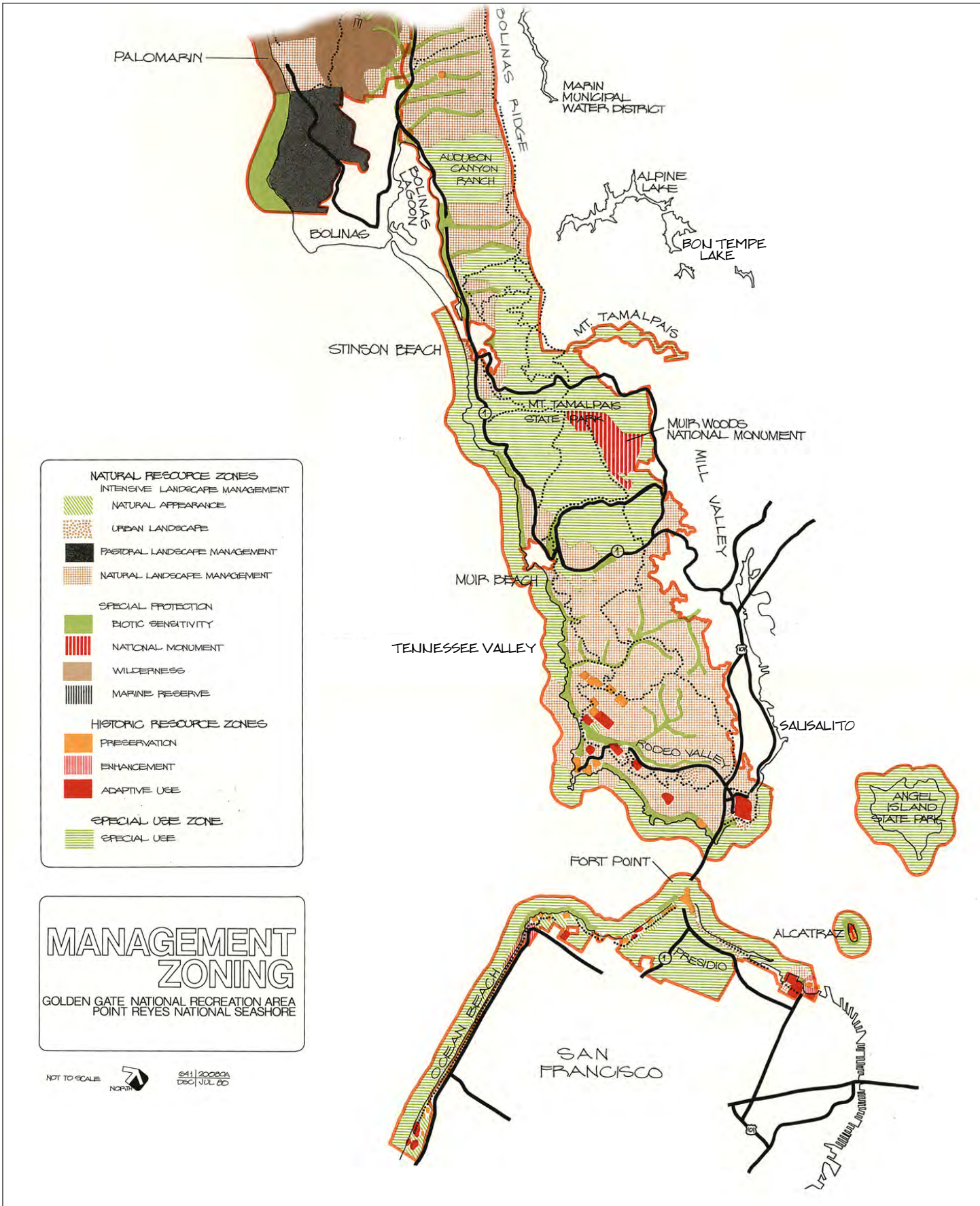
82 ***Special Use Zone (Vedanta Society, 83 Audubon Canyon Ranch, Zen Center, 84 Mount Tamalpais and Angel Island 85 State Parks, Lincoln Park and Marina 86 Green city parks, Presidio of San 87 Francisco)***

88 Lands within this zone are within the
89 authorized boundaries of Golden Gate
90 National Recreation Area or Point Reyes
91 National Seashore, but are not currently or
92 expected in the foreseeable future to come

PART 4: ALTERNATIVES FOR PARK LANDS IN MARIN, SAN FRANCISCO,
AND SAN MATEO COUNTIES

1 under the jurisdiction of the National Park
2 Service. Management policies and practices
3 of the agencies and organizations
4 administering these lands appear to
5 adequately provide the continued

6 preservation of the natural, scenic,
7 recreational, and historic values that
8 motivated their inclusion within the
9 boundaries.



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

1 PARK LANDS IN MARIN COUNTY

2 Overview

3 In this alternative, park managers would
4 preserve the natural, cultural, scenic, and
5 recreational qualities that are enjoyed today
6 and would improve access to the park for all
7 visitors. The park would enhance the
8 facilities that support visitor experience in
9 what has been called “the wilderness next
10 door.” Park managers would work to
11 preserve and restore these interconnected
12 coastal ecosystems through collaborative
13 partnerships with other land management
14 agencies in the region. A stronger national
15 park identity and message would welcome
16 people as they arrive, and improved
17 orientation and information services would
18 inform them of the variety of experiences
19 available in the park. Important park
20 operational uses would remain in the Marin
21 Headlands, and visitor facilities at these sites
22 would be improved.

23
24 The park lands in Marin County are an
25 outdoor recreationist’s paradise, with an
26 extensive network of trails through valleys,
27 atop windblown coastal bluffs, along rocky
28 shores, and among redwoods and oaks.
29 Sustainable approaches to rehabilitating
30 facilities that are in place today would
31 improve trailheads and trails as well as roads,
32 parking lots, campsites, picnic areas,
33 restrooms, and other structures at popular
34 destinations such as the coastal
35 fortifications. Some new facilities would be
36 developed to improve visitor services and
37 support the growing stewardship programs.
38 Park partners would continue to play
39 important roles in preserving resources and
40 offering programs and services to visitors in
41 support of the park’s mission. Public

42 transportation and multimodal access to all
43 park sites would be improved.

44

45

46 Stinson Beach North to 47 Bolinas–Fairfax Road

48 *Diverse Opportunities Zone (beach, 49 dunes, and developed area)*

50 At Stinson Beach, the setting and facilities
51 would be improved to better support beach
52 recreation, expand the creek buffer to
53 protect endangered species habitat, and
54 enhance the dunes. Sustainable new facilities
55 would replace deteriorated restrooms,
56 showers, picnic areas, and parking lots. The
57 siting of any new facilities would first be
58 evaluated for long-term viability and cost
59 effectiveness, taking present and future
60 climate change influences into
61 consideration. A visitor contact facility could
62 combine existing services (food service,
63 equipment rental) and interpretive and
64 educational programs. Visitor facilities
65 would be removed if it becomes infeasible to
66 maintain them because of climate change.
67 Maintenance and public safety offices with
68 staff housing would be retained.

69

70 The park would explore ways to improve
71 visitor access to Stinson Beach such as
72 increasing transit on weekends during the
73 peak season and enhancing regional trail
74 connections. The park would also continue
75 to work with the community and Marin
76 County to manage parking and reduce traffic
77 using congestion management tools.

78

79 The park would continue to work with the
80 Stinson Beach Community Services District,
81 Marin County, Gulf of the Farallones
82 National Marine Sanctuary, and the local

1 community to find sustainable solutions to
2 flooding and floodplain functions, water use,
3 water quality, and wastewater treatment, and
4 sea level rise related to climate change where
5 these affect park resources. More detailed
6 site planning for proposed improvements
7 will involve working with the community to
8 identify alternatives for vulnerable facilities,
9 including off-site locations and increased
10 transit service to offset reduced parking.

11
12
13 ***Natural Zone (surrounding park land***
14 ***north to Bolinas-Fairfax Road,***
15 ***except Stinson Beach)***

16 This area would be managed to protect and
17 restore the coastal ecosystems, and
18 contribute to the restoration of natural
19 processes that affect Bolinas Lagoon. The
20 Bolinas Lagoon Restoration Project—
21 Recommendations for Restoration and
22 Management (Gulf of the Farallones
23 National Marine Sanctuary Advisory
24 Council 2008) identified key actions to
25 protect and restore Bolinas Lagoon and its
26 watershed. Three tables identify
27 recommendations for restoration in the
28 Locally Preferred Plan, recommendations
29 for management (best management
30 practices), and recommendations for
31 adaptive management and monitoring. Each
32 action identifies the key land managers,
33 including Golden Gate National Recreation
34 Area, with a vested interest in implemen-
35 tation of each action. Park involvement
36 would be required to implement restoration
37 actions in portions of the watershed,
38 including improving floodplain function
39 along Easkoot Creek, at the Bolinas Y, and
40 along the east shore of Bolinas Lagoon (e.g.,
41 Stinson Gulch), and improving transitional
42 habitat and habitat connectivity along the
43 east shore of the lagoon. Partnerships with
44 neighboring ocean and land managers would
45 be strengthened to achieve these goals across
46 the broader landscape. The park would
47 improve trails, trailheads, and directional
48 signage to provide access to other nearby
49 park lands.

50 **State Route 1 and Panoramic**
51 **Highway Area**

52 ***Scenic Corridor Zone***

53 Park lands in this area would be managed to
54 enable visitors traveling by car, bicycle, and
55 transit to enjoy spectacular views of the
56 Pacific coast and natural habitats and to
57 provide trail access to park sites.

58
59 The park would collaborate with Caltrans
60 and Marin County, the managers of these
61 two important access roads that pass
62 through the park, and with California State
63 Parks and other land management agencies
64 to improve the roadways and trail crossings
65 for the safety and enjoyment of park visitors
66 while retaining the scenic rural character.
67 New facilities could include overlooks and
68 trailheads with parking, restrooms, interpre-
69 tive exhibits, picnic areas, enhanced trail and
70 transit connections, and a unified way-
71 finding system. A small trailhead parking
72 area could be developed in the vicinity of the
73 former White Gate Ranch. Improvements
74 east of Panoramic Highway in the vicinity of
75 Homestead Hill, including a parking area,
76 would enhance trail and transit access to
77 Muir Woods and other nearby park
78 destinations. Improvements would fit with
79 the rural character of the area. Park
80 managers would seek to minimize impacts
81 on natural resources caused by road use,
82 maintenance, and drainage.

83
84
85 **Slide Ranch**

86 ***Diverse Opportunities Zone***
87 ***(developed area)***

88 This area would be managed to enhance the
89 environmental and farm education center
90 and provide improved facilities for public
91 day use of the site, including a picnic area,
92 trail access, and a scenic overlook.
93 Improvements would take into account the
94 dynamic geologic conditions of the site. The
95 siting of any new construction would first be
96 evaluated for long-term viability and cost

1 effectiveness, taking present and future
2 climate change influences into
3 consideration.

4
5 **Natural Zone (land surrounding**
6 **the developed area)**

7 The landscape that surrounds the
8 educational programs would be managed to
9 enhance its natural and scenic values, retain
10 flexibility to adapt to coastal geologic
11 processes, and provide public trail use and
12 access to the coast.

13
14
15 **Lower Redwood Creek**
16 **(formerly Banducci flower farm**
17 **and surrounding area)**

18 **Natural Zone (majority of**
19 **Lower Redwood Creek)**

20 Park managers would continue to restore the
21 natural coastal ecosystem and the riparian
22 habitat of Redwood Creek while providing
23 improved trail connections to Mount
24 Tamalpais State Park and other area trails,
25 including the California Coastal Trail. All
26 unnecessary structures would be removed.

27
28 **Evolved Cultural Landscape Zone**
29 **(developed area and adjacent**
30 **approximately 6-acre site)**

31 Park managers would preserve the rural,
32 pastoral character of the landscape.
33 Stewardship facilities relocated from Muir
34 Woods National Monument could be
35 accommodated in this zone. The
36 stewardship center, incorporating a native
37 plant nursery and other native plant
38 propagation areas, would reinvigorate the
39 horticultural traditions of the site and engage
40 the community. Existing buildings would be
41 rehabilitated to support park programs and
42 operations.

43
44 The National Park Service would work with
45 California State Parks to provide a small
46 trailhead parking and picnic area near the

47 Santos Meadow and the Frank Valley horse
48 camp, and improve access to this zone.

49
50 A sustainable approach to providing for
51 water supply and wastewater treatment
52 would be identified and implemented to
53 confirm the viability of possible uses at this
54 site. To further protect the creek's
55 endangered salmon, park managers could
56 collaborate with the community to increase
57 water storage capacity for use during the dry
58 season.

59
60 Park managers would continue to work with
61 Marin County and California State Parks to
62 explore realignment of Muir Woods Road to
63 reduce impacts on Redwood Creek and
64 repair and reopen damaged road segments.

65
66
67 **Muir Beach**

68 **Natural Zone**

69 The National Park Service would manage
70 the area to restore and sustain the wetlands,
71 creek, dunes, and lagoon with improvements
72 for beach and trail access that preserve the
73 community's natural setting. The park would
74 continue to collaborate with the community,
75 Muir Beach Community Services District,
76 and Marin County to understand and
77 address water quality issues that impact park
78 resources. Ongoing collaboration with
79 Green Gulch Farm managers would
80 continue to promote compatible
81 management of this private parcel within the
82 park boundary.

83
84
85 **Golden Gate Dairy and Vicinity**

86 **Evolved Cultural Landscape Zone**
87 **(developed area only)**

88 The area would be managed to preserve the
89 historic structures and pastoral character
90 while continuing to support park and
91 community needs. Site improvements would
92 accommodate a small trailhead and rural
93 transit stop and enhance the creek corridor.

1 Equestrian facilities would be retained, with
2 site improvements made to incorporate best
3 management practices and protect the
4 adjacent riparian area. The National Park
5 Service would continue to work with the
6 operator of the equestrian facilities to
7 expand programs that benefit the public.
8 Nonhistoric residences along State Route 1
9 could be removed if they do not contribute
10 to essential community services or park
11 operational needs.

12
13 The National Park Service would continue
14 to promote regularly scheduled transit
15 service to reduce vehicle traffic. The
16 National Park Service would also continue
17 to work with Caltrans to improve the safety
18 of State Route 1 for park visitors, including
19 traffic calming and improved pedestrian
20 crossing, and also to complete the trail
21 connection between Dias Ridge and
22 Redwood Creek trails.

23
24 ***Natural Zone (surrounding uplands)***

25 The uplands surrounding the dairy would be
26 managed to preserve and enhance the
27 natural setting, protect the coastal prairie
28 and scrub habitat, and provide connections
29 to trails to the beach and the adjacent Mount
30 Tamalpais State Park.

31
32
33 **Tennessee Valley and Surrounding
34 Parklands (from Oakwood Valley to
35 the ocean, and northwest to
36 Highway 1)**

37 ***Diverse Opportunities Zone
38 (Tennessee Valley trailhead and the
39 upper stables area)***

40 Trailhead site improvements, including
41 potable water, restrooms, and an improved
42 picnic and parking area, would enhance this
43 “portal” to the park that supports hiking,
44 biking, and equestrian activities. A small
45 food and information kiosk could be
46 included in this area.

47

48 In collaboration with Marin County and the
49 community, park managers would explore
50 the feasibility of public transit service to the
51 trailhead on peak season weekends. Park
52 managers would also collaborate to extend
53 and link the Tennessee Valley trail system
54 into the surrounding community’s trail
55 network such as the Mill Valley Bike Path
56 (San Francisco Bay Trail).

57
58 Equestrian facilities would be retained and
59 could be expanded while protecting the
60 historic character of the former dairy ranch.
61 Site improvements would be made to
62 incorporate best management practices and
63 protect the adjacent riparian area. The
64 National Park Service would continue to
65 work with equestrian operators to expand
66 programs that benefit the public.

67
68 Modest facilities could be sited within this
69 zone that support stewardship, education,
70 and youth programs. The park horse patrol
71 would be relocated from lower Tennessee
72 Valley to Fort Barry at the Rodeo Valley site
73 and the lower Tennessee Valley site restored
74 (see natural zone description below).

75
76 ***Diverse Opportunities Zone
77 (Oakwood Valley)***

78 Visitor access improvements, including
79 trailhead amenities, parking, picnicking, and
80 restrooms, would be provided in this zone to
81 support access to the trail system.

82
83 ***Natural Zone (from the trailhead to
84 the ocean and the surrounding
85 uplands including Oakwood Valley)***

86 The main multiuse trail would be enhanced
87 to support the ongoing use and improve
88 accessibility. Unnecessary management
89 roads could be converted to trails and
90 natural processes restored.

91

92 Primitive group camping and the Youth
93 Conservation Corps seasonal group camp
94 could be retained at Haypress. All other
95 facilities and structures in lower Tennessee
96 Valley, including the remaining dams and

1 constructed ponds, would be removed and
2 native habitats restored. Other retained
3 existing operations could be accommodated
4 closer to the trailhead or in other park
5 locations.

6
7 The scenic hills that surround the main trail
8 corridor and trailhead and extend to the
9 north and south would be managed to
10 preserve and enhance the expanse of
11 undeveloped coastal habitat, outstanding
12 natural features, and the scenic beauty of a
13 large contiguous natural area. Trail
14 improvements would create a more
15 sustainable trail system that would provide
16 access to the variety of settings.

19 **Marin City Ridge and Gerbode Valley**

20 ***Natural Zone (majority of the*** 21 ***Marin Headlands extending south*** 22 ***of Tennessee Valley)***

23 This area would be managed to preserve the
24 expansive undeveloped wilderness-like
25 character of the landscape, preserve natural
26 resources and processes, continue habitat
27 restoration, protect endangered and
28 sensitive species, and improve the trail
29 system with more sustainable trails and
30 better connections to adjacent communities.
31 Visitor amenities could include expanded
32 primitive and accessible camping
33 opportunities. The National Park Service
34 would collaborate with other agencies and
35 the community to develop a community
36 trailhead in Marin City.

39 **Fort Barry and Fort Cronkhite**

40 ***Diverse Opportunities Zone (lower*** 41 ***elevations of Rodeo Valley along*** 42 ***Bunker Road and Fort Barry and*** 43 ***Fort Cronkhite)***

44 This zone would be managed to provide
45 visitors with a variety of recreational,
46 educational, and stewardship activities
47 consistent with the protection of the

48 nationally significant cultural resources in
49 the area. Visitor amenities could be
50 expanded to include improved trailheads,
51 accessible trails, camping, picnicking, and
52 orientation. These facilities would welcome
53 visitors and give access to the adjacent
54 natural areas. Fort Cronkhite would become
55 the visitor portal to Marin Headlands.

56
57 This alternative would build upon the
58 nucleus of existing programs offered by the
59 park and its partners that contribute to the
60 concept of a “Center for the Environment.”
61 Rehabilitated structures and limited new
62 construction would continue to be used by
63 the park and its partners to provide visitors
64 with an expanded menu of opportunities
65 that are strongly linked to the park’s
66 purpose. Programs would focus on
67 environmental education, science, history
68 and culture, recreation, healthy lifestyle
69 activities, and special events. Housing for
70 staff, interns, and volunteers of the park and
71 its partners would be provided within this
72 zone. A visitor contact facility combining
73 information and food service would be
74 developed at a site near both the beach and a
75 transit stop, replacing the existing chapel
76 visitor center at Fort Barry.

77
78 In 1994, the National Park Service removed
79 a national landmark World War II canton-
80 ment to restore Crissy Field, with the explicit
81 understanding that the cantonment at Fort
82 Cronkhite would be preserved and
83 interpreted. The Fort Cronkhite cantonment
84 is not only highly representative of the once-
85 ubiquitous 700-Series World War II
86 mobilization cantonments; it is considered
87 the best-preserved example of its type in the
88 United States. Every effort will be made to
89 enhance the historic scene while creating
90 diverse visitor opportunities in this zone.

91
92 Fort Barry and other historic sites and
93 structures within this zone would continue
94 to support programs provided by the park
95 and its partners consistent with the concept
96 described for Fort Cronkhite. Equestrian
97 facilities would be provided in this area of
98 the Marin Headlands while protecting the

1 historic structures and setting and
2 incorporating site improvements and best
3 management practices to protect natural
4 resources and expanding programs that
5 benefit the public. The park horse patrol
6 would be at this site. This zone would also
7 continue to provide park operational needs
8 including maintenance, public safety, staff
9 offices, and a plant nursery facility. The
10 chapel at Fort Barry could be adapted as a
11 multiuse meeting and program facility.

12 ***Natural Zone (uplands)***

14 This area of Marin Headlands would be
15 managed as part of the extensive natural
16 landscape, with emphasis on the protection
17 and restoration of habitat for threatened and
18 endangered species.

19 ***Evolved Cultural Landscape Zone (Rodeo Beach and seacoast 22 fortifications)***

23 This zone would be managed for enjoyment
24 of the beach, trails, and other outdoor
25 recreation and educational opportunities.
26 The landscape would be managed to
27 preserve and interpret the significant
28 military features and structures, such as
29 Wolf Ridge and Batteries Townsley and
30 Mendell, in the natural coastal setting.

31 ***Sensitive Resources Zone (Rodeo Lagoon and Rodeo Lake)***

34 This area would be managed to preserve and
35 restore coastal habitat for threatened and
36 endangered species. Visitor access would be
37 highly controlled and restricted to
38 designated trails.

39 ***Historic Immersion Zone (Nike Missile Site SF88-L)***

42 The restored compound would continue to
43 provide visitors with an experience that is
44 evocative of its historic use.

45
46

47 **Capehart Housing Area**

48 ***Park Operations Zone***

49 A new park operational facility would be
50 constructed within this zone south of
51 Bunker Road. Housing lost through the
52 removal of housing units to construct this
53 facility could be accommodated at another
54 site, either in existing structures or through
55 limited new construction.

56 ***Natural Zone***

58 The residences on the north side of Bunker
59 Road would be removed to provide creek
60 restoration and to create a more natural and
61 scenic entrance to Rodeo Valley.

62
63

64 **Conzelman, Bunker, and 65 McCullough Roads (including 66 Battery Spencer and Hawk Hill)**

67 ***Scenic Corridor Zone***

68 Managers would highlight the fundamental
69 coastal resources, endangered species
70 habitat, military fortifications, and
71 spectacular views of the Golden Gate Bridge,
72 San Francisco Bay, and the urban skyline of
73 San Francisco primarily from the roads and
74 trails. Safe pedestrian, bike, and motor
75 vehicle access to overlooks and to
76 interpretive and recreational opportunities
77 would be provided. Some overlooks, such as
78 Hawk Hill, would be improved with
79 amenities including interpretive signs,
80 restrooms, and benches.

81
82

83 **Kirby Cove**

84 ***Evolved Cultural Landscape Zone***

85 This area would be managed for beach
86 access and camping, and would support
87 additional uses by visitors on the new San
88 Francisco Bay Water Trail. Rustic cabin
89 accommodations could be developed,
90 maintaining the setting and character of this

1 park site. The coastal fortifications and
2 historic forest would be preserved and
3 interpreted.

4
5 Habitat restoration would continue outside
6 the historic forest with removal of invasive
7 nonnative vegetation and expansion of
8 habitat for the endangered mission blue
9 butterfly.

10 11 **Point Bonita Lighthouse Complex**

12 ***Historic Immersion Zone***

13 The park would continue to preserve the
14 historic structures and interpret the site’s
15 maritime and military history. The coastal
16 environment and the sensitive marine
17 habitat would be protected.

18 19 20 **Offshore Ocean and Bay** 21 **Environment**

22 ***Scenic Corridor Zone (all offshore*** 23 ***areas except Point Bonita Cove*** 24 ***and Bird Rock)***

25 Park managers would work to preserve the
26 integrity of the ocean and bay environment,
27 while accommodating public uses including
28 surfing, boating, and noncommercial fishing.
29 Management actions would protect the
30 marine habitat, rocks, sea caves, and other
31 natural features of the area in coordination
32 with the Monterey Bay and Gulf of the
33 Farallones national marine sanctuaries. This
34 zone would support the San Francisco Bay
35 Water Trail where appropriate.

36 37 ***Sensitive Resources Zone (Offshore*** 38 ***areas at Point Bonita Cove and*** 39 ***Bird Rock)***

40 The park would preserve sensitive marine
41 resources—intertidal resources, seabirds,
42 and marine mammals—in these two
43 locations. Visitation would be highly
44 restricted to protect resources that are easily
45 disturbed. Park-approved research would be

46 the primary activity in this zone, but would
47 be conducted in a manner that is highly
48 protective of sensitive resources.

49 50 51 **PARK LANDS IN SAN FRANCISCO**

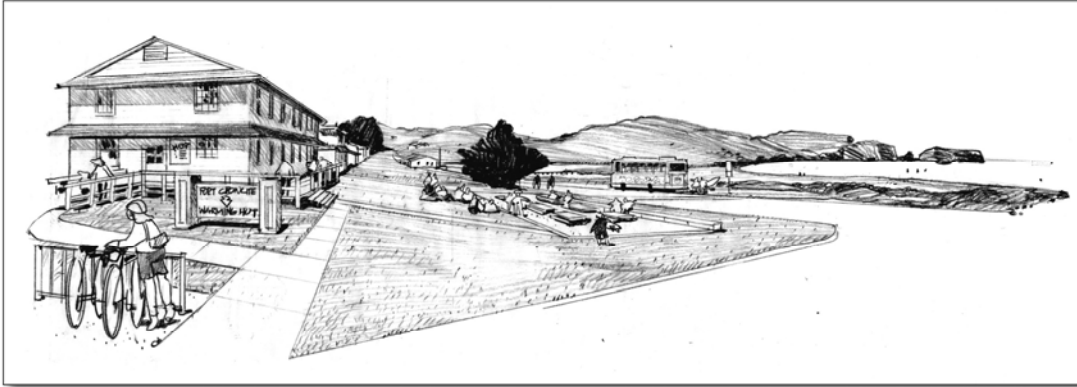
52 **Overview**

53 The park lands of San Francisco would
54 continue to provide opportunities to
55 experience nature; explore our heritage; and
56 enjoy the company of family, friends, and
57 fellow community members. Under this
58 alternative, these areas would be managed to
59 preserve and enhance a variety of settings
60 and improve and expand the facilities that
61 welcome and support visitors to the
62 “National Park Next Door.”

63
64 The visibility and identity of national park
65 system sites would be improved in settings
66 from military to “wild,” and visitors would
67 be introduced to Golden Gate National
68 Recreation Area through facilities,
69 information, and programming at popular
70 arrival nodes and recreational destinations.
71 As in other alternatives, the San Francisco-
72 based Alcatraz embarkation facility would
73 serve as a portal to Golden Gate National
74 Recreation Area and the larger national park
75 system.

76
77 This alternative would also emphasize the
78 importance of education, civic engagement,
79 and healthy outdoor recreation, including
80 offering nature experiences to city children
81 and their families. Existing and new facilities,
82 including a museum collection facility,
83 would support visitor enjoyment, learning,
84 and community-based natural and cultural
85 resource stewardship. Recreational and
86 stewardship opportunities would promote
87 healthy parks and healthy communities.
88 Similar to Crissy Field, this alternative would
89 engage the community to revitalize coastal
90 park areas such as Ocean Beach, Fort
91 Funston, and Lands End.

PART 4: ALTERNATIVES FOR PARK LANDS IN MARIN, SAN FRANCISCO,
AND SAN MATEO COUNTIES



A visitor center in the historic World War II 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 powerlines improves the ecological function and natural beauty of Tennessee Valley.

Marin County (Conceptual Sketches for the Preferred Alternative)

1 The park would continue to improve
2 multiuse trails and trailheads throughout the
3 San Francisco park lands to make the park
4 accessible to the broadest array of visitors.
5 Sites would be connected to each other and
6 to communities by the trail system and the
7 city’s transit and multimodal access systems.
8
9

10 **Upper Fort Mason**

11 ***Evolved Cultural Landscape Zone*** 12 ***(eastern portion of the site)***

13 The historic district would become a portal
14 to Golden Gate National Recreation Area,
15 using historic structures to welcome visitors
16 in a setting that would remain a peaceful
17 contrast to the more bustling northern
18 waterfront of Fisherman’s Wharf and Lower
19 Fort Mason. The park would preserve and
20 rehabilitate select historic structures for new
21 uses that provide orientation, information,
22 food service, special events, and other
23 services for visitors. With improved visibility,
24 signs, and additional activities, this site would
25 provide visitors with better access and
26 understanding of the opportunities available
27 throughout the park.
28

29 Historic residences would continue in
30 residential use where compatible with
31 preservation goals. Other nonresidential
32 historic structures would be preserved for
33 uses such as a hostel and other overnight
34 accommodations, park headquarters, partner
35 offices, and other programs that support the
36 park mission.
37

38 The two neighboring national park units,
39 Golden Gate National Recreation Area and
40 San Francisco Maritime National Historical
41 Park, would collaborate on unified visitor
42 welcoming and orientation, exploring the
43 potential to share facilities. Consistent NPS
44 site identification and directional signs would
45 be placed along the popular Golden Gate
46 Promenade / San Francisco Bay Trail and at
47 transit nodes.
48

49 An expanded stewardship program would
50 connect the park with San Francisco through
51 youth programs offered by the park and its
52 partners.
53

54 The historic district’s batteries and landscape
55 would be restored and rehabilitated,
56 including the overgrown gardens on the east
57 and northeast slopes. The community garden
58 would be retained in its current location.
59 Historic Pier 4 at the foot of Van Ness
60 Avenue would be stabilized.
61

62 This alternative anticipates improved access
63 to the park by the development of a water
64 shuttle at Lower Fort Mason and improved
65 walking paths, and planned San Francisco
66 Municipal Transportation Agency (SFMTA)
67 projects, including both the extension of the
68 F-Line Streetcar to Lower Fort Mason and
69 development of the bus rapid transit on Van
70 Ness Avenue. Visitor circulation and
71 wayfinding improvements would be
72 implemented in response to these new
73 adjacent bus transit and ferry connections.
74 These concepts would require close
75 collaboration with San Francisco Maritime
76 National Historical Park and the City of San
77 Francisco to improve the experience of
78 arriving at Fort Mason through Aquatic Park
79 and Gashouse Cove at Laguna Street and
80 Marina Boulevard.
81

82 ***Diverse Opportunities Zone*** 83 ***(“Great Meadow”)***

84 The “Great Meadow” would continue to
85 support a variety of uses and special events
86 with modest improvements to enhance the
87 landscape, enhance the safety of pedestrians
88 and bicyclists on the paths, and provide
89 formal opportunities for picnicking.
90

91 ***Park Operations Zone***

92 Park operations could remain in their current
93 locations. Adjacent structures would
94 continue to house a conservation corps
95 program. If the program relocates, the site
96 and structures would serve park operational
97 needs.

1 ***Sensitive Resource Zone (shoreline at***
2 ***Black Point, including a 100-foot***
3 ***offshore buffer to protect intertidal***
4 ***resources)***

5 This area would be managed to protect the
6 rare remaining natural rocky shoreline in San
7 Francisco inside the Golden Gate. An
8 overlook would be developed in the adjacent
9 zone to allow visitors to experience this small
10 site.

11

12

13 **China Beach**

14 ***Diverse Opportunities Zone***

15 Park managers would improve visitor
16 facilities and access to support current uses.

17

18

19 **Lands End**

20 ***Evolved Cultural Landscape Zone***

21 Park managers would continue to enhance
22 the landscape, integrating natural habitat
23 restoration with cultural landscape
24 preservation, and improving the trail system.
25 This would include the California Coastal
26 Trail and the secondary trails that access the
27 shoreline, and would enhance scenic
28 viewpoints and opportunities for bird
29 watching. The area would continue to be
30 managed for the preservation of dark night
31 skies. Trail connections and directional
32 signage to the community and adjacent park
33 lands would also be improved.

34

35

36 **Fort Miley**

37 ***Evolved Cultural Landscape Zone***
38 ***(West Fort Miley)***

39 The historic structures and cultural
40 landscape would be preserved and enhanced.
41 The Marine Exchange Lookout Station
42 (Octagon House) would be rehabilitated to
43 interpret its history and provide park
44 operational or public uses. Site improvements

45 would focus on enhancing the fort's
46 appearance and providing better connections
47 to the surrounding community, nearby Lands
48 End site, and the Veterans Administration
49 hospital campus. Improved picnicking and
50 group camping facilities would be provided
51 in an appropriate location, as would
52 opportunities for outdoor learning and
53 leadership programs. The area would
54 continue to be managed for preservation of
55 dark night skies.

56

57 ***Park Operations (East Fort Miley)***

58 The historic batteries and ordnance
59 storehouse would be preserved and would
60 continue to support park maintenance and
61 public safety satellite operations with
62 potential expansion of volunteer stewardship
63 based from this site. Other site improvements
64 would focus on interpreting the history of
65 Fort Miley, improving the picnic area, and
66 enhancing trail connections for better visitor
67 access linking to the medical center, the
68 community and Lands End. Safe and more
69 direct service vehicle access could be
70 developed.

71

72 ***In Both the Evolved Cultural***
73 ***Landscape Zone and the Park***
74 ***Operations Zone***

75 Continued coordination with the San
76 Francisco Veterans Affairs regarding their
77 campus development and management will
78 be important to ensure compatibility with
79 park uses and historic preservation.

80

81

82 **Ocean Beach**

83 ***In Both the Diverse Opportunities***
84 ***Zone and the Natural Zone***

85 In this alternative, the National Park Service
86 would participate in multiagency efforts to
87 knit the unique assets and experiences of the
88 Ocean Beach corridor into a seamless and
89 welcoming public landscape, planning for
90 environmental conservation, sustainable
91 infrastructure, and long-term stewardship.

1 The National Park Service would continue to
2 participate in multiagency planning and
3 implementation efforts following the San
4 Francisco Planning and Urban Research
5 Association (SPUR) May 2012 *Ocean Beach*
6 *Master Plan*, and other more detailed
7 planning and implementation processes that
8 would follow.

9
10 The National Park Service would continue to
11 work with the City of San Francisco,
12 California Coastal Commission, and the U.S.
13 Army Corps of Engineers to address coastal
14 erosion, restore natural processes, and
15 maximize protection of the beach for its
16 natural and recreational values. The National
17 Park Service could relocate park facilities
18 from vulnerable locations and would work
19 with municipalities to identify the most
20 compatible and sustainable management of
21 stormwater and wastewater facilities within
22 their easement rights.

23
24 ***Diverse Opportunities Zone (along***
25 ***the O’Shaughnessy seawall)***

26 Park managers would continue to provide a
27 diversity of recreational beach use and
28 preserve the natural setting and resource
29 values, including shorebird habitat. The vital
30 community stewardship activities that are
31 part of the successful management of the
32 beach would be promoted.

33
34 The park would preserve the historic
35 O’Shaughnessy seawall and collaborate with
36 the City of San Francisco to enhance the
37 Ocean Beach corridor with improved
38 amenities that support enjoyment of the
39 beach, including the promenade, parking,
40 and restrooms.

41
42 The California Coastal Trail and other
43 connections would be improved to link
44 Ocean Beach to Lands End, Fort Funston,
45 city neighborhoods, and other park lands
46 including Golden Gate Park and Lake
47 Merced.

48

49 ***Natural Zone (south of the***
50 ***O’Shaughnessy seawall)***

51 The area would be managed to protect
52 shorebirds and threatened species and allow
53 natural coastal and marine processes to
54 occur, while providing for a variety of
55 compatible recreational activities. Public
56 safety activities would be continued.

57
58

59 **Fort Funston**

60 ***Diverse Opportunities Zone (central***
61 ***area and southern beach)***

62 This site would continue to support current
63 recreational activities, including dog walking
64 and the unique opportunity for hang gliding
65 in the park, while making landscape and trail
66 improvements and protecting and restoring
67 natural habitat. New visitor facilities would
68 be provided near the parking lot. These could
69 include restrooms, group picnicking facilities,
70 a visitor contact facility combining food
71 service with park information, and other
72 support structures. Battery Davis, the historic
73 seacoast fortification, would be preserved
74 and interpreted and its earthworks fenced
75 and protected.

76

77 ***Natural Zone (corridors along the***
78 ***perimeter and northern beach)***

79 Fort Funston’s islands of native habitat
80 would be extended to form a continuous
81 habitat corridor that supports recovery of
82 native dune habitat including endangered San
83 Francisco *Lessingia* plants. The northern
84 stretch of beach would be managed to protect
85 shorebirds, coastal bluffs, and bank swallows
86 and to allow natural coastal and marine
87 processes to occur to the extent feasible,
88 while providing for a variety of compatible
89 recreational activities.

90

91 ***Park Operations Zone***
92 ***(southeast corner)***

93 Operational facilities could be expanded to
94 meet park needs, including public safety

1 offices, nursery, stewardship center, satellite
2 maintenance facilities, and staff or volunteer
3 housing.

4
5 The existing environmental education center
6 could remain in this zone or be relocated to
7 another site better served by public
8 transportation with appropriate facilities and
9 outdoor settings.

10
11 ***In Both the Diverse Opportunities***
12 ***Zone and the Natural Zone***

13 Trails within Fort Funston and trails
14 connecting to adjacent park lands, such as the
15 California Coastal Trail, would be improved.

16
17 ***In All Zones***

18 The National Park Service would work with
19 municipalities to identify the most
20 compatible and sustainable management of
21 their stormwater and wastewater facilities
22 within their easement rights. Also, the
23 National Park Service would cooperate with
24 Caltrans and the City of San Francisco to
25 encourage safety improvements along
26 Highway 35 and protect high quality visitor
27 experiences for visitors to both Fort Funston
28 and Lake Merced along this corridor.

29
30
31 ***Offshore Ocean and Bay***
32 ***Environment***

33 ***Scenic Corridor Zone***

34 The park would preserve the ocean and bay
35 environment and accommodate public uses
36 including surfing, boating, and
37 noncommercial fishing. Park managers
38 would protect the marine habitat, geologic
39 resources and processes, and other natural
40 features of the area.

41

42 **PARK LANDS IN**
43 **SAN MATEO COUNTY**

44 **Overview**

45 Under this alternative and others, park lands
46 and ocean environments in San Mateo
47 County would be managed as part of a vast
48 network of protected lands and waters, some
49 recognized as part of the UNESCO Golden
50 Gate Biosphere Reserve. This network
51 includes San Francisco Public Utilities
52 Commission Peninsula Watershed lands,
53 California State Parks, the Monterey Bay
54 National Marine Sanctuary, county parks,
55 and other land held by regional land trusts.
56 Park managers would emphasize
57 connectivity, preservation, and restoration of
58 the area's vital ecosystems through
59 collaborative partnerships with other land
60 management agencies.

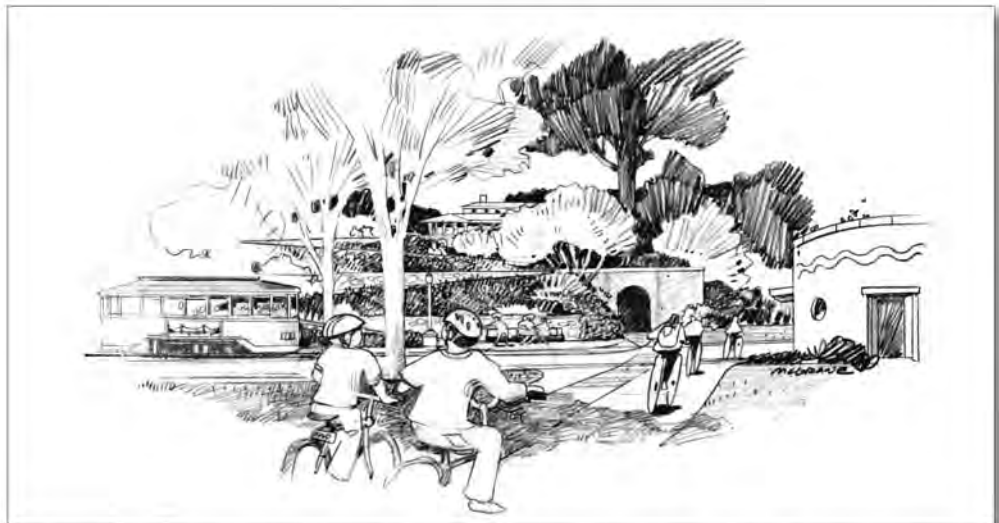
61
62 In the spirit of the "Parks to People"
63 movement that created Golden Gate
64 National Recreation Area four decades ago,
65 this alternative would focus on the
66 importance of improving access and engaging
67 the community in these newest park lands.
68 Given the significant addition of park land in
69 the county in recent years, a series of actions
70 would be needed to enhance visitor access,
71 enjoyment, appreciation, and stewardship.

72
73 Key efforts would include improving the
74 visibility and identity of NPS sites. Park trails
75 would be improved to create a sustainable
76 system that provides opportunities to enjoy
77 park sites, connects with local communities,
78 and contributes to an exceptional regional
79 trail network. Equestrian facilities would
80 continue to have an important role in
81 recreation and stewardship. A
82 comprehensive trail plan would be prepared
83 to achieve these goals.

84



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.

San Francisco County (Conceptual Sketches for the Preferred Alternative

1 Park managers would work with county
2 transit providers to improve transit
3 connections to local trailheads and east–west
4 transit between bayside communities and
5 State Route 1. Collaboration with the
6 community and Caltrans would focus on
7 providing safe access to park sites along
8 State Route 1.

9
10 The addition of signs and trailhead parking
11 would help visitors find their way to various
12 park sites and help them gain an under-
13 standing of the park’s diverse natural and
14 cultural resources. Equestrian needs would
15 be incorporated in trail and trailhead design.

16
17 Equally important would be providing
18 facilities to welcome visitors to the park.
19 This alternative would promote visitor
20 information and orientation centers in
21 Pacifica and in the coastside community
22 south of Devil’s Slide. Park improvements
23 would be consistent with preservation of
24 community character. These facilities could
25 be shared with San Mateo County
26 Department of Parks, California State Parks,
27 Monterey Bay National Marine Sanctuary,
28 local governments, and other organizations.
29 The National Park Service would explore
30 community trailheads and partnerships with
31 the San Mateo County Historical
32 Association at the Sanchez Adobe.

33
34

35 **South of Fort Funston to** 36 **South of Mussel Rock**

37 ***Natural Zone***

38 In this alternatives, park managers would
39 preserve and enhance the natural and scenic
40 values of the area; allow for natural coastal
41 geologic processes to continue; and provide
42 modest visitor access facilities (trails,
43 trailheads) to beaches, scenic overlooks, and
44 along the California Coastal Trail, where
45 feasible.

46

47 The beach, dunes, and cliffs extending from
48 San Francisco’s Ocean Beach south to
49 Mussel Rock (a stretch of almost 5 miles)

50 would be managed to protect shorebird
51 habitat, allow natural shoreline processes to
52 continue unimpeded, and provide improved
53 or new trails for visitors to enjoy and view
54 nature. Park staff would work with
55 neighboring communities to mitigate
56 concentrated urban runoff and landslide
57 threat.

58
59

60 **Milagra Ridge, Including Lower** 61 **Milagra Ridge (Connemara)** 62 **Conservation Easement**

63 ***Natural Zone***

64 The area would be managed to preserve its
65 wild character and protect habitat for
66 endangered species. Disturbed areas would
67 be restored. Coordinating with other land
68 managers, the park would also make trail
69 improvements that could include
70 connections to Oceana Boulevard, the
71 Pacific coast, Skyline Boulevard, and
72 Sweeney Ridge. Historic structures would be
73 preserved.

74

75 ***Scenic Corridor Zone (center*** 76 ***of ridge)***

77 Additional amenities would be developed to
78 support visitors and stewardship volunteers.
79 These could include accessibility improve-
80 ments, trailhead parking, restrooms, and
81 picnic facilities.

82
83

84 **Sheldance Nursery Area**

85 ***Diverse Opportunities Zone*** 86 ***and Park Operations Zone***

87 The site would transition from a commercial
88 nursery to an area that provides a variety of
89 visitor services that could include enhanced
90 trailhead parking serving Sweeney Ridge and
91 Mori Point, restrooms, park orientation and
92 information, and a community stewardship/
93 education center. Safe access from State
94 Route 1 and the trail connection to Mori
95 Point would be improved.

1 In all alternatives, a portion of this park site
2 would be dedicated to park operational
3 needs possibly including a satellite facility
4 for maintenance and public safety, native
5 plant nursery, and ranger workforce or
6 volunteer housing.

7
8
9 **Sweeney Ridge (including Cattle Hill,
10 Picardo Ranch, and Sweeney Ridge
11 Gateway conservation easement)**

12 **Natural Zone (majority of the area)**

13 The area would be managed to protect
14 endangered species and the large contiguous
15 natural landscape extending into the San
16 Francisco Public Utilities Commission
17 Peninsula Watershed. Visitors could
18 experience the area through stewardship
19 activities, improved trails, and primitive
20 camping. Improved trailhead facilities would
21 enhance the connection to the community at
22 Fassler Avenue. Connections to the regional
23 trail network and the surrounding public
24 lands (San Francisco Public Utilities
25 Commission lands, San Pedro Valley County
26 Park, McNee Ranch, and Rancho Corral de
27 Tierra) would be developed in coordination
28 with other land managers.

29
30 Management of the conservation easement
31 over the 7.2-acre parcel adjacent to the
32 Sweeney Ridge Sneath Lane Trailhead
33 would be consistent with the 2007 easement
34 and the restrictions of the 2005 U.S. Fish and
35 Wildlife Service (USFWS) biological opinion
36 for the PG&E Jefferson-Martin Project. The
37 emphasis of management will be to preserve
38 upland habitat for the California red-legged
39 frog and San Francisco garter snake.

40
41 **Scenic Corridor Zone (Sneath Lane
42 and part of Sweeney Ridge)**

43 Trail amenities would be developed and
44 connections would be enhanced to the Bay
45 Area Ridge Trail and the San Andreas Trail
46 in San Francisco Public Utilities Commission
47 Peninsula Watershed. The San Francisco
48 Bay Discovery Site National Historic

49 Landmark would be preserved and
50 interpreted. The park would continue to
51 permit vehicular access to the discovery site
52 for visitors with disabilities and to
53 accommodate limited special events. A
54 hikers' hut could be developed as part of a
55 system of huts proposed for the Bay Area
56 Ridge Trail. Partnership-based programs
57 would be pursued in preparation of the
58 upcoming 250th anniversary of the
59 discovery of San Francisco. Actions for the
60 Nike missile site might include removal of
61 buildings or retaining the shells of buildings.
62 Under either preservation treatment, the
63 site's history could be interpreted.

64
65 **Diverse Opportunities Zone
66 (developed portion of Picardo
67 Ranch)**

68 If acquired, the existing facilities could be
69 adapted or replaced with new facilities to
70 support visitor activities, potentially
71 including continued equestrian use,
72 environmental education, trailhead
73 improvements, and park operations.
74 Management would include strong
75 protection for the creek corridor and other
76 natural habitats.

77
78
79 **Mori Point**

80 **Natural Zone**

81 The land would be managed for ongoing
82 restoration of natural habitats and to protect
83 threatened and endangered species while
84 improving the trail system for public
85 enjoyment of the site and its exceptional
86 views and landscapes. Access to Mori Point
87 would be enhanced with modest trailhead
88 and parking improvements.

89
90 Trail connections to the community,
91 Sweeney Ridge and the adjacent public
92 lands, and the California Coastal Trail would
93 be improved in partnership with other land
94 managers. Collaboration with adjacent land
95 managers would also contribute to
96 expanded efforts to preserve listed species

1 and their habitats, improving habitat
2 connectivity across management
3 boundaries.

4
5
6 **Point San Pedro**

7 ***Natural Zone***

8 These lands, if acquired, would be managed
9 to maintain natural features and scenic
10 beauty and to continue with the habitat
11 restoration and access improvements
12 initiated by the community and other
13 agencies. Trailheads and trails would be
14 developed and enhanced to improve
15 accessibility and connections to the
16 California Coastal Trail and adjacent public
17 lands. Public access would be managed to
18 protect nesting seabirds and historic
19 resources. Collaboration with adjacent land
20 managers would be essential.

21
22
23 **Rancho Corral de Tierra**

24 ***Natural Zone (majority of the area)***

25 The upland areas and land outside the
26 existing equestrian centers would be
27 managed to preserve the wild, open
28 character of the landscape and offer trail-
29 based recreation that is light on the land,
30 including walking, hiking, bicycling, and
31 horseback riding. Natural habitats and
32 processes in the zone, which includes four
33 creek corridors, would be restored to the
34 greatest extent possible with the help of
35 community stewards.

36
37 Visitors would enjoy the scenic coastal
38 environment through an enhanced and
39 sustainable system of trails. The trail
40 network would connect local communities
41 to the park and link the ridges of Montara
42 Mountain to the Pacific Ocean. The
43 National Park Service would work with the
44 San Francisco Public Utilities Commission
45 to complete a trail connection to Sweeney
46 Ridge through the Peninsula Watershed's
47 northwest corner along Whiting Ridge.

48 Unnecessary management roads could be
49 converted to trails or removed. Exploration
50 of the park could be facilitated by scenic
51 overlooks, sites for picnicking, primitive
52 camping sites, and possibly a hikers' hut in a
53 remote setting.

54
55 ***Diverse Opportunities Zone***

56 Modest improvements would be created in
57 this zone consisting of trailheads and other
58 visitor facilities that provide for the
59 enjoyment of this new area. This area would
60 be considered a southern portal to the
61 Golden Gate National Recreation Area and
62 other public open space. Detailed planning
63 following general management plan
64 approval would determine the mix of uses
65 that would share this zone. Equestrian uses
66 would be retained at Rancho Corral de
67 Tierra, with the exact location, type, and
68 scale of facility improvements determined in
69 future planning efforts. Park managers
70 would continue to work with equestrian
71 operators to enhance the best management
72 practices employed to protect the
73 environment and expand programs that
74 welcome and benefit the public. New
75 facilities in this zone could include trails,
76 trailheads, a community stewardship/
77 educational center, a group picnic area, a
78 rustic campsite, and a horse camp.
79 Significant constraints on availability of
80 water will influence development and
81 operations of facilities at this site. Any new
82 visitor facility would be sited to preserve
83 natural and cultural resources and where
84 compatible with adjacent uses such as
85 agriculture.

86
87 In addition, safe trailheads would be
88 developed near State Route 1 to support
89 exploration of this large, diverse landscape
90 and the extensive adjacent public lands. The
91 multiuse trails and trailheads would be
92 compatible with adjacent residential uses.

93
94 Habitat restoration and community
95 stewardship activities would have a strong
96 presence in both zones. An area for native
97 plant production would be established to

1 support restoration projects in the park. The
2 National Park Service would partner with
3 surrounding land managers and the
4 Fitzgerald Marine Reserve, one of the richest
5 intertidal areas on the California coast, to
6 improve habitat connectivity and protect
7 sensitive habitats, to protect water quality,
8 restore the creek corridors and reconnect
9 them to the ocean, and to reestablish
10 anadromous fish passage where possible.

11
12 The National Park Service would connect
13 people to the agricultural history of Rancho
14 Corral de Tierra through interpretation of its
15 cultural landscape and adjacent working
16 farms.

17 18 19 **Montara Lighthouse**

20 ***Evolved Cultural Landscape Zone***

21 The historic lighthouse structures and other
22 associated resources would be preserved
23 and interpreted. Management would
24 enhance the current hostel and day use
25 programming. Trail connections from the
26 hostel up and down the coast would better
27 integrate this site with other park lands and
28 open space.

29
30 The park would seek an opportunity to
31 establish a multiagency visitor information
32 and orientation facility in this vicinity. Safe
33 access for vehicles, bicyclists, and
34 pedestrians would be pursued in
35 cooperation with Caltrans and San Mateo
36 County and addressed prior to any
37 substantial change in visitor use.

38 39 40 **Phleger Estate**

41 ***Natural Zone***

42 The area would be managed to provide trail-
43 based recreation in a natural and
44 contemplative setting that complements the
45 more developed recreation facilities at
46 adjacent Huddart County Park. The
47 redwood forest ecosystem, including West

48 Union Creek and threatened and
49 endangered species, would be protected and
50 restored. The history of logging on the estate
51 and its role in the settlement of San Mateo
52 County would be interpreted. Trail
53 connections to adjacent lands and the
54 regional trail system would be pursued in
55 collaboration with San Mateo County and
56 San Francisco Public Utilities Commission.
57 These connections would include the Bay
58 Area Ridge Trail, potential access from
59 trailheads on Cañada Road and Skyline
60 Boulevard, and a multiuse trail connection
61 between Cañada Road and Skyline
62 Boulevard north of the Phleger Estate.
63 Community stewardship of the site could
64 contribute to trail and habitat
65 improvements. The National Park Service
66 would explore community trailheads and
67 partnerships with the San Mateo County
68 Historical Association’s Woodside Store
69 historic site.

70 71 72 **SAN FRANCISCO PUBLIC UTILITIES** 73 **COMMISSION PENINSULA** 74 **WATERSHED EASEMENTS**

75 Note: The approximately 23,000-acre San
76 Francisco Peninsula Watershed is owned by
77 the City and County of San Francisco and
78 managed by the San Francisco Public
79 Utilities Commission for watershed
80 protection as a water supply resource with
81 limited public access. This area is included
82 within the Golden Gate National Recreation
83 Area authorized boundary, and is adjacent to
84 NPS-managed lands at the Phleger Estate,
85 Sweeney Ridge, and Rancho Corral de
86 Tierra.

87
88 Golden Gate National Recreation Area
89 administers two easements encompassing
90 the entire watershed property—a scenic
91 easement over approximately 19,000 acres
92 and a scenic and recreation easement over
93 approximately 4,000 acres. The provisions of
94 the easements include preservation of the
95 land in its present natural state, allowing
96 certain recreational uses, and requiring

1 approval of the park superintendent for
2 certain actions.
3
4 Because NPS management responsibility
5 over the watershed is limited to
6 administration of the easements, this area is
7 not included in management zoning for the
8 park. Actions described below would be
9 encouraged or promoted by the National
10 Park Service for these two easement areas
11 (see appendixes I and J). Some of these
12 actions are already identified in the
13 *Peninsula Watershed Management Plan*
14 (SFPUC 2001)—the San Francisco Public
15 Utilities Commission’s current land use plan
16 for this area. Other actions are suggested for
17 future consideration. Future actions would
18 be subject to the approval of the San
19 Francisco Public Utilities Commission and
20 consistency with the easements. Actions
21 could be implemented either solely by the
22 commission or in cooperation with Golden
23 Gate National Recreation Area and San
24 Mateo County.

27 **Both Easement Areas**

28 The National Park Service would continue
29 to coordinate with the San Francisco Public
30 Utilities Commission to administer the
31 easements consistent with the easement
32 goals and restrictions. Ongoing and regular
33 communication with the commission to
34 review activities and proposed projects
35 would continue to be a key responsibility.
36 Park managers would continue to cooperate
37 with the San Francisco Public Utilities
38 Commission for preservation of the natural,
39 cultural, scenic, and recreational values of
40 the watershed with improved public access
41 on trails.

43 **Scenic Easement Area (majority of the 44 area—approximately 19,000 acres).**

45 Within this area, completion of the Bay Area
46 Ridge Trail connection from the Phleger
47 Estate to Highway 92 would be encouraged.
48 A new trail connection between the Bay Area
49 Ridge Trail and the California Coastal Trail
50 using an existing management road over

51 Whiting Ridge would also be promoted. The
52 Whiting Ridge alignment would connect
53 Sweeney Ridge with McNee Ranch (State
54 Park) and Rancho Corral de Tierra. Park
55 managers would also promote preservation
56 of the values that resulted in designating this
57 area as the core of the UNESCO Golden
58 Gate Biosphere Reserve.

60 **Scenic and Recreation Easement Area 61 (eastern area closest to Highway 280— 62 approximately 4,000 acres).**

63 Implementation of trail improvements
64 proposed in the 2001 *Peninsula Watershed
65 Management Plan* would be promoted.
66 These include completion of the north-
67 south trail through the watershed in areas of
68 low sensitivity and a new trail connecting the
69 existing San Andreas multiuse trail to
70 Sweeney Ridge via Sneath Lane. Improving
71 trail access to the Phleger Estate from a new
72 trailhead on Cañada Road and a new
73 multiuse trail connection through the
74 Peninsula Watershed lands between Cañada
75 Road and Skyline Boulevard north of the
76 Phleger Estate would also be encouraged.
77 Preservation of scenic views along the trails,
78 Cañada Road, Skyline Boulevard, Interstate
79 280, and its vista points would be promoted
80 in cooperation with the San Francisco Public
81 Utilities Commission and Caltrans.
82 Additional coordination with the Juan
83 Bautista De Anza National Historic Trail
84 could also be provided.

86 The National Park Service would offer to
87 cooperate with the San Francisco Public
88 Utilities Commission in creating a watershed
89 visitor education center near the Pulgas
90 Water Temple on Cañada Road, as
91 described in the 2001 *Peninsula Watershed
92 Management Plan*.

95 **Offshore Ocean Environment**

96 Management of offshore areas could be
97 extended to cover new segments of the San
98 Mateo County coast as described in the
99 “Boundary Adjustments” section.

100

1 **Sensitive Resources Zone (Fitzgerald**
2 **Marine Reserve)**

3 In areas where the park boundary coincides
4 with the Fitzgerald Marine Reserve, the two
5 organizations would continue to cooperate
6 in implementation of the provisions of the
7 California State Marine Life Protection Act.
8 The offshore area between Montara State
9 Beach and Ross Cove, designated as the
10 Montara State Marine Reserve, would not
11 permit fishing, harvesting, or collecting. The
12 reserve area between Ross Cove and Pillar
13 Point Harbor, designated as the Pillar Point
14 Marine Conservation Area, would allow
15 some fishing in this area.

16
17
18 **COST ESTIMATES**

19 Cost estimates for alternative 1 are identified
20 in table 5 below. The costs shown here are
21 not for budgetary purposes; they are only
22 intended to show a relative comparison of
23 costs among the alternatives.

24
25 The alternatives describe the maximum
26 potential capital improvements; lesser
27 improvements may be implemented or built
28 in phases if necessary. Implementation of the
29 approved plan would depend on future
30 funding. The approval of this plan does not
31 guarantee that the funding and staffing
32 needed to implement the plan will be
33 forthcoming. Full implementation of the
34 actions in the approved general management
35 plan could be many years in the future.
36 Additionally, some of the future long-term
37 funding needed to implement the various
38 actions called for in the alternatives is
39 anticipated to come from nonfederal
40 partners, consistent with the park's current
41 practices.

42

43 The costs to implement alternative 1 focus
44 on a diversity of facilities to attract and
45 welcome visitors; connect people with the
46 resources; and promote understanding,
47 enjoyment, preservation, and health. Costs
48 reflect all proposals of alternative 1 that
49 could be implemented over the 20-year life
50 of the general management plan.

51

52

53 **Annual Operating Costs**

54 The annual operating costs for alternative 1
55 comprise the current annual operating costs,
56 with changes made to reflect additional
57 staffing needs. The annual operating costs of
58 alternative 1 are estimated at \$32.0 million.

59

60

61 **Staffing Requirements**

62 Total additional staff needed to support
63 alternative 1, including staff for Alcatraz
64 Island and Muir Woods National
65 Monument, would be 46 FTE. A significant
66 amount of staff would be required to
67 support the newly acquired lands in San
68 Mateo County. Staff would support
69 orientation, safety, maintenance, and
70 resource protection in these areas.

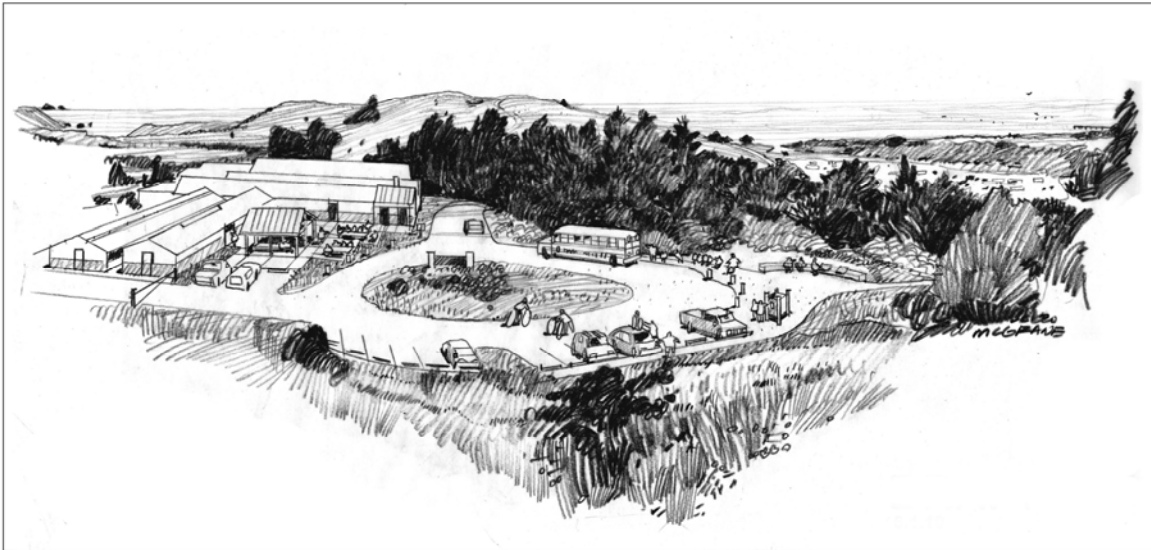
71

72 Additional staff would be needed to carry
73 out new functional use of the park lands. An
74 increase in interpretive staff would support
75 expanded interpretive programs throughout
76 the park. A greater number of law
77 enforcement officers would be needed to
78 patrol and respond to increased visitor
79 recreational activities. With the addition of
80 new trails and facilities and rehabilitation of
81 other facilities, maintenance responsibilities
82 would increase, also requiring additional
83 staff.

PART 4: ALTERNATIVES FOR PARK LANDS IN MARIN, SAN FRANCISCO,
AND SAN MATEO COUNTIES



Visitors are welcomed to Rancho Corral de Tierra at a new trailhead portal.



The trailhead to Sweeney Ridge is enhanced as the site transitions from commercial to park purposes.

San Mateo County (Conceptual Sketches for the Preferred Alternative)

1 The natural resources division would have a
2 need for staff to perform additional
3 inventory and monitoring duties, as well as
4 enhanced management and restoration
5 activities. The cultural resources division
6 would need funds to conduct baseline
7 studies to inventory and identify resources.
8 In addition, staff would support a series of
9 rehabilitation projects and would require
10 technical specialists in the fields of historic
11 architecture, landscape architecture,
12 archeology, curation, cataloging, and
13 compliance. The responsibilities of the
14 planning division for project coordination,
15 compliance, and public involvement would
16 also expand, requiring additional staff. The
17 business management division would
18 require additional staff to manage additional
19 visitor facilities, Alcatraz Island services, and
20 equestrian operations. New staff would also
21 manage the rigorous user capacity program
22 at Alcatraz Island and Muir Woods National
23 Monument.

24
25 Other divisions, including administration,
26 environmental and safety, and public affairs
27 would each require a few additional staff
28 members to manage new areas and uses of
29 the park lands.

30
31

32 **Proposed New Staff**

- 33 ▪ 10 positions in visitor resources and
34 protection
- 35 ▪ 12 positions in maintenance
- 36 ▪ 6 positions in interpretation and
37 education
- 38 ▪ 2 positions in planning and
39 compliance
- 40 ▪ 4 positions in cultural resources and
41 museum management
- 42 ▪ 6 positions in natural resources
43 management and science
- 44 ▪ 1 position in public affairs
- 45 ▪ 2 positions in business management
- 46 ▪ 2 positions in administration
- 47 ▪ 1 position in environmental and
48 safety programs

49
50

51 **One-time Costs**

52 One-time costs of alternative 1 reflect
53 extensive rehabilitation to provide a diverse
54 range of visitor activities for the park's many
55 visitors. Total one-time costs for park lands
56 in Marin, San Francisco, and San Mateo
57 counties are estimated at \$46.7 million over
58 the life of the general management plan.

**TABLE 5. COSTS ASSOCIATED WITH 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
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

TABLE 5. COSTS ASSOCIATED WITH IMPLEMENTATION OF ALTERNATIVE 1 FOR PARK LANDS IN MARIN, SAN FRANCISCO, AND SAN MATEO COUNTIES

Summary of Costs for Alternative 1 (NPS Preferred Alternative)	
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 Mason: stabilize Pier 4*	\$3,000,000
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 and Tennessee Valley	\$1,710,000
San Francisco: Ocean Beach, Fort Funston, and Lands End	\$1,000,000
San Mateo County sites	\$1,510,000
Facility Removal	
Lower Tennessee Valley: remove roads and non-historic structures	\$250,000
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

**TABLE 5. COSTS ASSOCIATED WITH IMPLEMENTATION OF ALTERNATIVE 1 FOR PARK
LANDS IN MARIN, SAN FRANCISCO, AND SAN MATEO COUNTIES**

Summary of Costs for Alternative 1 (NPS Preferred Alternative)	
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.



Map 5. Park Lands in Marin County, Alternative 1

ALTERNATIVE 2: PRESERVING AND ENJOYING COASTAL ECOSYSTEMS

1 **PARK LANDS IN MARIN COUNTY**

2 **Overview**

3 In this alternative, management would strive
4 to further preserve and restore the dynamic,
5 interconnected coastal ecosystems at the
6 core of protected lands through
7 collaborative regional partnerships. These
8 lands provide substantial swaths of
9 protected habitat for many of the park's
10 sensitive, rare, threatened, and endangered
11 species. Partners would work on common
12 goals to sustain the area's native biodiversity,
13 reconnect fragmented habitats and
14 migration corridors, minimize the impact of
15 invasive species, manage for changing fire
16 regimes, protect threatened and endangered
17 species, and restore naturally functioning
18 ecosystems. Proactive management would
19 work to build resiliency to climate change
20 into the natural environment.

21
22 This alternative would highlight Marin
23 County's park lands and waters as living
24 laboratories, engaging visitors in
25 participatory science, education, and
26 stewardship that nurture personal
27 connections with nature and inspire
28 advocacy.

29
30 Exploration of trails and beaches would
31 further highlight the park's coastal natural
32 and cultural resources. Cultural resource
33 sites and stories would emphasize human
34 occupation of the coastal environment, as
35 reflected in lighthouses, coastal defense
36 structures, archeological sites, and
37 agricultural land uses.

38
39

40 **Stinson Beach North to Bolinas- 41 Fairfax Road**

42 ***Diverse Opportunities Zone*** 43 ***(beach and developed area)***

44 The current level of visitor services, such as
45 restrooms, seasonal lifeguards, and food
46 service, would continue to support beach
47 recreation; however, park facilities such as
48 the central restroom and its septic system
49 would be relocated farther from the dunes
50 and beach to better protect natural
51 resources. As in alternative 1, sustainable
52 new facilities would replace deteriorated
53 restrooms, showers, picnic areas, and
54 parking lots. The siting of any new facilities
55 or relocation of existing ones would first be
56 evaluated for long-term viability and cost
57 effectiveness, taking present and future
58 climate change influences into
59 consideration. The Easkoot Creek riparian
60 corridor would be further enhanced by
61 redesigning the parking lot.

62
63 As in alternative 1, park managers would
64 explore improved weekend transit service at
65 peak times in order to reduce congestion,
66 minimize impacts on natural resources, and
67 provide a way to access the beach without a
68 car.

69 70 ***Natural Zone (dunes, south parking*** 71 ***lot, and surrounding park land north*** 72 ***to Bolinas-Fairfax Road)***

73 The sand dunes would be restored and the
74 south parking lot would be removed to
75 support wetland restoration. The rest of the
76 lands and waters in the vicinity of Stinson
77 Beach, including the uplands, would be
78 managed to protect and restore the coastal
79 ecosystems and contribute to restoration of
80 natural processes that affect Bolinas Lagoon.
81 The Bolinas Lagoon Restoration Project –

1 Recommendations for Restoration and
2 Management (Gulf of the Farallones
3 National Marine Sanctuary Advisory
4 Council 2008) identified key actions to
5 protect and restore Bolinas Lagoon and its
6 watershed. Three tables identify
7 recommendations for restoration in the
8 Locally Preferred Plan, recommendations
9 for management (best management
10 practices), and recommendations for
11 adaptive management and monitoring. Each
12 action identifies the key land managers,
13 including Golden Gate National Recreation
14 Area, with a vested interest in
15 implementation of each action. The park
16 involvement would be required to
17 implement restoration actions in portions of
18 the watershed, including improving
19 floodplain function along Easkoot Creek, at
20 the Bolinas Y, and along the east shore of
21 Bolinas Lagoon (e.g., Stinson Gulch), and
22 improving transitional habitat and habitat
23 connectivity along the east shore of the
24 lagoon. Partnerships with neighboring land
25 managers would be strengthened to achieve
26 these goals across the broader landscape.

27 28 29 **State Route 1 and Panoramic** 30 **Highway Area**

31 ***Natural Zone***

32 As in alternative 1, these park lands would be
33 managed to enable visitors traveling by car,
34 bicycle, and transit to enjoy spectacular
35 views of the Pacific Coast and to provide
36 access to park sites.

37
38 Under this alternative, greater emphasis
39 would be placed on collaboration with
40 Caltrans and other agencies to further
41 protect and restore the coastal ecosystem. In
42 the event of a catastrophic landslide, park
43 managers would encourage abandonment of
44 State Route 1 between Muir Beach and
45 Stinson Beach in the affected segment.
46 Interpretive exhibits could illustrate the
47 dramatic impacts on coastal ecosystems
48 caused by constructing and maintaining the
49 highway.

50 **Slide Ranch**

51 ***Natural Zone***

52 The existing environmental education center
53 and farm education program would be
54 relocated to a more sustainable and
55 geologically stable site in a less remote
56 location. The area would be managed to
57 promote restoration of coastal resources and
58 to allow natural geologic processes to
59 continue unimpeded. A modest trailhead
60 near State Route 1 would be provided to
61 support visitor access to the rugged coast,
62 but all other structures and farm areas would
63 be removed to allow restoration of natural
64 conditions.

65 66 67 **Lower Redwood Creek** 68 **(former Banducci flower farm** 69 **and surrounding area)**

70 ***Natural Zone***

71 Park managers would continue to restore the
72 native coastal ecosystem, including
73 Redwood Creek and endangered salmon
74 habitat, the riparian corridor and adjacent
75 wetlands, and the uplands that were planted
76 with heather and eucalyptus. Visitors would
77 have opportunities to participate in
78 stewardship activities in the restoration of
79 the natural systems. All facilities and
80 structures would be removed unless needed
81 to support stewardship, restoration
82 activities, and trail use. The California
83 Coastal Trail could also connect at this park
84 site.

85
86 Park managers would work with Marin
87 County and California State Parks to explore
88 realignment of Muir Woods Road to reduce
89 impacts on Redwood Creek. To further
90 protect the creek's endangered salmon, park
91 managers could collaborate with the
92 community to increase water storage
93 capacity for use during the dry season.

94
95

1 **Muir Beach**

2 **Natural Zone**

3 Management of this zone would be the same
4 as that described under alternative 1.

7 **Golden Gate Dairy and Vicinity**

8 **Evolved Cultural Landscape Zone**
9 **(developed area and surrounding**
10 **uplands)**

11 The area would be managed to preserve the
12 historic structures and pastoral landscape
13 and protect the coastal prairie and scrub
14 habitat.

15
16 The historic structures could be adaptively
17 reused for a science and stewardship center
18 or for local community services that are
19 consistent with park goals. Nearby
20 nonhistoric residences could be removed if
21 they do not contribute to essential
22 community services or park operational
23 needs. The rest of this park site could be
24 restored to its natural condition. Equestrian
25 use would be provided on designated trails
26 in the area.

29 **Tennessee Valley and Surrounding**
30 **Parklands (from Oakwood Valley to**
31 **the ocean, and northwest to**
32 **Highway 1)**

33 **Evolved Cultural Landscape Zone**
34 **(Tennessee Valley trailhead and**
35 **the Miwok Stables area)**

36 This area would be managed to retain its
37 traditional equestrian uses and provide a
38 minimal level of visitor facilities and an
39 improved trailhead to support visitor access
40 to the extensive network of trails. Modest
41 facilities that support the stewardship and
42 restoration activities and the park horse
43 patrol currently located in lower Tennessee
44 Valley could be sited within this zone.

45 **Natural Zone (from the trailhead to**
46 **the ocean and the surrounding**
47 **uplands including Oakwood Valley)**

48 Park managers would preserve and enhance
49 the native coastal ecosystem and allow
50 visitors to experience the wild character of
51 the valley. Nonhistoric facilities and
52 structures would be removed. Unnecessary
53 management roads, including Marincello
54 Road, could be converted to trails or
55 removed if not historic, and natural
56 processes restored.

57
58 The main Tennessee Valley Trail would be
59 converted to a multiuse trail, and the
60 remaining dams and artificial ponds would
61 be removed. Native wetland and riparian
62 habitat would be restored in these areas.

65 **Marin City Ridge and Gerbode Valley**

66 **Natural Zone (Marin City Ridge and**
67 **Gerbode Valley)**

68 This area would be managed to restore and
69 preserve the undeveloped coastal corridor of
70 contiguous habitat and natural resources,
71 and the outstanding open space and wild
72 character of these lands. The nonhistoric
73 facilities and infrastructure would be
74 removed and the land restored to a natural
75 condition. Unnecessary management roads
76 could be converted to trails, or removed if
77 not historic, and natural processes restored.
78 Opportunities would be explored to provide
79 trail connections from these park lands to
80 local communities.

83 **Fort Barry and Fort Cronkhite**

84 **Sensitive Resources Zone (Rodeo**
85 **Lagoon and most of the Rodeo**
86 **Valley uplands south of Bunker**
87 **Road)**

88 This area would be managed to preserve and
89 restore coastal habitat for threatened and
90 endangered species. Visitor access would be

1 highly controlled and restricted to
2 designated trails in this zone.

3

4 ***Evolved Cultural Landscape Zone***
5 ***(Rodeo Beach, Fort Cronkhite, and***
6 ***Fort Barry)***

7 These areas would be managed to maintain
8 the military identity of the area, provide for
9 higher levels of visitor use than in
10 surrounding areas, and provide educational
11 programs, surfing, fishing, and other
12 outdoor recreation opportunities. The
13 adjacent forts would be managed to protect
14 and interpret the national register historic
15 district while allowing reuse of the buildings
16 for park programming and operations,
17 possibly including a new visitor center.
18 Habitat restoration within this zone would
19 be consistent with preservation of the
20 military landscape. Equestrian facilities
21 would be accommodated in this area.

22

23 ***Historic Immersion Zone (Nike***
24 ***Missile Site SF88-L)***

25 Management of this zone would be the same
26 as that described under alternative 1.

27

28

29 **Capehart Housing Area**

30 ***Park Operations Zone***

31 A new park operations facility would be
32 constructed within this zone south of
33 Bunker Road. Residential structures and
34 unnecessary infrastructure would be
35 removed; riparian and upland habitats
36 would be restored, and fragmented habitat
37 would be reconnected where possible.

38

39

40 **Conzelman, Bunker, and McCullough**
41 **Roads (including Battery Spencer**
42 **and Hawk Hill)**

43 ***Scenic Corridor Zone***

44 Same as alternative 1, except that outside the
45 immediate road corridor, the area would be

46 managed to protect and restore coastal
47 habitat that supports the threatened mission
48 blue butterfly. Visitor access would be highly
49 controlled and restricted to designated trails
50 in this zone.

51

52

53 **Kirby Cove**

54 ***Evolved Cultural Landscape Zone***

55 The park resources and history associated
56 with coastal fortifications would be
57 highlighted; camping would promote
58 appreciation of views of the Golden Gate
59 Bridge and the wild-urban interface between
60 the park and the City of San Francisco.
61 Facilities would provide visitors with access
62 to the beach and new San Francisco Bay
63 Water Trail.

64

65 Habitat restoration would continue outside
66 the historic forest with removal of invasive
67 nonnative vegetation and expansion of
68 mission blue butterfly habitat.

69

70

71 **Point Bonita Lighthouse Complex**

72 ***Historic Immersion Zone***

73 Management of this zone would be the same
74 as that described under alternative 1.

75

76

77 **Offshore Ocean and Bay**
78 **Environment**

79 ***Scenic Corridor Zone (offshore areas***
80 ***except Muir Beach and Point Bonita)***

81 Management of this zone would be the same
82 as that described under alternative 1.

83

84 ***Sensitive Resources Zone (offshore***
85 ***areas around Muir Beach and Point***
86 ***Bonita – from Bird Island to Point***
87 ***Bonita Cove)***

88 The park would preserve sensitive marine
89 resources—intertidal resources, Redwood

1 Creek salmonids, seabirds, and marine
 2 mammals—in these two locations. Visitation
 3 would be highly restricted to protect
 4 resources that are easily disturbed. Park-
 5 approved research would be the primary
 6 activity in this zone, but would be conducted
 7 in a manner that is highly protective of
 8 sensitive resources.

9
 10

11 **PARK LANDS IN SAN FRANCISCO**

12 **Overview**

13 San Francisco’s national park system lands
 14 are a vital natural refuge, rich in biodiversity
 15 and native habitat. As in alternative 1, San
 16 Francisco park lands would welcome visitors
 17 to the “National Park Next Door”; however,
 18 this alternative would focus on engaging
 19 visitors, communities, and partners in
 20 participatory science, education, and
 21 stewardship focused on the coastal
 22 environment.

23

24 The local impacts of global climate change,
 25 including rising sea level, provide a focal
 26 point for individual and collective action and
 27 advocacy. The park, in collaboration with
 28 community partners, would demonstrate
 29 leadership in proactive adaptation and
 30 management in the face of accelerated sea
 31 level rise. These interpretive messages would
 32 reach visitors enjoying the coastal
 33 environment along San Francisco Bay Trail
 34 and the California Coastal Trail. Cultural
 35 resource sites and history would also
 36 highlight the human connection to the
 37 coastal environment; sites and history would
 38 include archeological sites, European
 39 exploration, maritime history, and coastal
 40 defense. As in other alternatives, the San
 41 Francisco-based Alcatraz embarkation
 42 facility would serve as a portal to Golden
 43 Gate National Recreation Area and larger
 44 national park system.

45
 46

47 **Upper Fort Mason**

48 ***Evolved Cultural Landscape Zone*** 49 ***(Majority of the site)***

50 This zone would be managed similarly to
 51 alternative 1, but rehabilitation of historic
 52 structures for adaptive reuse, including Pier
 53 4, would bring new park partners who
 54 would engage visitors, communities, and
 55 others in participatory science, education,
 56 and stewardship focused on the coastal
 57 environment. A stewardship “hub” would be
 58 based at Fort Mason to transport volunteers
 59 arriving by public transit to volunteer and
 60 stewardship activities in other park
 61 locations. Visitor circulation and wayfinding
 62 improvements would be implemented in
 63 response to new adjacent bus transit and
 64 ferry connections.

65

66 ***Diverse Opportunities Zone*** 67 ***(“Great Meadow”)***

68 Management of this zone would be the same
 69 as that described under alternative 1.

70

71 ***Sensitive Resources Zone*** 72 ***(shoreline at Black Point)***

73 Management of this zone would be the same
 74 as that described under alternative 1.

75

76

77 **China Beach**

78 ***Diverse Opportunities Zone***

79 Management of this zone would be the same
 80 as that described under alternative 1.

81

82

83 **Lands End**

84 ***Natural Zone***

85 Native habitat and natural processes would
 86 be restored within the coastal corridor
 87 extending from Eagle’s Point (Sea Cliff
 88 neighborhood) south to the area of recent

1 restoration and trail improvements near the
2 new Lands End parking lot.

3
4 The trail system would be improved to
5 provide access to the shoreline and vistas, as
6 well as connections to the community and
7 adjacent park areas.

8

9

10 **Fort Miley**

11 ***Evolved Cultural Landscape Zone***

12 Same as alternative 1, except that more
13 natural landscape enhancements would be
14 integrated and the Marine Exchange
15 Lookout Building (Octagon House) would
16 be adaptively reused to engage the public in
17 the natural and human history of the ocean
18 environment.

19

20

21 **Ocean Beach**

22 ***In Both the Diverse Opportunities 23 Zone and the Natural Zone***

24 In this alternative, the National Park Service
25 would participate in multiagency efforts to
26 knit the unique assets and experiences of the
27 Ocean Beach corridor into a seamless and
28 welcoming public landscape, planning for
29 environmental conservation, sustainable
30 infrastructure, and long-term stewardship.

31

32 The National Park Service would continue
33 to work with the City of San Francisco,
34 California Coastal Commission, and the U.S.
35 Army Corps of Engineers to address coastal
36 erosion, restore natural processes, and
37 maximize protection of the beach for its
38 natural and recreational values. The
39 National Park Service could relocate park
40 facilities out of vulnerable locations.

41

42 ***Diverse Opportunities Zone (along 43 the O'Shaughnessey seawall)***

44 The northern end of Ocean Beach would be
45 managed to provide opportunities for

46 visitors to engage in a variety of beach-
47 related recreational activities.

48

49 As in alternative 1, the park would
50 collaborate with the City of San Francisco to
51 provide an enhanced oceanfront landscape
52 in the Ocean Beach corridor with improved
53 amenities to support enjoyment of the
54 beach, including the coastal promenade,
55 parking, and restrooms.

56

57 ***Natural Zone (south of the 58 O'Shaughnessey seawall)***

59 The area would be managed to protect
60 shorebirds and allow natural coastal and
61 marine processes to occur while providing
62 for a variety of compatible recreational
63 activities that allow visitors to enjoy and
64 view nature. This zone would extend to
65 create approximately 5 miles of beach,
66 dunes, and cliffs from central Ocean Beach
67 south to Mussel Rock in San Mateo County.
68 Park managers would protect shorebird
69 habitat, allow natural shoreline processes to
70 continue unimpeded, and provide visitors
71 opportunities for self-discovery while
72 enjoying and viewing nature.

73

74

75 **Fort Funston**

76 ***Natural Zone (majority of the site)***

77 Fort Funston's islands of native habitat
78 would be expanded to form a continuous
79 habitat corridor that supports recovery of
80 native dune habitat including endangered
81 San Francisco *Lessingia* plants.

82

83 The beach, dunes, and cliffs extending from
84 central Ocean Beach south to Mussel Rock
85 (a nearly continuous stretch of almost 5
86 miles) would be managed to protect
87 shorebird habitat, allow natural shoreline
88 processes to continue unimpeded, and
89 provide improved or new trails for visitors to
90 enjoy and view nature.

91

1 **Diverse Opportunities Zone**
 2 **(central core of existing facilities)**

3 This area would be managed to provide
 4 continued high levels of varied visitor use,
 5 including hang gliding and dog walking near
 6 the main parking lot, supported by parking,
 7 restrooms, and trails. Park managers would
 8 preserve Battery Davis as a structure
 9 contributing to the history of seacoast
 10 fortifications.

11
 12 **Park Operations Zone**
 13 **(southeastern corner)**

14 Park operations, stewardship, and education
 15 support facilities would remain.

16
 17
 18 **Offshore Ocean and Bay**
 19 **Environment**

20 **Sensitive Resources Zone (Eagle’s**
 21 **Point near China Beach to Seal**
 22 **Rocks, and area at West Crissy Field)**

23 These areas would be designated marine
 24 reserves to protect seabirds and marine
 25 mammals.

26
 27 **Scenic Corridor Zone (all other**
 28 **offshore areas in San Francisco)**

29 Management of this zone would be the same
 30 as that described under alternative 1.

31
 32
 33 **PARK LANDS IN SAN MATEO**
 34 **COUNTY**

35 **Overview**

36 As in the other alternatives, park lands and
 37 ocean environments in San Mateo County
 38 would be managed as part of a vast network
 39 of protected lands and waters. In this
 40 alternative, however, park managers would
 41 work to preserve and restore these
 42 interconnected coastal ecosystems through
 43 collaborative partnerships with other land
 44 management agencies in the region.

45 Together, these groups would work to
 46 sustain the area’s native biodiversity,
 47 reconnect fragmented habitats and
 48 migration corridors, minimize the impact of
 49 invasive species, manage for changing fire
 50 regimes, and restore naturally functioning
 51 ecosystems. Proactive management would
 52 build into the environment greater resiliency
 53 to climate change.

54
 55 Park lands in San Mateo County provide an
 56 extensive wildlife corridor that includes
 57 habitat for threatened and endangered
 58 species. Under this alternative, these lands
 59 would serve as living laboratories, engaging
 60 visitors in participatory science, education,
 61 and stewardship—activities that nurture
 62 personal connections with nature and
 63 inspire advocacy.

64
 65 Exploration along the vast network of trails
 66 would further highlight the park’s diverse
 67 ecosystems and rich cultural resources.
 68 Cultural resource sites and stories—
 69 archeological sites, European exploration,
 70 agricultural land uses, coastal defense sites,
 71 and the lighthouse—would emphasize
 72 human occupation of the coastal
 73 environment. Most cultural resources would
 74 be stabilized if not in conflict with natural
 75 resource restoration.

76
 77 Land protection strategies would seek to
 78 reconnect fragmented endangered species
 79 habitat and strive to remove features that
 80 impede movement or migration of species,
 81 or disrupt ecological function.

82
 83 **South of Fort Funston to South of**
 84 **Mussel Rock Natural Zone**

85 Management of this zone would be the same
 86 as that described under alternative 1.

87
 88
 89 **Milagra Ridge**

90 **Natural Zone**

91 The land would be managed to preserve the
 92 wild character of the area and protect

1 endangered species habitat. Disturbed areas
2 would be restored. Coordinating with other
3 land managers, the National Park Service
4 would also make trail improvements that
5 could include connections to Oceana
6 Boulevard, the Pacific coast, Skyline
7 Boulevard, and Sweeney Ridge.

8
9
10 **Shelldance Nursery Area**

11 ***Diverse Opportunities Zone and***
12 ***Park Operations Zone***

13 Management of this zone would be the same
14 as that described under alternative 1.

15
16
17 **Sweeney Ridge (including Cattle Hill,**
18 **Picardo Ranch, and Sweeney Ridge**
19 **Gateway conservation easement)**

20 ***Natural Zone***

21 This area would be managed to protect
22 endangered species and restore the large
23 contiguous natural landscape extending into
24 the San Francisco Public Utilities
25 Commission Peninsula Watershed. Visitors
26 would experience the wild character of these
27 lands through stewardship activities, trail
28 use, and primitive camping. Sneath Lane
29 could be converted to a trail and connect to
30 the Bay Area Ridge Trail in the San
31 Francisco Public Utilities Commission
32 Peninsula Watershed. Unnecessary fire
33 roads could also be converted to trails or
34 removed if not historic and natural
35 resources restored. If acquired, a trailhead
36 would be located at Picardo Ranch with
37 modest visitor support facilities (restroom,
38 picnic tables, parking).

39
40 The San Francisco Bay Discovery Site
41 National Historic Landmark would be
42 preserved and interpreted.

43
44 The National Park Service acquired a
45 conservation easement over a 7.2-acre parcel
46 adjacent to the Sweeney Ridge Sneath Lane
47 Trailhead. Management of the parcel would

48 be consistent with the 2007 easement and
49 the restrictions of the 2005 USFWS
50 biological opinion for the PG&E Jefferson-
51 Martin Project. The emphasis of
52 management will be to preserve upland
53 habitat for the California red-legged frog
54 and San Francisco garter snake.

55
56
57 **Mori Point**

58 ***Sensitive Resources Zone***

59 Visitor use would be highly controlled to
60 protect threatened and endangered species
61 that inhabit the site. The public would
62 continue to engage in community
63 stewardship to preserve and restore the
64 native coastal ecosystem.

65
66
67 **Point San Pedro**

68 ***Natural Zones***

69 Management of this zone would be the same
70 as that described under alternative 1.

71
72
73 **Rancho Corral de Tierra**

74 ***Natural Zone (majority of the area)***

75 Management would be the same as
76 alternative 1, but with fewer and more
77 primitive visitor amenities. Unnecessary fire
78 roads could be converted to trails or
79 removed if not historic and natural
80 processes restored.

81
82 ***Sensitive Resources Zone***
83 ***(creek corridors)***

84 In this alternative, the four equestrian
85 facilities would be removed or relocated
86 away from creek corridors over time. The
87 park would partner with surrounding land
88 managers to restore the creek corridors,
89 reconnect them to the ocean, and restore
90 anadromous fish passage.

1 **Scenic Corridor Zone (existing**
2 **equestrian lease area)**

3 These areas would accommodate visitor and
4 equestrian facilities in sustainable locations
5 and configurations that are compatible with
6 natural resource management goals for the
7 surrounding area.

8
9
10 **Montara Lighthouse**

11 **Evolved Cultural Landscape Zone**

12 Similar to alternative 1, the historic
13 resources would be preserved and adaptively
14 used, but the site would be dedicated to
15 stewardship and environmental education.
16 The site would become a campus focused on
17 enhancing understanding and stewardship
18 of coastal resources, with hostel and
19 overnight accommodations for program
20 participants and staff.

21
22
23 **Phleger Estate**

24 **Natural Zone**

25 Management of this zone would be the same
26 as that described under alternative 1.

27
28
29 **San Francisco Public Utilities**
30 **Commission Peninsula Watershed**
31 **Easements**

32 Note: The approximately 23,000-acre San
33 Francisco Peninsula Watershed is owned by
34 the City and County of San Francisco and
35 managed by the San Francisco Public
36 Utilities Commission for watershed
37 protection as a water supply resource with
38 limited public access. This area is included
39 within the park's authorized boundary and is
40 adjacent to NPS-managed lands at Phleger
41 Estate, Sweeney Ridge, and Rancho Corral
42 de Tierra.

43
44 Golden Gate National Recreation Area
45 administers two easements encompassing

46 the entire watershed property—a scenic
47 easement over approximately 19,000 acres
48 and a scenic and recreation easement over
49 approximately 4,000 acres (see appendixes I
50 and J). The provisions of the easements
51 include preservation of the land in its
52 present natural state, allowing certain
53 recreational uses and requiring approval of
54 the park superintendent for certain actions.

55
56 Because NPS management responsibility
57 over the watershed is limited to
58 administration of the easements, this area is
59 not included in the management zoning for
60 the park. Actions described below would be
61 encouraged or promoted by the National
62 Park Service for these two easement areas.
63 Some of these actions are already identified
64 in the *Peninsula Watershed Management Plan*
65 (SFPUC 2001) – the commission's current
66 land use plan for this area. Other actions are
67 suggested for future consideration. Future
68 actions would be subject to the approval of
69 the commission and consistency with the
70 easements. Actions could be implemented
71 either solely by the San Francisco Public
72 Utilities Commission or in cooperation with
73 the park and San Mateo County.

74
75
76 **SCENIC EASEMENT AREA**

77 In this alternative, park managers would
78 continue to cooperate with the San
79 Francisco Public Utilities Commission for
80 preservation of the natural, cultural, scenic,
81 and recreational features of the watershed.
82 Park managers would promote natural
83 resource preservation and highly managed
84 public access in most of the watershed to
85 support the values that resulted in
86 designating this area as the core of the
87 UNESCO Golden Gate Biosphere Reserve.

88
89

1 **Scenic and Recreation Easement**
2 **Area (Crystal Springs Regional Trail /**
3 **Juan Bautista de Anza National**
4 **Historic Trail corridor)**

5 Park managers would promote access and
6 visitor services along the existing multiuse
7 trail and the implementation of trail
8 improvements proposed in the *San*
9 *Francisco Watershed Management Plan*
10 (2002), including completion of the north-
11 south corridor through the watershed in
12 areas of low sensitivity. Additional
13 coordination with the Juan Bautista De Anza
14 National Historic Trail could also be
15 provided.

16
17
18 **Offshore Ocean Environment**

19 Management of offshore areas could be
20 extended to cover new segments of the San
21 Mateo County coast as described in the
22 “Boundary Adjustments” section.

23
24 **Sensitive Resources Zone**
25 **(Fitzgerald Marine Reserve)**

26 In areas where the park boundary coincides
27 with the Fitzgerald Marine Reserve, the two
28 organizations would continue to cooperate
29 in the implementation of the provisions of
30 the California State Marine Life Protection
31 Act. The reserve area between Montara State
32 Beach and Ross Cove has been designated as
33 the Montara State Marine Reserve; no
34 fishing, harvesting, or collecting would be
35 allowed in this area. The reserve area
36 between Ross Cove and Pillar Point Harbor
37 has been designated as the Pillar Point
38 Marine Conservation Area; some fishing
39 would be allowed in this area.

40
41
42 **COST ESTIMATES**

43 Cost estimates for alternative 2 are identified
44 table 6 below. The costs shown here are not
45 for budgetary purposes; they are only

46 intended to show a relative comparison of
47 costs among the alternatives.

48
49 The alternatives describe the maximum
50 potential capital improvements; lesser
51 improvements may be implemented or built
52 in phases if necessary. Implementation of the
53 approved plan would depend on future
54 funding. Approval of this plan does not
55 guarantee that the funding and staffing
56 needed to implement the plan will be
57 forthcoming. Full implementation of the
58 actions in the approved general management
59 plan could be many years in the future.
60 Additionally, some of the future long-term
61 funding needed to implement the various
62 actions called for in the alternatives is
63 anticipated to come from nonfederal
64 partners consistent with the park’s current
65 practices.

66
67 Alternative 2 proposes to reconnect coastal
68 ecosystems and provide visitors with
69 recreational and educational opportunities
70 to learn about and enjoy the coastal and
71 marine environments. Costs to implement
72 this alternative include funding needed for a
73 wide range of landscape restoration
74 activities and stewardship and science
75 programming.

76
77
78 **Annual Operating Costs**

79 The annual operating costs for alternative 2
80 comprise the current annual operating costs,
81 with changes made to reflect additional
82 staffing needs. The annual operating costs of
83 alternative 2 are estimated at \$31.1 million.

84
85
86 **Staffing Requirements**

87 Additional staffing needs were estimated to
88 support alternative 2. While some divisions
89 would not require changes in staff, total
90 additional staff needed to support
91 alternative 2 is estimated at 35 FTE. Most
92 divisions would require additional staff to
93 support the newly acquired lands in San
94 Mateo County.

1 Other additional staff would be needed to
2 carry out new uses of the park lands. An
3 increase in interpretive staff would support
4 expanded interpretive programs throughout
5 the park. A greater number of law
6 enforcement officers would provide needed
7 evening coverage, marine patrol, and
8 response to increased visitor recreational
9 activities. With the addition of new trails and
10 facilities and the rehabilitation of other
11 facilities, maintenance responsibilities would
12 increase, also requiring additional staff.

13
14 The natural resources division would have
15 additional responsibilities related to the
16 inventory, monitoring, and restoration of
17 natural areas and habitats.

18
19 As a result of the expanded natural areas,
20 cultural resources would require extensive
21 documentation and survey, as well as
22 adaptive management. Significant cultural
23 resources would require rehabilitation for
24 park and partner use. Additional
25 archeological surveys would be needed
26 before areas were allowed to revert to their
27 natural state. Compliance would be needed
28 in cultural areas and also to document wild
29 areas where buildings may be removed and
30 archeological resources covered by
31 vegetation. The responsibilities of the
32 planning division for project coordination,
33 compliance and public involvement would
34 also expand, requiring additional staff.

35
36 Other divisions, including business and
37 administration, environmental and safety,
38 and public affairs would each require a few
39 additional staff members to manage new
40 areas and uses of the park lands. New staff
41 would also manage the rigorous user

42 capacity program at Alcatraz Island and
43 Muir Woods National Monument.

44 45 **Proposed New Staff**

- 46 ▪ 8 positions in visitor resources and
47 protection
- 48 ▪ 7 positions in maintenance
- 49 ▪ 4 positions in interpretation and
50 education
- 51 ▪ 2 positions in planning and
52 compliance
- 53 ▪ 3 positions in cultural resources and
54 museum management
- 55 ▪ 7 positions in natural resources
56 management and science
- 57 ▪ 1 position in public affairs
- 58 ▪ 1 position in business management
- 59 ▪ 1 position in administration
- 60 ▪ 1 position in environmental and
61 safety programs

62 63 64 **One-time Costs**

65 One-time costs of alternative 2 reflect
66 extensive restoration of the landscape and
67 rehabilitation of facilities in concert with the
68 goals of the alternative. Proposed facility
69 needs in this alternative reflect the
70 overarching goal of creating a park that
71 preserves and promotes enjoyment of the
72 coastal ecosystems. Total one-time costs for
73 Marin, San Francisco, and San Mateo
74 counties (including facility and landscape
75 restoration costs) are estimated at \$47.3
76 million.

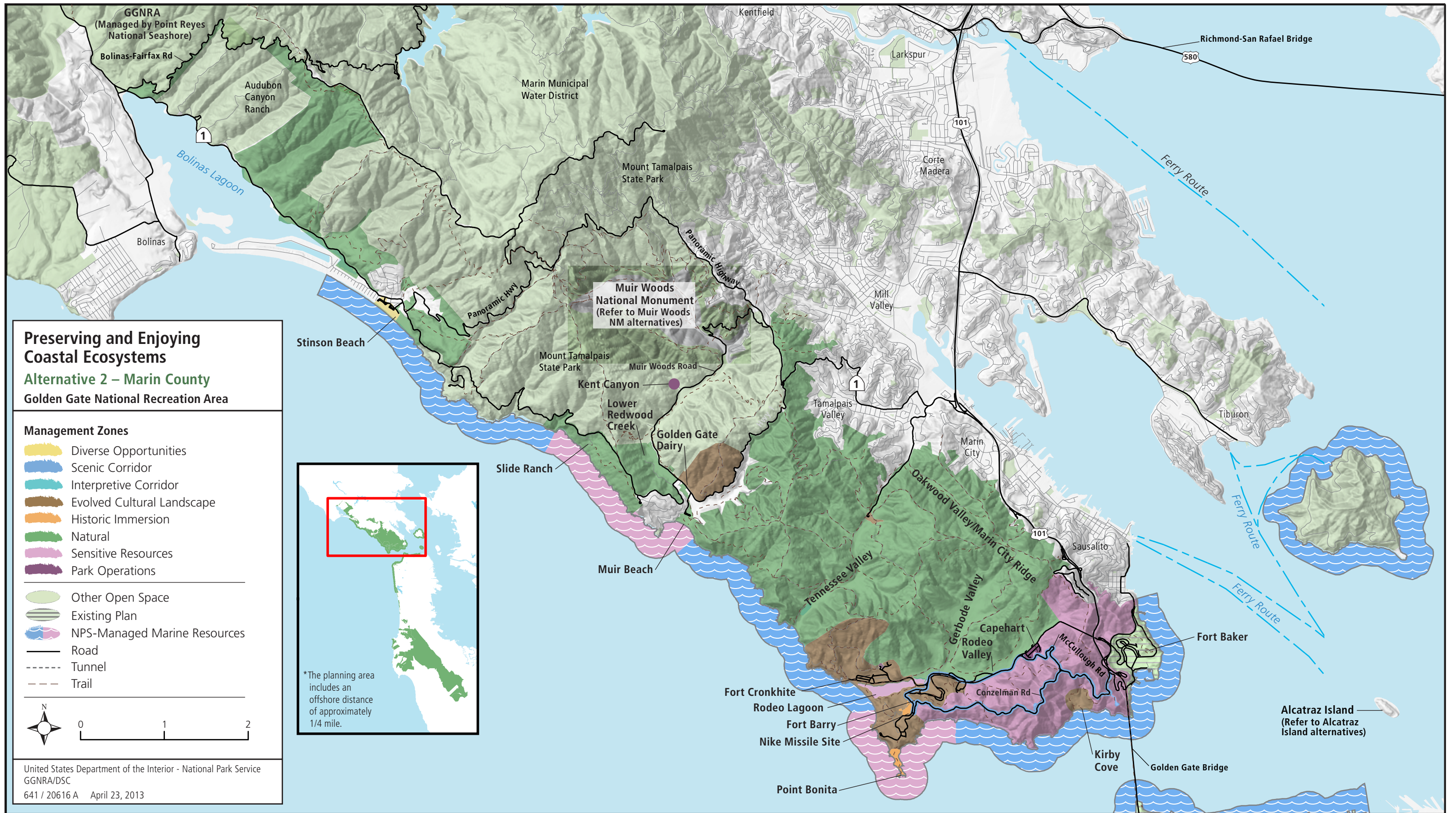
**TABLE 6. COSTS ASSOCIATED WITH IMPLEMENTATION OF ALTERNATIVE 2 FOR
PARK LANDS IN MARIN, SAN FRANCISCO, AND SAN MATEO COUNTIES**

Summary of Costs for Alternative 2	
Annual Operational Costs	
Annual Operational Costs	\$31,090,000
Staffing (additional FTE)	369 (+35)
One-time Capital Costs	
<i>Rehabilitation Projects</i>	
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
<i>Historic Preservation</i>	
China Beach: rehabilitate structures and parking	\$2,430,000
Fort Mason: stabilize Pier 4	\$3,000,000
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
<i>Natural Resource Restoration</i>	

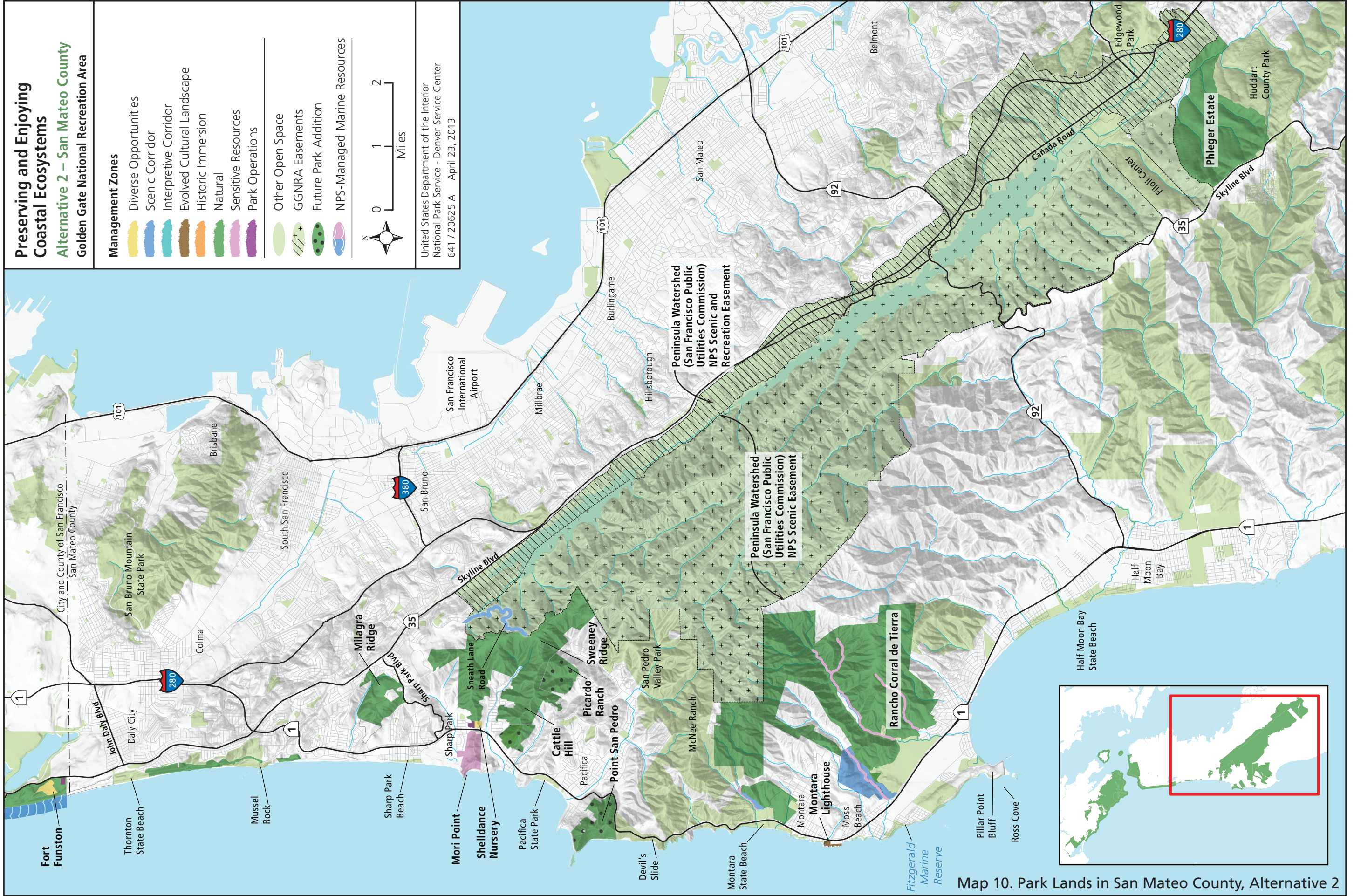
TABLE 6. COSTS ASSOCIATED WITH IMPLEMENTATION OF ALTERNATIVE 2 FOR PARK LANDS IN MARIN, SAN FRANCISCO, AND SAN MATEO COUNTIES

Summary of Costs for Alternative 2	
Marin County sites	\$13,400,000
San Francisco sites	\$3,060,000
San Mateo County sites	\$1,500,000
<i>Facility Removal</i>	
Facilities at various park sites	\$2,580,000
<i>New Construction</i>	
None	\$0
Total	\$47,250,000

All costs in 2009 dollars

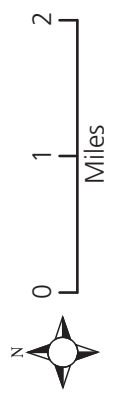


Map 8. Park Lands in Marin County, Alternative 2



Preserving and Enjoying Coastal Ecosystems
Alternative 2 – San Mateo County
 Golden Gate National Recreation Area

- Management Zones**
- Diverse Opportunities
 - Scenic Corridor
 - Interpretive Corridor
 - Evolved Cultural Landscape
 - Historic Immersion
 - Natural
 - Sensitive Resources
 - Park Operations
 - Other Open Space
 - GGNRA Easements
 - Future Park Addition
 - NPS-Managed Marine Resources



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 National Park Service - Denver Service Center
 641 / 20625 A April 23, 2013

Map 10. Park Lands in San Mateo County, Alternative 2

ALTERNATIVE 3: FOCUSING ON NATIONAL TREASURES

1 **PARK LANDS IN MARIN COUNTY**

2 **Overview**

3 This alternative would welcome visitors to a
4 vast network of open space that protects
5 natural and cultural resources and offers
6 many forms of recreation in a setting of
7 national importance. Much of the area's
8 undeveloped land is a legacy of the U.S.
9 Army whose coastal defense systems remain
10 anchored in the landscape.

11
12 The park would highlight several nationally
13 important sites, including Muir Woods, the
14 Golden Gate, and historic army posts on the
15 Marin Headlands.

16
17 Although this alternative shares many
18 characteristics of alternatives 1 and 2, the
19 management of the Marin Headlands'
20 historic core would be very different.
21 Sheltering the best-preserved collection of
22 seacoast fortifications in the United States,
23 the Marin Headlands tell the story of two
24 centuries of evolving weapons technology
25 and the nation's unwavering efforts to
26 protect the Golden Gate. As a result, this
27 alternative would focus on immersing
28 visitors in its compelling sites and history,
29 using and interpreting preserved structures
30 and landscapes ranging from Battery
31 Spencer to the Nike missile launch site.

32
33 Other important landmarks, such as the
34 Point Bonita Lighthouse, established in
35 1855, would be preserved and interpreted
36 for visitors.

37
38

39 **Stinson Beach North to 40 Bolinas-Fairfax Road**

41 ***Diverse Opportunities Zone 42 (beach, dunes, and developed area)***

43 Management of this zone would be the same
44 as that described under alternative 1.

45

46 ***Natural Zone (Easkoot Creek corridor 47 and surrounding park lands north to 48 Bolinas-Fairfax Road)***

49 The natural ecosystem of Easkoot Creek
50 riparian corridor and the uplands east of
51 State Route 1 would be restored. The coastal
52 defense structures in the vicinity of State
53 Route 1 near Red Rock Beach would be
54 preserved and interpreted.

55

56 As in alternative 1, other park lands and
57 waters in the vicinity of Stinson Beach,
58 including the uplands, would be managed to
59 protect and restore the coastal ecosystems,
60 and contribute to the restoration of natural
61 processes that affect Bolinas Lagoon. The
62 Bolinas Lagoon Restoration Project:
63 Recommendations for Restoration and
64 Management (Gulf of the Farallones
65 National Marine Sanctuary Advisory
66 Council 2008) identified key actions to
67 protect and restore Bolinas Lagoon and its
68 watershed. Three tables identify
69 recommendations for restoration in the
70 Locally Preferred Plan, recommendations
71 for management (best management
72 practices), and recommendations for
73 adaptive management and monitoring. Each
74 action identifies the key land managers,
75 including Golden Gate National Recreation
76 Area, with a vested interest in implementa-
77 tion of each action. Park involvement would
78 be required to implement restoration actions
79 in portions of the watershed, including
80 improving floodplain function along

1 Easkoot Creek, at the Bolinas Y, and along
2 the east shore of Bolinas Lagoon (e.g.,
3 Stinson Gulch), and improving transitional
4 habitat and habitat connectivity along the
5 east shore of the lagoon. Partnerships with
6 neighboring land managers would be
7 strengthened to achieve these goals across
8 the broader landscape.

9
10

11 **State Route 1 and Panoramic**
12 **Highway Area**

13 ***Scenic Corridor Zone***

14 Management of this zone would be the same
15 as that described under alternative 1.

16
17

18 **Slide Ranch**

19 ***Natural Zone***

20 Management of this zone would be the same
21 as that described under alternative 2.

22
23

24 **Lower Redwood Creek**
25 **(formerly Banducci flower farm**
26 **and surrounding area)**

27 ***Natural Zone***

28 Management of this zone would be the same
29 as that described under alternative 2.

30
31

32 **Muir Beach**

33 ***Natural Zone***

34 Management of this zone would be the same
35 as that described under alternative 1.

36
37

38 **Golden Gate Dairy and Vicinity**

39 ***Evolved Cultural Landscape Zone***
40 ***(developed area only)***

41 The area would be managed to preserve the
42 pastoral landscape and historic structures
43 and stories associated with past dairy
44 ranching.

45

46 The historic structures could be adapted for
47 use to support equestrian and other
48 recreational uses, park operations, and local
49 community services that are consistent with
50 park goals. The rest of this park site could be
51 restored to its natural coastal conditions.

52

53 ***Natural Zone (surrounding uplands)***

54 Management of this zone would be the same
55 as that described under alternative 1.

56

57

58 **Tennessee Valley and Surrounding**
59 **Parklands (from Oakwood Valley to**
60 **the ocean, and northwest to**
61 **Highway 1)**

62 ***Scenic Corridor Zone (Tennessee***
63 ***Valley trailhead and the Miwok***
64 ***Stables area, including the trail to***
65 ***the beach)***

66 The area would be managed to establish a
67 visitor facility that provides orientation and
68 services to support the recreational and
69 educational opportunities available in this
70 region of large undeveloped open spaces.
71 Equestrian, environmental education, and
72 stewardship uses would be retained in
73 improved, sustainable facilities.

74

75 The trail and ocean beaches would also be
76 managed to promote hiking, biking, and
77 equestrian touring on a “trail to the sea.”
78 Modest and rustic facilities could be
79 provided that support these recreational
80 activities including overnight
81 accommodations that complement the
82 scenic touring experience.

83

1 **Natural Zone (surrounding uplands**
2 **including Oakwood Valley)**

3 Outside the trail corridor, the area would be
4 managed to protect undeveloped coastal
5 habitat and outstanding natural features that
6 are backdrops to the scenic corridor.

7
8
9 **Marin City Ridge and Gerbode Valley**

10 **Natural Zone**

11 Management of this zone would be the same
12 as that described under alternative 1.

13
14
15 **Fort Barry and Fort Cronkhite**

16 **Historic Immersion Zone**
17 **(Rodeo Valley, Fort Barry**
18 **and Fort Cronkhite)**

19 These areas would be managed to showcase
20 the structures of military history and the
21 transition from Army post to national park.
22 Infrastructure and landscapes within this
23 area would be restored (at varying levels of
24 historic preservation treatment) to be
25 evocative of the military era, while
26 protecting threatened and endangered
27 species habitat. Structures could continue to
28 be used for a diversity of purposes, including
29 use by park partners, but partners would be
30 encouraged to incorporate into their
31 programming an association with military
32 history and conservation of open space.
33 Equestrian facilities would be
34 accommodated in this zone.

35
36 Much of the visitor immersion would be
37 interpretive, incorporating the latest
38 technological and multimedia advances to
39 bring history alive in new and nontraditional
40 ways. Interpretive themes would address the
41 various military periods. Preservation of the
42 historic military resources would be
43 consistent with natural resource protection.
44

45 **Historic Immersion Zone (Nike**
46 **Missile Site SF88-L)**

47 Management of this zone would be the same
48 as that described under alternative 1.

49
50
51 **Capehart Housing Area**

52 **Diverse Opportunities Zone**

53 Some Capehart residences would be
54 replaced with new facilities on the south side
55 of Bunker Road to serve park uses and
56 operational needs.

57
58
59 **Conzelman, Bunker, and McCullough**
60 **Roads (including Battery Spencer**
61 **and Hawk Hill)**

62 **Historic Immersion Zone**

63 The roads and adjacent park lands would be
64 managed to focus visitors on coastal geology
65 and the military fortifications and to engage
66 them in historical explorations. Deteriorated
67 military sites and features would be restored.
68 New or improved trails throughout the area,
69 including the California Coastal Trail, would
70 help connect the visitor to the geologic and
71 military resources and to follow a historic
72 route while protecting habitat for threatened
73 and endangered species.

74
75
76 **Kirby Cove**

77 **Historic Immersion Zone**

78 The park resources and history associated
79 with coastal fortifications would be
80 highlighted; overnight accommodations
81 would promote appreciation of views of the
82 Golden Gate Bridge and the wildland-urban
83 interface between the park and City of San
84 Francisco. Facilities would provide visitors
85 with access to the beach and the new San
86 Francisco Bay Water Trail.

87

1 Habitat restoration would continue outside
2 the historic forest with removal of invasive
3 nonnative vegetation and expansion of
4 mission blue butterfly habitat.

5
6
7 **Point Bonita Lighthouse Complex**

8 ***Historic Immersion Zone***

9 Management of this zone would be the same
10 as that described under alternative 1.

11
12
13 **Offshore Ocean and Bay
14 Environment**

15 ***Scenic Corridor Zone (all offshore
16 areas)***

17 Park managers would work to preserve the
18 ocean and bay environment and
19 accommodate public uses including water
20 recreation, boating, and noncommercial
21 fishing.

22
23
24 **PARK LANDS IN SAN FRANCISCO**

25 **Overview**

26 This alternative would focus on the
27 collection of historic sites and the dynamic
28 coastal landscape that defines San
29 Francisco’s coastline, from Fort Mason to
30 Fort Funston. Visitors would be welcomed
31 to the “National Park Next Door” as in
32 alternative 1, with a focus on the nationally
33 important sites that are connected by the San
34 Francisco Bay Trail and California Coastal
35 Trail, thus creating a scenic and historic
36 corridor.

37
38 Park lands in San Francisco encompass a
39 significant collection of historic sites,
40 ranging from the Civil War era Black Point at
41 Fort Mason to the military coastal
42 fortifications at Fort Funston. These sites are
43 amid a windswept coastal environment,
44 featuring rocky bluffs, acres of dunes, sandy
45 beaches, and fragile native habitat.

46 Today, these offerings are an array of
47 popular destinations for park lovers. Under
48 this alternative, the National Park Service
49 would expand interpretive programs and
50 visitor services to enable residents and
51 visitors to further appreciate the significant
52 landmarks and landscapes at the Golden
53 Gate. As in other alternatives, the San
54 Francisco-based Alcatraz embarkation
55 facility would serve as a portal to Golden
56 Gate National Recreation Area and the
57 larger national park system.

58
59
60 **Upper Fort Mason**

61 ***Diverse Opportunities Zone
62 (majority of the site)***

63 More of the structures at Fort Mason would
64 be dedicated to visitor services to expand the
65 range of park experiences. Fort Mason
66 would serve as the primary visitor entrance
67 to Golden Gate National Recreation Area
68 with an orientation and information center
69 that would introduce visitors to all Bay Area
70 national parks, as well as to the programs
71 offered by the park’s many partners, thus
72 enabling visitors to better plan their national
73 park visit. Visitor circulation and wayfinding
74 improvements would be implemented in
75 response to new adjacent transit and ferry
76 connections.

77
78 Park managers would preserve historic
79 structures and landscapes that tell the story
80 of continuous military and civilian use of the
81 fort. Expanded overnight accommodations
82 would provide a base for day trips to explore
83 other areas of the park. The “Great
84 Meadow” could have sustainable
85 infrastructure to support special events.

86
87 ***Historic Immersion Zone (Building
88 201—Park Headquarters and Pier 4)***

89 Golden Gate National Recreation Area
90 headquarters would share space with a
91 museum that would showcase the military
92 history of Fort Mason and the 20th century

1 port of embarkation that is the centerpiece
2 of the historic district.

3
4 In this alternative, historic Pier 4 at the foot
5 of Van Ness Avenue would be rehabilitated.
6 The facility would be developed to include
7 interpretive and educational exhibits. The
8 pier could also be used as an additional
9 embarkation point for ferry service to
10 Alcatraz Island.

11
12 McDowell Road would continue to facilitate
13 pedestrian and bicycle travel through Fort
14 Mason and highlight scenic views of the
15 Golden Gate and San Francisco Bay.

16
17 As in alternative 1, these proposals would
18 require close collaboration with San
19 Francisco Maritime National Historical Park
20 and the City of San Francisco.

21
22 ***Sensitive Resources Zone***
23 ***(shoreline at Black Point)***

24 Management of this zone would be the same
25 as that described under alternative 1.

26
27

28 **China Beach**

29 ***Diverse Opportunities Zone***

30 Management of this zone would be the same
31 as that described under alternative 1.

32
33

34 **Lands End**

35 ***Evolved Cultural Landscape Zone***

36 Management of this zone would be the same
37 as that described under alternative 1.

38
39

40 **Fort Miley**

41 ***Historic Immersion Zone (West***
42 ***Fort Miley, the USS San Francisco***
43 ***Memorial, and Marine Exchange***
44 ***Lookout Building)***

45 The park would preserve these structures
46 and sites and showcase military and
47 maritime history.

48

49 ***Park Operations Zone***
50 ***(East Fort Miley)***

51 Park managers would focus on providing
52 park maintenance and public safety
53 operations needed to support the
54 surrounding park lands. Safer and more
55 direct vehicle and trail access to East Fort
56 Miley would be developed to better support
57 this use.

58
59

60 **Ocean Beach**

61 ***In Both the Diverse Opportunities***
62 ***Zone and the Natural Zone***

63 In this alternative, the National Park Service
64 would participate in multiagency efforts to
65 knit the unique assets and experiences of the
66 Ocean Beach corridor into a seamless and
67 welcoming public landscape, planning for
68 environmental conservation, sustainable
69 infrastructure, and long-term stewardship.

70

71 The National Park Service would continue
72 to work with the City of San Francisco,
73 California Coastal Commission, and the U.S.
74 Army Corps of Engineers to address coastal
75 erosion, restore natural processes, and
76 maximize protection of the beach for its
77 natural and recreational values. The
78 National Park Service could relocate park
79 facilities out of vulnerable locations.

80

81 ***Diverse Opportunities Zone (along***
82 ***the O'Shaughnessey seawall)***

83 Management of this zone would be the same
84 as that described under alternative 2.

1 **Natural Zone (south of the**
2 **O’Shaughnessey seawall)**

3 Management of this zone would be the same
4 as that described under alternative 2.

5

6

7 **Fort Funston**

8 **Natural Zone (majority of the site)**

9 This area would be managed to provide
10 recreational activities in a more natural
11 setting with limited support facilities. Access
12 and parking would be at the edge of the site,
13 allowing restoration of the natural dune
14 ecosystem and providing trail access.
15 Nonhistoric structures would be removed;
16 existing park operation functions and the
17 environmental education program would be
18 relocated to suitable locations elsewhere in
19 the park.

20

21 The historic Battery Davis would be
22 preserved within the context of the natural
23 setting. The coastal bluffs would be
24 preserved for their unique geology and to
25 allow natural processes to continue
26 unimpeded.

27

28 **Diverse Opportunities Zone**
29 **(uplands, away from the edge**
30 **of the Dune)**

31 This zone would be managed to provide for
32 continued high levels of visitor use and
33 current opportunities such as hang gliding
34 and dog walking, to the extent the area
35 remains safe from bluff erosion.

36

37 **Park Operations Zone**
38 **(southeast corner)**

39 Operational facilities could be expanded to
40 meet park needs, including public safety
41 offices, nursery, stewardship center, satellite
42 maintenance facilities, and staff or volunteer
43 housing.

44

45

46 **Offshore Ocean and Bay**
47 **Environment**

48 **Natural Zone (all offshore areas**
49 **in San Francisco)**

50 Management of this zone would be the same
51 as that described under alternative 1.

52

53

54 **PARK LANDS IN SAN MATEO**
55 **COUNTY**

56 **Overview**

57 As in the other alternatives, park lands and
58 ocean environments in San Mateo County
59 would be managed as part of a vast network
60 of protected lands and waters. This
61 alternative, however, would highlight how
62 this “quilt” of undeveloped land has been
63 protected by numerous organizations. Over
64 the past 20 years, the National Park Service,
65 local governments, private land trusts, and
66 dedicated individuals have worked together
67 to acquire and preserve this “wilderness”
68 next door.

69

70 Today, these lands are a national treasure of
71 recreational, natural, and cultural resources.
72 Several nationally significant historic sites
73 are in San Mateo County, along with habitat
74 for numerous endangered species. Many of
75 these important resources are managed by
76 other agencies on nearby sites. This
77 alternative would focus on protecting
78 resources in the park while developing
79 recreational and thematic connections
80 between sites managed by other land
81 managers.

82

83 This alternative also looks beyond the
84 immediate park lands to explore the
85 potential to stimulate regional landscape
86 management and enhance heritage tourism.
87 To do so, park managers would work with
88 communities between Pacifica and Santa
89 Cruz to support special designations for the
90 Pacific Coast Highway (Route 1). The
91 highway is one of the unifying features of the
92 rural coast and is characterized by forested

1 hills, small-scale agriculture, and seaside
2 communities.

3
4 **South of Fort Funston to South
5 of Mussel Rock Natural Zone**

6 Management of this zone would be the same
7 as that described under alternative 1.

8
9

10 **Milagra Ridge**

11 **Natural Zone**

12 Management of this zone would be the same
13 as that described under alternative 2.

14
15

16 **Sheldance Nursery Area**

17 **Diverse Opportunities Zone and
18 Park Operations Zone**

19 Management of these zones would be the
20 same as that described under alternative 1.

21
22

23 **Sweeney Ridge (including Cattle Hill,
24 Picardo Ranch, and Sweeney Ridge
25 Gateway conservation easement)**

26 **Natural Zone (majority of the area)**

27 The area would be managed to protect
28 endangered species and the large contiguous
29 natural landscape extending into the San
30 Francisco Public Utilities Commission
31 Peninsula Watershed. Visitors could
32 experience the area through stewardship
33 activities, improved trails, and primitive
34 camping. The area would connect visitors to
35 the Bay Area Ridge Trail. The San Francisco
36 Bay Discovery Site National Historical
37 Landmark would be preserved, enhanced,
38 and interpreted.

39

40 **Diverse Opportunities Zone
41 (developed portion of Picardo
42 Ranch)**

43 Management of this zone would be the same
44 as that described under alternative 1.

45
46

47 **Mori Point**

48 **Natural Zone**

49 Management of this zone would be the same
50 as that described under alternative 1.

51
52

53 **Point San Pedro**

54 **Natural Zone**

55 Management of this zone would be the same
56 as that described under alternative 1.

57
58

59 **Rancho Corral de Tierra**

60 **Natural Zone (majority of the area)**

61 Management of this zone would be the same
62 as that described under alternative 1.

63
64

65 **Diverse Opportunities Zone (existing
equestrian lease area)**

66 Management of this zone would be the same
67 as that described under alternative 1.

68
69

70 **Montara Lighthouse**

71 **Historic Immersion Zone**

72 As the most intact lighthouse complex in the
73 park, the site offers an opportunity for
74 immersion in the life of lighthouse keepers.
75 This alternative would restore historic
76 structures and landscape features, remove
77 contemporary structures, and develop new
78 visitor programs. Overnight stays would be
79 part of the immersion experience.

80

1 **Phleger Estate**

2 **Natural Zone**

3 Management of this zone would be the same
4 as that described under alternative 1.

5 Interpretation would explore the estate’s
6 similarities with and differences from Muir
7 Woods National Monument.

8
9
10 **San Francisco Public Utilities**
11 **Commission Peninsula Watershed**
12 **Easements**

13 Note: The approximately 23,000-acre San
14 Francisco Peninsula Watershed is owned by
15 the City and County of San Francisco and
16 managed by the San Francisco Public
17 Utilities Commission for watershed
18 protection as a water supply resource with
19 limited public access. This area is included
20 within the park’s authorized boundary, and
21 is adjacent to NPS-managed lands at Phleger
22 Estate, Sweeney Ridge, and Rancho Corral
23 de Tierra.

24
25 Golden Gate National Recreation Area
26 administers two easements encompassing
27 the entire watershed property—a scenic
28 easement over approximately 19,000 acres
29 and a scenic and recreation easement over
30 approximately 4,000 acres. The provisions of
31 the easements include preservation of the
32 land in its present natural state, allowing
33 certain recreational uses, and requiring
34 approval of the park superintendent for
35 certain actions.

36
37 Because NPS management responsibility
38 over the watershed is limited to
39 administration of the easements, this area is
40 not included in management zoning for the
41 park. Actions described below would be
42 encouraged or promoted by the National
43 Park Service for these two easement areas
44 (see appendixes I and J). Some of these
45 actions are already identified in the
46 *Peninsula Watershed Management Plan*
47 (SFPUC 2001)—the SFPUC’s current land
48 use plan for this area. Other actions are

49 suggested for future consideration. Future
50 actions would be subject to the approval of
51 the commission and consistency with the
52 easements. Actions could be implemented
53 either solely by the San Francisco Public
54 Utilities Commission or in cooperation with
55 Golden Gate National Recreation Area and
56 San Mateo County.

57
58 **Scenic Easement Area**

59 Management of this area would be the same
60 as that described under alternative 1.

61
62 **Scenic and Recreation**
63 **Easement Area**

64 Same as alternative 1, but with an emphasis
65 on promoting enhanced interpretation to
66 highlight the scope of the water system with
67 its origins in Yosemite National Park and
68 enhanced interpretation of Spanish
69 exploration and colonization efforts
70 including the Bay Area Discovery Site and
71 Anza and Portola routes.

72
73
74 **Offshore Ocean Environment**

75 Management of offshore areas could be
76 extended to cover new segments of the San
77 Mateo County coast as described in the
78 “Boundary Adjustments” section.

79
80 **Sensitive Resources Zone**
81 **(Fitzgerald Marine Reserve)**

82 In areas where the park boundary coincides
83 with the Fitzgerald Marine Reserve, the two
84 organizations would continue to cooperate
85 in the implementation of the provisions of
86 the California State Marine Life Protection
87 Act. The reserve area between Montara State
88 Beach and Ross Cove has been designated as
89 the Montara State Marine Reserve; no
90 fishing, harvesting, or collecting would be
91 allowed in this area. The reserve area
92 between Ross Cove and Pillar Point Harbor
93 has been designated as the Pillar Point
94 Marine Conservation Area; some fishing
95 would be allowed in this area.

1 **COST ESTIMATES**

2 Cost estimates for alternative 3 are identified
3 in table 7 below. The costs shown here are
4 not for budgetary purposes; they are only
5 intended to show a relative comparison of
6 costs among the alternatives.

7
8 The alternatives describe the maximum
9 potential capital improvements; lesser
10 improvements may be implemented or built
11 in phases if necessary. Implementation of the
12 approved plan would depend on future
13 funding. The approval of this plan does not
14 guarantee that the funding and staffing
15 needed to implement the plan will be
16 forthcoming. Full implementation of the
17 actions in the approved general management
18 plan could be many years in the future.
19 Additionally, some of the future long-term
20 funding needed to implement the various
21 actions called for in the alternatives is
22 anticipated to come from nonfederal
23 partners, consistent with the park's current
24 practices.

25
26 The costs of this alternative reflect the effort
27 to focus management of the park's
28 resources, visitor experiences, and
29 partnerships on the park's most significant
30 sites.

31
32
33 **Annual Operating Costs**

34 The annual operating costs for alternative 3
35 comprise the current annual operating costs,
36 with changes made to reflect additional
37 staffing needs. The annual operating costs of
38 alternative 3 are estimated at \$31.6 million.

39
40
41 **Staffing Requirements**

42 Additional staffing needs were estimated to
43 support alternative 3. While some divisions
44 would not require changes in staff, total
45 additional staff needed to support
46 alternative 3 is estimated at 43 FTE. Most
47 divisions would require additional staff to

48 support the newly acquired lands in San
49 Mateo County.

50
51 Other additional staff would be needed to
52 implement new uses of park lands. An
53 increase in interpretive staff would support
54 expanded interpretive programs throughout
55 the park. A greater number of law enforce-
56 ment officers would provide evening
57 coverage, marine patrol, and response to
58 increased visitor recreational activities. With
59 the addition of new trails and facilities and
60 rehabilitation of other facilities, maintenance
61 responsibilities would increase, also
62 requiring additional staff.

63
64 The natural resources division would have
65 additional responsibilities related to the
66 inventory, monitoring, and restoration of
67 natural areas and habitats.

68
69 The cultural resources division would have
70 additional tasks associated with expanded
71 stewardship centers throughout the park,
72 museum collection program and outreach,
73 and restoration of historic structures and
74 landscapes. The responsibilities of the
75 planning division for project coordination,
76 compliance, and public involvement would
77 also expand, requiring additional staff.

78
79 Other divisions, including business and
80 administration, environmental and safety,
81 and public affairs, would each require a few
82 additional staff members to manage new
83 areas and uses of park lands. New staff
84 would also manage the rigorous user
85 capacity program at Alcatraz Island and
86 Muir Woods National Monument.

87
88
89 **Proposed New Staff**

- 90 ▪ 10 positions in visitor resources and
91 protection
92 ▪ 9 positions in maintenance
93 ▪ 6 positions in interpretation and
94 education
95 ▪ 2 positions in planning and
96 compliance

- 1 ▪ 4 positions in cultural resources and
- 2 museum management
- 3 ▪ 7 positions in natural resources
- 4 management and science
- 5 ▪ 1 positions in public affairs
- 6 ▪ 1 positions in business management
- 7 ▪ 2 positions in administration
- 8 ▪ 1 positions in environmental and
- 9 safety programs

10

11 **One-time Costs**

12 Alternative 3 proposes a high level of
 13 restoration and rehabilitation of historic
 14 resources. Total one-time costs for park
 15 lands in Marin, San Francisco, and San
 16 Mateo counties are estimated at \$78.2
 17 million.

**TABLE 7. COSTS ASSOCIATED WITH 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

TABLE 7. COSTS ASSOCIATED WITH IMPLEMENTATION OF ALTERNATIVE 3 FOR PARK LANDS IN MARIN, SAN FRANCISCO, AND SAN MATEO COUNTIES

Summary of Costs for Alternative 3	
<i>Historic Preservation</i>	
China Beach: rehabilitate structures and parking	\$2,430,000
Fort Barry and Fort Cronkhite: rehabilitate military structures	\$4,360,000
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
<i>Natural Resource Restoration</i>	
Marin County sites	\$2,300,000
San Francisco sites	\$1,010,000
San Mateo County sites	\$190,000
<i>Facility Removal</i>	
Facilities at various park sites	\$1,430,000
<i>New Construction</i>	
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

**TABLE 7. COSTS ASSOCIATED WITH IMPLEMENTATION OF ALTERNATIVE 3
FOR PARK LANDS IN MARIN, SAN FRANCISCO, AND SAN MATEO COUNTIES**

Summary of Costs for Alternative 3	
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

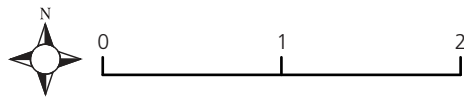
Alternative 3 – Marin County

Golden Gate National Recreation Area

Management Zones

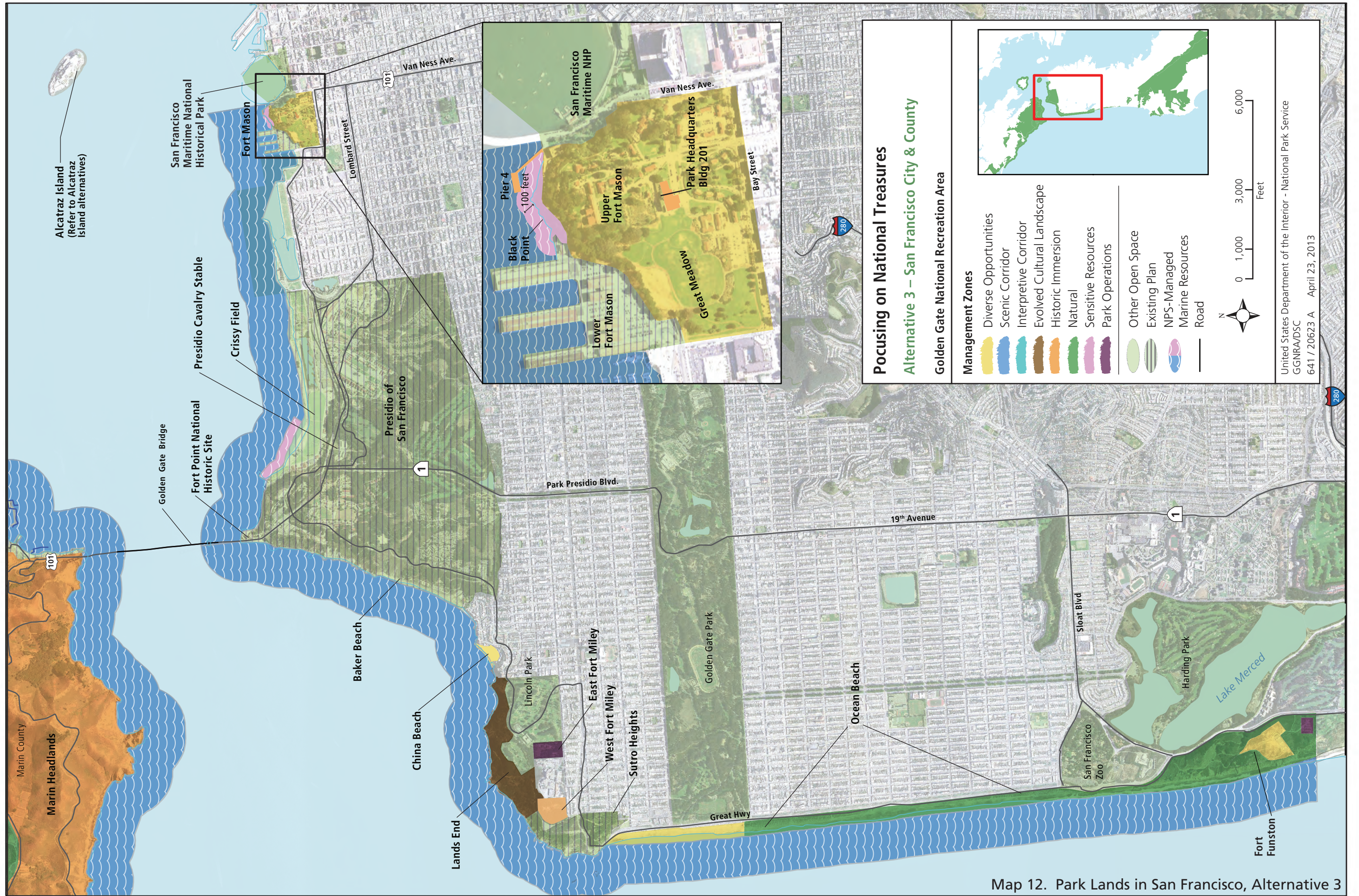
- Diverse Opportunities
- Scenic Corridor
- Interpretive Corridor
- Evolved Cultural Landscape
- Historic Immersion
- Natural
- Sensitive Resources
- Park Operations

- Other Open Space
- Existing Plan
- NPS-Managed Marine Resources
- Road
- Tunnel
- Trail



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 GGNRA/DSC
 641 / 20617 A April 23, 2013

Map 11. Park Lands in Marin County, Alternative 3



Map 12. Park Lands in San Francisco, Alternative 3

SUMMARY COST ESTIMATES FOR PARK LANDS IN MARIN, SAN FRANCISCO, AND SAN MATEO COUNTIES

1 The cost figures shown here and throughout
2 the plan are intended only to provide
3 conceptual costs for general comparison of
4 alternatives. National Park Service and
5 industry cost estimating guidelines were
6 used to develop the costs (in 2009 dollars) to
7 the extent possible, but the estimates should
8 not be used for budgeting purposes. Specific
9 costs will be determined in subsequent,
10 more detailed planning and design exercises
11 after considering the design of facilities,
12 identification of detailed resource
13 protection needs, and changing visitor
14 expectations. Actual costs to the National
15 Park Service will vary depending on when
16 actions are implemented and on
17 contributions by partners and volunteers.
18

19 The alternatives describe the maximum
20 potential capital improvements; lesser
21 improvements may be implemented or built
22 in phases if necessary. Implementation of the
23 approved plan will depend on future
24 funding. The approval of this plan does not
25 guarantee that the funding and staffing
26 needed to implement the plan will be
27 forthcoming. Full implementation of the
28 actions in the approved general management
29 plan could be many years in the future.
30 Additionally, some of the future long-term
31 funding needed to implement the various
32 actions called for in the alternatives is
33 anticipated to come from nonfederal
34 partners, consistent with the park's current
35 practices.

**TABLE 8. SUMMARY COSTS ASSOCIATED WITH 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

1 The “Actions Common to All Alternatives”
 2 section, earlier in this document, contained a
 3 discussion of facilities that could be removed
 4 to reduce maintenance funding needs.
 5 However, in addition to removing facilities,
 6 expending one-time costs on park facilities
 7 would reduce the deferred maintenance by
 8 bringing the facilities up to a sustainable
 9 condition. Deferred maintenance—or work
 10 needed to bring park assets into good
 11 condition—exceeds \$198.1 million at
 12 Golden Gate National Recreation Area,
 13 according to the 2009 *Park Asset*
 14 *Management Plan*.
 15

16 Each alternative contains proposals that
 17 would reduce total deferred maintenance.
 18 Although the reductions in deferred
 19 maintenance are similar in amount for each
 20 alternative, the alternatives do not all
 21 contain the same proposals for reducing
 22 deferred maintenance; each alternative
 23 proposes different treatments for structures,
 24 including rehabilitation or removal.
 25
 26 Park staff continue to seek out additional
 27 measures to reduce deferred maintenance at
 28 the park. The *Park Asset Management Plan*,
 29 in particular, addresses strategies for
 30 reducing deferred maintenance.

TABLE 9. REDUCTIONS IN DEFERRED MAINTENANCE ASSOCIATED WITH 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

1 The environmentally preferable alternative
2 is the alternative that promotes the national
3 environmental policy expressed in the
4 National Environmental Policy Act (section
5 101[b]). This includes alternatives that

- 6
7 1. “fulfill the responsibilities of each
8 generation as trustee of the
9 environment for succeeding
10 generations;
- 11 2. ensure for all Americans safe,
12 healthful, productive, and
13 esthetically and culturally pleasing
14 surroundings;
- 15 3. attain the widest range of beneficial
16 uses of the environment without
17 degradation, risk of health or safety,
18 or other undesirable and unintended
19 consequences;
- 20 4. preserve important historic, cultural,
21 and natural aspects of our national
22 heritage and maintain, wherever
23 possible, an environment that
24 supports diversity and variety of
25 individual choice;
- 26 5. achieve a balance between
27 population and resource use that will
28 permit high standards of living and a
29 wide sharing of life’s amenities; and
- 30 6. enhance the quality of renewable
31 resources and approach the
32 maximum attainable recycling of
33 depletable resources” (NPS DO-12
34 Handbook, Section 2.7D).

35
36 The alternatives are very similar with respect
37 to criteria 1, 2, 5, and 6. The park staff
38 continues to work in achieving these factors
39 as a basic course of implementing the legal
40 mandates for Golden Gate National
41 Recreation Area. All the alternatives equally
42 meet the attainment for these four criteria,

43 therefore the evaluation focuses on criteria 3
44 and 4.

45
46 The no-action alternative is included to
47 provide a comparison against the action
48 alternatives. The legal foundation for
49 managing these park lands requires the
50 National Park Service to provide outdoor
51 recreation opportunities while protecting
52 the natural, historic, and scenic values of the
53 park. The no-action alternative does not
54 fully provide for the widest range of
55 beneficial uses. Some of the park lands are
56 not easily identifiable as public lands and are
57 not very welcoming to the park visitor. Most
58 of the recent land additions and some
59 existing park lands are in need of natural and
60 cultural resource restoration or stabilization.
61 These lands lack appropriate land use
62 planning; therefore, the desired conditions
63 for future recreation activities and levels of
64 resource preservation are not defined.
65 Through this planning process, the future
66 desired conditions have been described for
67 each of the action alternatives.

68
69 Alternative 2 emphasizes management of
70 these park lands for natural resource
71 restoration and preservation, while
72 providing for an increase in hiking and
73 primitive recreational opportunities. This
74 alternative identifies actions that will
75 provide a slightly wider range of beneficial
76 uses than the no-action alternative. But
77 visitor opportunities would not be as diverse
78 as those identified in alternatives 1 and 3.

79
80 In alternative 3, the focus is on preserving
81 and strengthening those park resources and
82 values that have national significance. This
83 would result in a more diverse range of
84 visitor opportunities and greater resource
85 restoration, protection, interpretation, and
86 stewardship for both natural and cultural

1 resources than is provided in the no-action
2 alternative and alternative 2.
3
4 In alternative 1, the emphasis is to be
5 welcoming to park visitors (improved
6 information, facilities, and signing) while
7 providing diverse opportunities and
8 restoring the park's natural and cultural
9 resources. The emphasis on visitor
10 opportunities, education, and stewardship
11 provides additional actions that better attain
12 the widest range of beneficial uses of the
13 environment without degradation, risk of
14 health or safety, or other undesirable and
15 unintended consequences. This is
16 accomplished by incorporating actions for
17 natural and cultural resources preservation
18 and restoration from the other alternatives
19 where there is a well-defined advantage.
20 Implementation of alternative 1 would

21 provide the best means to preserve
22 important historic, cultural, and natural
23 aspects of our national heritage and
24 maintain, wherever possible, an
25 environment that supports diversity and
26 variety of individual choice.
27
28 After considering the environmental
29 consequences of the alternatives, including
30 consequences to the human environment,
31 the National Park Service has concluded that
32 the NPS preferred alternative, alternative 1
33 for park lands in Marin, San Francisco, and
34 San Mateo counties, is also the environ-
35 mentally preferable alternative. This
36 alternative best realizes the full range of
37 national environmental policy goals as stated
38 in section 101 of the National
39 Environmental Policy Act.

SUMMARY TABLES OF THE ALTERNATIVES FOR PARK LANDS IN MARIN, SAN FRANCISCO, AND SAN MATEO COUNTIES

TABLE 10. 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			
<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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			
<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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 Area			
<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Same as alternative 1.
Slide Ranch			
<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Same as alternative 2.

TABLE 10. 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
Lower Redwood Creek (former Banducci flower farm and surrounding area)			
<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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 on Redwood Creek. To protect salmon, collaborate with community to increase water storage capacity for use in dry season. 	<ul style="list-style-type: none"> Same as alternative 2.
Muir Beach			
<ul style="list-style-type: none"> Manage the beach, creek, parking lot and picnic area as planned in the wetland and creek restoration plan. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Same as alternative 1. 	<ul style="list-style-type: none"> Same as alternative 1.
Golden Gate Dairy			
<ul style="list-style-type: none"> Manage area to support equestrian facility and Muir Beach Volunteer Fire Department within historic ranch buildings. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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 and Surrounding Parklands (from Oakwood Valley to the ocean, and northwest to Highway 1)			
<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Provide improvements at trailhead, such as potable water, restrooms, and possibly a food kiosk. Retain equestrian facilities near the main trailhead, and possibly expand them. Retain walk-in group camping. Remove structures, including the park horse patrol, from lower Tennessee Valley, and restore wetland and riparian habitat. 	<ul style="list-style-type: none"> Manage Tennessee Valley trailhead and nearby 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. 	<ul style="list-style-type: none"> Manage Tennessee Valley trailhead and nearby 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.
Marin Headlands: Marin City Ridge, and Gerbode Valley			
<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Manage area to restore and preserve coastal corridor of contiguous habitat and natural resources. Remove nonhistoric buildings and infrastructure and restore lands. Convert unnecessary management roads to trails. Explore opportunities to provide trail connections to 	<ul style="list-style-type: none"> Same as alternative 1.

TABLE 10. 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
	opportunity to provide a community trailhead in Marin City.	local communities.	
Marin Headlands: Fort Barry and Fort Cronkhite			
<ul style="list-style-type: none"> Continue to use 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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			
<ul style="list-style-type: none"> Manage area to provide workforce housing for park and partner staff 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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)			
<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. Add interpretive signs, restrooms, and benches to some overlooks. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. Protect habitat for threatened/endangered species.
Offshore Ocean and Bay Environment			
<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Work to preserve the integrity of ocean and bay environment and accommodate public uses including water recreation, boating, and noncommercial fishing.

TABLE 11. 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			
<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Manage this district as a portal to the park; use selected historic structures for orientation and visitor services. Rehabilitate historic landscape and stabilize 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. 	<ul style="list-style-type: none"> Manage this area similar to Alternative 1, but selected historic structures, including Pier 4, would be adaptively 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. 	<ul style="list-style-type: none"> Manage Fort Mason as primary visitor entrance to the park, with an orientation and information center. Preserve historic structures and landscapes. Expand overnight accommodations. Rehabilitate historic Pier 4 to provide an additional embarkation point to Alcatraz Island. Manage Great Meadow and shoreline at Black Point same as in Alternative 1.
China Beach			
<ul style="list-style-type: none"> Manage the area to provide for enjoyment of a secluded beach and bird watching. 	<ul style="list-style-type: none"> Improve visitor facilities and access to support current uses. 	<ul style="list-style-type: none"> Same as alternative 1. 	<ul style="list-style-type: none"> Same as alternative 1.
Lands End (Northern area)			
<ul style="list-style-type: none"> Manage the area to preserve and enhance the rugged coastal landscape. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Same as alternative 1.
Fort Miley			
<ul style="list-style-type: none"> Manage the area to preserve the historic structures and landscapes and provide public and park operations uses. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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.
Ocean Beach			
<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Collaborate with City of San Francisco and other agencies to address coastal erosion, sea 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 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Same as alternative 2.

TABLE 11. 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
	erosion.		
Fort Funston			
<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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			
<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Preserve integrity of ocean and bay environment. Accommodate appropriate public uses including water recreation, boating, and noncommercial fishing. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Work to preserve the integrity of ocean and bay environment and accommodate public uses including water recreation, boating, and noncommercial fishing.

TABLE 12. 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
South of Fort Funston to South of Mussel Rock			
<ul style="list-style-type: none"> Limited management would continue. 	<ul style="list-style-type: none"> Preserve and enhance natural and scenic values; allow for coastal geologic processes. Provide modest visitor access facilities; protect shorebird habitat. 	<ul style="list-style-type: none"> Same as alternative 1. 	<ul style="list-style-type: none"> Same as alternative 1.
Milagra Ridge			
<ul style="list-style-type: none"> Manage to protect and restore natural habitat, to protect historic coastline defenses. Maintain limited trail access. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Same as alternative 1 without additional amenities and improved access at center of ridge. 	<ul style="list-style-type: none"> Same as alternative 2.
Sheldance Nursery Area			
<ul style="list-style-type: none"> Manage area for multiple uses including commercial nursery, trailhead, and park maintenance storage. 	<ul style="list-style-type: none"> Transition area to provide visitor services including trailhead parking, restrooms, orientation, and community stewardship/education center. Designate some portion for park operations. 	<ul style="list-style-type: none"> Same as alternative 1. 	<ul style="list-style-type: none"> Same as alternative 1.
Sweeney Ridge (including Cattle Hill, Picardo Ranch, and Sweeney Ridge Gateway conservation easement)			
<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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			
<ul style="list-style-type: none"> Manage to preserve and enhance habitat for threatened and endangered species and to restore natural functions. Develop hiking trails network. 	<ul style="list-style-type: none"> Manage land for ongoing restoration of natural habitats and to protect endangered species. Improve trail system and its connections and improve access. 	<ul style="list-style-type: none"> Control visitor use to protect threatened and endangered species on site. Continue community stewardship to restore ecosystem. 	<ul style="list-style-type: none"> Same as Alternative 1.
Point San Pedro			
<ul style="list-style-type: none"> Not currently managed by NPS, but could be added to the park after construction of the State Route 1 tunnel. 	<ul style="list-style-type: none"> If acquired, manage to maintain natural features and scenic views, and restore habitat. Improve trails and trailheads; control access to protect nesting seabirds. 	<ul style="list-style-type: none"> Same as Alternative 1. 	<ul style="list-style-type: none"> Same as Alternative 1.

TABLE 12. 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
Rancho Corral de Tierra			
<ul style="list-style-type: none"> Manage for limited public access for recreation such as hiking and horseback riding. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Same as alternative 1, with fewer amenities. Remove unnecessary management 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. 	<ul style="list-style-type: none"> Same as alternative 1.
Montara Lighthouse			
<ul style="list-style-type: none"> Currently managed by the U.S. Coast Guard; current uses include a hostel. Potential to be transferred to NPS. 	<ul style="list-style-type: none"> Preserve and interpret historic structures and associated resources. Enhance hostel and day use programming. Encourage multiagency visitor center in vicinity. Improve trail connections. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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			
<ul style="list-style-type: none"> Manage this area to preserve cultural and natural resources of second-growth redwood forest and to provide access to regional trail system. 	<ul style="list-style-type: none"> Manage this area to provide trail-based recreation in natural setting. Restore redwood forest ecosystem and pursue trail connections. Interpret logging history. 	<ul style="list-style-type: none"> Same as alternative 1. 	<ul style="list-style-type: none"> Same as alternative 1.
San Francisco Public Utilities Commission Peninsula Watershed Easements			
<ul style="list-style-type: none"> Managed by San Francisco Public Utilities Commission to protect water supply and ecological and cultural resources. The NPS administers a scenic easement and a recreation easement to protect natural values and limited recreational uses compatible with ongoing water operations. 	<ul style="list-style-type: none"> Continue to coordinate with San Francisco Public Utilities Commission to administer the easements consistent with easement goals and restrictions. Continue to cooperate with SFPUC 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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.
Offshore Ocean Environments			
<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Management could be extended to cover new offshore areas added to the park. 	<ul style="list-style-type: none"> Same as alternative 1. 	<ul style="list-style-type: none"> Same as alternative 1.

TABLE 13. 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	<ul style="list-style-type: none"> Total gross emissions would be 6,818 MTCE, resulting in long-term, minor to moderate, adverse impacts on the park's carbon footprint. Overall, when compared to background levels of air pollution and GHG emissions in the region or the nation, impacts on air quality from the no-action alternative would be long term, adverse, and negligible. 	<ul style="list-style-type: none"> The combined effect of the actions included in alternative 1 would increase the gross emissions of the entire park by 7% to 7,292 MTCE. This would result in long-term, minor, adverse impacts on the NPS' carbon footprint. As in the no-action alternative, impacts on air quality would be negligible when compared to background levels of regional and national air pollution. The preferred alternative (alternative 1 for Marin, San Francisco, and San Mateo counties and alternative 3 for Alcatraz Island) would result in total emissions of 7,166 MTCE, an increase of 5% from the no action alternative. 	<ul style="list-style-type: none"> The combined effect of the actions included in alternative 2 would reduce the gross emissions of the entire park by 1% to 6,758 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 on air quality would be negligible when compared to background levels of regional and national air pollution. 	<ul style="list-style-type: none"> The combined effect of the actions included in alternative 3 would reduce the gross emissions of the entire park by 1%, to 6,861 MTCE. This would result in long-term, minor, beneficial impacts on the park's carbon footprint. As in the no-action alternative, impacts on air quality would be negligible when compared to background levels of regional and national air pollution.
Soils and Geologic Resources and Processes	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> The elimination of unsustainable roads and trails would reduce soil erosion, resulting in long-term, minor, beneficial, localized impacts on 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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.
Water Resources and Hydrologic Processes	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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 on water quality, while the construction, maintenance or removal of trails and facilities would have short-term, minor to moderate, adverse impacts on water quality. There would be long-term minor to moderate, adverse, localized impacts on water quality resulting from cleaning of primary visitor use areas on Alcatraz Island and increased vessel traffic in San Francisco Bay. 	<ul style="list-style-type: none"> 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 on 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 on 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 on water quality. 	<ul style="list-style-type: none"> 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 on water resources and hydrologic process. However, the construction, maintenance, or removal of trails and facilities would have short-term, minor to moderate, adverse impacts on water quality. The scale of historic structure rehabilitation and facility improvements on Alcatraz Island could result in impacts on 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 on water quality.

TABLE 13. 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
Habitat (vegetation and wildlife)	<ul style="list-style-type: none"> The conditions related to existing facilities would continue to cause fragmentation of habitat and the potential for nonnative plant species to displace native species. The continuation of current recreational use also would reduce habitat integrity. The impacts would 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 on waterbirds would be long-term, minor to moderate, adverse, and localized. 	<ul style="list-style-type: none"> 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, beneficial, 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 to moderate, 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 on waterbirds would be long-term, moderate, adverse, and localized. 	<ul style="list-style-type: none"> 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, moderate, beneficial, localized to parkwide 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. 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 on waterbirds on the island would be long-term, moderate, beneficial, and localized. 	<ul style="list-style-type: none"> 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 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 on waterbirds on the island would be long-term, moderate, adverse, and localized.
Special Status Species (federal and state threatened and endangered species)	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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 (Federal endangered) and Steelhead trout (Federal threatened), Central California Coast: “may affect, not likely to adversely affect” 	<ul style="list-style-type: none"> 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” 	<ul style="list-style-type: none"> 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 (Federal endangered) and Steelhead trout (Federal threatened), Central California Coast: “may affect, not likely to adversely affect”

TABLE 13. 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
Special Status Species (federal and state threatened and endangered species) (cont.)	<ul style="list-style-type: none"> ▪ San Francisco garter snake (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 Bruno elfin butterfly (Federal endangered): “may affect, not likely to adversely affect” ▪ Coho salmon (Federal endangered) and steelhead trout (Federal threatened): Central California Coast “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. 	<ul style="list-style-type: none"> ▪ Western snowy plover (Federal threatened): “may affect, not 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): long-term, adverse impact that is minor and localized. 	<ul style="list-style-type: none"> ▪ Western snowy plover (Federal threatened): “may affect, not 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): long-term, adverse impact that is minor and localized. 	<ul style="list-style-type: none"> ▪ Western snowy plover (Federal threatened): “may affect, not 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): long-term, adverse impact that is minor and localized.
Cultural Resources				
Archeological Resources	<ul style="list-style-type: none"> ▪ 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 <i>King Philip</i> and <i>SS Tennessee</i>) 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 on archeological resources would be permanent and minor to moderate in intensity. 	<ul style="list-style-type: none"> ▪ Because 90% of the park has not been surveyed for archeological resources, there is potential for 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 <i>King Philip</i> and <i>SS Tennessee</i>) could 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 stabilized, provided security, or other protection commensurate with their significance and sensitivity—a beneficial impact. Such resources could 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, a mitigation strategy would be developed in consultation with the state historic preservation officer. Any adverse impacts on archeological resources would be permanent and minor to moderate in intensity. 	<ul style="list-style-type: none"> ▪ 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 on archeological resources would be permanent and minor to moderate in intensity. 	<ul style="list-style-type: none"> ▪ 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 on archeological resources would be permanent and minor to moderate in intensity.

TABLE 13. 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
Ethnographic Resources/ Traditional Cultural Properties	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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.
Historic Structures	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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 on 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. 	<ul style="list-style-type: none"> 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 on 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. 	<ul style="list-style-type: none"> 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 the greatest number of historic buildings preserved in “good” condition. It would also provide public access to the greatest number of historic buildings. Although public access and adaptive reuse could result in localized adverse impacts on 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 on 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.

TABLE 13. 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
Cultural Landscape Resources	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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 on cultural landscape resources. However, the loss of some cultural landscape resources would result in permanent adverse impacts of minor intensity.
Park Collections	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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.
Visitor Use and Experience				
	<ul style="list-style-type: none"> 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 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 cell house 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. 	<ul style="list-style-type: none"> The actions proposed in alternative 1 for Golden Gate National Recreation Area would result in long-term, moderate, beneficial impacts on 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 beneficial impact on the visitor experience by reducing traffic congestion and use conflicts. Alternative 1 would result in long-term, moderate, beneficial impacts on 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. 	<ul style="list-style-type: none"> The actions proposed in alternative 2 for Golden Gate National Recreation Area would result in long-term, minor to moderate, beneficial impacts on 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 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 on 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. 	<ul style="list-style-type: none"> The actions proposed in alternative 3 for Golden Gate National Recreation Area would result in long-term, moderate, beneficial impacts on visitor experience. The most substantial 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 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 on 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.

TABLE 13. 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
Social and Economic Environment				
	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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 on 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. 	<ul style="list-style-type: none"> 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 on 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). 	<ul style="list-style-type: none"> 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 on quality 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				
	<ul style="list-style-type: none"> 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. 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 	<ul style="list-style-type: none"> 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-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 	<ul style="list-style-type: none"> 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 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. 	<ul style="list-style-type: none"> 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-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.

TABLE 13. 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
	impacts on transportation to or within Alcatraz Island.	year-round trail access would have a long-term, minor, beneficial impact on pedestrian access to park features and circulation on the island.		
Park Management, Operations, and Facilities				
	<ul style="list-style-type: none"> Inadequate staffing levels would result in continued long-term, moderate, and adverse impacts on operations. Continued partner and volunteer efforts would result in long-term, moderate, beneficial impacts on 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 on 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 on operations. 	<ul style="list-style-type: none"> Increased number of park staff would result in long-term, moderate, beneficial impacts on 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 on 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 on park operations. 	<ul style="list-style-type: none"> Increased staff would result in long-term, moderate, beneficial impacts on 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 on 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 on operations. 	<ul style="list-style-type: none"> Increased staff would result in long-term, moderate, beneficial impacts on 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 on 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 on park operations.



NO-ACTION ALTERNATIVE

1 OVERVIEW

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

17
18 Under the no-action alternative, the island
19 would continue to be managed to preserve
20 historic and natural resources and provide
21 public access to the variety of settings and
22 experiences where appropriate and safe. The
23 primary visitor experience would be day use,
24 beginning with a ferry ride from San
25 Francisco. The island experience would
26 continue to be centered on the federal
27 penitentiary; however, other periods of the
28 island history and bird life would also be
29 interpreted. Scheduled evening tours of
30 Alcatraz Island would continue to provide
31 visitors with this unique opportunity.

32
33 The deterioration of buildings and land-
34 scapes (exacerbated by the harsh island
35 environment) and the protection of areas for
36 bird nesting habitat (at least for part of the
37 year) would continue to limit visitor access
38 to much of the island, at least for part of the
39 year. Rehabilitation of historic buildings and
40 landscaped areas would be ongoing and
41 subject to available funding.

42
43 The island supports one of the largest
44 concentrations of colonial nesting
45 waterbirds along the central coast of

46 California. Many areas of the island would
47 continue to be closed during breeding
48 season to protect the colonies from human
49 disturbance. In areas open to the public,
50 western gulls would be managed under an
51 existing agreement with the U.S. Fish and
52 Wildlife Service in accordance with the
53 Migratory Bird Treaty Act, through the use
54 of bird exclusion measures and other
55 deterrents to protect visitor health and
56 safety. Education and stewardship
57 opportunities would inform visitors about
58 the importance of the island to nesting birds
59 and what the public can do to help protect
60 them.

61
62 Management of Alcatraz Island is currently
63 guided by the 1980 General Management
64 Plan and the 1993 Alcatraz Island
65 Development Concept Plan, which
66 established zones of year-round and
67 seasonal access and established areas that
68 are closed year-round to visitors. See
69 "Map 4: 1980 General Management Plan,
70 Park Lands in Marin and San Francisco
71 Counties (No-action Alternative)" for
72 additional information on current
73 management.

74 75 76 FERRY EMBARKATION

77 Access to the island would remain at the
78 docks on San Francisco's northern
79 waterfront. The park would continue to
80 provide basic orientation and visitor services
81 at the pier. Ticketing would continue to be
82 through a reservation system and ferries
83 would operate daily on a year-round
84 schedule. The length of the ferry trip
85 between the mainland and Alcatraz Island
86 would remain approximately 10–15 minutes.

87
88

1 **Arrival Area**

2 **(including the Dock, Building 64 [Historic Barracks], and the Sallyport)**

3 The arrival area would continue to provide
4 orientation, restrooms, and other support
5 services for visitors arriving and departing
6 Alcatraz Island. This area includes a mix of
7 structures and landscapes that would
8 continue to support the high volume of
9 visitation. Portions of the first floor of
10 Building 64, the historic barracks, would be
11 adaptively used for administrative purposes
12 and some visitor services, including a small
13 gift shop, exhibits, and a theater. The upper
14 floors have not been rehabilitated and would
15 remain unused. All visitors would continue
16 to pass through the Sallyport, one of the
17 oldest structures on the island.
18
19
20

21 **Main Prison Area**

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

23 The Main Prison Building and several
24 adjacent areas, like the Recreation Yard,
25 have been rehabilitated to represent the
26 federal penitentiary era. They would
27 continue to be managed as part of the central
28 visitor experience. Visitors would have
29 access to most of the building and yard.
30 Several areas, like the Civil War era Citadel
31 (located below the Main Cellblock) and part
32 of the building's hospital wing, would
33 remain closed. Visiting the Main Prison
34 Building would primarily be a self-guiding
35 experience facilitated by an audio tour.
36
37
38
39
40

41 Many adjacent landscape areas would
42 continue to be minimally preserved and
43 inhabited by waterbirds both seasonally and
44 year-round, while other areas include the
45 island's restored historic gardens. Before the
46 National Park Service assumed management
47 of the island, the Government Services
48 Administration demolished several
49 residential structures on the Parade Ground.

50 The piles of ruins from these demolished
51 structures would remain and would be used
52 seasonally by waterbirds.

53

54

55 **LIGHTHOUSE**

56 The lighthouse would continue to be
57 managed for its historic function as an early
58 aid to navigation in San Francisco Bay. It is
59 currently managed by the U.S. Coast Guard,
60 but is expected to be transferred to the
61 National Park Service. Visitor access would
62 be highly controlled.
63
64

63

64

65 **NORTH END OF THE ISLAND**

66 These buildings and adjacent yards were
67 once active parts of the prison. They would
68 continue to house the island's diesel
69 generators that currently provide all power
70 to the island's facilities and be used for
71 operations and maintenance functions. The
72 state of preservation would be minimal, and
73 visitors would generally not be permitted in
74 this area.
75
76

75

76

77 **ISLAND PERIMETER**

78 The perimeter of the island, including the
79 steep cliffs and immediate shore, would
80 continue to be managed to preserve habitat
81 for birds and marine wildlife. Visitor access
82 would be on primary trails that are open
83 year-round, and on seasonal trails such as
84 the Agave Trail. Other areas would be closed
85 year-round for visitor safety and seabird
86 habitat protection.
87
88

87

88

89 **OFFSHORE BAY ENVIRONMENT**

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

96

1 **SUSTAINABILITY**

2 The National Park Service would continue
 3 to develop and implement sustainable
 4 approaches to meet the island’s energy,
 5 water, and wastewater needs. Actions that
 6 are being considered include replacing diesel
 7 generators with renewable (e.g., photo-
 8 voltaic panels) and grid-tied energy sources.
 9 These infrastructure technologies would be
 10 interpreted where possible.

11
 12
 13 **COST ESTIMATES**

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

19
 20 The alternatives describe the maximum
 21 potential capital improvements; lesser
 22 improvements may be implemented or built
 23 in phases if necessary. The implementation
 24 of the approved plan will depend on future
 25 funding. The approval of this plan does not
 26 guarantee that the funding and staffing
 27 needed to implement the plan will be
 28 forthcoming. Full implementation of the
 29 actions in the approved general management
 30 plan could be many years in the future.
 31 Additionally, some of the future long-term
 32 funding needed to implement the various
 33 actions called for in the alternatives is
 34 anticipated to come from nonfederal
 35 partners, consistent with the park’s current
 36 practices.

37

38 **Annual Operating Costs**

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

42
 43
 44 **One-time Capital Costs**

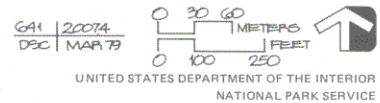
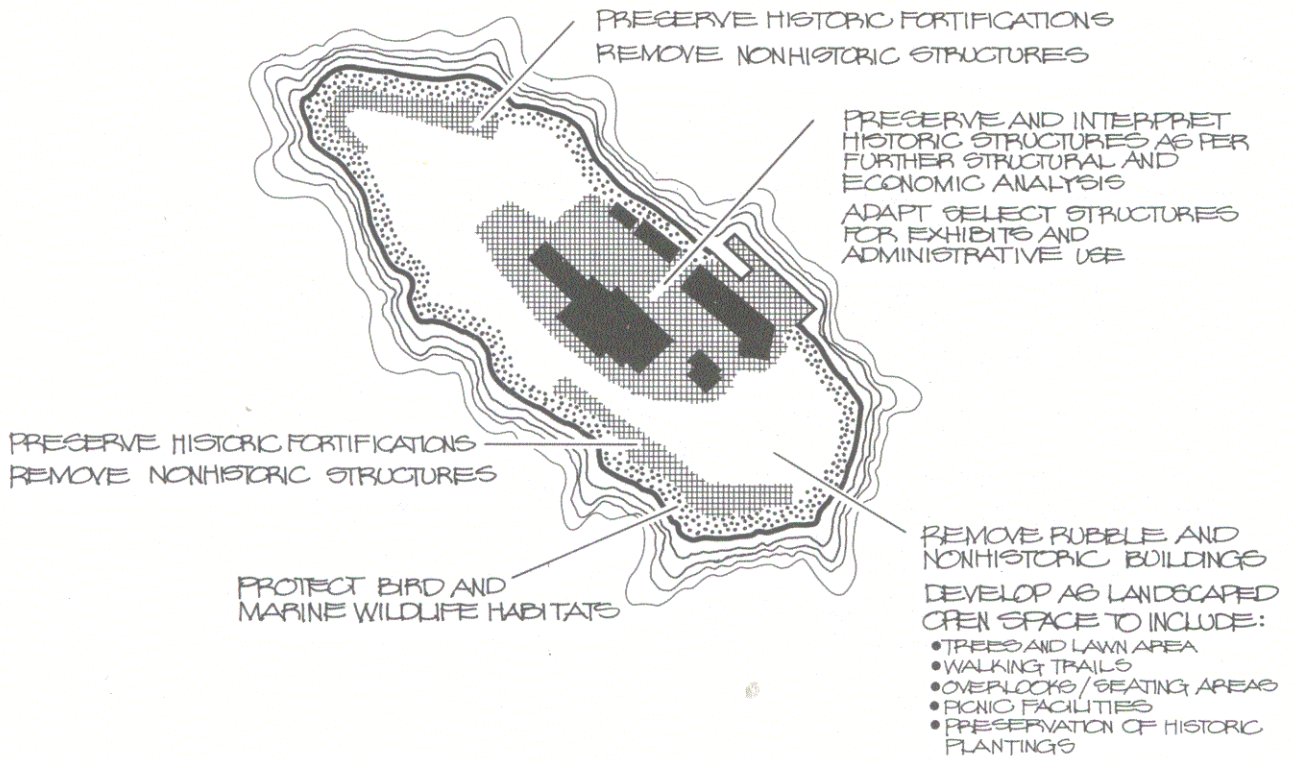
45 The estimated costs of the no-action
 46 alternative reflect the continuation of
 47 current management. One-time costs for the
 48 no-action alternative are the costs for those
 49 projects that are currently approved and
 50 funded—any requested but unfunded
 51 projects are not considered in this analysis.
 52 Therefore, while the action alternatives
 53 contain estimates for 20 years of proposed
 54 projects, the no-action alternative assumes
 55 no new projects would take place except
 56 those projects funded in 2009. Projects
 57 include electrical upgrades and repair of the
 58 Alcatraz Island morgue and total \$4.3
 59 million.

60
 61 In the no-action alternative, the current level
 62 of facilities would be continued. Improve-
 63 ments to facilities would include deferred
 64 maintenance and rehabilitation projects.

65
 66 Operating costs and staff numbers for
 67 Alcatraz Island are included in Golden Gate
 68 National Recreation Area analysis.

TABLE 14. 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



ALCATRAZ

DEVELOPMENT CONCEPT
GOLDEN GATE NATIONAL RECREATION AREA
POINT REYES NATIONAL SEASHORE

ALTERNATIVE 1: CONNECTING PEOPLE WITH THE PARKS

1 OVERVIEW

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

10

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

20

21 Visitors would have access to the majority of
22 the island's historic structures and land-
23 scapes to experience the layers of island
24 history and its natural resources and settings.
25 Many of the indoor and outdoor spaces
26 currently inaccessible to visitors would be
27 reopened to expand the range of available
28 activities.

29

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

37

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

45

46

47 FERRY EMBARKATION

48 The visitor's immersion in Alcatraz Island
49 history would begin at the main embarkation
50 site in San Francisco. The primary embarka-
51 tion site would remain on San Francisco's
52 northern waterfront where visitor services,
53 including education about Alcatraz and
54 orientation to Golden Gate National
55 Recreation Area, could be enhanced.
56 Additional ferry connections could be
57 provided to other park sites as part of the
58 facility's role as a portal to the park.
59 Ticketing would continue to be through a
60 reservation system, and ferries would
61 operate daily on a year-round schedule. The
62 length of the ferry trip between the mainland
63 and Alcatraz Island would remain
64 approximately 10–15 minutes.

65

66

67 **Arrival Area**

68 **(including the Dock, Building 64 (Historic**
69 **Barracks), and the Sallyport)**

70

71 ***Diverse Opportunities Zone***

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

82

83

84 **Main Prison Area**

85 **(including the Citadel, Main Cellblock,**
86 **Hospital Wing, Administration Wing,**
87 **Recreation Yard, New Industries**
88 **Building, Post Exchange, and Parade**
89 **Ground)**

1 ***Historic Immersion Zone***
2 ***(Main Prison Building)***

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

9
10 ***Evolved Cultural Landscape Zone***
11 ***(Guardhouse, Post Exchange, and***
12 ***Gardens)***

13 In this alternative, the park would manage
14 the structures and landscaped areas
15 surrounding the Main Prison Building to
16 protect and interpret the layers of history.
17 The Post Exchange and Warden’s House
18 ruins would be stabilized and the
19 Guardhouse would be rehabilitated.

20
21 ***Diverse Opportunities Zone***
22 ***(Hospital Wing of Main Prison***
23 ***Building, Recreation Yard, New***
24 ***Industries Building, and Parade***
25 ***Ground)***

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

40
41 The building ruins on the Parade Ground
42 could be removed and bird populations
43 would be managed to accommodate
44 enhanced visitor access in coordination with
45 the management of western gulls. This
46 rehabilitation of the parade ground could
47 incorporate measures to support wildlife.

48

49 **LIGHTHOUSE**

50 ***Historic Immersion Zone***

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

57
58
59 **NORTH END OF THE ISLAND**

60 ***Park Operations Zone***

61 The historic structures in this zone,
62 including part of the Model Industries
63 Building, would be rehabilitated and
64 adaptively reused for maintenance, storage,
65 and public safety functions. They could
66 house green, sustainable infrastructure
67 technologies. Where appropriate, visitor
68 access would be provided to showcase the
69 technologies and interpret the island’s
70 energy history.

71
72
73 **ALCATRAZ ISLAND PERIMETER**

74 ***Natural Zone (northeastern and***
75 ***southern perimeter of the island)***

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

81
82 ***Sensitive Resources Zone (western***
83 ***coastal cliffs and Little Alcatraz***
84 ***Island)***

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

90
91

1 **OFFSHORE BAY ENVIRONMENT**

2 ***Sensitive Resources Zone (extending***
3 ***100 feet from the island’s western***
4 ***shore)***

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

9
10 ***Scenic Corridor Zone (extending***
11 ***beyond the Sensitive Resources***
12 ***Zone and along the island’s eastern***
13 ***shore)***

14 This area on the east side of the island would
15 be managed to accommodate ferry service to
16 the island. Boat tours around the island and
17 some types of water-based recreation could
18 be permitted. The area adjacent to the entry
19 dock would be managed to expand the
20 capacity and range of uses that may occur.
21 This would enable the island to be part of
22 the San Francisco Bay Water Trail,
23 welcoming nonmotorized boats via permits
24 or reservations.

25
26
27 **SUSTAINABILITY**

28 The National Park Service would continue
29 to develop and implement sustainable
30 approaches to meet the island’s energy,
31 water, and wastewater needs. Actions that
32 are being considered include replacing diesel
33 generators with renewable (e.g., photo-
34 voltaic panels) and grid-tied energy sources.
35 These infrastructure technologies would be
36 interpreted where possible.

37
38
39 **COST ESTIMATES**

40 Cost estimates for alternative 1 are identified
41 in table 5. The costs shown here are not for
42 budgetary purposes; they are only intended
43 to show a relative comparison of costs
44 among the alternatives.

46 The alternatives describe the maximum
47 potential capital improvements; lesser
48 improvements may be implemented, or built
49 in phases if necessary. Implementation of the
50 approved plan will depend on future
51 funding. The approval of this plan does not
52 guarantee that the funding and staffing
53 needed to implement the plan will be
54 forthcoming. Full implementation of the
55 actions in the approved general management
56 plan could be many years in the future.
57 Additionally, some of the future long-term
58 funding needed to implement the various
59 actions called for in the alternatives is
60 anticipated to come from nonfederal
61 partners, consistent with the park’s current
62 practices.

63
64 Alternative 1 for Alcatraz Island would
65 provide an expanded variety of settings and
66 experiences, thereby connecting visitors to
67 the greater breadth of the island’s resources
68 and stories. Visitors would have access to the
69 majority of the island’s historic structures
70 and landscapes, including areas currently
71 closed to the public.

72
73
74 **Annual Operating Costs**

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

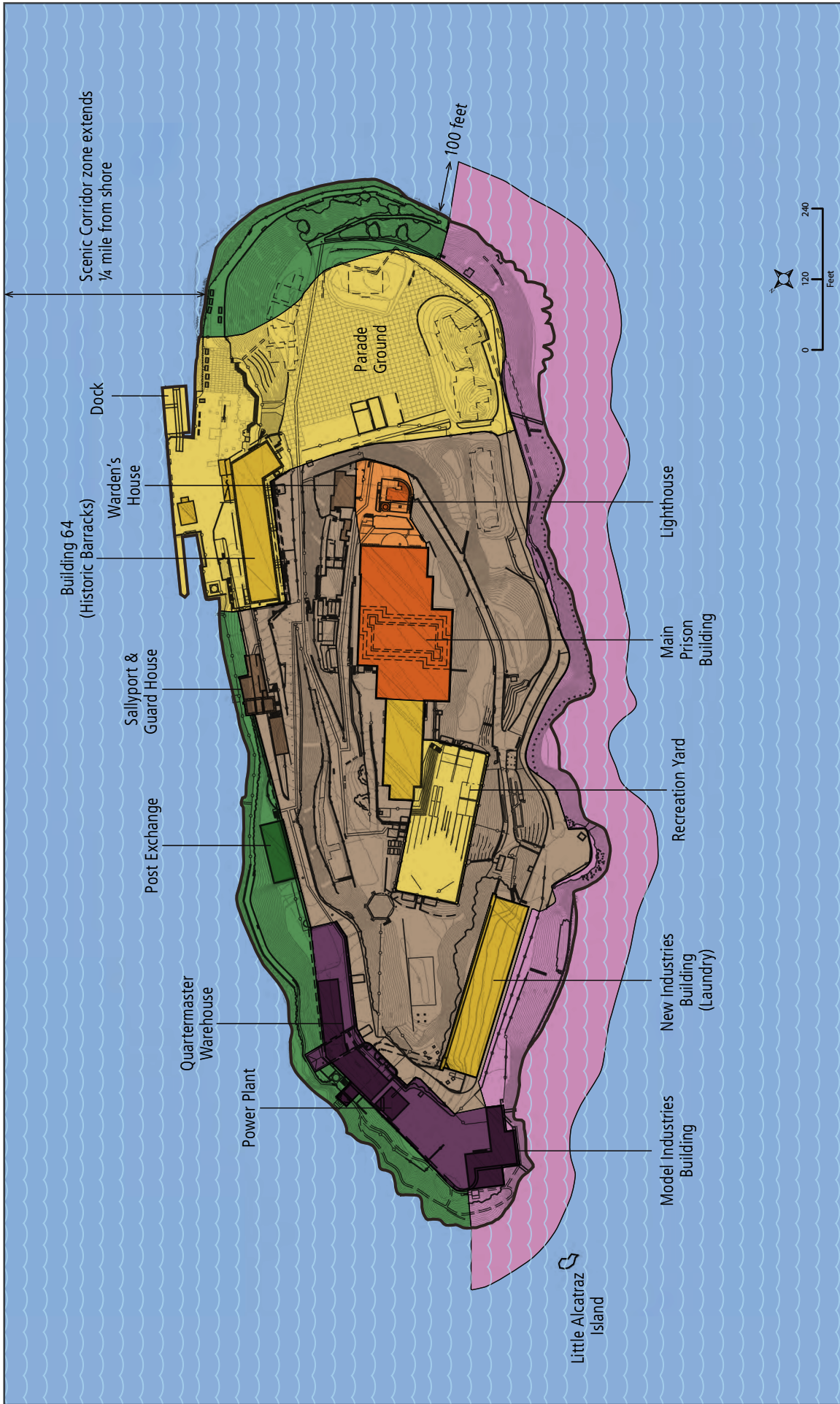
78
79
80 **One-time Capital Costs**

81 One-time facility costs of this alternative
82 reflect the extensive rehabilitation required
83 to more fully open buildings and landscapes
84 to the public. All buildings would be
85 preserved, with most rehabilitated and
86 adaptively reused for visitor activities or
87 park operations. Many of the structures on
88 Alcatraz Island are in a deteriorated state
89 and the stabilization costs to ensure the
90 continuation of national landmark status are
91 high. Total one-time costs for alternative 1
92 for Alcatraz Island are estimated at \$61.2
93 million.

TABLE 15. 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



Connecting People with the Parks

Alternative 1 – Alcatraz Island

Golden Gate National Recreation Area

U.S. Department of the Interior - National Park Service
 GGNRA/DSC
 641/20618 A April 23, 2013

Management Zones

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

Note: Buildings are shown in a darker shade in each zone.

ALTERNATIVE 2: PRESERVING AND ENJOYING COASTAL ECOSYSTEMS

1 OVERVIEW

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

14
15 The island’s changing natural and built
16 landscape would continue to evolve, further
17 enhancing habitat for nesting birds. Only
18 those buildings and features necessary to
19 maintain the island’s national historic
20 landmark status would be preserved; the
21 natural elements would reclaim other
22 features as part of the wilding of Alcatraz
23 Island.

24
25 Visitors would be immersed in opportunities
26 that showcase the island’s isolation, its
27 natural resources, and all the layers of
28 history that can be found at the Main Prison
29 Building. Visitor experiences would include
30 outdoor learning, and natural and cultural
31 resource stewardship programming
32 delivered in partnership with Bay Area
33 nonprofits.

34
35 While access would be managed to protect
36 sensitive resources, visitors would be able to
37 more freely explore, discover, and
38 experience nature reclaiming Alcatraz
39 Island, and understand the role the island
40 plays in the broader marine ecosystem
41 (reaching from San Francisco Bay to the
42 Farallon Islands) as a result of its strategic
43 location.

44

45 FERRY EMBARKATION

46 The visitor’s immersion in Alcatraz Island
47 history would begin from an embarkation
48 site in San Francisco. The primary
49 embarkation site would remain on San
50 Francisco’s northern waterfront where
51 visitor services, including education about
52 Alcatraz and orientation to the park, could
53 be enhanced. Additional ferry connections
54 could be provided to other park sites as part
55 of the facility’s role as a portal to the park.
56 Ticketing would continue to be through a
57 reservation system, and ferries would
58 operate daily on a year-round schedule. The
59 length of the ferry trip between the mainland
60 and Alcatraz Island would remain
61 approximately 10–15 minutes.

62

63

64 Arrival Area

65 **(including the Dock, Building 64 (Historic**
66 **Barracks), and the Sallyport)**

67

68 *Evolved Cultural Landscape Zone*

69 This area would welcome visitors while
70 protecting the multitude of cultural
71 resources. Building 64 would be adaptively
72 reused to support the science, education,
73 and stewardship programs. It could include
74 space for offices, classrooms, labs, minimal
75 food service, and hostel-like overnight
76 facilities for program participants. Co-
77 locating these functions would promote
78 interactive learning and association among
79 the scientists, teachers, and student
80 participants. Administrative functions would
81 also be housed in this building.

82

83 The park would manage the structures and
84 landscaped areas (such as the Guardhouse
85 and gardens) between the entry dock and

1 the Main Prison Building to protect and
2 interpret the various periods of history.

3

4

5 **Main Prison Area**

6 **(including the Citadel, Main Cellblock,**
7 **Hospital Wing, Administration Wing,**
8 **Recreation Yard, New Industries**
9 **Building, Post Exchange, and Parade**
10 **Ground)**

11

12 ***Historic Immersion Zone (Main***
13 ***Prison Building, including the***
14 ***Hospital Wing and Recreation Yard)***

15 These historic structures would be managed
16 to provide visitors with access to the wide
17 range of resources in historically accurate
18 conditions, from the military period through
19 the Indian occupation. Rehabilitation or
20 restoration of historic resources would
21 enhance their historic integrity.

22

23 ***Natural Zone (Model Industries***
24 ***Building, New Industries Building,***
25 ***Parade Ground, and western side of***
26 ***island)***

27 The park would manage these structures and
28 adjacent areas to enhance bird habitat and
29 protect sensitive resources. Visitor use
30 would be managed and controlled to
31 support natural resource management goals.

32 The New Industries Building would be
33 stabilized and no efforts would be made to
34 avoid its loss to coastal erosion. Visitor
35 access could be provided for wildlife

36 viewing, research, and education, but would
37 be highly controlled. The building ruins on
38 the Parade Ground would be retained to

39 maintain and enhance seabird habitat. The
40 existing Agave Trail would protect natural
41 habitat while providing seasonal access to
42 the shoreline for visitors. The Model

43 Industries Building would be stabilized to
44 allow expanded habitat for nesting birds. No

45 efforts would be made to avoid the loss of
46 the building to coastal erosion. Visitor access
47 could be provided for wildlife viewing,

48 research, and education, but would be highly
49 controlled.

50

51

52 **LIGHTHOUSE**

53 ***Historic Immersion Zone***

54 The lighthouse and surrounding area would
55 be preserved to give visitors opportunities to
56 learn about the maritime history of Alcatraz
57 Island and its strategic location in the bay.

58 Access and interpretation would be
59 enhanced.

60

61

62 **NORTH END OF THE ISLAND**

63 ***Park Operations Zone (Post***
64 ***Exchange, Quartermaster***
65 ***Warehouse, and Power Plant)***

66 The interior spaces of the Post Exchange,
67 Quartermaster Warehouse, and Power Plant
68 would be dedicated park operation
69 activities. The Post Exchange would be
70 stabilized to preserve the exterior of the
71 structure. An interior shell could be
72 constructed within the ruin to support park
73 operational functions if needed. Maintenan-
74 ce activities and visitor access outside and
75 close to these structures would be managed
76 to prevent disruption of sensitive natural
77 resources.

78

79

80 **ISLAND PERIMETER**

81 ***Sensitive Resources Zone (majority***
82 ***of the island perimeter)***

83 The majority of the perimeter of Alcatraz
84 Island would be preserved to protect natural
85 habitat values. Visitor use and access would
86 be highly managed.

87

88

1 **OFFSHORE BAY ENVIRONMENT**

2 ***Sensitive Resources Zone (extending***
3 ***300 feet from the island's western***
4 ***shore)***

5 This zone extends out 300 feet and would be
6 managed as a marine protected area to
7 preserve coastal resources, including
8 submerged resources and seabird colonies
9 using the island's cliffs. The area would be
10 closed to boats during seabird breeding
11 season.

12
13 ***Scenic Corridor Zone (extending***
14 ***beyond the Sensitive Resources***
15 ***Zone and along the island's eastern***
16 ***shore)***

17 This area would be managed to
18 accommodate ferry access to the island.
19 Some other types of water-based access
20 could also be permitted. Enforcement of
21 resource protection measures and visitor
22 access regulations would be strengthened.
23 For example, tours near the island would be
24 regulated.

25
26
27 **SUSTAINABILITY**

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

37
38
39 **COST ESTIMATES**

40 Cost estimates for alternative 2 are identified
41 in table 6. The costs shown here are not for
42 budgetary purposes; they are only intended
43 to show a relative comparison of costs
44 among the alternatives.

45

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

63
64 Alternative 2 for Alcatraz Island would
65 highlight the island's isolation, harsh
66 environment, and strategic location in telling
67 the story of the island. The weather, plants,
68 and wildlife would reclaim much of the
69 island, leaving only the historic landmark
70 structures preserved.

71
72
73 **Annual Operating Costs**

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

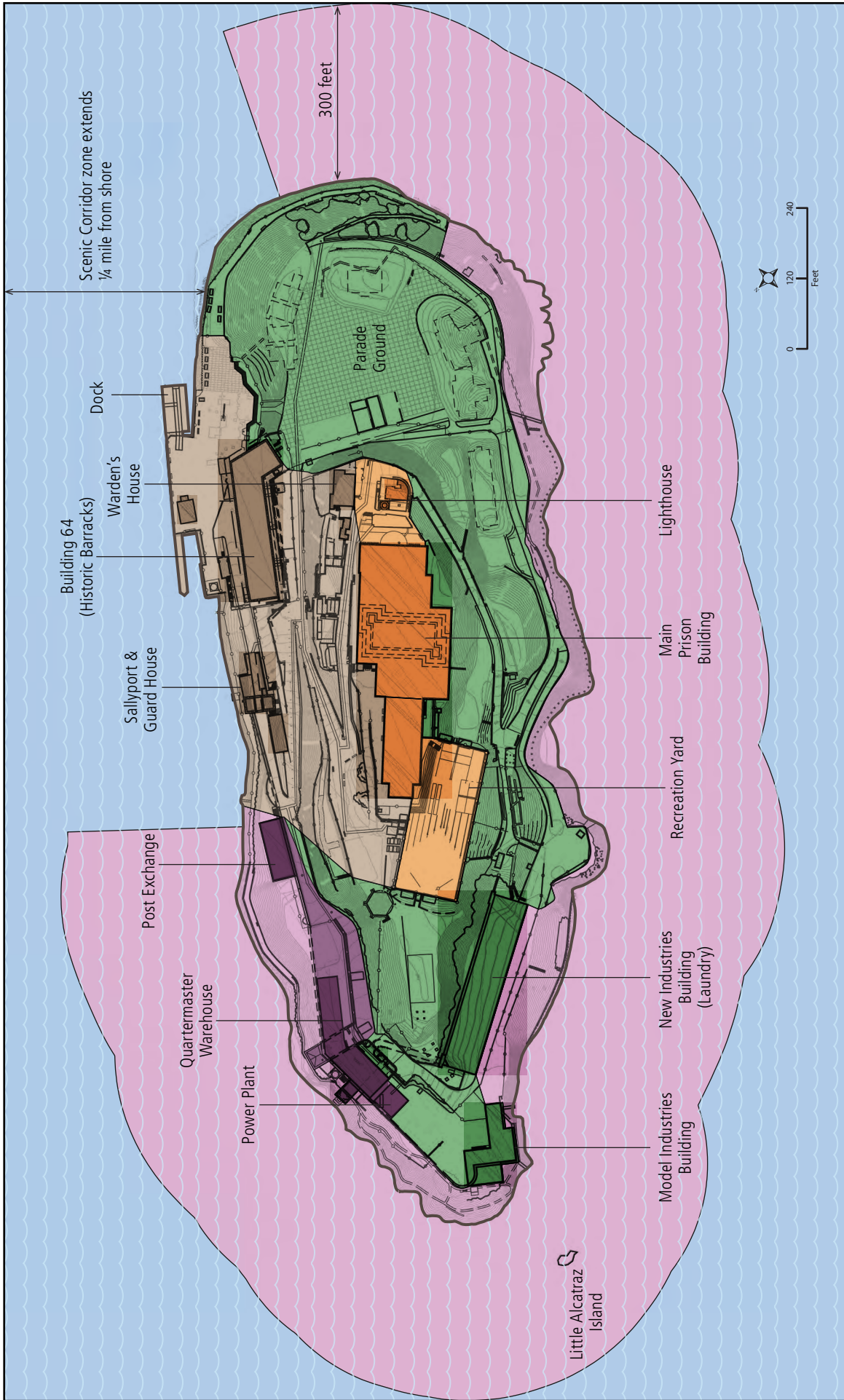
77
78
79 **One-time Capital Costs**

80 One-time costs reflect the rehabilitation of
81 select buildings for contemporary uses and
82 limited restoration to historic conditions,
83 allowing other buildings and areas to be
84 managed for natural resource objectives or
85 as ruins. Many of the structures on Alcatraz
86 Island are in a deteriorated state and the
87 stabilization costs to ensure the continuation
88 of national landmark status are high. Total
89 one-time costs for alternative 2 for Alcatraz
90 Island are estimated at \$37.4 million.

TABLE 16. 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



Preserving and Enjoying Coastal Ecosystems
Alternative 2 – Alcatraz Island
Golden Gate National Recreation Area

U.S. Department of the Interior - National Park Service
 GGNRA/DSC
 641/20619 A April 23, 2013

Management Zones

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

Note: Buildings are shown in a darker shade in each zone.

ALTERNATIVE 3: FOCUSING ON NATIONAL TREASURES THE PREFERRED ALTERNATIVE

1 OVERVIEW

2 For more than 150 years, Alcatraz Island has
3 been reworked and altered by human
4 activity. This alternative would immerse
5 visitors extensively in all of Alcatraz Island’s
6 historic periods, including the Civil War
7 military fortifications and prison, federal
8 penitentiary, and American Indian
9 occupation. Alcatraz Island’s history would
10 be interpreted, first and foremost with
11 tangible and accessible historic resources,
12 including the structures, landscape,
13 archeological sites, and museum collection.
14 These resources contribute to the island’s
15 national historic landmark status and its
16 recognition as an international icon.

17
18 Most visits would begin at an enhanced ferry
19 embarkation facility in San Francisco. On
20 the way to the island, the ferry would pass a
21 line of warning buoys. The immersive
22 experience would continue at the island’s
23 arrival dock, with greater access to restored
24 portions of Building 64, the historic
25 barracks. Visitors would ascend to the main
26 prison in the summit through a landscape of
27 preserved historic structures and features.
28 While the primary visitor experience would
29 focus on the federal penitentiary, visitors
30 also would be exposed to the other periods
31 of history, literally and programmatically.

32
33 This alternative would require evaluator
34 excavations, extensive stabilization,
35 rehabilitation, and/or restoration of historic
36 buildings, small-scale landscape features,
37 and archeological sites, as well as creative
38 interpretative and educational programs and
39 visitor services. Park managers would create
40 additional opportunities for cultural
41 resource stewardship programs.

42

43 Visitors would have opportunities to learn
44 about the natural history of San Francisco
45 Bay. The colonial waterbird habitat that has
46 grown in regional importance would be
47 protected, enhanced, and interpreted.
48 Visitors could also explore the island
49 perimeter, managed to protect sensitive bird
50 populations while providing opportunities
51 to observe them or participate in steward-
52 ship activities. The large population of gulls
53 would be managed to reduce conflicts in
54 primary visitor use areas like the Parade
55 Ground. In addition, a comprehensive user
56 capacity strategy would help the park to
57 monitor and adaptively manage crowding,
58 congestion, and impacts on resources.

59

60

61 FERRY EMBARKATION

62 The visitor’s immersion in Alcatraz Island
63 history would begin from an embarkation
64 site in San Francisco. The primary
65 embarkation site would remain on San
66 Francisco’s northern waterfront where
67 visitor services, including education about
68 Alcatraz and orientation to Golden Gate
69 National Recreation Area, could be
70 enhanced. Additional ferry connections
71 could be provided to other park sites as part
72 of the San Francisco facility’s role as a portal
73 to the park. Ticketing would continue to be
74 through a reservation system, and ferries
75 would operate daily on a year-round
76 schedule. The length of the ferry trip
77 between the mainland and Alcatraz Island
78 would remain approximately 10–15 minutes.

79

80

1 **Arrival Area**

2 **(including the Dock, Building 64 (Historic**
3 **Barracks), and the Sallyport)**

4
5 ***Historic Immersion Zone***

6 Here, the park would welcome, orient, and
7 begin to immerse visitors in the island’s
8 prison landscape, creating an atmosphere
9 evocative of its history. To better reveal the
10 early military prison period, the guardhouse
11 could be restored by removing the later
12 boathouse addition. Selected areas of
13 Building 64 would be restored to tell the
14 story of its history and use. Period
15 restoration in the building would include the
16 post office, canteen, and a prison-era guard
17 apartment to extend the immersive
18 experience. Other parts of Building 64 would
19 be rehabilitated for visitor services and
20 administrative functions and could include
21 modest dorm-like overnight accommoda-
22 tions for participants in education,
23 conservation, and stewardship programs.
24 The upper floors would be stabilized to
25 preserve the structure’s integrity.

26
27
28 **Main Prison Area**

29 **(including the Citadel, Main Cellblock,**
30 **Hospital Wing, Administration Wing,**
31 **Recreation Yard, New Industries**
32 **Building, Post Exchange, and Parade**
33 **Ground)**

34
35 ***Historic Immersion Zone***

36 The many historic resources of the Main
37 Prison Building would provide visitors with
38 the opportunity to explore the federal
39 penitentiary’s history. Visitors would also
40 have access to the wide range of historic
41 structures and features in historically
42 accurate conditions that tell stories about
43 the different layers of island history. Park
44 managers would look for opportunities to
45 expose visitors to the tangible resources
46 (including artifacts in the park’s museum
47 collection) of the federal penitentiary and
48 military eras.

49 Treatments ranging from upgrades to
50 exhibits and furnishings to more complete
51 restoration would continue with the goal of
52 increasing access and interpretation of the
53 structure’s history.

54
55 In this alternative, the park would also
56 manage the adjacent areas, such as the main
57 road, Warden’s House, and the Parade
58 Ground, to reinforce the sense of history as
59 visitors move around the island. The Parade
60 Ground would be rehabilitated, along with
61 aspects of its buried archeological sites, to
62 support year-round visitor exploration of
63 this area in coordination with adaptive
64 management of western gulls. The
65 rehabilitation could incorporate measures to
66 support natural systems with preservation of
67 cultural resources.

68
69 The Post Exchange would be stabilized
70 while providing visitors with opportunities
71 to explore this historic structure. Additional
72 preservation could be possible with the
73 involvement of partners to make a more
74 complete visitor experience and interpret
75 the building’s history.

76
77
78 **LIGHTHOUSE**

79 ***Historic Immersion Zone***

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

86
87
88 **NORTH END OF ALCATRAZ ISLAND**

89 ***Park Operations Zone***

90 The Quartermaster Warehouse would be
91 rehabilitated and used as an operational
92 center for maintenance, public safety, and a
93 preservation stewardship workshop.

94

1 The Power Plant would be stabilized to
2 house green, sustainable infrastructure
3 technologies. Where appropriate, visitor
4 access would be provided to showcase the
5 technologies and interpret the history of
6 energy use on the island. The adjacent yard
7 would support island operational needs.
8 Access to the yard would employ measures
9 to protect nearby seabird habitat. Visitor
10 access to this zone would be extremely
11 limited.

12
13 Although this area is currently identified as
14 the primary park operations area, the
15 National Park Service would continue to
16 evaluate other portions of the island that
17 may be advantageous for operational uses
18 such as administrative space, maintenance,
19 and auxiliary functions.

20
21 ***Evolved Cultural Landscape Zone***
22 ***(including Model Industries Building***
23 ***and New Industries Building)***

24 The Model Industries Building would be
25 stabilized. The building and adjacent cliffs
26 would be closed to general visitation and
27 park operational uses to protect nearby
28 sensitive habitat of nesting waterbirds.
29 Vehicular access through the courtyard to
30 the adjacent Power Plant yard would employ
31 measures to protect habitat, possibly
32 including seasonal closures.

33
34 The New Industries Building would be
35 rehabilitated as a multipurpose facility. It
36 would include flexible space that could
37 accommodate interpretation, special events,
38 classrooms, and meetings, and would
39 include restrooms and a service kitchen to
40 support these uses. The perimeter trail
41 would connect through the building and
42 provide bird-viewing opportunities from its
43 interior.

44
45

46 **ISLAND PERIMETER**

47 ***Evolved Cultural Landscape Zone***
48 ***(majority of the island perimeter)***

49 The perimeter of the island, including the
50 coastal cliffs, would be managed to stabilize
51 significant historic resources, protect
52 colonial nesting birds and intertidal habitat,
53 and interpret the island's evolving cultural
54 and natural history. Opening a perimeter
55 trail, including segments of the historic
56 sentry walk, would provide visitors with
57 enhanced access to much of the island.
58 Sensitive design and seasonal closure of the
59 trail, which could include the Agave Trail,
60 would protect nesting bird habitat.

61

62

63 **OFFSHORE BAY ENVIRONMENT**

64 ***Sensitive Resources Zone (extending***
65 ***300 feet around most of Alcatraz***
66 ***Island)***

67 This zone would be managed as a marine
68 protected area to preserve coastal resources,
69 including Little Alcatraz Island, submerged
70 resources, and seabird colonies using the
71 island's cliffs. The area would be demarcated
72 by warning buoys and closed to boats. A
73 formal rule-making process would consider
74 both seasonal and year-round closures.

75

76 ***Historic Immersion Zone (extending***
77 ***from the Sensitive Resources Zone***
78 ***out to 0.25 mile from the island's***
79 ***shore)***

80 The National Park Service would manage
81 this area to accommodate service to the
82 island. Park managers would mark and
83 interpret the historic no-trespass zone that
84 was in place during previous periods. Only
85 approved vessels, like the visitor ferry,
86 would be allowed to use the island's dock.

87

88

1 **SUSTAINABILITY**

2 The National Park Service would continue
3 to develop and implement sustainable
4 approaches to meet the island’s energy,
5 water, and wastewater needs. Actions that
6 are being considered include replacing diesel
7 generators with renewable (e.g., photo-
8 voltaic panels) and grid-tied energy sources.
9 These infrastructure technologies would be
10 interpreted where possible.

11
12
13 **COST ESTIMATES**

14 Cost estimates for alternative 3 are identified
15 in table 17. The costs shown here are not for
16 budgetary purposes; they are only intended
17 to show a relative comparison of costs
18 among the alternatives.

19
20 The alternatives describe the maximum
21 potential capital improvements; lesser
22 improvements may be implemented, or built
23 in phases if necessary. The implementation
24 of the approved plan will depend on future
25 funding. The approval of this plan does not
26 guarantee that the funding and staffing
27 needed to implement the plan will be
28 forthcoming. Full implementation of the
29 actions in the approved general management
30 plan could be many years in the future.
31 Additionally, some of the future long-term
32 funding needed to implement the various
33 actions called for in the alternatives is

34 anticipated to come from nonfederal
35 partners, consistent with the park’s current
36 practices.

37
38 Alternative 3 for Alcatraz Island would
39 require extensive but focused stabilization,
40 rehabilitation, and restoration to effectively
41 immerse the visitor in the history of Alcatraz
42 Island as previously described in the
43 alternative.

44
45
46 **Annual Operating Costs**

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

50
51
52 **One-time Capital Costs**

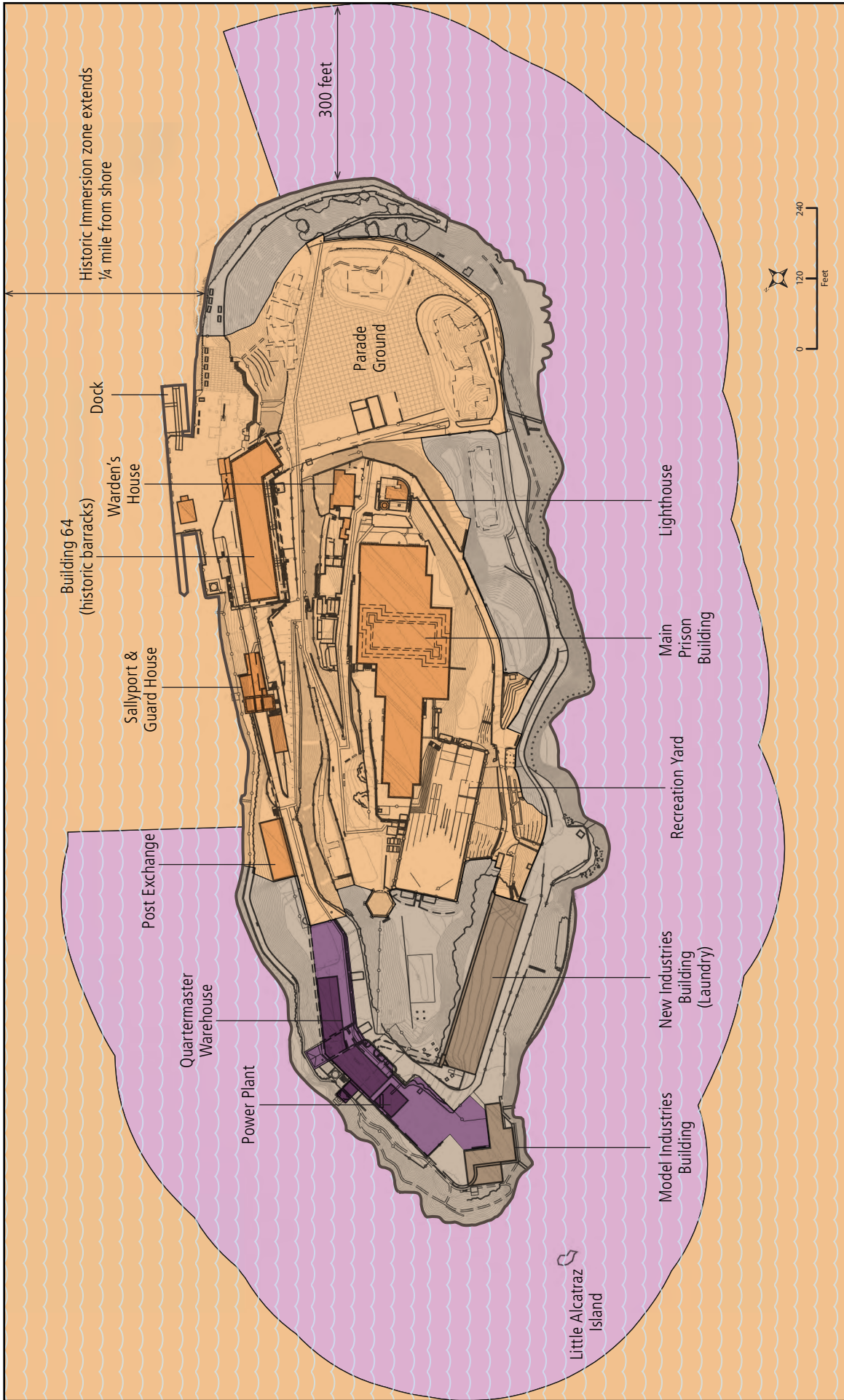
53 Many historic resources are in poor
54 condition and would be stabilized to
55 maintain the integrity of the national historic
56 landmark district. Decisions to go beyond
57 stabilization, including rehabilitation of a
58 building or landscape, were based on the
59 benefit to visitor experience, capital and
60 operating costs, impact on sustainability of
61 the island, and other factors such as the
62 availability of new interpretive technologies.
63 The estimated one-time capital costs for
64 alternative 3 for Alcatraz Island are
65 approximately \$54.4 million.

TABLE 17. 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
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.



Focusing on National Treasures
Alternative 3 – Alcatraz Island
Preferred Alternative

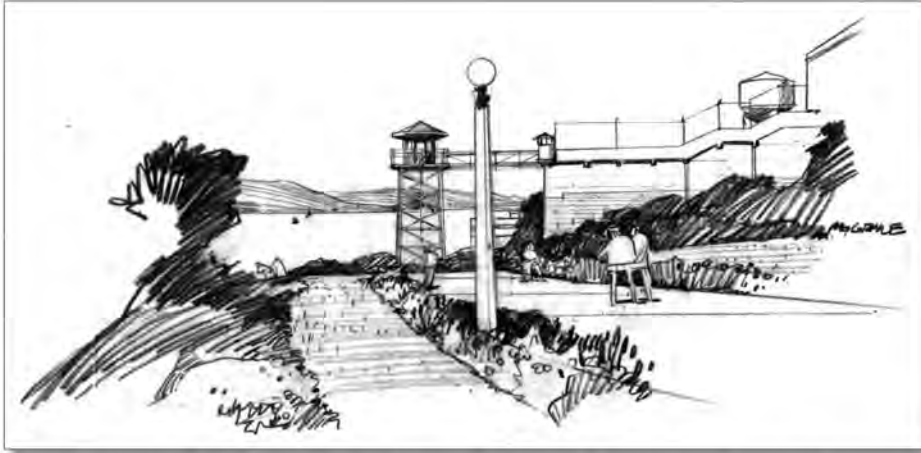
Golden Gate National Recreation Area

U.S. Department of the Interior - National Park Service
 GGNRA/DSC
 641/20620 A April 23, 2013

Management Zones

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

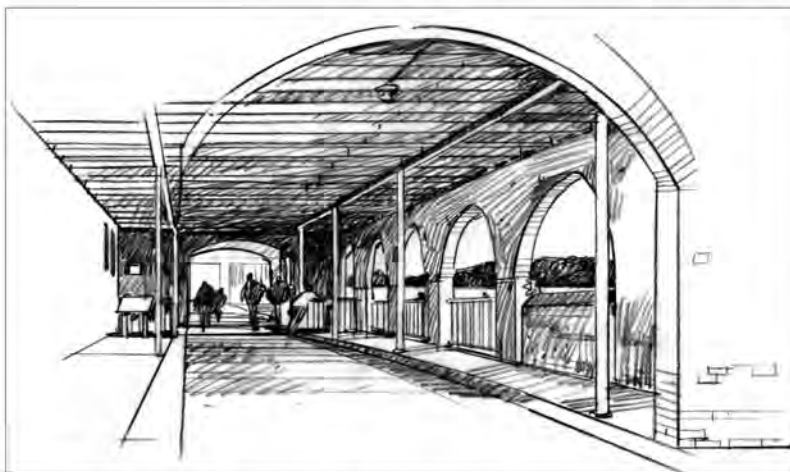
Note: Buildings are shown in a darker shade in each zone.



Partial restoration of guard towers and fences, along with maintaining vegetation 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 understanding of Alcatraz's parade ground.



Selectively removing later building additions could help visitors understand the character and central role of the Guardhouse-Sallyport when Alcatraz was a military prison.

Alcatraz Island (Conceptual Sketches for the Preferred Alternative)

SUMMARY COST ESTIMATES FOR ALCATRAZ ISLAND

1 The cost figures shown here and throughout
 2 the plan are intended only to provide
 3 conceptual costs for a general comparison of
 4 alternatives. NPS and industry cost
 5 estimating guidelines were used to develop
 6 the costs (in 2009 dollars), but the estimates
 7 should not be used for budgeting purposes.
 8 Specific costs will be determined in
 9 subsequent, more detailed planning and
 10 design exercises, identifying detailed
 11 resource protection needs and changing
 12 visitor expectations. Actual costs to the
 13 National Park Service will vary depending
 14 on when actions are implemented and on
 15 contributions by partners and volunteers.
 16

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

**TABLE 18. 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

1 The “Actions Common to All Alternatives”
 2 section earlier in this document contained a
 3 discussion of facilities that could be removed
 4 to reduce maintenance funding needs.
 5 However, in addition to removing facilities,
 6 expending one-time costs on park facilities
 7 would reduce the deferred maintenance by
 8 bringing the facilities up to a sustainable
 9 condition. Deferred maintenance—or work
 10 needed to bring park assets into good
 11 condition—exceeds \$198.1 million at
 12 Golden Gate National Recreation Area,
 13 according to the 2009 Park Asset
 14 Management Plan.
 15

16 Each alternative contains proposals that
 17 would reduce total deferred maintenance.
 18 Although the reductions in deferred
 19 maintenance are similar in amount for each
 20 alternative, the alternatives do not all
 21 contain the same proposals for reducing
 22 deferred maintenance; each alternative
 23 proposes different treatments for structures,
 24 including rehabilitation or removal.
 25
 26 Park staff continue to seek out additional
 27 measures to reduce deferred maintenance at
 28 the park. The park asset management plan,
 29 in particular, addresses strategies for
 30 reducing deferred maintenance.

**TABLE 19. REDUCTIONS IN DEFERRED MAINTENANCE ASSOCIATED WITH
 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

1 The environmentally preferable alternative
2 is the alternative that promotes the national
3 environmental policy expressed in the
4 National Environmental Policy Act (section
5 101[b]). This includes alternatives that

- 6
7 1. fulfill the responsibilities of each
8 generation as trustee of the
9 environment for succeeding
10 generations
- 11 2. ensure for all Americans safe,
12 healthful, productive, and
13 esthetically and culturally pleasing
14 surroundings
- 15 3. attain the widest range of beneficial
16 uses of the environment without
17 degradation, risk of health or safety,
18 or other undesirable and unintended
19 consequences
- 20 4. preserve important historic, cultural,
21 and natural aspects of our national
22 heritage and maintain, wherever
23 possible, an environment that
24 supports diversity and variety of
25 individual choice
- 26 5. achieve a balance between
27 population and resource use that will
28 permit high standards of living and a
29 wide sharing of life's amenities
- 30 6. enhance the quality of renewable
31 resources and approach the
32 maximum attainable recycling of
33 depletable resources (NPS Director's
34 Order 12 Handbook, section 2.7D)

35
36 The alternatives are similar with respect to
37 criteria 1, 2, 5, and 6. The park staff
38 continues to work toward achieving these
39 factors as a basic course of implementing the
40 legal mandates for Golden Gate National
41 Recreation Area and Muir Woods National
42 Monument. All the alternatives equally meet
43 the attainment for these four criteria;

44 therefore, the evaluation focuses on criteria
45 3 and 4.

46
47 The no-action alternative represents the
48 continuation of current management and
49 was included to provide a baseline against
50 which to compare the effects of the other
51 (action) alternatives. The no-action is the
52 weakest alternative in relationship to criteria
53 3 and 4. In this alternative, much of Alcatraz
54 Island is not accessible to the public and
55 therefore limits the range of beneficial uses.
56 The primary purpose of preserving Alcatraz
57 Island is to preserve and protect its historic
58 resources. In the no-action alternative,
59 minimal preservation efforts are applied to
60 the island's historic resources. Limited
61 visitor access and programs minimizes the
62 range of beneficial uses.

63
64 Alternatives 1 and 2 include actions to
65 substantially improve the current conditions
66 of the historic resources while strengthening
67 the island's natural resources. A variety of
68 natural and cultural resource restoration
69 activities, improved public access to more
70 areas on the island, and enhanced steward-
71 ship programs would greatly enhance
72 criteria 3 and 4. Alternative 3 has an even
73 higher standard of historic preservation and
74 visitor programs that improves upon the
75 other alternatives. In addition, alternative 3
76 is strengthened by incorporating many of the
77 natural resource restoration actions that
78 were identified in alternative 2.

79
80 After considering the environmental
81 consequences of the alternatives, including
82 consequences to the human environment,
83 the National Park Service has concluded that
84 the NPS preferred alternative, alternative 3
85 for Alcatraz Island, is also the environ-
86 mentally preferable alternative. This
87 alternative best realizes the full range of
88 NEPA policy goals as stated in section 101.

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 Costs Associated with Implementation of the Alternatives for Park Lands in Marin, San Francisco, and San Mateo Counties (including Alcatraz Island).” The impacts on Alcatraz Island are not separated out from the rest of Golden Gate National Recreation Area.

TABLE 20. COMPARISON OF THE ALTERNATIVES FOR ALCATRAZ ISLAND

No Action	Alternative 1	Alternative 2	Alternative 3 (Preferred)
Overview			
<ul style="list-style-type: none"> ▪ 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. 	<ul style="list-style-type: none"> ▪ 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. 	<ul style="list-style-type: none"> ▪ 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. 	<ul style="list-style-type: none"> ▪ 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			
<ul style="list-style-type: none"> ▪ Embarkation from San Francisco’s northern waterfront would remain as the only access point. 	<ul style="list-style-type: none"> ▪ Primary embarkation would remain on San Francisco’s northern waterfront; additional ferry connections could be provided from there. 	<ul style="list-style-type: none"> ▪ Same as alternative 1. 	<ul style="list-style-type: none"> ▪ Same as alternative 1.

TABLE 20. COMPARISON OF THE ALTERNATIVES FOR ALCATRAZ ISLAND

No Action	Alternative 1	Alternative 2	Alternative 3 (Preferred)
Arrival Area			
<ul style="list-style-type: none"> ▪ Adaptively use Building 64 for administrative purposes and some visitor services; majority of the structure would remain unused. 	<ul style="list-style-type: none"> ▪ Building 64 would be rehabilitated and used as a multipurpose facility with expanded visitor services. 	<ul style="list-style-type: none"> ▪ Building 64 would be adaptively used to support science education and stewardship programs, as well as administrative functions. 	<ul style="list-style-type: none"> ▪ 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 the guardhouse would be removed.
Main Prison Area			
<ul style="list-style-type: none"> ▪ 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 (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 	<ul style="list-style-type: none"> ▪ 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, the park would manage the structures and landscaped areas surrounding the Main Prison Building to protect and interpret the layers of history. ▪ The building ruins 	<ul style="list-style-type: none"> ▪ 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 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 ruins on the Parade Ground would be retained to maintain and enhance seabird habitat. 	<ul style="list-style-type: none"> ▪ 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 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

TABLE 20. COMPARISON OF THE ALTERNATIVES FOR ALCATRAZ ISLAND

No Action	Alternative 1	Alternative 2	Alternative 3 (Preferred)
<p>facilitated by an audio tour.</p> <ul style="list-style-type: none"> The piles of ruins on the Parade Ground would remain and would be used seasonally by waterbirds. 	<p>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 ruins on the parade ground could be removed; rehabilitation could incorporate measures to support wildlife.</p>		<p>would continue with the goal of increasing access and interpretation of the prison's history.</p> <ul style="list-style-type: none"> The Parade Ground would be rehabilitated to portray its historic period and support year-round visitor exploration in coordination with adaptive management of western gulls. Rehabilitation could incorporate measures to support wildlife.
Lighthouse			
<ul style="list-style-type: none"> The lighthouse would be managed for historic function with highly controlled visitor access. 	<ul style="list-style-type: none"> The lighthouse would be preserved. Access and interpretation would be enhanced. 	<ul style="list-style-type: none"> Same as alternative 1. 	<ul style="list-style-type: none"> Same as alternative 1.
North End of Island			
<ul style="list-style-type: none"> Area and buildings would continue to be used for operations and maintenance. Visitors are not permitted. 	<ul style="list-style-type: none"> Historic structures including the Model Industries Building would be 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 	<ul style="list-style-type: none"> The interior of the Post Exchange, Quartermaster Warehouse, and Power Plant would 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. 	<ul style="list-style-type: none"> The Quartermaster Warehouse would be rehabilitated for park operations and a preservation 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

TABLE 20. COMPARISON OF THE ALTERNATIVES FOR ALCATRAZ ISLAND

No Action	Alternative 1	Alternative 2	Alternative 3 (Preferred)
	floors)		Building would be rehabilitated as a multipurpose facility (on the second floor).
Island Perimeter			
<ul style="list-style-type: none"> ▪ 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 seabird protection. 	<ul style="list-style-type: none"> ▪ 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 seabird habitat. 	<ul style="list-style-type: none"> ▪ The perimeter would be preserved to protect natural resources. ▪ Visitor use and access would be highly managed. 	<ul style="list-style-type: none"> ▪ 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			
<ul style="list-style-type: none"> ▪ NPS jurisdiction extends 900 feet from shore; no active management of this area; access would continue to be limited to the ferry. 	<ul style="list-style-type: none"> ▪ The western shore and the area extending 100 feet beyond it would be managed to 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 nonmotorized boat tours. 	<ul style="list-style-type: none"> ▪ The western shore and the area extending 300 feet beyond it would be managed to protect coastal resources 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. 	<ul style="list-style-type: none"> ▪ The western shore and the area extending 300 feet offshore would be managed to protect coastal resources and nesting seabird colonies on cliffs. The area would be closed to boats. A formal rule-making process would consider both seasonal and year-round closures. ▪ The area extending out to 0.25 mile 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.

ALTERNATIVES FOR
MUIR WOODS NATIONAL MONUMENT

6



NO-ACTION ALTERNATIVE

1 OVERVIEW

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

10
11 Muir Woods National Monument would
12 remain a popular international destination
13 and ecological treasure. With trees over
14 1,000 years old, it preserves a small yet
15 towering vestige of the vast forests of
16 *Sequoia sempervirens* that once graced the
17 slopes and valleys surrounding San
18 Francisco Bay. The monument also supports
19 a diversity of flora and fauna.

20
21 The park staff would continue to balance
22 preservation of the redwood ecosystem with
23 providing access to hundreds of thousands
24 of visitors annually. For many visitors, Muir
25 Woods would continue to provide their
26 initial experience with the national park
27 system. Key park objectives would include
28 fostering a conservation ethic among
29 visitors, preserving and restoring habitat for
30 threatened and endangered species,
31 preserving cultural resources such as the
32 Dipsea Trail, supporting public transpor-
33 tation as a way to reduce congestion, and
34 promoting a watershed perspective in land
35 management that includes Mount Tamalpais
36 State Park, two water districts, an organic
37 farm, equestrian stables, and local
38 communities. These are objectives for the
39 entire watershed as well. Overall
40 management of the monument would
41 continue to be guided by the 1980 General
42 Management Plan.

43

44

45 ARRIVAL

46 Today, most visitors arrive by personal
47 vehicles and commercial tour buses. Since
48 2005, a pilot shuttle service has been used
49 during the summer to help reduce traffic
50 congestion. In the no-action alternative,
51 parking areas would continue to be provided
52 adjacent to Redwood Creek and very near
53 the main concentration of redwoods.

54
55 The entrance area would continue to be
56 located at the edge of the redwood forest
57 adjacent to Redwood Creek. It includes a
58 parking area, restrooms, and a small visitor
59 information station with a bookstore and fee
60 collection booth. This area is a hub of
61 activity with a mix of pedestrians, auto-
62 mobiles, and buses. Additional parking areas
63 would continue to exist farther down along
64 Redwood Creek and would continue to be
65 used during periods of peak demand.
66 Maintenance and some other operational
67 functions would continue to be located in
68 the Old Inn on the east side of Muir Woods
69 Road.

70

71

72 REDWOOD FOREST AND 73 REDWOOD CREEK

74 The main trail system would continue to
75 exist as a series of loops running along
76 Redwood Creek, crossing the creek four
77 times on footbridges. Visitors would
78 continue to have opportunities to stroll
79 among the groves of ancient redwoods. A
80 variety of interpretive waysides and
81 scheduled interpretive programs would
82 continue in order to support the visitor's
83 discovery of the monument's resources.
84 Intersecting with the main trail are other
85 trails that would provide visitors with
86 extended hiking opportunities to adjacent
87 public lands. The Administration-
88 Concession Building would continue to

1 provide food, retail services, restrooms, and
 2 park offices. The current use of the nearby
 3 historic Superintendent’s Residence and
 4 associated structures would remain.

5
 6 Since the monument was established, the
 7 National Park Service has increased its
 8 understanding of a healthy redwood forest
 9 ecosystem. Past practices of allowing visitors
 10 to drive, picnic, and camp within the forest
 11 have been phased out. Natural fires have
 12 been suppressed throughout most of the
 13 20th century, but have been slowly
 14 reintroduced through the use of prescribed
 15 burns to restore more natural conditions,
 16 reduce fuel loading, and to enhance the
 17 health of the ecosystem. This land
 18 management practice would continue. In the
 19 1930s, the Civilian Conservation Corps lined
 20 portions of Redwood Creek with rocks as a
 21 means to stabilize and contain the flow of
 22 water within the existing channel. These
 23 actions may have protected selected
 24 redwood trees on the banks, but have also
 25 eliminated the natural meandering of the
 26 creek across a wider floodplain, constraining
 27 its role in sustaining a healthy ecosystem.

28
 29

30 **MUIR WOODS ADDITION (ALSO**
 31 **KNOWN AS CAMINO DEL CANYON,**
 32 **CONLON AVENUE, AND DRUID**
 33 **HEIGHTS)**

34 Over time, additional tracts of land have
 35 been acquired to support the administrative
 36 functions and visitor use of the monument.
 37 Properties in the area referred to as the Muir
 38 Woods Addition were acquired by the
 39 National Park Service between 1974 and
 40 1984. These properties include the rustic
 41 buildings of historic Camp Hillwood
 42 (located up Conlon Avenue), Druid Heights
 43 (located at the end of Camino del Canyon),
 44 and other structures.

45
 46 Some structures are used for park operations
 47 and a native plants nursery, while others are
 48 under special use permits, reservation of use
 49 and occupancy, or have been vacated and

50 are scheduled for removal. These uses and
 51 planned actions would continue under the
 52 no-action alternative. The valuable wildlife
 53 habitat in this area, including habitat for
 54 northern spotted owl and salmonids, would
 55 continue to be protected.

56
 57

58 **COST ESTIMATES**

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

64

65 The alternatives describe the maximum
 66 potential capital improvements; lesser
 67 improvements may be implemented, or built
 68 in phases if necessary. The implementation
 69 of the approved plan will depend on future
 70 funding. The approval of this plan does not
 71 guarantee that the funding and staffing
 72 needed to implement the plan will be
 73 forthcoming. Full implementation of the
 74 actions in the approved general management
 75 plan could be many years in the future.
 76 Additionally, some of the future long-term
 77 funding needed to implement the various
 78 actions called for in the alternatives is
 79 anticipated to come from nonfederal
 80 partners, consistent with the park’s current
 81 practices.

82
 83

84 **Annual Operating Costs**

85 The annual NPS portion of the Muir Woods
 86 National Monument shuttle cost is \$340,000.
 87 Shuttle costs have been shared with local
 88 transportation agencies as a joint solution to
 89 alleviating traffic congestion on the State
 90 Route 1 corridor.

91

92 Operating costs and staff numbers for Muir
 93 Woods National Monument are included in
 94 the table titled Summary of Costs Associated
 95 with the Implementation of the Alternatives
 96 for Park Lands in Marin, San Francisco, and
 97 San Mateo Counties.

98

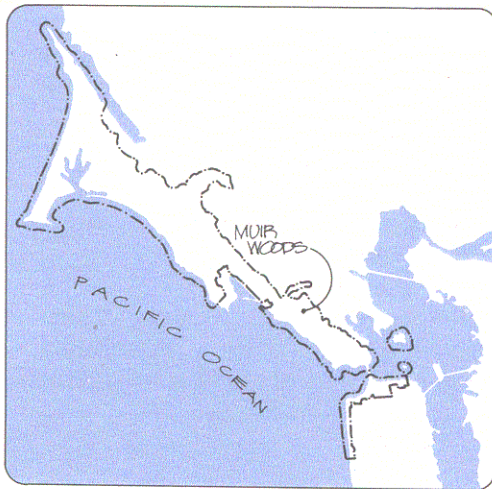
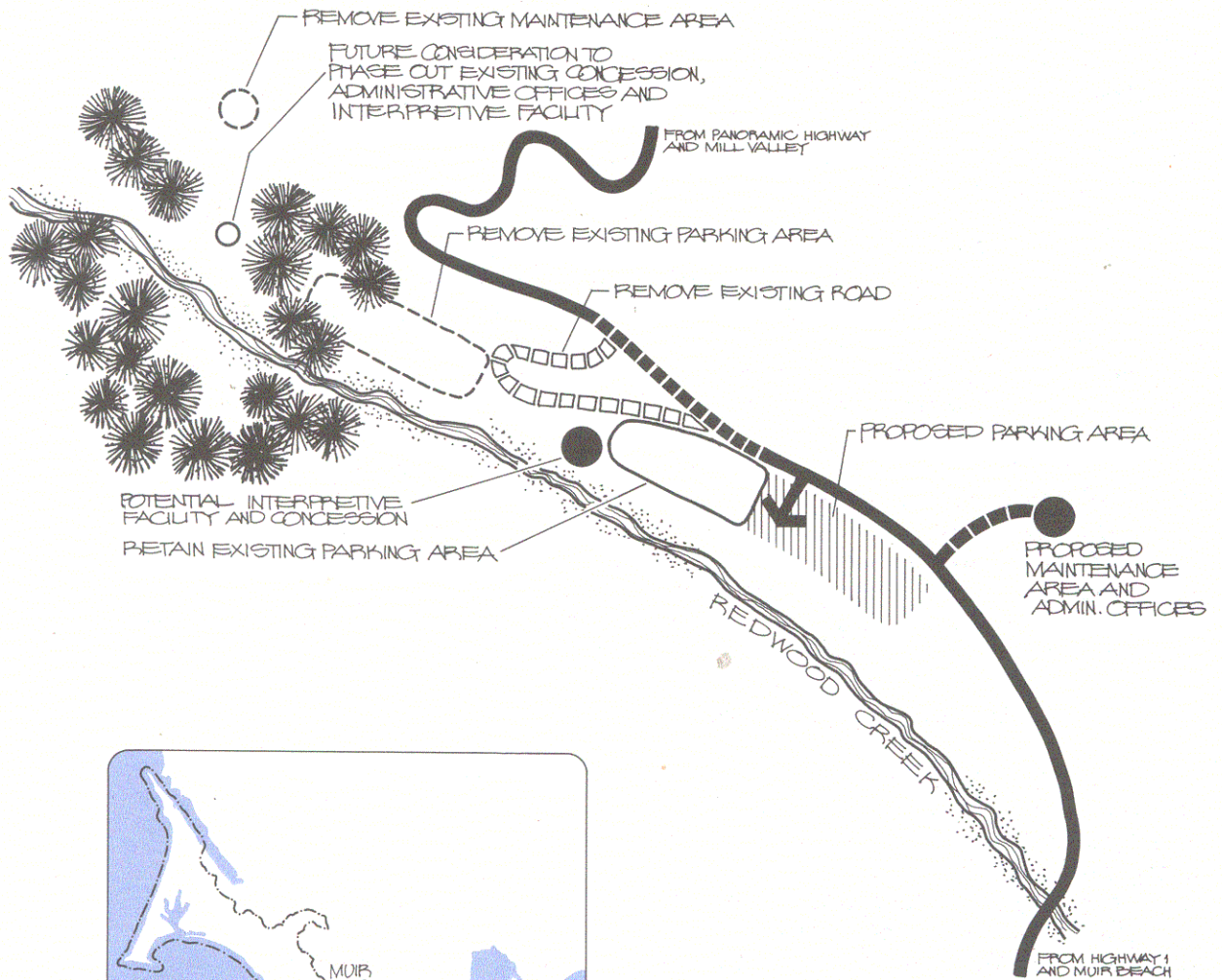
1 One-time Costs

2 The estimated costs of the no-action
 3 alternative reflect the continuation of
 4 current management. One-time costs for the
 5 no-action alternative are the costs for those
 6 projects that are currently approved and
 7 funded—any requested but unfunded
 8 projects are not considered in this analysis.
 9 Therefore, while the action alternatives
 10 contain estimates for 20 years of proposed

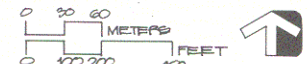
11 projects, the no-action alternative assumes
 12 no new projects would take place except
 13 those projects funded in 2009. Examples of
 14 currently funded projects include
 15 remodeling of the concession facilities,
 16 cyclic maintenance, and management of the
 17 fee collection program. Total funded one-
 18 time costs for the no-action alternative for
 19 Muir Woods are \$920,000.

**TABLE 21. COSTS OF THE NO-ACTION ALTERNATIVE FOR
 MUIR WOODS NATIONAL MONUMENT**

Summary of Costs of the No-action Alternative	
Annual Operational Costs	
Shuttle Operations	\$ 340,000
One-time Capital Costs	
Total	\$ 920,000



64 | 2007
DEC | MAR 79



UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

MUIR WOODS

DEVELOPMENT CONCEPT
GOLDEN GATE NATIONAL RECREATION AREA
POINT REYES NATIONAL SEASHORE

1980 General Management Plan
Muir Woods National Monument Development Concept, No-action Alternative

ALTERNATIVE 1: CONNECTING PEOPLE WITH THE PARKS

1 OVERVIEW

2 In this alternative, the park would offer
3 visitors the opportunity to experience and
4 enjoy the primeval forest ecosystem and
5 understand the monument's place in
6 American conservation history through a
7 variety of enhanced programs, facilities, and
8 trails that access the forest and connect local
9 communities to the park and surrounding
10 open space.

11
12 While retaining much of the present system
13 of trails through the forest, some existing
14 facilities and use areas, such as the entrance
15 area and parking lots, would be modified or
16 relocated to reduce their impacts on the
17 ecosystem and improve the park experience.

18
19 The monument would continue to welcome
20 a diversity of visitors and support a range of
21 experiences, better serving as a gateway or
22 stepping stone to understanding the national
23 park system.

24
25 An off-site welcome center for the shuttle
26 system, with parking and visitor services,
27 would be an important first point for
28 orientation and key to providing sustainable
29 access to the monument.

30
31 Collaboration with other public land
32 managers would continue to address
33 watershed restoration and stewardship.

34 35 36 ARRIVAL

37 Off Site

38 To enhance the visitor experience and
39 address congestion problems, permanent
40 shuttle service to Muir Woods National
41 Monument would be provided during peak
42 periods throughout the year, supported by a

43 new welcome center in the vicinity of State
44 Route 1 and Highway 101, created in
45 collaboration with Marin County, California
46 State Parks, and Caltrans. Shuttles would
47 travel a distance of about 6 miles to the
48 monument. Express transit service from
49 downtown San Francisco and improved
50 connections with the regional ferry services
51 would also be pursued. The welcome facility
52 would provide necessary visitor services that
53 could include parking, sheltered waiting
54 areas, restrooms, and orientation to the
55 monument and other regional park
56 destinations. The facility would also connect
57 visitors to other regional and local
58 transportation systems.

59 60 *Diverse Opportunities Zone*

61 The monument's existing entry area would
62 be redesigned to enhance the visitor's arrival
63 experience, protect resources, and improve
64 safety. Parking at the monument would be
65 reconfigured or relocated using sustainable
66 design practices to reduce impacts on the
67 creek and other sensitive resources. Capacity
68 would meet demand during off-peak
69 periods. Pedestrian access would be
70 improved to offer visitors a more natural
71 experience transitioning into the redwood
72 forest separated from roads and parking.

73
74 A modest facility would be provided to
75 receive visitors arriving by different modes
76 of transportation. The services provided
77 could include shuttle drop-off, sheltered
78 waiting areas, orientation, restrooms, food
79 service, and a bookstore. The existing
80 separate structures for fee collection, a
81 bookstore, and restrooms could be replaced
82 as part of the new facility. The goal of the
83 design process would be to accommodate
84 visitor's needs while simultaneously
85 minimizing the overall footprint of
86 development within the old-growth forest.

1 Future use or removal of the Old Inn would
2 be determined through more detailed site
3 planning that would consider its utility for
4 visitor services or operational needs in the
5 redesigned entry area. To allow visitor
6 parking to be reconfigured, the native plant
7 nursery would be relocated to Lower
8 Redwood Creek as part of a stewardship
9 center. Realignment of portions of county-
10 maintained Muir Woods Road would also be
11 explored to improve operational safety and
12 visitor access.

13
14 In order to improve pedestrian safety and
15 protect Redwood Creek, the park would
16 collaborate with Marin County to restrict
17 shoulder parking along Muir Woods Road in
18 non-trailhead areas as alternative
19 transportation becomes more readily
20 available.

21
22

23 **REDWOOD FOREST AND** 24 **REDWOOD CREEK**

25 ***Scenic Corridor Zone (Redwood*** 26 ***Creek corridor including the existing*** 27 ***wooden arch, several existing*** 28 ***buildings, and the main loop trails)***

29 This area would be managed to provide a
30 national park experience within the primeval
31 redwood forest setting. The Administration-
32 Concession Building would transition to
33 support stewardship, interpretive, and
34 educational activities, providing a flexible
35 classroom and program space in the woods.
36 Experiences would immerse visitors in
37 nature (the sights, sounds, smells of the
38 forest) where quiet would be encouraged.
39 Improved accessibility would ensure that all
40 visitors could have these experiences. New
41 restrooms and drinking water would be
42 provided near Bridge 4 to protect resources
43 and enhance visitor comfort.

44
45 The historic Superintendent's Residence and
46 nearby structures would be used for
47 administrative purposes. Other structures
48 needed to support visitor uses or park
49 operations would be rehabilitated.

50 Nonhistoric or nonessential structures
51 would be removed.

52

53 ***Natural Zone (all areas beyond*** 54 ***the Redwood Creek corridor)***

55 The majority of the monument would be
56 managed to preserve and restore natural
57 systems and contribute to the primeval
58 forest setting. Visitors within this zone
59 would have opportunities for self-discovery
60 and challenge on trails in a more dispersed
61 and wild park setting.

62

63 To provide a diverse continuum of
64 experiences, visitors would be introduced to
65 ways of accessing the adjacent landscapes
66 and the recreational opportunities of Mount
67 Tamalpais State Park, Marin Municipal
68 Water District, and Golden Gate National
69 Recreation Area. The Ben Johnson, Fern
70 Creek, Redwood Creek, and Dipsea trails
71 would provide access to a variety of day and
72 overnight recreational experiences.

73

74

75 **MUIR WOODS ADDITION (ALSO** 76 **KNOWN AS CAMINO DEL CANYON,** 77 **CONLON AVENUE, AND DRUID** 78 **HEIGHTS)**

79 ***Diverse Opportunities Zone*** 80 ***(Conlon Avenue)***

81 Camp Hillwood and its immediate
82 surroundings would be adaptively used for
83 day use or overnight educational
84 opportunities. The historic values of the
85 camp would be preserved while the facilities
86 would be adapted to contemporary uses.

87

88 All existing operational functions within this
89 zone (maintenance and native plants
90 nursery) would be relocated to the Lower
91 Redwood Creek site (former Banducci
92 flower farm) or in potential shared facilities
93 with Mount Tamalpais State Park nearby at
94 Kent Canyon.

95

1 **Natural Zone (other areas in Camino**
2 **del Canyon and Druid Heights)**

3 The majority of the area would be managed
4 to preserve the natural environment. The
5 landscape and streams would be restored to
6 an intact habitat. All nonhistoric structures
7 would be removed and Camino del Canyon
8 Road would be downgraded to a trail.

10
11 **KENT CANYON, MOUNT TAMALPAIS**
12 **STATE PARK**

13 The park would work with California State
14 Parks to achieve common objectives for this
15 area. Collaboration would focus on
16 maintenance, parking, and trails. Most
17 maintenance functions in the monument
18 would be relocated to facilities potentially
19 shared with Mount Tamalpais State Park.

20
21
22 **COST ESTIMATES**

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

28
29 The alternatives describe the maximum
30 potential capital improvements; lesser
31 improvements may be implemented, or built
32 in phases if necessary. The implementation
33 of the approved plan will depend on future
34 funding. The approval of this plan does not
35 guarantee that the funding and staffing
36 needed to implement the plan will be
37 forthcoming. Full implementation of the

38 actions in the approved general management
39 plan could be many years in the future.
40 Additionally, some of the future long-term
41 funding needed to implement the various
42 actions called for in the alternatives is
43 anticipated to come from nonfederal
44 partners, consistent with the park's current
45 practices.

46
47
48 **Annual Operating Costs**

49 The annual cost to operate the shuttle during
50 peak periods is estimated to range from
51 \$600,000 to \$1,400,000. This is the full cost
52 to operate the shuttle, although historically,
53 shuttle operation costs have been shared
54 with local transportation agencies as a joint
55 solution to alleviating traffic congestion on
56 the State Route 1 corridor.

57
58
59 **One-time Costs**

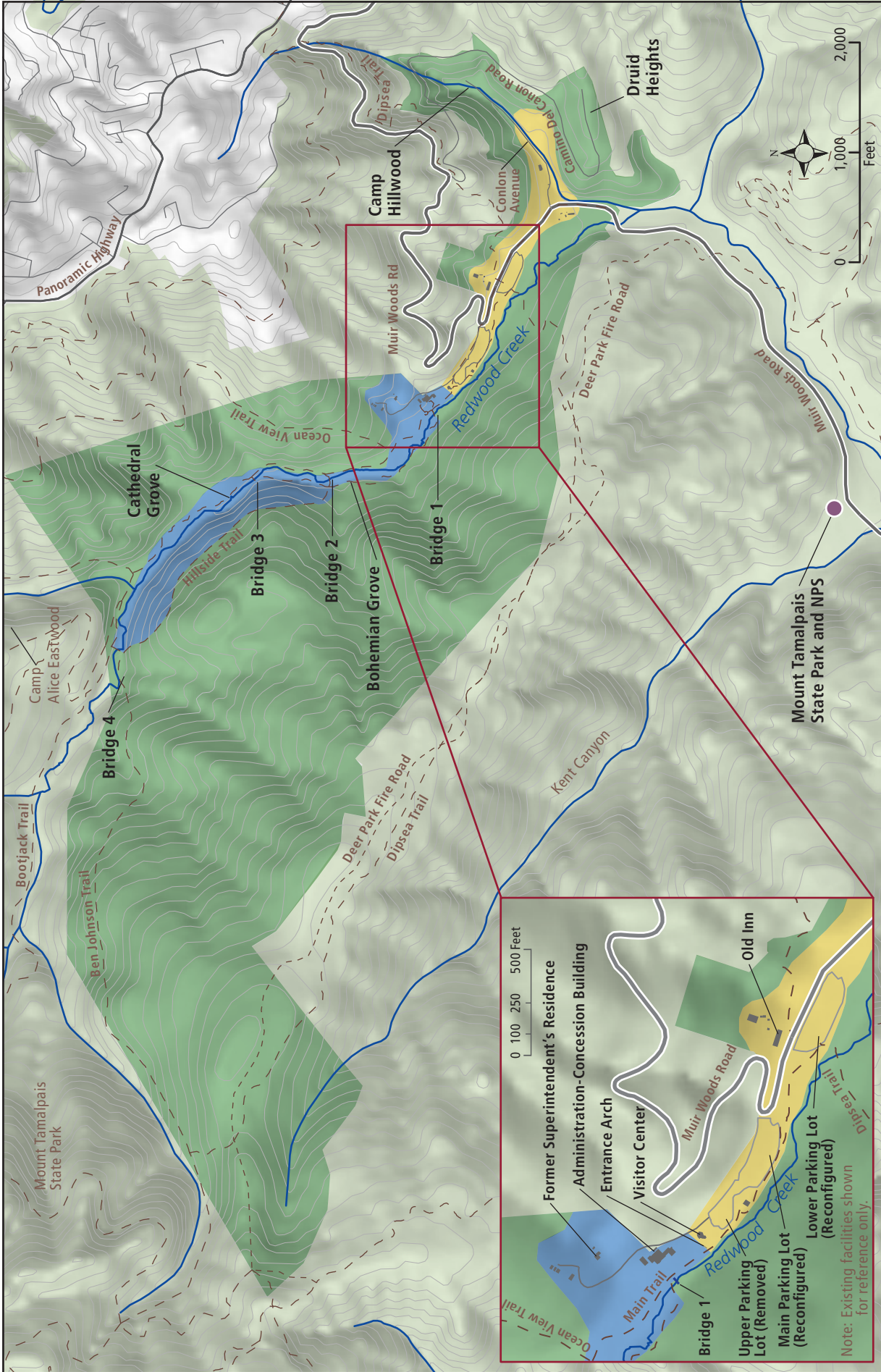
60 This alternative proposes a variety of
61 enhanced programs, facilities, and trails to
62 welcome a diversity of visitors and support a
63 range of experiences. Many of the facilities
64 would be relocated or modified to reduce
65 impacts on the ecosystem and improve the
66 park experience.

67
68 One-time costs of the alternative include a
69 mix of projects including rehabilitation of
70 historic structures, new construction,
71 removal of nonhistoric facilities, and natural
72 resource restoration. Total one-time costs
73 for Muir Woods National Monument are
74 estimated at \$15.9 million.

**TABLE 22. COSTS OF ALTERNATIVE 1 FOR
MUIR WOODS NATIONAL MONUMENT**

Summary of Costs of Alternative 1	
Annual Operational Costs	
Shuttle Operations	\$ 600,000–\$1,400,000
One-time Capital Costs	
<i>Facility Rehabilitation</i>	
Entrance area improvements	\$7,150,000
Entry drive and parking improvements	\$1,300,000
Trail system improvements	\$500,000
<i>Historic Preservation</i>	
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
<i>Natural Resource Restoration</i>	
Muir Woods Addition	\$2,410,000
Within the Monument	\$120,000
<i>Facility Removal</i>	
Structures in the Monument and other infrastructure	\$250,000
Nonhistoric structures in the Muir Woods Addition	\$470,000
<i>New Construction</i>	
Off-site welcome center	\$2,230,000
Bridge 4 amenities	\$410,000
Total	\$15,900,000

All costs in 2009 dollars



Connecting People with the Parks
Alternative 1
Muir Woods National Monument
 U.S. Department of the Interior - National Park Service
 GGNRA/DSC 112/20010 A April 23, 2013

Management Zones

- Diverse Opportunities
- Scenic Corridor
- Interpretive Corridor
- Evolved Cultural Landscape
- Historic Immersion
- Natural
- Sensitive Resources
- Park Operations

Note: Buildings are shown in a darker shade in each zone.

Map 19

ALTERNATIVE 2: PRESERVING AND ENJOYING COASTAL ECOSYSTEMS

1 OVERVIEW

2 Muir Woods National Monument and the
3 Redwood Creek watershed are part of the
4 UNESCO Golden Gate Biosphere Reserve—
5 one of the world’s richest reservoirs of plant
6 and animal life. This alternative would seek
7 to restore the primeval character of the old-
8 growth redwood forest. Visitors would be
9 immersed in the forest, and could
10 experience the natural sounds, smells, light,
11 and darkness of the forest.

12
13 The experience would be more primitive
14 than it is today; the majority of the built
15 environment—buildings, parking lots, paved
16 trails—would be removed, and all visitors
17 would arrive by shuttle, bicycle, or on foot.
18 The landscape would be “messier” than it is
19 today, but the forest would function more
20 naturally: Redwood Creek would be allowed
21 to meander across the floodplain, flooding
22 the valley bottom, uprooting trees, and
23 opening gaps in the canopy.

24
25 Where not in conflict with natural resource
26 goals, historic trails and structures could be
27 retained or adapted for contemporary uses.
28 A light-on-the-land, accessible trail would
29 reach into the heart of the forest. Visitors
30 would engage in participatory stewardship,
31 education, and science that further the
32 preservation of the forest and all its parts—
33 the creek, salmon, spotted owls, bats, natural
34 sounds—as part of the continuing history
35 and evolution of the land preservation and
36 conservation movement.

37
38 An off-site welcome center for the shuttle
39 system, with parking and visitor services,
40 would be an important first point for
41 orientation and a key to providing
42 sustainable access to the monument.
43 Restoration of the Redwood Creek
44 watershed would be accelerated in

45 collaboration with other land managers.
46 Actions would include the removal of
47 unneeded management roads, stabilization
48 of sediment sources, and removal of invasive
49 vegetation, as well as removal of streambank
50 stabilization structures in Redwood Creek,
51 removal and possible relocation of some
52 pedestrian bridges, and restoration of
53 natural floodplain function.

54 55 56 ARRIVAL

57 Off Site

58 This area would be the same as in
59 alternatives 1 and 3, except that the shuttle
60 service would run year-round. To the extent
61 feasible, all visitors would come to Muir
62 Woods National Monument either by
63 shuttle service from the new welcome
64 center, or under their own power.

65 66 *Park Operations Zone (Old Inn area)*

67 The Old Inn and adjacent areas would be
68 used for administration and limited
69 maintenance operations. Only a small
70 parking area would be available for special
71 needs. The park entrance would be
72 relocated to the current lower parking lot
73 and designed to accommodate a modest
74 transit stop for the shuttle. It would also
75 provide basic visitor services such as light
76 snacks and restrooms.

77 78 *Sensitive Resources Zone* 79 *(along Redwood Creek)*

80 The existing main entrance area, including
81 the entire upper parking area, restrooms,
82 and visitor center, as well as a major portion
83 of the lower parking lot, would be removed
84 to restore natural conditions, including
85 seasonal flooding.

1 **REDWOOD FOREST AND**
2 **REDWOOD CREEK**

3 ***Sensitive Resources Zone***
4 ***(majority of the monument)***

5 The old-growth redwood forest would be
6 managed to achieve the highest level of
7 natural resource integrity. The visitor
8 experience would promote an intimate
9 relationship with the natural resources of the
10 primeval redwood forest. Visitor access
11 would be highly controlled and limited to
12 designated areas and activities. The visitor
13 would have the opportunity to engage in
14 participatory stewardship, and educational
15 and science activities.

16
17 The natural conditions of the redwood
18 forest and Redwood Creek would be
19 restored and allowed to continue
20 unimpeded. Floodplain processes and
21 riparian habitat would be restored by
22 removing, realigning, or redesigning trails,
23 bridges, and other impediments to natural
24 processes. Woody debris would accumulate
25 in the creek and on the forest floor.

26
27 Visitor services in the forest would be
28 relocated to the transit stop. In consultation
29 with the state historic preservation office
30 and other stakeholders, the existing
31 buildings and other major infrastructure
32 would be removed and the sites restored to
33 their natural conditions. All buildings,
34 except the Old Inn, would be removed,
35 including the former Superintendent's
36 Residence and the Administration-
37 Concession Building.

38
39 The trail system would be redesigned to
40 accommodate fewer visitors in a more
41 intimate and appropriate setting. A simple
42 accessible trail would reach into a portion of
43 the old-growth forest. The existing main trail
44 along the creek would be relocated out of
45 the floodplain, and other trails and bridges
46 could be removed, relocated, or redesigned
47 to allow and promote natural processes.
48 Paved surfaces would be removed.

49

50 The trail system throughout the monument
51 would be designed to connect to other trails
52 that would allow it to extend from the
53 redwood forest to the ocean, highlighting
54 the connection between the uplands and the
55 ocean and the role that watershed
56 restoration plays in maintaining healthy
57 ecosystems. A reroute of the Redwood
58 Creek crossing of the Dipsea Trail would be
59 explored to find a more appropriate location
60 with less impact to the natural functions of
61 the creek; the rest of the Dipsea Trail would
62 be maintained along its historic alignment.

63

64

65 **MUIR WOODS ADDITION (ALSO**
66 **KNOWN AS CAMINO DEL CANYON,**
67 **CONLON AVENUE, AND DRUID**
68 **HEIGHTS)**

69 ***Natural Zone***

70 The area would be managed to restore native
71 habitat and natural processes with emphasis
72 on removal of unneeded roads and
73 development (including portions of Druid
74 Heights and Camp Hillwood), stabilization
75 of sediment sources, re-establishment of
76 natural drainage patterns, restoration of the
77 tributary creek, and removal of invasive
78 vegetation that has escaped from developed
79 areas.

80

81 All existing operational functions within this
82 zone (maintenance and native plants
83 nursery) would be relocated to the Lower
84 Redwood Creek site (former Banducci
85 flower farm) or in potential shared facilities
86 with Mount Tamalpais State Park nearby at
87 Kent Canyon. Water and sewer systems
88 could be relocated to appropriate sites using
89 sustainable technologies and practices.

90

91

92 **KENT CANYON, MOUNT TAMALPAIS**
93 **STATE PARK**

94 The park would work with California State
95 Parks to achieve common objectives for this
96 area. Collaboration would focus on

1 maintenance, parking, and trails. Most
2 maintenance functions in the monument
3 would be relocated to facilities potentially
4 shared with Mount Tamalpais State Park.

5
6

7 **COST ESTIMATES**

8 Cost estimates for alternative 2 are identified
9 in the table below. The costs shown here are
10 not for budgetary purposes; they are only
11 intended to show a relative comparison of
12 costs among the alternatives.

13
14 The alternatives describe the maximum
15 potential capital improvements; lesser
16 improvements may be implemented, or built
17 in phases if necessary. The implementation
18 of the approved plan will depend on future
19 funding. The approval of this plan does not
20 guarantee that the funding and staffing
21 needed to implement the plan will be
22 forthcoming. Full implementation of the
23 actions in the approved general management
24 plan could be many years in the future.
25 Additionally, some of the future long-term
26 funding needed to implement the various
27 actions called for in the alternatives is
28 anticipated to come from nonfederal

29 partners, consistent with the park's current
30 practices.

31
32

33 **Annual Operating Costs**

34 The annual costs to operate the shuttle year-
35 round are estimated to range from
36 \$4,000,000 to \$9,500,000. This is the full cost
37 to operate the shuttle, although historically,
38 shuttle operation costs have been shared
39 with local transportation agencies as a joint
40 solution to alleviating traffic congestion on
41 the State Route 1 corridor.

42
43

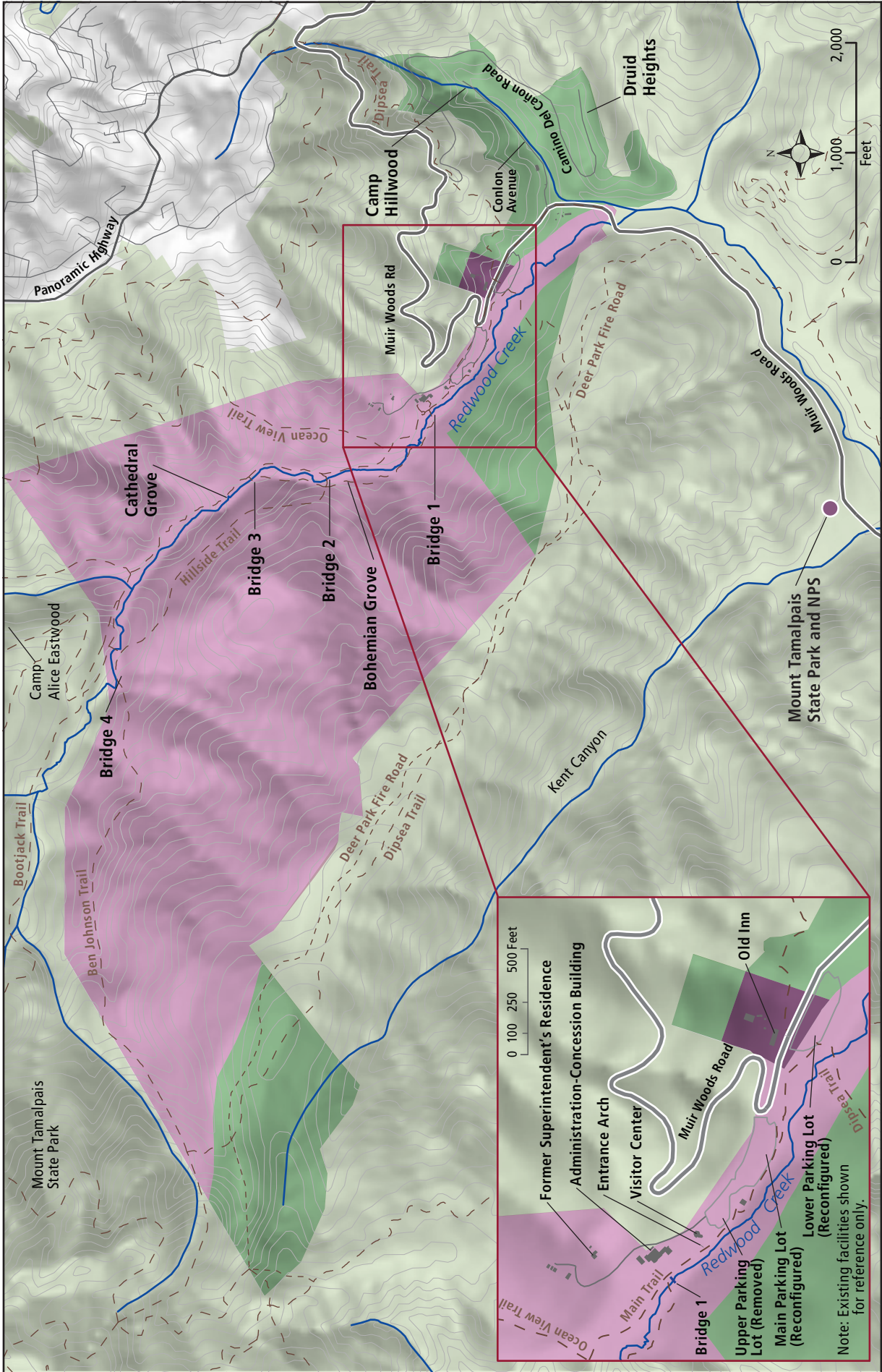
44 **One-time Costs**

45 In order to achieve the goals of alternative 2,
46 a large portion of the built environment
47 would be removed from the redwood forest
48 and addition lands; however, some trails and
49 structures would be adapted for
50 contemporary uses. Much of the cost of this
51 alternative is attributable to the removal of
52 facilities and infrastructure, new welcome
53 centers, and landscape and natural resource
54 restoration. Total one-time costs for
55 alternative 2 for Muir Woods are estimated
56 at \$16.9 million.

TABLE 23. COSTS OF ALTERNATIVE 2 FOR MUIR WOODS NATIONAL MONUMENT

Summary of Costs for Alternative 2	
Annual Operational Costs	
Shuttle Operations	\$4,000,000 to \$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
- Sensitive Resources
- Park Operations
- Evolved Cultural Landscape
- Historic Immersion
- Natural

Note: Buildings are shown in a darker shade in each zone.

Preserving and Enjoying Coastal Ecosystems Alternative 2

Muir Woods National Monument

U.S. Department of the Interior - National Park Service
GGNRA/DSC 112/20011 A April 23, 2013

ALTERNATIVE 3: FOCUSING ON NATIONAL TREASURES— THE PREFERRED ALTERNATIVE

1 OVERVIEW

2 Muir Woods National Monument is a
3 window into the complex world of nature
4 and conservation. This alternative would
5 present the monument as a contemplative
6 outdoor museum where visitors would
7 discover the primeval redwood forest and
8 the monument's place in the early United
9 States conservation movement.

10

11 The system of trails would continue to lead
12 visitors into the forest to feel, see, and learn,
13 in different ways, about the essential
14 qualities of the forest. These include its giant
15 trees, the ecology of Redwood Creek, and
16 William Kent's generous donation of the
17 forest to the American public. Rather than
18 continue to concentrate visitation along a
19 main trail, visitors would be encouraged to
20 take different thematic interpretive trails,
21 some new and some existing, to experience
22 the different parts of the park. Other trails
23 would be enhanced to better link the
24 monument with the surrounding Mount
25 Tamalpais State Park.

26

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

32

33 Shuttle service from off-site locations would
34 be expanded and be an important first point
35 for orientation and a key to providing
36 sustainable access to the monument. Visitors
37 would continue to be drawn to the
38 monument to see the trees, but they would
39 leave with a richer understanding of this
40 precious ecosystem and how the saving of
41 these few acres helped spark conservation
42 across the United States. They would be
43 motivated to return and learn more of the
44 story. In addition, a comprehensive user

45 capacity strategy would help the park to
46 monitor and adaptively manage crowding,
47 user conflicts, and impacts on resources.

48

49 Building on the interagency *Redwood Creek*
50 *Watershed: Vision for the Future* (2003), and a
51 cooperative management agreement with
52 California State Parks, the National Park
53 Service would continue to collaborate with
54 the public and other land managers to
55 address watershed restoration, stewardship,
56 and recreation.

57

58

59 ARRIVAL

60 Off Site

61 To enhance the visitor experience and
62 address congestion problems, permanent
63 shuttle service to Muir Woods National
64 Monument would be provided during peak
65 periods throughout the year. The existing
66 transit hub in the vicinity of State Route 1
67 and Highway 101 could continue to serve as
68 a shuttle intercept facility. The National Park
69 Service would collaborate with partners
70 including Marin County, California State
71 Parks, and Caltrans to provide shuttle and
72 other necessary visitor services. This could
73 include phased improvements to parking,
74 sheltered waiting areas, restrooms,
75 orientation to the monument and other
76 regional park destinations, and improved
77 connections to regional ferry services.
78 Improvements east of Panoramic Highway
79 in the vicinity of Homestead Hill, including a
80 parking area, would enhance trail and transit
81 access to Muir Woods and other nearby
82 park destinations.

83

84 *Diverse Opportunities Zone*

85 The monument's existing entry area would
86 be redesigned to enhance the visitor's arrival

1 experience, protect resources, and improve
 2 safety. Parking at the monument would be
 3 reduced, reconfigured and relocated using
 4 sustainable design practices to better protect
 5 Redwood Creek and other sensitive
 6 resources. Removal of parking would
 7 primarily be along the shoulder of Muir
 8 Woods Road. Parking supply would
 9 continue to meet demand during off-peak
 10 periods. Pedestrian access would be
 11 improved to offer visitors a more natural
 12 experience transitioning into the redwood
 13 forest separated from roads and parking.

14
 15 A modest facility would be provided to
 16 receive visitors arriving by different modes
 17 of transportation. The services provided
 18 could include shuttle drop-off, sheltered
 19 waiting areas, orientation, restrooms, food
 20 service, and a bookstore. The existing
 21 separate structures for fee collection, a
 22 bookstore, and restrooms could be replaced
 23 as part of the new facility. The goal of the
 24 design process would be to accommodate
 25 visitor’s needs while simultaneously
 26 minimizing the overall footprint of
 27 development in the park.

28
 29 Future use or removal of the Old Inn would
 30 be determined through more detailed site
 31 planning that would consider its utility for
 32 visitor services or operational needs in the
 33 redesigned entry area. To allow visitor
 34 parking to be reconfigured, the native plant
 35 nursery would be relocated to Lower
 36 Redwood Creek as part of a stewardship
 37 center. Realignment of portions of county-
 38 maintained Muir Woods Road would also be
 39 explored to improve operational safety and
 40 visitor access.

41
 42 In order to improve pedestrian safety and
 43 protect Redwood Creek, the park would
 44 collaborate with Marin County and
 45 California State Parks to restrict shoulder
 46 parking along Muir Woods Road in areas
 47 without trailheads as alternative
 48 transportation becomes more readily
 49 available.

50
 51

52 **REDWOOD FOREST AND**
 53 **REDWOOD CREEK**

54 ***Interpretive Corridor Zone (large***
 55 ***corridor around Redwood Creek)***

56 This area would be managed as a setting
 57 where visitors discover and interact with the
 58 features of the primeval redwood forest.

59 Each of the existing trails within the
 60 monument would be managed to unveil a
 61 different story and experience using creative
 62 interpretive approaches that are appropriate
 63 to the majestic old-growth forest. The trails
 64 would be designed and managed to provide
 65 visitors with opportunities to learn, explore,
 66 and become immersed in the resources that
 67 illustrate a particular theme. Examples of
 68 thematic trails could include an ecology-
 69 themed trail that leads visitors to examine
 70 the forest structure and the dynamic habitats
 71 of the creek. Another trail would highlight a
 72 century of conservation history and quietly
 73 usher visitors into Cathedral Grove. Some
 74 trails would start at the main entrance and
 75 highlight the main redwood groves along the
 76 creek. Others would bring visitors down into
 77 the woods from higher in the canyon.

78
 79 The Dipsea Trail and other trails from
 80 Mount Tamalpais State Park also would be
 81 highlighted, offering opportunities for self-
 82 discovery. The experience would be further
 83 reinforced through ranger-led activities that
 84 engage the visitor with the monument’s
 85 natural and cultural resources.

86
 87 Portions of the main trail and bridges could
 88 be relocated to allow for creek and
 89 floodplain restoration and improvements to
 90 the integrity of the redwood forest
 91 ecosystem.

92
 93 The Administration-Concession Building
 94 would transition to support interpretive and
 95 educational activities, providing flexible
 96 classroom and program space in the woods.
 97 Nonhistoric and nonessential additions
 98 made to this structure and its surroundings
 99 would be removed to reduce development in

1 the monument. The adjacent restroom
2 building would be retained.

3
4 The historic structures and features that
5 represent the conservation movement would
6 be preserved and rehabilitated, and used to
7 support visitor programming and services.
8 These include the former Superintendent's
9 Residence, equipment shed, garage, trails,
10 monuments, and named groves. The historic
11 creek stabilization rock work could be
12 removed in targeted areas to restore natural
13 creek functions important to forest health.

14
15 The use of contained fires limited to
16 interpretive and educational purposes could
17 be permitted by the superintendent within
18 this zone.

19
20 ***Sensitive Resources Zone (upper***
21 ***north-facing slopes of the canyon)***

22 These areas would be managed to preserve
23 the redwood forest and natural sounds that
24 provide a backdrop to the adjacent
25 interpretive corridor zone. Visitor access to
26 this area would be carefully managed and
27 limited to retain the pristine setting and
28 protect its resources.

29
30 ***Natural Zone (western portion***
31 ***of the national monument)***

32 This area of the monument would be
33 managed to preserve natural systems and
34 contribute to the primeval forest setting.
35 Visitors within this zone would have
36 opportunities for self-discovery and
37 challenge on the Ben Johnson and Dipsea
38 trails in a more dispersed and wild park
39 setting.

40
41

42 **MUIR WOODS ADDITION (ALSO**
43 **KNOWN AS CAMINO DEL CANYON,**
44 **CONLON AVENUE, AND DRUID**
45 **HEIGHTS)**

46 ***Natural Zone***

47 The area would be managed to provide low
48 impact trail-based day uses and restore
49 native habitat and natural processes with
50 emphasis on removal of roads, nonhistoric
51 structures, stabilization of sediment sources,
52 re-establishment of natural drainage
53 patterns, restoration of the tributary creek,
54 and removal of invasive vegetation that has
55 escaped from developed areas.

56
57 Some historic structures and landscape
58 associated with the bohemian community at
59 Druid Heights would be preserved. Camino
60 del Canyon would be converted to a trail
61 with access by foot or light service vehicle.
62 The structures at Camp Hillwood would be
63 preserved to the extent that this would not
64 compromise natural resource values. Use of
65 the camp would be for educational and
66 interpretive programs consistent with the
67 natural zone. The segment of Conlon
68 Avenue extending from the lift station to the
69 camp would be downgraded and realigned
70 to restore natural processes and conditions
71 in the tributary to Redwood Creek.

72
73 ***Diverse Opportunities Zone (lower***
74 ***Conlon Avenue from Muir Woods***
75 ***Road to the lift station)***

76 A modest parking area and trailhead would
77 be situated in this zone. The National Park
78 Service would continue to explore a
79 sustainable wastewater treatment process to
80 replace the existing lift station. Other
81 existing operational functions (maintenance
82 and native plant nursery) would be relocated
83 to the Lower Redwood Creek site (former
84 Banducci flower farm) or in potential shared
85 facilities with Mount Tamalpais State Park
86 nearby at Kent Canyon.

87
88

1 **KENT CANYON, MOUNT TAMALPAIS**
2 **STATE PARK**

3 The park would work with California State
4 Parks to achieve common objectives for this
5 area. Collaboration would focus on
6 maintenance, parking, and trails. Most
7 maintenance functions in the monument
8 would be relocated to facilities potentially
9 shared with Mount Tamalpais State Park.

10
11
12 **COST ESTIMATES**

13 Cost estimates for alternative 3 are identified
14 in table 20. The costs shown here are not for
15 budgetary purposes; they are only intended
16 to show a relative comparison of costs
17 among the alternatives.

18
19 The alternatives describe the maximum
20 potential capital improvements; lesser
21 improvements may be implemented, or built
22 in phases if necessary. The implementation
23 of the approved plan will depend on future
24 funding. The approval of this plan does not
25 guarantee that the funding and staffing
26 needed to implement the plan will be
27 forthcoming. Full implementation of the
28 actions in the approved general management
29 plan could be many years in the future.
30 Additionally, some of the future long-term
31 funding needed to implement the various

32 actions called for in the alternatives is
33 anticipated to come from nonfederal
34 partners, consistent with the park's current
35 practices.

36
37
38 **Annual Operating Costs**

39 The annual costs to operate the shuttle at
40 peak periods throughout the year are
41 estimated to range from \$600,000 to
42 \$1,400,000. This is the full cost to operate the
43 shuttle, although historically, shuttle
44 operation costs have been shared with local
45 transportation agencies as a joint solution to
46 alleviating traffic congestion on the State
47 Route 1 corridor.

48
49
50 **One-time Costs**

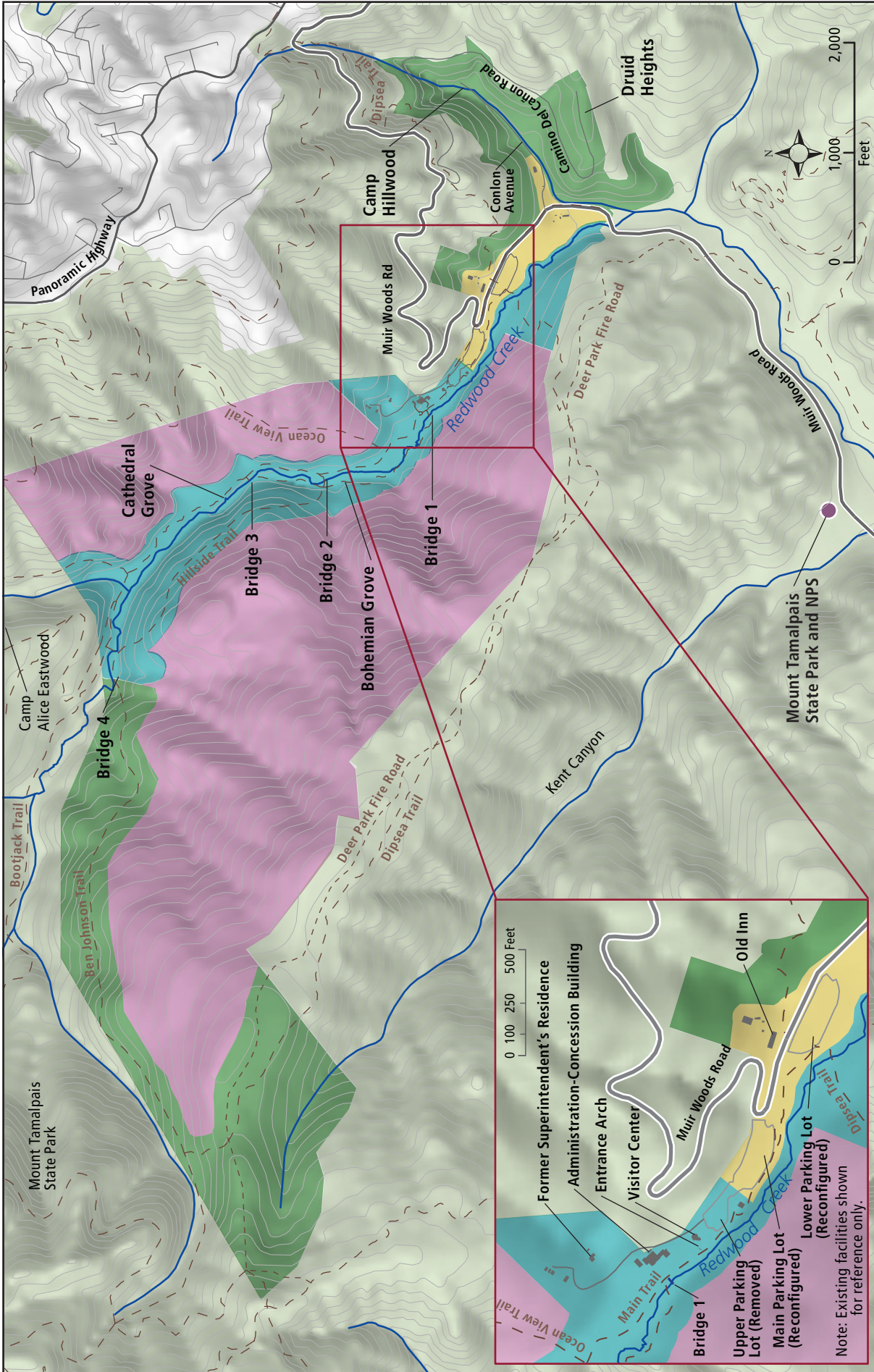
51 In alternative 3, Muir Woods National
52 Monument would be presented as an
53 outdoor museum where visitors discover the
54 primeval forest and conservation history.
55 Costs are largely attributable to the
56 proposed improvements to the arrival
57 experience, reducing congestion,
58 rehabilitation of historic structures, and trail
59 system enhancements. Total one-time costs
60 for alternative 3 for Muir Woods National
61 Monument are estimated at \$15.6 million.

**TABLE 24. COSTS OF ALTERNATIVE 3 FOR
MUIR WOODS NATIONAL MONUMENT**

Summary of Costs for Alternative 3 (NPS Preferred Alternative)	
Annual Operational Costs	
Shuttle Operations	\$600,000 to 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 Addition	\$470,000
TOTAL	\$15,560,000

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**

U.S. Department of the Interior - National Park Service
GGNRA/DSC 112/20012 A April 23, 2013



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.

Muir Woods National Monument (Conceptual Sketches for the Preferred Alternative)

SUMMARY OF COSTS ESTIMATES FOR MUIR WOODS NATIONAL MONUMENT

1 The cost figures shown here and throughout
 2 the plan are intended only to provide
 3 conceptual costs for general comparison of
 4 alternatives. National Park Service and
 5 industry cost estimating guidelines were
 6 used to develop the costs (in 2009 dollars) to
 7 the extent possible, but the estimates should
 8 not be used for budgeting purposes. Specific
 9 costs will be determined in subsequent,
 10 more detailed planning and design exercises,
 11 and after considering the design of facilities,
 12 identification of detailed resource
 13 protection needs, and changing visitor
 14 expectations. Actual costs to the National
 15 Park Service will vary depending on when
 16 actions are implemented, and on
 17 contributions by partners and volunteers.
 18

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

**TABLE 25. SUMMARY OF COSTS ASSOCIATED WITH 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	\$15,560,000

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 of the no-action alternative only include costs associated with projects already approved and fully funded.
- 3 All costs are in 2009 dollars.

DEFERRED MAINTENANCE

1 The “Actions Common to All Alternatives”
 2 section, earlier in this document, contained a
 3 discussion of facilities that could be removed
 4 to reduce maintenance funding needs.
 5 However, in addition to removing facilities,
 6 expending one-time costs on park facilities
 7 would reduce the deferred maintenance by
 8 bringing the facilities up to a sustainable
 9 condition. Deferred maintenance—or work
 10 needed to bring park assets into good
 11 condition—exceeds \$198.1 million at
 12 Golden Gate National Recreation Area and
 13 Muir Woods National Monument,
 14 according to the 2009 *Park Asset*
 15 *Management Plan*.
 16

17 Each alternative contains proposals that
 18 would reduce total deferred maintenance.
 19 Although the reductions in deferred
 20 maintenance are similar in amount for each
 21 alternative, the alternatives do not all
 22 contain the same proposals for reducing
 23 deferred maintenance; each alternative
 24 proposes different treatments for structures,
 25 including rehabilitation or removal.
 26
 27 Park staff continue to seek out additional
 28 measures to reduce deferred maintenance at
 29 the park. The *Park Asset Management Plan*,
 30 in particular, addresses strategies for
 31 reducing deferred maintenance.

TABLE 26. REDUCTION IN DEFERRED MAINTENANCE ASSOCIATED WITH 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

1 The environmentally preferable alternative
2 is the alternative that promotes the national
3 environmental policy expressed in the
4 National Environmental Policy Act (section
5 101[b]). This includes alternatives that

- 6
7 1. fulfill the responsibilities of each
8 generation as trustee of the
9 environment for succeeding
10 generations;
- 11 2. ensure for all Americans safe,
12 healthful, productive, and
13 esthetically and culturally pleasing
14 surroundings;
- 15 3. attain the widest range of beneficial
16 uses of the environment without
17 degradation, risk of health or safety, or
18 other undesirable and unintended
19 consequences;
- 20 4. preserve important historic, cultural,
21 and natural aspects of our national
22 heritage and maintain, wherever
23 possible, an environment that supports
24 diversity and variety of individual
25 choice;
- 26 5. achieve a balance between
27 population and resource use that will
28 permit high standards of living and a
29 wide sharing of life's amenities; and
- 30 6. enhance the quality of renewable
31 resources and approach the
32 maximum attainable recycling of
33 depletable resources" (NPS DO-12
34 Handbook, Section 2.7D).

35
36 The alternatives are very similar with respect
37 to criteria 1, 2, 5, and 6. The park staff
38 continues to work in achieving these factors
39 as a basic course of implementing the legal
40 mandates for Muir Woods National
41 Monument. All the alternatives equally meet
42 the attainment for these four criteria;
43 therefore, the evaluation focuses on criteria
44 3 and 4.

45 The no-action alternative represents
46 continuation of the existing management
47 strategy in order to provide a baseline
48 against which to compare the effects of the
49 other (action) alternatives. The no-action
50 alternative is the weakest alternative when
51 considering criteria 3 and 4. In this
52 alternative, the visitor experience is based
53 primarily on self-discovery with some
54 scheduled interpretive programs. The
55 natural and historic resources of the national
56 monument are protected but continue to be
57 impacted by past human disturbance such as
58 stream bank stabilization, locating parking
59 facilities adjacent to Redwood Creek, and
60 locating concession services within the old-
61 growth redwood forest. The new land
62 additions to Muir Woods National
63 Monument lack any planning and guidance
64 regarding the type of visitor opportunities
65 and the level of natural and cultural resource
66 preservation that should be implemented. In
67 the no-action alternative, visitor access to
68 the national monument would continue to
69 be by individual vehicles, tour buses and the
70 park's shuttle bus during the summer
71 season—which contribute to social and
72 environmental problems.

73
74 Alternative 2 provides for substantial
75 improvements to the natural environment
76 through restoration work that addresses past
77 human disturbances such as removing the
78 bank stabilization, narrowing trails,
79 eliminating the majority of parking, and
80 providing a year-round shuttle system. But
81 in consideration to criteria 3, the alternative
82 limits the range of beneficial uses to those
83 visitors looking to experience a more
84 primitive and natural setting with a focus on
85 education. The no-action alternative
86 provides a greater variety of visitor
87 opportunities than alternative 2. In regards
88 to criteria 4, alternative 2 proposes to

1 remove important historic and cultural
2 features of our national heritage.
3
4 The actions associated with the
5 implementation of alternative 1 improve
6 upon the no-action alternative and
7 alternative 2 by enhancing recreational
8 opportunities such as picnicking,
9 interpretation, and stewardship programs.
10 The social and environmental impacts
11 associated with parking and other past
12 human disturbances would be improved, as
13 well. Alternative 1 provides a good balance
14 of addressing past human disturbances and
15 providing a range of beneficial uses with
16 minimal impacts.
17
18 Alternative 3 is very similar to alternative 1 in
19 balancing the restoration of past human
20 disturbances and providing a wider range of
21 beneficial uses. Alternative 3 is better at

22 accomplishing criteria 3 and 4 with the
23 implementation of a comprehensive
24 education and interpretive program,
25 incorporating thematic trails, that would
26 help visitors to easily learn about and
27 explore the natural and cultural resources of
28 the national monument.
29
30 After considering the environmental
31 consequences of the alternatives, including
32 consequences to the human environment,
33 the National Park Service has concluded that
34 the NPS preferred alternative, alternative 3
35 for Muir Woods National Monument, is also
36 the environmentally preferable alternative.
37 This alternative best realizes the full range of
38 national environmental policy goals as stated
39 in section 101 of the National
40 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			
<ul style="list-style-type: none"> ▪ 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. 	<ul style="list-style-type: none"> ▪ 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. 	<ul style="list-style-type: none"> ▪ 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. 	<ul style="list-style-type: none"> ▪ 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.

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)
Arrival			
<ul style="list-style-type: none"> ▪ 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. 	<ul style="list-style-type: none"> ▪ 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. 	<ul style="list-style-type: none"> ▪ 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. 	<ul style="list-style-type: none"> ▪ The entrance would be redesigned to enhance visitor experience, protect resources, and improve safety. The parking lot would be reconfigured using sustainable design practices. ▪ Shuttle service would be provided during peak periods. Express transit and connections with regional and local transportation systems would be explored.
Redwood Forest and Redwood Creek			
<ul style="list-style-type: none"> ▪ 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 	<ul style="list-style-type: none"> ▪ 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 trails; add new restrooms and drinking water near 	<ul style="list-style-type: none"> ▪ 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 would be encouraged to engage in stewardship, 	<ul style="list-style-type: none"> ▪ 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-Concession Building would be used for interpretive and

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)
<p>support the visitor’s discovery of the monument’s resources.</p> <ul style="list-style-type: none"> 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. 	<p>bridge 4.</p> <ul style="list-style-type: none"> 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. 	<p>education, and science activities.</p> <ul style="list-style-type: none"> 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. 	<p>educational activities. Non-historic additions to the structure would be removed.</p> <ul style="list-style-type: none"> 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)			
<ul style="list-style-type: none"> 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 continue. The valuable wildlife habitat in this area would continue to be protected. 	<ul style="list-style-type: none"> 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 the natural setting. The natural landscape and streams would be restored and all nonhistoric structures would be removed. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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 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.

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)
			<p>Other operational functions would be relocated.</p> <ul style="list-style-type: none"> ▪ 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			
	<ul style="list-style-type: none"> ▪ Collaboration with California State Parks would focus on maintenance, parking, and trails. ▪ Most maintenance functions would be relocated to shared facilities. 	<ul style="list-style-type: none"> ▪ Same as alternative 1. 	<ul style="list-style-type: none"> ▪ 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 on 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 on air quality from the no-action alternative would be long-term, adverse, and negligible.	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 on air quality (when compared to background levels of air pollution in the region and nation) would be negligible.	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 on air quality (when compared to background levels of air pollution in the region and nation) would be negligible.	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 on air quality (when compared to background levels of air pollution in the region and nation) would be negligible.
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.	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.	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.	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.
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 monument-wide. 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.	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.	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.	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 in the Camino del Canyon and Druid Heights areas.
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 monument-wide. 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.	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 monument-wide. Adverse impacts would occur from new recreational development and expanded visitor use. Beneficial impacts would occur from the restoration of disturbed sites.	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.	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.

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
Special Status Species (federal and state threatened and endangered species)	<ul style="list-style-type: none"> ▪ Coho salmon (Federal endangered) and steelhead trout (Federal threatened), central California Coast: “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” 	<ul style="list-style-type: none"> ▪ Coho salmon (Federal endangered) and steelhead trout (Federal threatened), central California Coast: “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” 	<ul style="list-style-type: none"> ▪ Coho salmon (Federal endangered) and steelhead trout (Federal threatened), Central California Coast: “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” 	<ul style="list-style-type: none"> • Coho salmon (Federal endangered) and steelhead trout (Federal threatened), Central California Coast: “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	<p>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.</p> <p>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 on archeological resources would be permanent and minor to moderate in intensity.</p>	<p>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.</p> <p>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.</p> <p>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 on archeological resources would be permanent and minor to moderate in intensity.</p>	<p>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.</p> <p>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 on archeological resources would be permanent and minor to moderate in intensity.</p>	<p>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.</p> <p>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.</p> <p>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 on archeological resources would be permanent and minor to moderate in intensity.</p>
Ethnographic Resources/ Traditional Cultural Properties	<p>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.</p>	<p>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.</p>	<p>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.</p>	<p>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.</p>
Historic Structures	<p>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</p>	<p>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</p>	<p>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</p>	<p>Actions under alternative 3 would result in long-term, beneficial impacts on 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</p>

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
	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.	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 on potentially eligible buildings. Although increased visitation could accelerate the deterioration of historic structures, monitoring human impacts on 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.	structures would be lost.	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 on 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.
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.	Actions under alternative 1 would result in long-term, beneficial impacts on 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.	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.	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.
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 Area.	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 Area.	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 Area.	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 Area.
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 on 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 on 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 on 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 on 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.

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
Social and Economic Environment				
	In the context of the local gateway communities and the three adjacent counties, the beneficial impacts on 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 on 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 on 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 substantial 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 on 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 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.	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 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,	Alternative 2 proposes actions which would substantially 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 off-site 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	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 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

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
		moderate, adverse impact on parking availability on those days when the shuttle is not running.	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 considerably.	those days when the shuttle is not running.
Park Management, Operations, and Facilities				
	Continued long-term, moderate, beneficial impacts on 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 on park facilities. Inappropriate space for staff would also result in continued long-term, minor to moderate, adverse impacts on 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 on 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 on park operations. Construction and landscape restoration activities also would result in short-term, minor, adverse impacts on 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 on park operations. Construction and landscape restoration activities also would result in short-term, minor, adverse impacts on 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.



INTRODUCTION

1 General management plans for national park
2 units are required by law to identify and
3 address implementation commitments for
4 user capacity, also known as carrying
5 capacity. The National Park Service defines
6 user capacity as the types and levels of visitor
7 use that can be accommodated within a
8 particular national park area while sustaining
9 the quality of park resources and visitor
10 experiences consistent with the purpose of
11 that national park. Managing user capacity in
12 national parks is inherently complex and
13 depends not only on the number of visitors,
14 but also on where the visitors go, what they
15 do, and the “footprints” they leave behind. In
16 managing for user capacity, the park staff and
17 partners rely on a variety of management
18 tools and strategies, rather than relying solely
19 on regulating the number of people in a park
20 area. In addition, the ever-changing nature of
21 visitor use in parks requires a deliberate and
22 adaptive approach to user capacity
23 management.

24
25 The foundations for making user capacity
26 decisions in this general management plan
27 are the purpose, significance, special
28 mandates, and management zones associated
29 with the national park and monument. The
30 purpose, significance, and special mandates
31 define why the park was established and
32 identify the most important resources and
33 values—including visitor opportunities—that
34 are to be protected and provided. The
35 management zones in each alternative
36 describe the desired resource conditions and
37 visitor experiences, including appropriate
38 types of activities and general use levels, for
39 different locations throughout the two parks,
40 Golden Gate National Recreation Area and
41 Muir Woods National Monument. The
42 zones, as applied in the alternatives, are
43 consistent with, and help achieve, the specific
44 purpose, significance, and special mandates
45 for each park. As part of the NPS
46 commitment to the implementation of user

47 capacity, the park staff will use these
48 directives to guide the types and levels of
49 visitor use that will be accommodated while
50 sustaining the quality of park resources and
51 visitor experiences consistent with the
52 purposes of both parks.

53
54 In addition to these directives, in areas where
55 use and past research and study have
56 demonstrated a need, this plan also includes
57 specific indicators and standards for Alcatraz
58 Island in the Golden Gate National
59 Recreation Area and for Muir Woods
60 National Monument. Indicators and
61 standards are measurable variables that will
62 be monitored to track changes in resource
63 conditions and visitor experiences. The
64 indicators and standards help the National
65 Park Service ensure that desired conditions
66 are being attained, supporting the fulfillment
67 of the legislative and policy mandates of the
68 park and the monument. The general
69 management plan also identifies the types of
70 management actions that would be taken to
71 achieve desired conditions and related
72 legislative and policy mandates.

73
74 Tables 1 and 2 include the indicators,
75 standards, and potential future management
76 strategies, allocated by management zones for
77 Alcatraz Island and Muir Woods National
78 Monument, that would be implemented as a
79 result of this planning effort. The planning
80 team considered many potential issues and
81 related indicators that would identify impacts
82 of concern, but those described were
83 considered the most salient and feasible given
84 the importance and vulnerability of the
85 resource or visitor experience affected by
86 visitor use. Standards that represent the
87 minimum acceptable condition for each
88 indicator were then assigned taking into
89 consideration the qualitative descriptions of
90 the desired conditions, data on existing
91 conditions, relevant research studies, staff
92 management experience, and scoping on

1 public preferences. A range of management
 2 strategies have been identified that would be
 3 implemented if needed in response to
 4 changing conditions to ensure that standards
 5 are maintained and desired conditions are
 6 protected. If new strategies are needed, an
 7 analysis will be done to identify the most
 8 effective and feasible action for
 9 implementation. Implementation of some of
 10 these management strategies in the future
 11 may require additional compliance and
 12 public involvement

13
 14 User capacity decision making is a form of
 15 adaptive management (see the following
 16 figure). It is an iterative process in which
 17 management decisions are continuously
 18 informed and improved by monitoring the
 19 indicators and standards. Adjustments are
 20 made as appropriate. As monitoring of the
 21 park's conditions continues, managers may
 22 decide to modify or add indicators if better
 23 ways are found to measure important
 24 changes in resource and social conditions.
 25 Information on the NPS monitoring efforts,
 26 related visitor use management actions, and
 27 any changes to the indicators and standards
 28 would be available to the public.

31 **MONITORING**

32 Some of the issues and related indicators
 33 noted for both Golden Gate National
 34 Recreation Area and Muir Woods National
 35 Monument, such as impacts on bird
 36 populations, invasive species, and wear on
 37 cultural resources, are also highly influenced
 38 by regional and global threats such as
 39 pollution, disease, and climate change.
 40 Isolating visitor use impacts on these
 41 resources is not easy and may seem less
 42 significant than these other serious threats.

43 However, there are visitor management
 44 actions that can help minimize these impacts
 45 and reduce the stress on park resources,
 46 providing tangible resource and social
 47 benefits.

48
 49 The park staff will continue general
 50 monitoring of use levels and patterns
 51 throughout the park and monument. In
 52 addition, the park staff will monitor these
 53 user capacity indicators. The rigor of
 54 monitoring the indicators (e.g., frequency of
 55 monitoring cycles, amount of geographic area
 56 monitored) may vary considerably depending
 57 on how close existing conditions are to the
 58 standards. If the existing conditions are far
 59 from exceeding the standard, the rigor of
 60 monitoring may be less than if the existing
 61 conditions are close to or trending towards
 62 the standard.

63
 64 In addition, the initial phases of monitoring
 65 for the indicators and standards defined
 66 above will help the National Park Service
 67 determine if any revisions are needed. The
 68 initial application of the indicators and
 69 standards will determine if the indicators are
 70 accurately measuring the conditions of
 71 concern and if the standards truly represent
 72 the minimally acceptable condition of the
 73 indicator. Park staff may decide to modify the
 74 indicators or standards and revise the
 75 monitoring program if better ways are found
 76 to measure changes caused by visitor use. If
 77 use levels and patterns change appreciably,
 78 the park may need to initiate additional
 79 monitoring of new indicators to ensure that
 80 desired conditions are protected. This
 81 iterative learning and refining process is the
 82 strength of the NPS user capacity
 83 management program, in that it can be
 84 adapted and improved as knowledge grows.

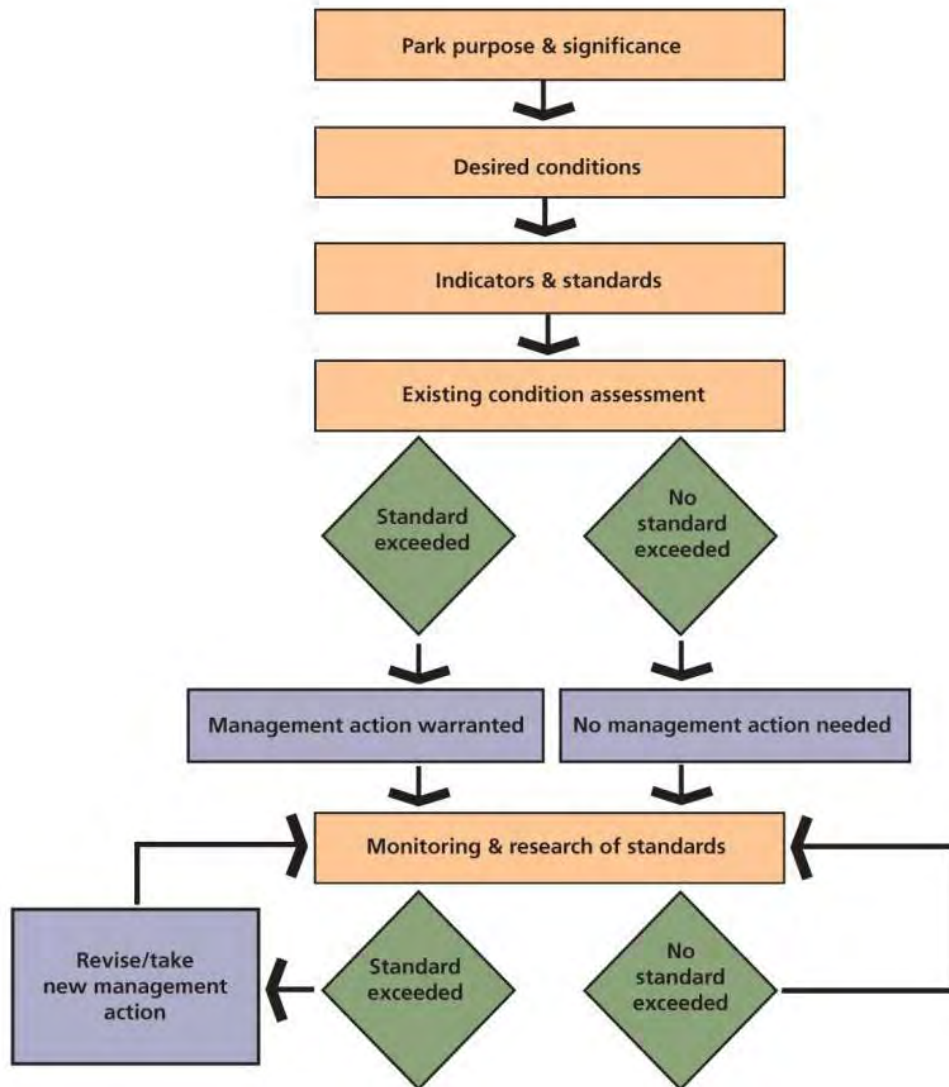


FIGURE 3. USER CAPACITY FRAMEWORK

GOLDEN GATE NATIONAL RECREATION AREA

1 Golden Gate National Recreation Area is a
2 popular, heavily visited national park with
3 extensive and diverse visitor opportunities
4 that are in great demand. In addition, the
5 park contains unique resources, some of
6 which are highly vulnerable to visitor use
7 impacts. Further, visitor use opportunities
8 occur over an extensive area with many
9 access points and use areas that make
10 regulating use levels, activities, and patterns
11 complex. Managing user capacity in this
12 unique setting is highly challenging.

13
14 Given these challenges and limited staff and
15 budgets, user capacity management must be
16 strategic through the efficient use of staff
17 time and funding, targeted focus on areas of
18 most concern within the park, and creative
19 approaches to monitoring and developing
20 management strategies. For all areas of
21 Golden Gate National Recreation Area, the
22 management zones provide the most
23 important implementation commitment for
24 user capacity, because they describe the
25 desired resource conditions and visitor
26 experiences—including appropriate types
27 and levels of use, visitor services, and
28 development—for all sites within the
29 planning area. These management zones are
30 consistent with and help achieve Golden
31 Gate National Recreation Area’s purpose,
32 significance, and special mandates. Further,
33 there are many existing visitor use
34 management strategies already in use that
35 will continue to be implemented to help the
36 park staff achieve these desired conditions.
37 Examples of some of these existing
38 management strategies include the
39 following:

- 40
41 ▪ providing visitor education materials
42 on low impact practices (e.g.,
43 informational signs about off-trail
44 impacts)

- 45 ▪ establishing maximum group size
46 limits (e.g., the number of bicyclists
47 in a group)
- 48 ▪ managing sites (e.g., closure of
49 informal trails and active restoration)
- 50 ▪ closing sensitive resource areas (e.g.,
51 no visitor access to the tide pools at
52 Point Bonita)
- 53 ▪ establishing regulations on visitor
54 activities (e.g., hiking restricted to
55 on-trail travel on the Coastal Trail)
- 56 ▪ requiring permits (e.g., all special
57 events require a special use permit)

58
59 The management strategies for some specific
60 visitor use activities have recently been the
61 focus of separate public planning processes.
62 These activities include the management of
63 beach fires at Ocean Beach, equestrian
64 activities in the Marin Headlands, dog
65 walking throughout Golden Gate National
66 Recreation Area, and transportation within
67 and outside park boundaries. The decisions
68 that have been made or are being considered
69 on appropriate visitor use management
70 strategies for these activities are consistent
71 with desired conditions outlined in this plan,
72 and will help the National Park Service
73 achieve these conditions.

74
75 In addition to the implementation
76 commitments for the desired conditions
77 (identified in the zone descriptions), the
78 park staff selected user capacity indicators
79 and standards for Alcatraz Island, given the
80 popularity of the site, the specialized visitor
81 experience objectives, and the sensitivity of
82 some natural and cultural resources. In the
83 future, as the need presents itself and other
84 planning opportunities arise, indicators and
85 standards will be identified for other areas
86 within Golden Gate National Recreation
87 Area. Some of the topics for future
88 consideration as indicators will likely

1 include traffic congestion, parking in
2 locations not designated for parking,
3 informal trails, invasive plants, and
4 encounter rates on trails.

5
6 The park staff considered many potential
7 resource and social indicators that would
8 represent visitor use influences on resource
9 and social conditions at Alcatraz Island. The
10 indicators selected for inclusion in the
11 general management plan were those that
12 were considered to be the most important,
13 as well as feasible, for long-term evaluation.

14 15 16 **PRIORITY RESOURCE INDICATORS**

17 The priority resource indicators for Alcatraz
18 Island are associated with the issues of
19 disturbance to birds, vandalism, and
20 disturbance and wear on cultural resources.

21 The conditions of these resources are
22 already being monitored in various forms,
23 but the indicators identified will help the
24 park staff track specific influences to these
25 resources as a result of visitor use.

26
27 Impacts on bird populations from visitor
28 activities can include unintentional
29 disturbance, harassment, and feeding. These
30 types of impacts can have substantial effects
31 on the health, abundance, and diversity of
32 targeted bird species. Alcatraz Island serves
33 as one of the few estuarine breeding sites for
34 many marine birds (Saenz et al. 2006).

35 Disturbance to Brandt's cormorants was
36 selected as the user capacity indicator,
37 because the island is home to San Francisco
38 Bay's only Brandt's cormorant colony. The
39 populations of Brandt's cormorants on
40 Alcatraz Island have been the focus of study
41 by the Point Reyes Bird Observatory since
42 1996, as part of their annual seabird
43 monitoring program. The bird disturbance
44 trend data collected by the observatory,
45 along with the long-term desired conditions
46 for marine bird habitat within the different
47 zones on Alcatraz Island, served as the basis
48 for selection of the standards for this
49 indicator. Some of the existing management
50 activities the National Park Service has

51 already been employing in relation to this
52 issue include visitor education via signs,
53 staff, and docents; barriers in specific areas;
54 and area and seasonal closures.

55
56 Visitor use impacts on cultural resources
57 include general wear on historic structures
58 and some occurrences of unintentional
59 disturbance and vandalism to archeological
60 resources, historic structures, and the
61 recently restored historical gardens. The
62 specific indicators focus on existing
63 monitoring protocol, including tracking
64 incidences of graffiti and vandalism, and
65 assessing site conditions as affected by
66 visitor use. The standards are set at a low
67 threshold since cultural resources are
68 nonrenewable, so impacts, especially those
69 that represent depreciative behavior, must
70 be minimized to the extent possible. Visitor
71 use impacts can disturb significant features
72 of these resources, which may cause a loss of
73 site integrity over time. Some of the
74 management activities that the National Park
75 Service has already been employing in
76 relation to this issue include visitor
77 education via signage, interpretive programs
78 and roving patrols, barriers in specific areas,
79 and area closures.

80 81 82 **PRIORITY SOCIAL INDICATORS**

83 The priority social indicators selected for
84 Alcatraz Island are associated with the issues
85 of crowding and congestion. Given the
86 popularity of Alcatraz Island as a tourist
87 destination within San Francisco, the issues
88 of crowding and congestion have been the
89 focus of management efforts. In addition,
90 these topics have been addressed in long-
91 term visitor use studies conducted by the
92 Park Studies Laboratory at the University of
93 Vermont in cooperation with the National
94 Park Service (Manning et al. 2007). The
95 visitor activities within the cell house have
96 been, and will continue to be, the highest
97 priority area for some of these issues.
98 Crowding and congestion problems may
99 affect visitors' ability to experience high-
100 quality educational opportunities and could

1 on occasion, affect visitor health and safety.
 2 The importance of the indicators selected,
 3 which include the number of people per
 4 view, the number of people at one time in
 5 the cell house, and the wait times for the
 6 ferry, are supported by the visitor survey
 7 research (Manning et al. 2007) along with
 8 on-going feedback provided to park staff by
 9 the visiting public. The standards set for
 10 these indicators were based on specific data
 11 collected regarding the levels of use
 12 experienced or observed, as well as visitors'
 13 evaluations of acceptability for different
 14 levels of use. Many of these concerns are
 15 already tracked to some degree through
 16 periodic monitoring of visitor use levels in
 17 the cell house, tracking of wait times for the
 18 ferry, the recording of visitor complaints,
 19 and law enforcement incident reporting.
 20 The selected indicators will increase the
 21 degree of systematic monitoring and
 22 assessment of these issues. Some of the
 23 management activities the National Park
 24 Service has already been employing in
 25 relation to these issues include pre-trip
 26 planning information to encourage
 27 voluntary redistribution of use, reservation
 28 systems, and onsite education and
 29 programming to direct the flow of visitor use
 30 once on the island.
 31
 32

33 **MANAGING USE LEVELS**

34 Currently, Alcatraz Island receives about
 35 4,400 visitors per day during the peak season
 36 and up to 5,000 visitors per day if evening
 37 programs are being offered. This level of use
 38 is—and will continue to be—closely
 39 regulated through the number of tickets that
 40 are offered each day for ferry access to the
 41 island. Given the National Park Service's
 42 existing knowledge of resource and social
 43 conditions on the island, this amount of use
 44 allows the National Park Service and its
 45 partners to protect resources and provide
 46 high-quality visitor experiences, including
 47 meeting specific standards. In this plan, all of
 48 the alternatives for Alcatraz Island provide
 49 new visitor opportunities that will allow the
 50 National Park Service and its partners to
 51 better distribute and manage visitor use on
 52 the island. In the future, incremental
 53 increases in the levels of visitor use may be
 54 considered. However, increases in use levels
 55 would be approached very carefully, and in
 56 an incremental and experimental way using
 57 monitoring data and related research, to
 58 ensure that the National Park Service's
 59 implementation commitments to the park's
 60 legislative and policy mandates, desired
 61 conditions, and related standards are always
 62 being achieved.

TABLE 29. ALCATRAZ ISLAND: USER CAPACITY INDICATORS, STANDARDS, MONITORING STRATEGIES, AND MANAGEMENT STRATEGIES

Indicator	Assigned Zone/Area	Standard	Monitoring Strategy	Potential Management Strategies
Topic: Visitor-caused Bird Disturbance				
Number of incidents of visitor disturbance to Brandt's cormorants that result in impacts on individual birds during nesting season	Evolved Cultural Landscape Zone	No more than an average seasonal rate of 0.02 major/moderate/minor island-based visitor induced disturbances per hour to Brandt's cormorants during nesting season. In	Continue monitoring based on PRBO protocol	<ul style="list-style-type: none"> ▪ Increase visitor education on low impact practices and park regulations ▪ Increase staff patrols and use of docents ▪ Increase signage ▪ Increase fencing, barricades, visual barriers, vegetative buffers

TABLE 29. ALCATRAZ ISLAND: USER CAPACITY INDICATORS, STANDARDS, MONITORING STRATEGIES, AND MANAGEMENT STRATEGIES

Indicator	Assigned Zone/ Area	Standard	Monitoring Strategy	Potential Management Strategies
		<p>addition, if observers note more than one disturbance per monitoring session (=6.5 hours), additional management could be considered.</p>		<ul style="list-style-type: none"> ▪ Restrict access to ranger/docent led only ▪ Restrict visitor access to targeted areas ▪ Relocate visitor activities ▪ Alter gull management areas
<p>Number of incidents of visitor disturbance to Brandt’s cormorants that result in subcolony abandonment</p>	<p>Evolved Cultural Landscape Zone</p>	<p>No visitor-induced disturbances to Brandt’s cormorants that result in subcolony abandonment</p>	<p>Continue monitoring based on PRBO protocol</p>	<ul style="list-style-type: none"> ▪ Increase visitor education on low impact practices and park regulations ▪ Increase staff patrols and use of docents ▪ Increase signage ▪ Increase fencing, barricades, visual barriers, vegetative buffers ▪ Restrict access to ranger/docent led only ▪ Restrict visitor access to targeted areas ▪ Relocate visitor activities ▪ Alter gull management areas
<p>Number of incidents of visitor disturbance to Brandt’s cormorants that result in impacts on individual birds during nesting season</p>	<p>Sensitive Resource Zone (after marine-protected area is designated)</p>	<p>No more than an average seasonal rate of 0.03 major/moderate/minor water-based visitor induced disturbances to Brandt’s cormorants during nesting season. Additional management could be considered if a single water based disturbance was observed.</p>	<p>Continue monitoring based on PRBO protocol</p>	<ul style="list-style-type: none"> ▪ Boat patrols in collaboration with other agencies ▪ Target outreach to user groups ▪ Increase signage visible from water ▪ Use of buoys ▪ Collaborate with the Seabird Protection Network for coordinated outreach, education, enforcement

TABLE 29. ALCATRAZ ISLAND: USER CAPACITY INDICATORS, STANDARDS, MONITORING STRATEGIES, AND MANAGEMENT STRATEGIES

Indicator	Assigned Zone/ Area	Standard	Monitoring Strategy	Potential Management Strategies
Number of incidents of visitor disturbance to Brandt’s Cormorants that result in subcolony abandonment	Sensitive Resource Zone (after marine-protected area is designated)	No visitor-induced disturbances to Brandt’s cormorants that result in subcolony abandonment	Continue monitoring based on PRBO protocol	<ul style="list-style-type: none"> ▪ Boat patrols in collaboration with other agencies ▪ Targeted outreach to user groups ▪ Increased signage visible from water ▪ Use of buoys ▪ Collaborate with the Seabird Protection Network for coordinated outreach, education, enforcement
Topic : Vandalism of Cultural Resources				
Number of incidents of graffiti/vandalism	Historic Immersion Zone (cell house tour route, areas open to public)	<p>No more than 1 minor incident* per month</p> <p>No major incidents**</p> <p>* Minor Incident: Small, easily repairable damage (e.g., new ink/paint graffiti over paintable surface)</p> <p>** Major Incident: Irreparable damage resulting in major resource loss and significant recovery cost (e.g., new graffiti over historic graffiti)</p>	On-going monitoring as part of regularly scheduled staff and volunteer patrols and collection of visitor comments. More rigorous comparison of existing conditions to the baseline on a periodic basis.	<ul style="list-style-type: none"> ▪ Increase in visitor education on low impact practices and park regulations ▪ Increase staff presence ▪ Increase monitoring ▪ Temporarily close area while undergoing conservation treatment ▪ Close problem area, except under supervision
Topic: Visitor-caused Disturbance To Cultural Resources				
Disturbance of plants in restored gardens	All zones with restored gardens	No more than a 20% loss/major disturbance to the plants in areas that are open to the public	On-going monitoring as part of regularly scheduled staff and volunteer patrols and collection of visitor comments. More rigorous comparison of existing conditions to the	<ul style="list-style-type: none"> ▪ Increase visitor education on low impact practices and park regulations ▪ Increase fences and barriers ▪ Increase staff presence ▪ Regulate or restrict access ▪ Increase monitoring

TABLE 29. ALCATRAZ ISLAND: USER CAPACITY INDICATORS, STANDARDS, MONITORING STRATEGIES, AND MANAGEMENT STRATEGIES

Indicator	Assigned Zone/ Area	Standard	Monitoring Strategy	Potential Management Strategies
			baseline on a periodic basis.	
Disturbance of rock walls, brickwork, exposed cultural resources	All zones	No more than a 5% loss/major disturbance of the feature (rock wall, brickwork, exposed cultural resources)	On-going monitoring as part of regularly scheduled staff and volunteer patrols and collection of visitor comments. More rigorous comparison of existing conditions to the baseline on a periodic basis.	<ul style="list-style-type: none"> ▪ Increase visitor education on low impact practices and park regulations ▪ Increase fences or barriers ▪ Increase staff presence ▪ Regulate or restrict access ▪ Increase monitoring
Disturbance/loss of ground cover on known archeological sites	All unpaved areas	No trampling on known archeological sites, as evidenced by footprints and compaction of soil compared to similar and immediately adjacent soils	On-going monitoring as part of regularly scheduled staff and volunteer patrols and collection of visitor comments. More rigorous comparison of existing conditions to the baseline on a periodic basis.	<ul style="list-style-type: none"> ▪ Increase visitor education on low impact practices and park regulations ▪ Create or widen existing paths ▪ Install temporary or permanent signs ▪ Increase fences/barriers
Topic: Visitor-caused Wear on Cultural Resources				
Number of incidents regarding wear, tear, or damage on cultural resources from special events	Historic Immersion Zone (cell house, VIP tours, SPUG)	<p>No more than 2 minor incidents per event</p> <p>No major incidents</p>	Continue existing assessment protocols of conditions after each special event.	<ul style="list-style-type: none"> ▪ Revise Standard Operating Procedure for VIPs/SPUG events ▪ Increase in visitor education on low impact practices and park regulations ▪ Increase staffing ratio ▪ Increase physical barriers ▪ Restrict or reduce access
Topic: Crowding and Congestion				
<p>People Per View (PPV) on Michigan Avenue</p> <p>People at one time (PAOT) on C-D Street</p>	Historic Immersion Zone	<p>No more than 0-43 PPV on Michigan Avenue, 90% of the time</p> <p>No more than 0-74 PAOT on C-D Street, 90% of the time</p>	Periodic photo monitoring and/or observations and visitor surveys	<ul style="list-style-type: none"> ▪ Adjust flow of visitors (for example: timed audio tickets, reconfiguration of tour flow, or scheduling dockside programming) ▪ Adjust boat ticket distribution (e.g., more in the a.m. or p.m.) ▪ Reduce the number of visitors to the island ▪ Increase monitoring to determine and readjust to standard

TABLE 29. ALCATRAZ ISLAND: USER CAPACITY INDICATORS, STANDARDS, MONITORING STRATEGIES, AND MANAGEMENT STRATEGIES

Indicator	Assigned Zone/ Area	Standard	Monitoring Strategy	Potential Management Strategies
Number of times a vessel departs Alcatraz Island leaving visitors in line for more than 15 minutes	Evolved Cultural Landscape Zone	No more than 2 times per month or 12 times annually, excluding emergencies	Continue existing monitoring and documentation of wait times and visitor comments regarding ferry access	<ul style="list-style-type: none"> ▪ Increase education on the timing of ferries ▪ Add more boats and/or higher capacity boats ▪ Adjust programming (for example: close facilities early or cancel programs at certain times) ▪ Limit the number of island visitors (limit tickets sold)

MUIR WOODS NATIONAL MONUMENT

1 Similar to Golden Gate National Recreation
2 Area, the management zones provide the
3 most important implementation commitment
4 for user capacity for Muir Woods National
5 Monument because they describe the desired
6 resource conditions and visitor
7 experiences—including appropriate types
8 and levels of use, visitor services, and
9 development—for all sites within the
10 monument. These zones are consistent with
11 and help achieve the monument’s purpose,
12 significance, and special mandates. Further,
13 there are many existing visitor use
14 management strategies already in use that will
15 continue to be implemented to help the park
16 staff achieve these desired conditions.
17 Examples of some of these existing
18 management strategies include

- 19
- 20 ▪ visitor education on low impact
21 practices (e.g., quiet zones and quiet
22 days)
- 23 ▪ management of visitor access (e.g.,
24 dedicated park shuttle access during
25 peak season)
- 26 ▪ closure of sensitive resource areas
27 (e.g., no fishing or swimming in
28 Redwood Creek)
- 29 ▪ regulations for visitor activities (e.g.,
30 hiking restricted to on-trail travel on
31 the main trail through the woods)
- 32 ▪ permit requirements (e.g., all special
33 events require a special use permit)

34
35 In addition to the implementation
36 commitments for the desired conditions, the
37 park staff has selected user capacity
38 indicators and standards for Muir Woods
39 National Monument. The park staff
40 considered many potential resource and
41 social indicators that would represent visitor
42 use influences on resource and social
43 conditions within the monument. Similar to
44 Alcatraz Island, the indicators selected for

45 inclusion in the general management plan
46 were those that were considered to be the
47 most important, as well as feasible, for long-
48 term evaluation.
49
50

51 **PRIORITY RESOURCE INDICATORS**

52 The priority resource indicators for Muir
53 Woods National Monument are associated
54 with the issues of informal trails (i.e., trails
55 created by visitors leaving designated trails),
56 impacts on soundscapes from human-caused
57 noise, evidence of visitor-caused wear or
58 disturbance to the redwood trees, and the
59 amount and distribution of invasive species.
60

61 The proliferation of informal trails in Muir
62 Woods National Monument is not currently
63 a serious problem because the NPS staff has
64 greatly increased efforts to clearly delineate
65 designated trails and to educate visitors to
66 stay on trails. Although conditions have
67 improved and informal trails are not a
68 significant concern currently, any future
69 expansion of informal trails was still
70 considered a high priority issue given the
71 related impacts of vegetation loss, soil
72 erosion, fragmentation of wildlife habitats,
73 and disturbance to rare flora, fauna and
74 archeological sites (Marion 2008). The
75 indicator for informal trails is based on a
76 modified version of a trail condition
77 classification system developed by Jeff
78 Marion of the United States Geological
79 Survey (Marion 2008). Given the associated
80 resource concerns and the limited extent of
81 informal trails currently, the standard was set
82 at zero tolerance for new informal trails in
83 order to perpetuate existing conditions over
84 the long term. As mentioned, some of the
85 management activities the National Park
86 Service has been employing in relation to this
87 issue include educating visitors to stay on
88 trails and clearly marking designated trails.
89 Further, the National Park Service has placed

1 barriers and actively restored informal trails
2 to minimize their continued use. Roving
3 patrols and other education and enforcement
4 techniques have also been used.

5
6 Given the high levels of use in the woods,
7 including use by families and groups, noise
8 levels and the frequency of human
9 introduced sound can affect the natural
10 soundscape, disrupting wildlife and
11 impacting visitor experiences. These changes
12 can sometimes influence normal wildlife
13 activities, leading to altered behavior and
14 productivity in individuals, and possible
15 modifications in the abundance and
16 distribution of populations (Knight and
17 Gutzwiller 1995). Baseline conditions for
18 much of the monument's soundscape were
19 established through comprehensive noise
20 monitoring in 2006 and 2007. These data,
21 along with visitor surveys, were used to
22 identify the best metrics for the soundscape
23 indicators and establish associated standards.
24 There is more discussion below on the
25 studies conducted and how they were used in
26 the planning process. Some of the
27 management activities the National Park
28 Service has been employing in relation to this
29 issue have focused on education regarding
30 low impact practices, including introducing
31 "quiet days" and "quiet zones" within the
32 woods to encourage visitors to voluntarily
33 modify their behavior and better protect the
34 natural soundscape.

35
36 Although visitor use is not the only or even
37 the primary source of invasive species, these
38 species can be introduced and spread
39 through visitor and vehicle activity within the
40 monument. The NPS Inventory and
41 Monitoring program has been monitoring the
42 number of detections and the extent of cover
43 of invasive species as part of the Vital Signs
44 Program. The goal of the program is to target
45 new or expanding infestations (NPS 2006).
46 The indicators and standards included in
47 Table 25 are consistent with those being
48 pursued by the NPS Inventory and
49 Monitoring program. If monitoring detects a
50 change in the number or extent of invasive
51 species, then a problem analysis would be

52 needed to isolate the causal factors. If visitor
53 use were determined to be a contributor to
54 the observed change in conditions, then the
55 necessary visitor use management strategies
56 would be implemented. Some of the
57 management activities the National Park
58 Service has been employing in relation to this
59 issue include educating visitors to stay on
60 trails, clearly marking designated trails, and
61 restricting activities that may increase the
62 introduction of invasive species.

63

64

65

PRIORITY SOCIAL INDICATORS

66 The priority social indicators for Muir
67 Woods National Monument are associated
68 with the issues of crowding and use conflicts.
69 The Park Studies Laboratory at the
70 University of Vermont has conducted a
71 program of social science research at the
72 monument from 2003 to the present
73 (Manning et al. n.d.). These studies collected
74 baseline data on visitor use and users
75 (including detailed travel patterns
76 throughout the park), potential indicators of
77 quality of the visitor experience, potential
78 standards of quality for specific types of
79 crowding and use conflicts, and visitor
80 attitudes toward alternative management
81 practices. The research resulted in
82 recommended potential indicators that
83 included the number of people within a
84 person's view, noise impacts, and arrival
85 delays, which contributed to visitors'
86 perception of crowding and conflict while
87 visiting Muir Woods (Manning et al. n.d.).

88

89 Additional visitor studies were targeted to
90 collect data on visitor preference and
91 acceptability of various use densities (people
92 per view) along trails in the woods, the
93 current number of encounters between
94 groups along secondary trails, as well as
95 number of people at one time in key
96 interpretive areas, which contributed to
97 selection of the standards for the Interpretive
98 Corridor Zone (Manning et al. n.d.). This
99 zone contains both the primary use areas in
100 the redwood forest (including the valley
101 primary trails and interpretive areas such as

1 the redwood cross section and Pinchot Tree)
 2 and secondary trails. Based on the desired
 3 conditions for the Interpretive Corridor
 4 Zone and the need to manage the primary use
 5 areas in a different manner from the
 6 secondary trails, the approach for setting
 7 standards varied across these two areas. The
 8 primary use areas are managed to
 9 accommodate the highest levels of use in the
 10 monument and visitors have an expectation
 11 of seeing others in these areas. Given these
 12 expectations, the planning team assigned the
 13 level of use that was deemed acceptable by
 14 visitors in the visitor study as the standard for
 15 this area (a level that does not affect the
 16 experience to the extent a visitor would not
 17 come back). The secondary trails within the
 18 Interpretive Corridor Zone are not intended
 19 for high use and there is an expectation for
 20 solitude and quiet in these areas, so the
 21 planning team assigned the level of use that
 22 was deemed preferred by visitors in the
 23 visitor study as the standard for this area (a
 24 level that does not require action by park
 25 management) (Manning et al. n.d.).

26
 27 In addition, visitor reactions to visitor-caused
 28 noise were studied using a series of audio
 29 clips simulating a range of visitor-caused
 30 noise in the park; these findings contributed
 31 to the standards selected for this indicator.
 32 The indicators of the percentage of time
 33 human sounds are audible and sound
 34 pressure level were considered the most
 35 meaningful and measurable indicators related
 36 to visitor-caused noise (Newman and
 37 McCusker 2009).

38
 39 Finally, the visitor studies evaluated visitor
 40 perceptions on acceptable waiting times to
 41 find parking and walking times from the
 42 parking area. This information in
 43 combination with other national standards
 44 for wait times at high-use areas and attraction

45 sites contributed to the selection of a
 46 standard for this indicator for both auto and
 47 shuttle visitors (Manning et al. n.d.; Orca
 48 Consulting 2008). Some of the existing
 49 management activities that the National Park
 50 Service has been employing in relation to
 51 these various social issues include educating
 52 visitors regarding low impact practices,
 53 providing pre-trip planning information to
 54 encourage voluntary redistribution of use to
 55 less busy times, and employing the park
 56 shuttle system during peak periods to help
 57 modify the flow of visitor use to the woods.
 58
 59

60 **MANAGING USE LEVELS**

61 The level of use at Muir Woods National
 62 Monument is not as regulated as it is at
 63 Alcatraz Island, but it is currently constrained
 64 during the peak season by the amount of
 65 parking available and the frequency and size
 66 of shuttle buses. All of the alternatives for
 67 Muir Woods National Monument call for
 68 visitation to be better distributed and
 69 managed. However, it is uncertain at this time
 70 whether the amount of use per day, if better
 71 distributed and managed, would need to be
 72 further regulated in order to achieve the
 73 desired conditions and related standards
 74 identified for the monument. In order to
 75 better assess those needs, the National Park
 76 Service will continue to conduct analysis of
 77 visitor use patterns as part of the planning for
 78 the redesign of the monument's entrance and
 79 parking areas, which is proposed in this
 80 plan's action alternatives. The
 81 implementation plan will closely examine the
 82 need for further regulation of the amount and
 83 timing of use as part of the alternatives for
 84 reduced parking and an increased emphasis
 85 on shuttle access.

TABLE 30. MUIR WOODS NATIONAL MONUMENT: USER CAPACITY INDICATORS, STANDARDS, MONITORING STRATEGIES, AND MANAGEMENT STRATEGIES

Indicator	Assigned Zone/Area	Standard	Monitoring Strategy	Potential Management Strategies
Topic: Visitor-created Informal Trails				
<p>Increase in the number of informal trails and change in the condition class of existing informal trails in the redwood forest.*</p> <p>*Problem analysis would be needed to isolate visitor-caused impacts.</p>	<p>Interpretive Corridor Zone – surrounding Redwood Creek</p> <p>Sensitive Resources Zone – the upper slopes</p> <p>Natural Zone – western end of the monument at Mount Tamalpais State Park</p>	<p>No increase in the number of informal trails, and no increase in the condition class* of existing informal trails from the previously monitored baseline. No class III trails.</p> <p>* Trail Condition Classification System: <i>Adapted from descriptive system by Jeff Marion, USGS</i></p> <p>Class I Trail is barely visible. Minimal disturbance of organic litter or vegetation. Very little bare soil is evident along the tread.</p> <p>Class II Trail is obvious. Organic litter is disturbed or diminished in places. Slight loss or damage to vegetation. Bare soil is evident along the center of the tread.</p> <p>Class III Serious erosion is obvious. Nearly complete loss of organic litter and/or vegetative cover. Bare soil is widespread in a widening tread.</p>	<p>Periodic assessments would be conducted inside the monument boundaries and possibly beyond if they are critical to forest health, e.g., areas in Mount Tamalpais State Park adjacent to Redwood Creek. Assessments would take place at the point where the informal trail begins, i.e., where it departs from an existing authorized trail.</p>	<ul style="list-style-type: none"> ▪ Formal review of possible causes (including determining whether the informal trail is visitor use or animal related) and to determine most appropriate management response. ▪ Increase visitor education on low impact practices and park regulations. ▪ Place border logs or other barriers along formal trails at the junction with informal trails. ▪ Restore informal trails by decompacting soils and moving organic debris onto the visible portion of the informal trails to hide them (for Class II and III trails, natural topography would be restored prior to any addition of organic matter/litter). ▪ Add formal trailhead signs explaining the problem and asking visitors to remain on formal trails. ▪ Enhance marking of the official trail and/or improve adjacent designated trails. ▪ Formalize an informal trail, possibly on a new alignment, to accommodate visitor interest. ▪ Install temporary or permanent signs. ▪ Consider more substantial restoration work (after all foot traffic has been removed from the

TABLE 30. MUIR WOODS NATIONAL MONUMENT: USER CAPACITY INDICATORS, STANDARDS, MONITORING STRATEGIES, AND MANAGEMENT STRATEGIES

Indicator	Assigned Zone/Area	Standard	Monitoring Strategy	Potential Management Strategies
				informal trail). <ul style="list-style-type: none"> ▪ Increase enforcement or presence of rangers or volunteers. ▪ Area closures. ▪ Reduce use levels.
Topic: Impacts on Soundscapes from Human Noise				
Sound pressure level. Percent time human sounds are audible.	Interpretive Corridor Zone	Daytime (0700–1900) L50 dBA: 34 (note: L50 is the sound level that is exceeded 50% of the time). % time human sounds audible: 45%.	Monitoring would be conducted on a periodic basis using digital recordings and/or on-site listening protocol as appropriate. If a standard is exceeded, the type and location of each contributing noise source would be identified.	<ul style="list-style-type: none"> ▪ Increase visitor education on low impact practices and park regulations. ▪ Designate more quiet zones and days. ▪ Redistribute visitor flow and/or reduce use levels. ▪ Increase education for organized groups. ▪ Change in the regulations of organized groups (e.g., group size limits).
Difference between Lnat and existing ambient L50.	Natural and Sensitive Resources Zones	Difference between Lnat and existing ambient (L50) is 2 dBA or less during the daytime (0700–1900).	Monitoring would be conducted on a periodic basis using digital recordings and/or on-site listening protocol as appropriate. If a standard is exceeded, the type and location of each contributing noise source would be identified.	<ul style="list-style-type: none"> ▪ Increase visitor education on low impact practices and park regulations. ▪ Designate more quiet zones and days. ▪ Redistribute visitor flow and/or reduce use levels.

TABLE 30. MUIR WOODS NATIONAL MONUMENT: USER CAPACITY INDICATORS, STANDARDS, MONITORING STRATEGIES, AND MANAGEMENT STRATEGIES

Indicator	Assigned Zone/Area	Standard	Monitoring Strategy	Potential Management Strategies
Topic: Invasive Plant Species				
<p>Number of priority invasive plant species detections.*</p> <p>Extent of invasive plant cover.*</p> <p>*Problem analysis would be needed to isolate visitor-caused impacts.</p>	<p>All zones</p>	<p>No increase in the number of new priority invasive plant species.*</p> <p>No increase in the % cover.*</p>	<p>Continue monitoring per the Inventory and Monitoring Program.</p>	<ul style="list-style-type: none"> ▪ Increase visitor education on low impact practices and park regulations. ▪ Require the cleaning of gear that is capable of transferring plant material. ▪ Temporarily or permanently close areas. ▪ Reduce use levels. ▪ Removal of invasives and restoration of disturbed areas.
Topic: Crowding and Congestion				
<p>People Per View (PPV) along valley primary trails.</p> <p>People AT One Time (PAOT) at the Pinchot Tree and Redwood Crosscut.</p>	<p>Interpretive Corridor Zone: primary visitor areas in the redwood forest including the valley trails, redwood cross-section, and Pinchot Tree.</p>	<p>No more than 18 PPV per 50 meter trail section along valley primary trails, 90% of the time during park operating hours</p> <p>No more than 30 PAOT at the Pinchot Tree and Redwood Crosscut, 90% of the time during park operating hours.</p>	<p>PPV and PAOT would be measured by still photography from a few fixed positions at various times through the year. Visitor counts taken from the photographs would be used to determine the appropriate management actions. The standard for crowding and congestion (acceptability of PPV and PAOT range) would be updated by a focused survey every 5 years or when major changes are implemented.</p>	<ul style="list-style-type: none"> ▪ Encourage voluntary redistribution of use across the day. ▪ Change the timing and availability of transit and tour bus access. ▪ Direct visitor flow to other areas and trails. ▪ Reduce use levels.
<p>Number of encounters along secondary trails with other visitor groups (one or more people) traveling in the opposite direction.</p>	<p>Interpretive Corridor Zone: secondary trails including Hillside and Fern Creek.</p>	<p>No more than 40 encounters with other visitor groups traveling in the opposite direction, 90% of the time during park operating hours.</p>	<p>Encounter rates would be measured by an observer hiking along principal secondary trails at various times of day and days of week throughout the year. The data would be used to determine the appropriate management actions.</p>	<ul style="list-style-type: none"> ▪ Encourage voluntary redistribution of use across the day. ▪ Change the timing and availability of transit and tour bus access. ▪ Direct visitor flow to other areas and trails. ▪ Reduce use levels.

TABLE 30. MUIR WOODS NATIONAL MONUMENT: USER CAPACITY INDICATORS, STANDARDS, MONITORING STRATEGIES, AND MANAGEMENT STRATEGIES

Indicator	Assigned Zone/Area	Standard	Monitoring Strategy	Potential Management Strategies
			The standard for crowding and congestion (preference for encounter rates) would be updated by a focused survey every 5 years or when major changes are implemented.	
<p>Approximate arrival experience time (from arrival* to entering the interpretive corridor zone) *Arrival for auto visitors begins when vehicles turn off Muir Woods Road and into a parking lot at the monument.</p> <p>*Arrival for shuttle visitors begins when the shuttle bus pulls into the designated bus loading/unloading zone.</p>	Diverse Opportunities Zone	Maximum arrival time of 30 minutes per individual or group, 90% of the time during park operating hours.	Regular observations of the arrival experience time would be conducted. This indicator and standard will be further tested and adjusted as part of implementation planning for increased shuttle access and the redesigned entrance to the monument.	<ul style="list-style-type: none"> ▪ Encourage voluntary redistribution of use. ▪ Redesign the arrival experience. ▪ Institutionalize Intelligent Transportation Systems with Caltrans. ▪ Increase efficiencies at fee station. ▪ Improve shuttle service.



IMPLEMENTATION PLANNING

1 After the approval of this general
2 management plan, the park staff would
3 complete other more detailed studies before
4 specific actions would be implemented.
5 These studies would investigate the baseline
6 condition of resources and visitor use in the
7 park as required by NPS management
8 policies and fulfill the requirements of the
9 National Environmental Policy Act, National
10 Historic Preservation Act, and other relevant
11 laws and policies. These would inform the
12 detailed site-specific improvement plans that
13 would be prepared for different parts of the
14 park. Where appropriate, these studies and
15 plans would be completed with substantial
16 public involvement and environmental
17 compliance. The additional studies and
18 improvement plans could include the
19 following:

20
21

22 DETAILED SITE IMPROVEMENT PLANS

- 23 ▪ Stinson Beach
- 24 ▪ Muir Woods
- 25 ▪ Muir Woods Off-site Welcome
26 Center
- 27 ▪ Lower Redwood Creek
- 28 ▪ Tennessee Valley
- 29 ▪ Fort Cronkhite / Rodeo Valley
- 30 ▪ Alcatraz Island
- 31 ▪ Ocean Beach
- 32 ▪ Fort Funston
- 33 ▪ Picardo Ranch
- 34 ▪ Rancho Corral de Tierra

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37 NATURAL RESOURCES

- 38 ▪ Resource stewardship strategy
- 39 ▪ Ocean stewardship action plan

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58 CULTURAL RESOURCES

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- Climate vulnerability assessment
- Sea level rise vulnerability study
- Vegetation management plans,
including nonnative species
- Forest inventories and condition
assessments
- Water resources availability studies
- Earth materials management plans
- Geotechnical evaluations of
shorelines
- Field surveys for presence of
threatened and endangered species
- Regional studies of wildlife species of
special interest
- Pest control and eradication plans

<i>1</i>	VISITOR USE	<i>12</i>	▪ Accessibility action and transition plan
<i>2</i>	▪ Educational and interpretive program plans	<i>13</i>	
<i>3</i>		<i>14</i>	
<i>4</i>	▪ Visitor satisfaction surveys	<i>15</i>	
<i>5</i>	▪ Trails development and management plans	<i>16</i>	GENERAL
<i>6</i>		<i>17</i>	▪ Land protection plan
<i>7</i>	▪ Social trail inventories and management plans	<i>18</i>	▪ Business plans
<i>8</i>		<i>19</i>	▪ Visual impact assessments
<i>9</i>	▪ Transportation and transit plans	<i>20</i>	
<i>10</i>	▪ Equestrian facilities management plans		
<i>11</i>			

MITIGATION MEASURES

1 National Park Service staff routinely
2 evaluate and implement mitigation measures
3 whenever conditions occur that could
4 adversely affect the sustainability of national
5 park system resources.

6
7 To ensure that implementation of the action
8 alternatives applies appropriate levels of
9 protection to natural and cultural resources
10 and provides quality visitor experiences, a
11 consistent set of mitigation measures would
12 be applied to actions proposed in this plan.
13 The National Park Service would prepare
14 implementation plans with appropriate
15 environmental compliance [i.e., those
16 required by the National Environmental
17 Policy Act and the National Historic
18 Preservation Act, as amended, and other
19 relevant legislation] for these future actions.
20 These implementation plans would include
21 more detailed mitigation measures for
22 specific projects. As part of the
23 environmental compliance, the National
24 Park Service would avoid, minimize, and
25 mitigate adverse impacts when practicable.
26 The implementation of a compliance-
27 monitoring program would be within the
28 parameters of the National Environmental
29 Policy Act and the National Historic
30 Preservation Act, compliance documents,
31 U.S. Army Corps of Engineers Clean Water
32 Act Section 404 permits, and other
33 compliance requirements. The compliance-
34 monitoring program would oversee these
35 mitigation measures and would include
36 reporting protocols.

37
38 The following mitigation measures and best
39 management practices would be applied to
40 avoid or minimize potential impacts from
41 implementation of the action alternatives
42 included in this general management plan.

43
44

45 NATURAL RESOURCES

46 General

47 The park and monument resources,
48 including air, water, soils, vegetation, and
49 wildlife, would be periodically inventoried
50 and monitored to provide information
51 needed to avoid or minimize impacts of
52 future development. Any museum
53 collections related to natural resources
54 generated by such activities would be
55 managed according to NPS policies.

56
57 Whenever possible, new facilities would be
58 built in previously disturbed areas or in care-
59 fully selected sites with as small a
60 construction footprint as possible and with
61 sustainable design. During design and
62 construction periods, NPS natural and
63 cultural resource staff would identify areas
64 to be avoided and would monitor activities.
65 The siting of any new facilities would first be
66 evaluated for long-term viability and cost
67 effectiveness, taking present and future
68 climate change influences into
69 consideration.

- 70
- 71 ■ Fencing or other means would be
- 72 used to protect sensitive resources
- 73 adjacent to construction areas.
- 74 ■ Construction materials would be
- 75 kept in work areas, especially if the
- 76 construction takes place near
- 77 streams, springs, natural drainages,
- 78 or other water bodies.
- 79 ■ Visitors would be informed of the
- 80 importance of protecting the natural
- 81 resources and leaving these
- 82 undisturbed for the enjoyment of
- 83 future generations.
- 84
- 85

1 **Air Quality**

2 A dust abatement program would be
 3 implemented. Standard dust abatement
 4 measures could include watering or
 5 otherwise stabilizing soils, covering haul
 6 trucks, employing speed limits on unpaved
 7 roads, minimizing vegetation clearing, and
 8 revegetating after construction.

10
 11 **Fire**

12 Fire management for NPS managed lands,
 13 including Sweeney Ridge, is addressed in the
 14 Golden Gate National Recreation Area Fire
 15 Management Plan (FMP). The Golden Gate
 16 National Recreation Area Fire Management
 17 Plan Update, **scheduled for 2013**, will
 18 address park-managed lands in San Mateo
 19 County, that were not included in the (2008)
 20 Fire Management Plan, including Rancho
 21 Corral de Tierra. Owned by the Peninsula
 22 Open Space Trust (POST), the Gregerson
 23 property would not be included in the Fire
 24 Management Plan Update at that time, but
 25 could be added in a later update, following a
 26 boundary change and acquisition, if
 27 approved and funded. The FMP document
 28 would address fire risk, prevention, and
 29 management on NPS-managed lands,
 30 including:

- 31
- 32 ▪ analysis of existing fire hazard
- 33 conditions
- 34 ▪ fuels management projects
- 35 ▪ fire preparedness and suppression
- 36 ▪ fire danger and visitor use
- 37 restrictions (such as restricted
- 38 activities or access on fire danger
- 39 days)
- 40 ▪ strategies to reduce risk and prevent
- 41 wildfires, including maintenance
- 42 activities such as mowing and
- 43 vegetation management as well as
- 44 monitoring, communications and
- 45 protocols (patrols and enforcement)
- 46 during periods of high fire danger

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 56 **Lightscape**

57 Mitigative measures to preserve natural
 58 ambient lightscapes would include the
 59 following:

- 60
- 61 ▪ Limiting the use of artificial outdoor
- 62 lighting to that which is necessary for
- 63 basic safety requirements.
- 64 ▪ Shielding all outdoor lighting to the
- 65 maximum extent possible.
- 66 ▪ Keeping light on the intended subject
- 67 and out of the night sky to the
- 68 greatest degree possible.
- 69 ▪ Working with park partners and
- 70 visitors on education and best
- 71 management practices to minimize
- 72 their impacts on lightscapes.

73
 74
 75 **Nonnative Species**

76 Special attention would be devoted to
 77 preventing the spread of nonnative and
 78 invasive plants. Standard measures could
 79 include the following elements: ensure that
 80 construction-related equipment arrives at
 81 the work site free of mud or seed-bearing
 82 material, certify all seeds and straw material
 83 as weed-free, identify areas of nonnative
 84 plants before construction, treat nonnative
 85 plants or nonnative infested topsoil before
 86 construction (e.g., topsoil segregation,
 87 storage, herbicide treatment), and revegetate
 88 areas with appropriate native species.

89
 90

1 Scenic Resources

2 Mitigative measures that would be used to
3 minimize visual intrusions could include the
4 following:

- 5
- 6 ▪ Where appropriate, facilities such as
7 boardwalks and fences would be
8 used to route people away from
9 sensitive natural and cultural
10 resources while still permitting access
11 to important viewpoints.
- 12 ▪ Facilities would be designed, sited,
13 and constructed to avoid or minimize
14 visual intrusion into the natural
15 environment or landscape.
- 16 ▪ Vegetative screening would be
17 provided, where appropriate.

18 Soils

19

20

21 New facilities would be built on soils suitable
22 for development. Soil erosion would be
23 minimized by limiting the time soil is left
24 exposed and by applying other erosion
25 control measures such as erosion matting,
26 silt fencing, and sedimentation basins in
27 construction areas to reduce erosion, surface
28 scouring, and discharge to water bodies.
29 Once work was completed, construction
30 areas would be revegetated with native
31 plants.

32

33 To minimize soil erosion on new trails, best
34 management practices for trail construction
35 would be used. Examples of best
36 management practices could include
37 installing water bars, check dams, and
38 retaining walls; contouring to avoid erosion;
39 and minimizing soil disturbance.

40 Soundscapes

41

42

43 Mitigation measures to preserve natural
44 ambient soundscapes would include the
45 following:

- 46
- 47 ▪ Facilities would be sited and
48 designed to minimize objectionable
49 noise.
- 50 ▪ Standard noise abatement measures
51 would be followed during
52 construction, including: a schedule
53 that minimizes impacts on adjacent
54 noise-sensitive resources, the use of
55 the best available noise control
56 techniques wherever feasible, the use
57 of hydraulically or electrically
58 powered tools when feasible, and the
59 position of stationary noise sources
60 as far from sensitive resources as
61 possible.

62 Threatened and Endangered Species 63 and Species of Concern

64

65

66 Conservation measures would occur during
67 normal operations as well as before, during,
68 and after construction to minimize long-
69 term, immediate impacts on rare species, and
70 threatened and endangered species where
71 they are identified in the two parks. These
72 measures would vary by specific project and
73 the affected area of the two parks. Many of
74 the measures listed above for vegetation and
75 wildlife would also benefit rare, threatened,
76 and endangered species by helping to
77 preserve habitat. Conservation measures
78 specific to rare, threatened, and endangered
79 species would include the following actions:

- 80
- 81 ▪ Surveys would be conducted for
82 special status species, including rare,
83 threatened, and endangered species,
84 before deciding to take any action
85 that might cause harm. In
86 consultation with the U.S. Fish and
87 Wildlife Service and NOAA-National
88 Marine Fisheries Service, appropriate
89 measures would be taken to protect
90 any sensitive species, whether
91 identified through surveys or
92 presumed to occur. Any actions
93 expected to impact threatened and
94 endangered species would be subject
95 to consultation with the U.S. Fish and

1 Wildlife Service, leading to the
2 development of necessary protective
3 measures.

4 ■ If breeding or nesting areas for
5 threatened and endangered species
6 were observed in the park or
7 monument, these areas would be
8 protected from human disturbance.

9 ■ New facilities and management
10 actions would be located and
11 designed to avoid adverse effects on
12 rare, threatened, and endangered
13 species. If avoidance of adverse
14 effects on these species were
15 infeasible, appropriate conservation
16 measures would be taken in
17 consultation with the appropriate
18 resource agencies.

19 ■ Restoration or monitoring plans
20 would be developed as warranted.
21 Plans should include evaluation of
22 long-term viability, methods for
23 implementation, performance
24 standards, monitoring criteria, and
25 adaptive management techniques.

26
27 Measures would be taken to reduce adverse
28 effects of nonnative plants and wildlife on
29 rare, threatened, and endangered species.

31 32 **Vegetation**

33 Areas used by visitors (e.g., trails) would be
34 monitored for signs of native vegetation
35 disturbance. Public education, revegetation
36 of disturbed areas with native plants, erosion
37 control measures, and barriers would be
38 used to control potential impacts on plants
39 from trail erosion or social trailing.

40 Proposed sites for new trails and other
41 facilities would be surveyed for sensitive
42 species before construction. If sensitive
43 species were present, new developments
44 would be relocated to avoid impacts.

45
46 Revegetation plans would be developed for
47 disturbed areas. Revegetation plans should
48 specify such features as seed/plant source,

49 seed/plant mixes, soil preparation, fertilizers,
50 and mulching. Salvage vegetation, rather
51 than new planting or seeding, would be used
52 to the greatest extent possible. To maintain
53 genetic integrity, native plants that grow in
54 the project area or the region would be used
55 in restoration efforts, whenever possible.
56 Use of nonnative species or genetic materials
57 would be considered only where deemed
58 necessary to maintain a cultural landscape or
59 to prevent severe resource damage, and
60 would be approved by the NPS resource
61 management staff. Restoration activities
62 would be instituted immediately after
63 construction was completed. Monitoring
64 would occur to ensure that revegetation was
65 successful, plantings were maintained, and
66 unsuccessful plant materials were replaced.

67 68 69 **Water Resources**

70 To prevent water pollution during
71 construction, erosion control measures
72 would be used, discharges to water bodies
73 would be minimized, and construction
74 equipment would be regularly inspected for
75 leaks of petroleum and other chemicals.

76
77 Best management practices, such as the use
78 of silt fences, would be followed to ensure
79 that construction-related effects were
80 minimal and to prevent long-term impacts
81 on water quality, wetlands, and aquatic
82 species.

83
84 Caution would be exercised to protect water
85 resources from activities with the potential
86 to damage water resources, including
87 damage caused by construction equipment,
88 erosion, and siltation. Measures would be
89 taken to keep fill material from escaping
90 work areas, especially near streams, springs,
91 natural drainages, and wetlands.

92
93 For new facilities, and to the extent
94 practicable for existing facilities, stormwater
95 management measures would be
96 implemented to reduce nonpoint source
97 pollution discharge from parking lots and
98 other impervious surfaces. Such actions

1 could include use of oil/sediment separators,
 2 street sweeping, infiltration beds, permeable
 3 surfaces, and vegetated or natural filters to
 4 trap or filter stormwater runoff. As directed
 5 by the Clean Water Act, all projects
 6 disturbing more than 5 acres require a
 7 stormwater discharge permit and specific
 8 mitigation measures would be developed as
 9 needed.

10
 11 The NPS spill prevention and pollution
 12 control program for hazardous materials
 13 would be followed and updated on a regular
 14 basis. Standard measures could include 1)
 15 procedures for hazardous materials storage
 16 and handling, spill containment, cleanup,
 17 and reporting, and 2) limitation of refueling
 18 and other hazardous activities to
 19 upland/nonsensitive sites.

20
 21 Wetlands would be avoided if possible, and
 22 protection measures would be applied
 23 during construction. Wetlands would be
 24 delineated by qualified NPS staff or certified
 25 wetland specialists and clearly marked
 26 before construction work. Construction
 27 activities would be performed in a cautious
 28 manner to prevent damage caused by
 29 equipment, erosion, siltation, or other
 30 construction-related effects.

31 **Wildlife**

32
 33
 34 To the extent possible, new or rehabilitated
 35 facilities would be sited to avoid sensitive
 36 wildlife habitats, including feeding and
 37 resting areas, major travel corridors, nesting
 38 areas, and other sensitive habitats.

39
 40 Construction activities would be timed to
 41 avoid sensitive periods, such as nesting or
 42 spawning seasons. Ongoing visitor use and
 43 NPS operational activities could be
 44 restricted if their potential level of damage
 45 or disturbance warranted doing so. Park
 46 staff and contractors would be trained to
 47 avoid impacts on threatened and
 48 endangered species during construction or
 49 rehabilitation efforts.

50
 51 Measures would be taken to reduce the
 52 potential for wildlife to get food from
 53 humans. Wildlife-proof garbage containers
 54 would be required in developed areas
 55 (including visitor centers, picnic areas, trails,
 56 and interpretive waysides). Signs would
 57 continue to educate visitors about the need
 58 to refrain from feeding wildlife.

59
 60 Other visitor impacts on wildlife would be
 61 addressed through such techniques as visitor
 62 education programs, restrictions on visitor
 63 activities, and ranger patrols.

64 **CULTURAL RESOURCES**

65
 66
 67 All projects with the potential to affect
 68 historic properties and cultural landscapes
 69 would be carried out in compliance with
 70 Section 106 of the National Historic
 71 Preservation Act, as amended, to ensure that
 72 the effects are adequately addressed. All
 73 reasonable measures would be taken to
 74 avoid, minimize, or mitigate adverse effects
 75 in consultation with the California state
 76 historic preservation office and, as
 77 necessary, the Advisory Council on Historic
 78 Preservation and other concerned parties,
 79 including American Indian tribal officials. In
 80 addition to adhering to the legal and policy
 81 requirements for cultural resources
 82 protection and preservation, the National
 83 Park Service would also undertake the
 84 measures listed below to further protect the
 85 park and monument resources.

86
 87 All areas selected for construction (including
 88 any trail improvements) would be surveyed
 89 and evaluated to ensure that cultural
 90 resources (i.e., archeological, historic,
 91 ethnographic, and cultural landscape
 92 resources) in the area of potential effect are
 93 adequately identified and protected by
 94 avoidance or, if necessary, mitigation.

95
 96 Compliance with the Native American
 97 Graves Protection and Repatriation Act of
 98 1990 would occur in the unlikely event that
 99 human remains believed to be Native
 100 American were discovered inadvertently

1 during construction. Prompt notification
 2 and consultation with the tribes traditionally
 3 associated with Golden Gate National
 4 Recreation Area and Muir Woods National
 5 Monument would occur in accordance with
 6 the act. If such human remains were believed
 7 to be non-Indian, standard reporting
 8 procedures to the proper authorities would
 9 be followed, as would all applicable federal,
 10 state, and local laws.

11
 12 In accordance with section 110 of the
 13 National Historic Preservation Act strategic
 14 archeological surveys would be conducted
 15 of portions of the 90% un-inventoried park
 16 lands, considered under this general
 17 management plan, that are most vulnerable
 18 from resource stressors such as visitor use,
 19 management zone policies, climate change,
 20 and other factors. These surveys are distinct
 21 from resource actions resulting from section
 22 106 undertakings, and are designed to
 23 correct material deficiencies in the park's
 24 archeological resource identification
 25 process. Archeological documentation
 26 would be done in accordance with the
 27 *Secretary of the Interior's Standards for*
 28 *Archeology and Historic Preservation* (1983,
 29 as amended and annotated).

30
 31 If during construction, previously unknown
 32 archeological resources were discovered, all
 33 work in the immediate vicinity of the
 34 discovery would be halted until the
 35 resources could be identified and
 36 documented and, if the resources could not
 37 be preserved in situ, an appropriate
 38 mitigation strategy would be developed in
 39 consultation with the state historic
 40 preservation officer and, if necessary,
 41 associated Indian tribes.

42
 43 The National Park Service would consult
 44 with tribal officials before taking actions that
 45 could affect ethnographic resources. The
 46 National Park Service would continue to
 47 abide by existing cooperative agreements
 48 and would pursue additional agreements
 49 with culturally affiliated tribes to avoid
 50 resource impacts, allow access for traditional
 51 gathering and other approved activities, and

52 minimize potential use conflicts in culturally
 53 sensitive areas. The National Park Service
 54 would develop and accomplish their
 55 programs in a manner respectful of the
 56 beliefs, traditions, and other cultural values
 57 of the affiliated tribes.

58
 59 A proactive program of identification and
 60 evaluation of the full range of cultural
 61 resources, including archeological and
 62 landscape resources will be implemented
 63 well in advance of individual park projects
 64 having the potential to affect these
 65 resources. The priorities of this research
 66 program will be informed by the park's
 67 implementation priorities.

68
 69 Prior to demolition of any structure listed in
 70 or eligible for listing in the national register,
 71 a survey for archeological resources in the
 72 general vicinity of the affected structure
 73 would be conducted. The excavation,
 74 recordation, and mapping of any significant
 75 cultural remains, if present, would be
 76 completed prior to demolition, to ensure
 77 that important archeological data that
 78 otherwise would be lost is recovered and
 79 documented.

80
 81 To appropriately preserve and protect
 82 national register listed or national register-
 83 eligible historic structures, cultural
 84 landscape features, or archeological sites, all
 85 surveys, assessments, stabilization,
 86 preservation, rehabilitation, data recovery
 87 and restoration efforts would be undertaken
 88 in accordance with the *NPS Management*
 89 *Policies 2006*, and the *Secretary of the*
 90 *Interior's Standards for the Treatment of*
 91 *Historic Properties* (1995). Any materials
 92 removed during rehabilitation efforts would
 93 be evaluated to determine their value to the
 94 park's museum collections and/or for their
 95 comparative use in future preservation work
 96 at the sites.

97
 98 Design guidelines for new construction
 99 would be prepared by the National Park
 100 Service and would be reviewed for
 101 compatibility with the cultural landscape or
 102 historic setting and for compliance with the

1 *Secretary of the Interior's Standards for the*
 2 *Treatment of Historic Properties.* Additional
 3 coordination and consultation would be
 4 carried out with the California state historic
 5 preservation office, the Advisory Council on
 6 Historic Preservation, and, if necessary,
 7 American Indian tribal officials to assess and
 8 mitigate any adverse effects of new
 9 construction on designated or potential
 10 national historic landmark districts. All new
 11 buildings, additions, and landscape features
 12 would be designed and sited to harmonize
 13 with their historic settings.

14
 15 Visitors would be educated on the
 16 importance of protecting the historic
 17 properties of the park and monument and
 18 leaving these undisturbed for the enjoyment
 19 of future visitors.

20
 21 Patrols would include condition visits to the
 22 full inventory of national register eligible and
 23 listed properties to ensure their
 24 preservation.

25 26 27 **VISITOR SAFETY AND EXPERIENCES**

28 Measures to reduce adverse effects of
 29 construction on visitor safety and
 30 experience would be implemented,
 31 including project scheduling and best
 32 management practices.

33
 34 Visitor safety concerns would be integrated
 35 into NPS educational programs. Directional
 36 signs would continue to orient visitors, and
 37 education programs would continue to
 38 promote understanding among visitors.

39
 40 Every reasonable effort would be made to
 41 make the facilities, programs, and services of
 42 the National Park Service and its park
 43 partners accessible to and usable by all
 44 people, including those who are disabled.
 45 This policy is based on the commitment to
 46 provide access to the widest cross section of
 47 the public and to ensure compliance with the
 48 intent of the Architectural Barriers Act (42
 49 USC 4151 et seq.) and the Rehabilitation Act
 50 (29 USC 701 et seq.). Specific guidance for

51 implementing these two laws is found in the
 52 Secretary of the Interior's regulations
 53 regarding "Nondiscrimination in Federally
 54 Assisted Programs" (43 CFR 17). Special,
 55 separate, or alternative facilities, programs,
 56 or services would be provided only when
 57 existing ones cannot reasonably be made
 58 accessible. The determination of what is
 59 reasonable would be made after consultation
 60 with disabled persons or their
 61 representatives.

62
 63 Through Director's Order 42, the National
 64 Park Service is required to update and repair
 65 existing facilities to remove physical barriers;
 66 design new facilities and programs; and
 67 modifying existing programs and media, to
 68 ensure that all visitors without regard to a
 69 disability, have access to these programs and
 70 facilities. It is recognized that this goal will
 71 require detailed condition assessments for
 72 accessibility, short and long range planning,
 73 and action over a number of years.

74
 75 While a general management plan is not the
 76 most appropriate mechanism for addressing
 77 the details of a park's accessibility needs, this
 78 plan does establish the goals and objectives
 79 for accessibility at Golden Gate National
 80 Recreation Area, and does prepare for the
 81 important follow-up work that may be
 82 needed to comply with accessibility laws,
 83 regulations, and policies. Park managers
 84 shall make every attempt to evaluate their
 85 programs and facilities for accessibility.
 86 General management plans should, as this
 87 one does, identify a full range of park
 88 experiences and opportunities to made
 89 available to the visitor. Through the action
 90 and transition planning process, park staff
 91 will ensure that key representative
 92 experiences and opportunities throughout
 93 the park will be available to people with
 94 disabilities.

95 96 97 **PARK OPERATIONS**

98 In order to provide facilities that are
 99 functional, code compliant, and sustainable,
 100 the following strategies would be used:

- 1 ▪ Energy efficient strategies would be
2 applied to new and rehabilitated
3 structures through the establishment
4 of performance standards to address
5 the building envelope, mechanical
6 systems, electrical systems, and
7 lighting systems.
- 8 ▪ Water conservation strategies for use
9 in buildings and for irrigation would
10 be implemented through
11 performance standards designed to
12 meet or exceed federal requirements.
- 13 ▪ Alternative strategies for energy
14 production would be evaluated and
15 incorporated into the final design as
16 appropriate, including photovoltaic
17 systems for generating peak electrical
18 energy demand. Photovoltaic
19 systems, if determined to be feasible
20 based on further evaluation, would
21 be subject to design review and
22 establishment of design guidelines to
23 ensure compatibility with natural or
24 historic settings. Guidelines would
25 identify appropriate locations, such
26 as flat plate modules on rear roofs of
27 historic structures or parking
28 carports and/or pole-mounted
29 tracking arrays located in visually
30 unobtrusive locations within the
31 developed footprint of the site.
- 32
- 33

34 **SOCIAL AND ECONOMIC**
35 **ENVIRONMENT**

36 During the future planning and
37 implementation of the approved
38 management plan for the two parks, NPS
39 staff would work with local communities
40 and county governments to further identify
41 potential impacts and mitigation measures
42 that would best serve the interests and
43 concerns of both the National Park Service
44 and the local communities. Partnerships
45 would be pursued to improve the quality and
46 diversity of community amenities and
47 services.

48

49

50 **TRANSPORTATION**

51 To determine the success of measures
52 implemented to encourage alternative
53 modes of travel, the National Park Service
54 would periodically collect data on traffic
55 volumes and vehicle occupancy; use of
56 transit services; and amount of pedestrian
57 and bicyclist use to, from, and within the
58 park and monument. Based on this data, the
59 National Park Service would expand or
60 modify existing facilities and services for
61 alternative transportation modes or
62 implement other measures to increase the
63 use of those modes.

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American Indian

Banducci flower farm

Battery Spencer

Bay Area Ridge Trail

Bolinas Lagoon

Bolinas-Fairfax Road

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Cañada Road

Capehart Housing Area

carbon footprint

Cattle Hill

China Beach

climate change

Conzelman Road

Dipsea Trail

Druid Heights

Fitzgerald Marine Reserve

Fort Baker

Fort Barry

Fort Cronkhite

Fort Funston

Fort Mason or Upper Fort Mason

Fort Miley

Fort Point National Historic Site

Gerbode Valley

Golden Gate Dairy

Golden Gate National Parks Conservancy

Gulf of the Farallones National Marine Sanctuary

Hawk Hill

Highway 101

Huddart County Park

Kent Canyon

Kirby Cove

Lower Redwood Creek

Marin City Ridge

Martini Creek

Milagra Ridge

Montara Lighthouse

Montara Mountain

Mori Point

Mount Tamalpais State Park

Muir Beach

Muir Woods Addition

Mussel Rock

Native American

Nike Missile Site

Oakwood Valley

Ocean Beach

Panoramic Highway

park collections

Point San Pedro

Phleger Estate

Picardo Ranch

Point Bonita Lighthouse

Presidio of San Francisco

Rancho Corral de Tierra

Redwood Creek

San Andreas Trail

Sanchez Adobe

San Francisco Bay Discovery Site

San Francisco Maritime National Historical Park

San Francisco Peninsula Watershed or San Francisco Public Utilities Commission Peninsula Watershed Easement

San Pedro Mountain

Sawyer Camp Trail

Shelldance Nursery

Skyline Boulevard

Slide Ranch

Sneath Lane

State Route 1

Stinson Beach

Sutro Heights Historic District

Sweeney Ridge

Tennessee Valley

Thornton State Beach

Woodside Store



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.

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