

Alternative 2- Preserving and Enjoying Coastal Ecosystems

CONCEPT	The emphasis of this concept is to preserve and promote dynamic and interconnected coastal ecosystems in which marine resources are valued and prominently featured. Recreational and educational opportunities would allow visitors to learn about and enjoy the coastal and marine environments, and gain a better understanding of the region's international significance and history.
RATIONALE	The concept creates a vision for intentionally connecting resources and systems to form contiguous habitat from the ocean to the coastal hills. The more connected the water and land base, the better the ability for ecosystems to adjust and adapt, thus increasing their resiliency to urban pressures and climate change. The concept also responds to the public's strong interest in having more natural wild lands in close proximity to the urban communities of the San Francisco Bay area.
Visitor Experience Goals	<ul style="list-style-type: none"> • Connect visitors with resources and the parks through expanded and diverse science and stewardship programs that are focused on preservation and restoration of coastal and marine resources and address the implications of climate change. • Provide greater opportunities for visitors to explore wild areas and immerse themselves in nature. • Manage low-impact visitor use that enhances the qualities of solitude, quiet, and naturalness in critical natural resource areas, and accommodate active recreational pursuits in other areas. • Increase visitor understanding, awareness, and support for coastal resources through participation in stories and programs about human interaction with and dependency on natural resources.
Natural Resource Goals	<ul style="list-style-type: none"> • Reconnect fragmented habitat within and adjacent to the parks to strengthen the integrity and resiliency of the coastal ecosystem to respond to climate change and urban pressures. • Optimize recovery of special status species and survival of wide-ranging wildlife. • Restore natural processes and/or allow these processes to evolve unimpeded to the greatest degree feasible. • Promote partnerships to help the parks become a center for innovative coastal science, stewardship, and learning.
Cultural Resource Goals	<ul style="list-style-type: none"> • Emphasize sites and stories connected to coastal resources, including shipwrecks, archeological sites, agricultural lands and uses, coastal defense, and lighthouses. • Use cultural resources as a platform

ALCATRAZ

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Area-wide desired conditions: A sustainable plan is developed for facilities across the entire island. No food service provided on the island, rather food service is provided at departure point on mainland.

Boundary notes:

DIVERSE VISITOR OPPORTUNITIES

Rationale:

Area-specific desired conditions:

Assets not needed:

New assets needed:

EVOLVED CULTURAL LANDSCAPE

Docks, road leading to cell house, guardhouse, building 64?

Rationale:

Significant contributing buildings to collection and public access. Best area to tell story of human use of island.

Area-specific desired conditions:

Assets not needed:

Overgrown vegetation not contributing to the historic landscape

New assets needed:

Restrooms in an appropriate location

HISTORIC IMMERSION

Cell house complex

Rationale:

Cell house complex is most significant building of historic building collection and revenue source.

Area-specific desired conditions:

Maintained in best possible condition to promote opportunities for historic immersion. Visitor use and operational support activities are reduced from current levels.

Assets not needed:

New assets needed:

Continuing restoration with phased plan. Solar on roof.

WILD

State leased lands – 300 yards wide

Rationale:

NPS exclusive jurisdiction.

Area-specific desired conditions:

“Mom and pop” fishing with permit activities are restricted. This zone is added to marine charts.

Assets not needed:

New assets needed:

Establish buoy line. Need boat to enforce area.

SENSITIVE ZONE

Near offshore waters

Rationale:

Protect sea bird colonies.

Area-specific desired conditions:

Seasonal and perhaps all-year access is restricted to protect sea birds. This zone is added to marine charts.

Assets not needed:

New assets needed:

Establish buoy line. Need boat to enforce area.

PARK OPERATIONS

Powerhouse building, cisterns and ???

Rationale:

Facilities have potential for sustainable uses with planning.

Area-specific desired conditions:

This area includes opportunities for storage, warehouse, power and cogeneration. Powerhouse building is restored and preserved for its historic value. Cisterns may be used for other purposes to support sustainable activities on the island.

Assets not needed:

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New assets needed:

NEW ZONE Coastal cliffs, model industries, laundry, parade grounds, historic road, water tower, guard's house

Rationale: Both exceptional natural and cultural resources with high concentration of water bird colonies found only in this park location. Have regional significance.

Area-specific desired conditions: Both resources continue to be enhanced. Public access is highly controlled, including seasonal, guided only access restrictions. A decision is made on the future of the Model Industries buildings since they are undermined and in danger of falling into the bay. Natural resource activities are expanded, such as a web cam (seabird theme).

Assets not needed: To be determined. Need plan for coastal erosion and affects on loss of land features.

New assets needed:

MUIR WOODS

MUIR WOODS

Notes from Summer 2007 9/6/07

Muir Woods Visitor Experience GMP 'Coastal Ecosystem Corridor' Working Group

(Possible alternate working title for this alternative – *Preserving Biodiversity in the Face of Climate Change*)

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'Coastal Ecosystem' concept development for Muir Woods NM

The vision is that MUWO is restored to its messy, feral, untidy/un-manicured, primeval forest condition, where the fog-shrouded old growth forest is nurtured by unimpeded natural processes including natural flooding, fallen trees, canopy gaps and multi-layered canopy, fire, etc. Floodplain function and stream processes are restored and sustain improved conditions for coho salmon, steelhead and other aquatic life in Redwood Creek. Natural quiet and natural light and darkness predominate and sustain spotted owls, rare bats and other old growth forest inhabitants.

This alternative concept is grounded in the 1908 proclamation that established Muir Woods National Monument that called out "...the extraordinary scientific interest and importance because of the primeval character of the forest in which it is located, and the character, age and size of the trees." Restoration of natural processes will aid in preserving and re-establishing the primeval character of the forest. Muir Woods will also serve as a living laboratory for research into the long-range impacts of climate change on the watershed and the old growth forest, providing urgently needed direction for adaptive management and response to future changes.

Visitor Experience and Capacity

Muir Woods NM, one of America's most treasured places, serves as a source of inspiration for visitors. The experience is tailored to immerse visitors in the watershed, from the ocean at Muir Beach to the redwood canyons upstream, where the lives of salmon connect the ocean to the redwood forest. The visitor comes in intimate contact with all the qualities of the forest – the filtered light, the damp shroud of fog, the gurgling stream, the trill of the winter wren, the silver flash of salmon, and solitude – not just the majestic trees.

The message of Conservation is paramount. It links the past – the history of the conservation movement, the establishment and preservation of Muir Woods as a National Monument, the Civilian Conservation Corps era – with the present, highlighting the changes in thinking about conservation including recognition of the impacts of past practices and the need to restore ecological function. It explores the anticipated, yet unpredictable, future changes that will result from human-induced changes in the earth's climate, challenging the forest's, and our own, abilities to adapt. Interpretation is focused on this evolution of conservation ethics through time. The Muir Woods experience (which begins when one decides to visit there) serves as an active agent of change, inspiring visitors to take action to preserve the places they cherish, to become more civically engaged.

A visit to Muir Woods begins with a commitment to change, to treading lightly on our planet. Visitation is reduced significantly from today's levels to reduce the potential for human impacts on fragile resources, and all visitors arrive on foot, bicycle or via quiet park shuttle buses that use alternative fuels and clean air technology. No tour buses are accommodated, in order to enhance the intimate feeling and solitude evoked by a quiet walk in the woods. Only basic amenities are provided – restrooms, shelter and water, and those are outside of the redwood forest. The experience is about minimizing the human footprint on the planet – reducing carbon emissions to reduce global warming, conserving water to sustain other forms of life, preserving quiet for the human psyche and lives of wildlife... Programs are developed to actively engage the public in the stewardship of Muir Woods including ecological restoration, monitoring of resource conditions, and research into the impacts of climate change on the redwood forest ecosystem and what potential actions might mitigate those impacts.

Visitor use levels are dictated by a reduction in carbon emissions of 80% below 1990 levels by 2050, beginning with a 20% reduction below 1990 levels by 2012. Slowing and stopping global warming is imperative if we hope to preserve Muir Woods for the future.

A significant reduction in visitor use (to moderate along the main trail and low everywhere else) affords opportunities to restore ecological function to the redwood forest ecosystem. All major infrastructure would be removed (except water and sewer systems, and essential small office or shop space preserved at the Muir Woods Inn location) within the monument boundaries, including Camino del Canyon, Conlon Avenue and the native plant nursery. The trail system would be redesigned to accommodate fewer visitors in a more intimate and appropriate setting. Redwood Creek Trail would be realigned and extend from the ocean to the redwood forest (and beyond?), highlighting watershed restoration and the connections between the ocean and the uplands. The primary trail

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within Muir Woods is relocated out of the floodplain, other trails and bridges may be removed, more sensitively located, or designed to be modular/flexible/adaptable to changing conditions as more natural processes are restored. Some trails may only be available seasonally. Paved surfaces would be removed, though the main trail would provide universal access to the heart of the woods. The design of any new infrastructure (trails, bridges, shuttle bus shelter) would be a reflection of the CCC era but would minimize impacts on the redwood forest ecosystem. Historic trails and CCC era structures would be utilized or preserved where appropriate. Seasonal viewing areas for salmon would be established while minimizing impacts to the stream and forest environment. Fallen trees would be left intact and trails relocated over or around the fallen giants. Visitor use and access would accommodate restoration of a naturally functioning ecosystem. Off trail travel would be prohibited in all areas of the Monument except for approved stewardship and research activities. Park leadership in restoration, resource stewardship and climate change research would be key messages visitors take home with them.

Resource Stewardship

Natural processes, including floodplain function and stream processes would be restored along Redwood Creek. Woody debris would be actively added back into the system, rather than waiting for recruitment. Impediments to natural processes would be removed such as riprap revetments, grade control structures, bridges that confine stream-flow, major trails and stream crossing in the floodplain and tributaries. Prescribed fire would be used to mimic natural fire processes. Fallen trees would be left to decay in place and serve as nursery trees for recruitment of old growth forest species and as wildlife habitat. Salmonid fisheries and possibly amphibians (foothill yellow-legged frogs) would be restored and/or reintroduced. Invasive terrestrial and aquatic plants and animals would be aggressively controlled.

All parking lots would be removed (with the exception of a shuttle bus turnaround and handicap parking above the floodplain near the Muir Woods Inn) and floodplain function restored. Redwood forest and riparian habitat would be expanded onto the re-established floodplain.

A major program to control sediment sources in the watershed would be undertaken, including removal of the structures and the roads within Camino del Canyon, rehabilitation and restoration of the landscape, and an aggressive removal of associated invasive and escaped ornamental vegetation including the eucalyptus groves. Natural drainage patterns and tributary channels would be restored or reconstructed in Camino del Canyon and Conlon Avenue, as well as along upper Muir Woods Road. All of these actions would reduce the vulnerability of the watershed to climate change impacts by increasing its resiliency and ability to recover from extreme events including storms, landslides and flooding, or prolonged drought and wildfires.

Active stewardship programs would engage the public in hands-on ecological restoration of aquatic, riparian and upland habitats, as well as monitoring of T&E species (coho salmon, steelhead, spotted owls), stream-flow, water quality, and other resource conditions (e.g. natural sounds, land birds, amphibians, barred owls, bats, changes in stream channel morphology). A stewardship center, including native plant nursery, might be located in the lower Redwood Creek watershed at the Golden Gate Dairy, the Banducci site, or possibly on state park land (or at Green Gulch Farm?).

Climate Change Research

The park will collaborate with academic institutions and federal agencies engaged in climate change research to identify the greatest threats to the redwood ecosystem arising from climate change, develop a research strategy, and conduct climate change research that will provide direction for future management in these uncertain times. The park encourages establishment of a consortium like CIRMOUNT (The Consortium for Integrated Climate Research in Western Mountains) to collaborate on climate change research needs in the region of California influenced by the Mediterranean climate (CIRMED?).

The park will promote the sensitive use of Muir Woods as a living laboratory. It is imperative that these research efforts be conducted throughout the range of the California redwood to better understand future climate change impacts. Research conducted in the near-term south of Muir Woods would be particularly valuable.

An inventory of the redwood canopy environment at Muir Woods is urgently needed as no canopy investigations have ever been conducted there. A whole canopy ecosystem could be lost before it is even described. Visitors would be able to experience and learn more about the redwood canopy and impacts of climate change on the canopy through a virtual tour created in concert with canopy research. A very preliminary list of research needs includes climate change impacts on seasonal changes in fog and fog drip and their moisture contributions to the redwood ecosystem, the impact of increasing temperatures on stream temperature, forest health and disease dynamics including tanbark oak and SOD, redwood recruitment and stand longevity.

Area-wide desired conditions:

Boundary notes: Acquire lands from state parks.

DIVERSE VISITOR OPPORTUNITIES

Rationale:

Area-specific desired conditions:

Assets not needed:

New assets needed:

SIGHTSEEING CORRIDOR

Rationale:

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Area-specific desired conditions:

Assets not needed:

New assets needed:

HISTORIC IMMERSION

Rationale:

Area-specific desired conditions:

Assets not needed:

New assets needed:

SCENIC VALUES

Rationale:

Area-specific desired conditions:

Assets not needed:

New assets needed:

WILD

Upper Conlon Avenue

Rationale:

This area does not support resources as significant as the other zones. However this area is still a part of a contiguous corridor of sensitive habitat and has a wild character. This area supports less use than the new zone.

Area-specific desired conditions:

Assets not needed:

Parking lot, nursery, operation facilities, maintenance area (note: see #9 under MaHe map – need for relocation), Conlon Ave., buildings within Conlon Ave. Removing these facilities in both locations allows for restoration of natural resources and processes to the greatest extent. Remove restrooms, sewer and power infrastructure. Frank Valley Road will be downgraded.

New assets needed:

Shelter or transit hub to facilitate the public circulation/drop-off via shuttle.

SENSITIVE ZONE

Rationale:

Area-specific desired conditions:

Assets not needed:

New assets needed:

PARK OPERATIONS

Rationale:

Area-specific desired conditions:

Assets not needed:

New assets needed:

NEW ZONE

Most of the monument, including Redwood Creek riparian corridor

Rationale:

Protects large contiguous unit of highly sensitive habitat that includes a high number of sensitive and endangered species (red-legged frogs, coho salmon, Western pond turtle), wetland and riparian habitat, and old growth forest. The resources within these areas are also a major attraction and therefore a high level of controlled use is expected.

Area-specific desired conditions:

The riparian corridor for Redwood Creek is expanded beyond its current configuration.

Assets not needed:

Concession, historic buildings and facilities, rip rap, ranger office, restroom, cultural resource features, asphalt on trail and Alice Eastwood Road, (consider regrading). Parking and culverts would be removed from the Redwood Creek riparian area. Frank Valley Road could be downgraded to only allow limited access for local and public transportation.

New assets needed:

Shuttle buses for transportation, alternative boardwalk material (current type is too noisy), trail re-alignment to further protect resources, complete trails management strategy to evaluate circulation patterns, use and duplicity of trails with the goals of removing redundant or resource-impacting trails and identifying priority riparian and woodland habitat restoration.

Park Wide

Other ideas

OTHER ZONING NOTES

Transit Thoughts to Support COASTAL ECOSYSTEM:

Tennessee Valley – Muir Woods – Stinson – Muir Beach:
 Construct transit hub adjacent to Hwy 101 w/visitor center/concession & parking
 Provide buses to all 4 sites
 Restore “Wild“ feel:
 Remove all parking at Muir Woods, Muir Beach, Tennessee Valley
 Remove South lot at Stinson

Marin Headlands:
 Transit hub could be same as above or located at northern end of the GG Bridge or at Baker-Barry tunnel.
 No cars on Conzelman Rd.

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Reduce parking at Fort Cronkhite.

Fort Funston:
Transit hub to serve southlands

Alcatraz pier (historic) vs. Lower Fort Mason as ferry hub:
Volume
Impact on intertidal resources
Feeder/transit hub (bus and trolley lines)
Parking and related infrastructure

MARIN COUNTY

Bolinas Lagoon

Bolinas Lagoon is zoned new zone for the reason that it is a wetland of international significance and should support visitor use with resource protection.

Bolinas Lagoon Delete – not in park

Zone #A – New Zone

Rationale: This area is a RAMSAR wetland of international significance - supports a diverse wildlife community (seals, shorebirds, T&E species etc.). The significance of this land merits inclusion in the GGNRA and should be considered under this alternative.

Assets not needed: To be determined

New assets needed: Raise Highway 1 to causeway structure to address rising seas level, additional to be determined.

Stinson Beach

Stinson Beach is zoned diverse opportunities for visitors to allow continued recreational uses. The south parking lot is zoned wild [re-named natural](#) for the purpose of wetland restoration. The Stinson Uplands are zoned wild for the reason of establishing a large ecosystem corridor.

Stinson Beach

Zone #19 – Diverse Visitor Use

Rationale: It has and will continue to support surfing, fishing, strolling, general recreation. This beach is accessible.

Assets not needed: Septic system; central restroom needs to be pulled back from beach and dunes restored

New assets needed: Municipal water and sewage treatment that would be combined with community needs

Stinson Beach (south parking lot)

Zone #20 – Wild

Rationale: Current studies indicate that this area is a priority area for wetland restoration (past uses filled in wetland habitat)

Assets not needed: Parking lot (it would be restored)

New assets needed: Stewardship center at Rancho Baulines

Stinson Uplands

Zone #15 – Wild

Rationale: Part of a large contiguous matrix of protected habitats that are managed by multiple agencies. This zone is consistent with goal of establishing large ecosystem corridors. Allows for low to moderate visitor use while protecting resource values,

Assets not needed: Pottery studio and remaining in-holding structures

New assets needed: Alternative more sustainable water sources should be considered

Slide Ranch

Slide Ranch is zoned wild to protect coastal areas. The State Lands Lease is zoned wild to protect 1,000 feet of marine habitat, sea caves, and National Marine Sanctuaries.

North of Muir Beach (includes Slide Ranch and Banducci)

Zone #14 - Wild

Rationale: Allows for low to moderate visitor use while protecting resource values.

Assets not needed: Flower farm (restore habitat and floodplain), Slide Ranch, all of the Banducci-associated buildings unless needed for stewardship center. In the event that maintaining Highway becomes incompatible with NPS resource protection and management then consider downgrading to a trail.

New assets needed: Consider stewardship and science center (but may need alternative spot zoning given that this area is designated wild). See #9

Slide Ranch Intertidal Area

Zone #12- Sensitive

Rationale: Long-term intertidal research site therefore should have limited visitor use. [1,000 feet distance?- Daphne to research](#)

Assets not needed:

New assets needed:

State Lands Lease

Zone #13 – Wild to [Natural \(rec. is to prohibit motorized boating- Daphne to research\)](#)

Rationale: This area protects 1,000 feet of marine habitat. This zone allows for water-based recreation uses while protecting marine resources. Sea cave protection and monitoring will be important part of management in this area. This area is also within the Monterey Bay and Gulf of the Farallones National Marine Sanctuaries. [Area being](#)

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Banducci	<p>proposed as a no-take marine reserve (Rocky Point to past Muir Beach, includes mouth of Redwood Creek). <i>Assets not needed:</i> <i>New assets needed:</i> Buoys for demarcating protection area</p> <p>Banducci is zoned wild to protect resource values.</p>
	<p>North of Muir Beach (includes Slide Ranch and Banducci) Zone #14 - Wild <i>Rationale:</i> Allows for low to moderate visitor use while protecting resource values. <i>Assets not needed:</i> Flower farm (restore habitat and floodplain), Slide Ranch, all of the Banducci-associated buildings unless needed for stewardship center. In the event that maintaining Highway becomes incompatible with NPS resource protection and management then consider downgrading to a trail. <i>New assets needed:</i> Consider stewardship and science center (but may need alternative spot zoning given that this area is designated wild). See #9</p>
Golden Gate Dairy	<p>The Golden Gate Dairy is zoned evolved cultural landscape for the reasons of: the landscape is designated National Register-eligible property and this zone is consistent with the natural resource goals of open coastal prairie and scrub habitat.</p> <p>Golden Gate Dairy Zone #9 – Evolved Cultural Landscape <i>Rationale:</i> This property is being placed on the National Historic Register. Its management as a cultural landscape is consistent with natural resources goals of open coastal prairie and scrub habitat. The facility could be re-used as the science and stewardship center (this also could be located in #14 with the nursery) Alternative sites for this use could be locations on State Park lands within the watershed. <i>Assets not needed:</i> Non-native trees along riparian habitat, non-historic barbed wire fencing and culverts <i>New assets needed:</i> Municipal water and sewer for the Muir Beach community and NPS operations</p>
	<p>Muir Beach Muir Beach is zoned wild for the reasons of reclaiming the habitat and protecting sensitive species.</p> <p>Muir Beach Zone #10 – Wild <i>Rationale:</i> Redwood Creek flows out into the beach. With the restoration of Big Lagoon, the presence of the partially rocky shoreline and coastal bluffs, we will want to maintain lower levels of use, the wild character and protect the number of sensitive species (coho salmon, red-legged frog, etc.). <i>Assets not needed:</i> Parking lot (possibly relocate to other area in watershed), beach fire pits <i>New assets needed:</i> Shuttles (tie in with Muir Wood alternative transportation), improved visitor amenities, trailhead,</p> <p>State Lands Lease – Muir Beach to Rodeo Beech; zoned Natural</p>
Tennessee Valley/ Oakwood Valley	<p>Miwok Stables Area is zoned evolved cultural landscape as it is a proposed national historic register property and its use as a stable will either increase or stabilize.</p> <p>Miwok Stables Area Zone #18 – Evolved Cultural Landscape <i>Rationale:</i> This is proposed as a national historic register property, has programmed use that will either increase or maintain itself into the future. This are could also support future stewardship/nursery facilities use and others that are currently located in the lower valley. <i>Assets not needed:</i> Wells, any facilities associated with springs, structures that are impacting riparian habitat <i>New assets needed:</i> Municipal water and sewer (need to have the stables no longer using spring water).</p>
	<p>Marin (Gerbode Valley)</p> <p>The Northern Marin Headlands are zoned wild to provide for a contiguous habitat corridor, the largest in the area. Rodeo Valley Trail is within this zone. Green zone is extended to south side of Bunker Road. The Redwood Creek Riparian Corridor is zoned new zone (deleted since it is not in the park) to allow for visitor use while protecting a high number of sensitive species, wetland, and riparian habitat. The Mission Blue Corridor is zoned new zone Sensitive (south of Bunker Road) to focus visitor use along the road corridor, while providing the largest contiguous unit of mission blue butterfly habitat in the park.</p> <p>Northern Marin Headlands Zone #8 – Wild <i>Rationale:</i> It provides for a contiguous habitat corridor, the largest in this area. The wild designation provides for bike use. <i>Assets not needed:</i> Downgrade and remove fire trails to maximize continuity in corridor. Remove non-historic facilities and infrastructure (including spring boxes) and restore habitat, remove the non-native trees currently dominating the riparian corridors; remove remaining dams (including the lower large dam and the one below backdoor pond); relocate Haypress campground out of the riparian area. Power poles, Vortac site, FM site, water lines removed, especially in riparian habitat. <i>New assets needed:</i> Improved TV trailhead, reconfigures entrance road/parking/parking lot, restrooms, municipal water and sewer</p> <p>Redwood Creek Riparian Corridor Zone #11 – New Zone (Deleted since it is not in park)</p>

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Rodeo Valley

[Note: incorporates areas outside of the park – e.g. State Lands]

Rationale: High number of sensitive species (red-legged frogs, coho salmon, Western pond turtle), wetland and riparian habitat. The corridor borders the road and a trail.

Assets not needed: Frank Valley Road could either be downgraded with limited access local and public transportation access. Culverts and non-historic fencing would be removed.

New assets needed: Bridges replace culverts. Municipal water and sewage treatment plan for NPS land and broader community (see earlier discussion). This would include the replacement of CSD facilities with municipal facilities at Muir Beach.

Mission Blue Corridor

Zone # 1 – New Zone

Rationale: This area is the largest contiguous unit of mission blue butterfly habitat in the Park. It also draws high visitation, which will increase overtime with road and trail improvements provided under the MHFBTMP. High visitation is primarily focused on the road corridor, overlooks/viewing stations and ½ - 1 mile in along trails. Use type (e.g. bike and horse use) will need to be limited in this area to ensure resource protection and restoration. The New Zone provides for this level use Vs sensitive zone. [Note: amenities such as toilets at Hawk Hill can be included on the edge of this zone].

Assets not needed: Julian Road would be downgraded to support pedestrian use; Non-native trees at Hawk Hill would be removed. Capehart housing should be removed and relocated. Vortac site and power poles to be removed.

New assets needed:

Note: Boundary between Zone 1 and 8 is Rodeo Valley Trail. Check note on plan may not be accurate. McCullough and Bunker remain in place going through site.

Rodeo Lagoon is zoned sensitive resources to support the tide water goby, pelican, and river otter habitat which is highly disturbed by visitor interactions. Rodeo Beach is zoned diverse opportunities for visitors to focus visitor use and continue to support educational programs, dog use, surfing, fishing and other recreation.

Rodeo Lagoon (includes west end of beach)

Zone #6 – Sensitive

Rationale: Supports tide water goby, pelican and river otter habitat which is highly disturbed by visitor interactions. Under this alternative the current equestrian use of the stables would be reduced or stopped due to issues with water quality.

Assets not needed:

New assets needed: fencing 100-feet from edge of lagoon (consistent with MHFBTMP) see above regarding traffic redirection; improvements to stables to limit water quality and sediment issues

Rodeo Beach

Zone #7 – Diverse Visitor Opportunities ([change to Evolved Cultural](#))

Rationale: It has and will continue to support educational programs, dog use, surfing, fishing, and general recreation. This beach is accessible. [Can continue to host these uses and activities; part of cultural identity and larger landscape.](#)

[Off-shore area is zoned Natural to allow surfing.](#)

Assets not needed:

New assets needed: Single guided access point to the beach (currently no trail or signage); boardwalk leading from the bridge to the beach

Fort Barry and Cronkhite

Fort Barry and Cronkhite are zoned evolved cultural landscape for the reasons of: this area is a National Register Historic District, it allows for reuse of the buildings, a visitor center, and habitat restoration.

Fort Barry and Cronkhite

Zone #4 – Evolved Cultural Landscape

Rationale: This area has National Register Historic District (National Historic Landmark status potential for the military fortifications). Using this zone still provides for the management of the natural resources including the removal of social trails, habitat restoration, reduction of erosion etc. This zone would also provide for NPS operations and visitor center (needs to include nursery and future location). This area also supports an intense reuse of historic buildings by partners who interpret and help manage.

Assets not needed: Those should be determined following the completion of the historic structure reports and Cultural Landscape Report. Dirt parking lot can be removed, consistent with MHFBTMP. Power poles.

New assets needed: Those should be determined following the completion of the historic structure reports and Cultural Landscape Report. This could also include an relocation of vehicle traffic to Fort Cronkhite (e.g. traffic would be on other side of Rodeo Creek and pedestrian access would remain along the bridge) to address the issue of red-legged frog impacts.

Point Bonita

Point Bonita Marine Reserve is zoned sensitive resources to protect the sensitive marine life (pinnapeds, harbor seals, and birds) which is highly disturbed by visitor interactions. This area is also within the Monterey Bay National Marine Sanctuary.

Point Bonita Marine Reserve

Zone #5 – Sensitive (at least 100-150 yards from shoreline) [State Lands Lease- Sensitive from Rodeo Beach around corner \(Daphne to research southeastern extent of sensitive zone\).](#) [Area would be seasonally closed to protect harbor seals and seabirds.](#)

Rationale: Sensitive marine life (pinnapeds, harbor seals and bird use) which is highly disturbed by visitor interactions. Sensitive zoning maximizes resource protection. This area is also within the Monterey Bay National Marine Sanctuary (managed by Gulf of the Farallones NMS)

Assets not needed:

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Conzelman Road

New assets needed: Buoy marker

Conzelman Road is zoned as a sightseeing corridor ([from intersection of 101](#)) to continue to focus visitor use at set points along the corridor to protect very sensitive habitat while allowing high use along the corridor. [Add Scenic Corridor along McCullough Rd to complete a full loop, includes nodes for Hawk Hill and Battery Spencer to accommodate use levels and amenities.](#) Has views of Golden Gate strait, City backdrop, and Rodeo Valley.

Conzelman Road

Zone #3 – Sightseeing Corridor (includes Battery Spencer)

Rationale: Conzelman Road is visited by millions of visitors to view the Golden Gate and San Francisco. Most visitors only get out at overlooks and viewing areas such as Battery Spencer. This zone provides for a route for all of these visitors through a very sensitive area.

Assets not needed:

New assets needed: New Coastal Trail connection, overlooks, bike lanes, visitor amenities, etc. These are all called out in the MHFBTMP.

Kirby Cove

Kirby Cove is zoned evolved cultural landscape to focus attention on military fortifications, to reduce the non-native forest, and to provide a connection to the water trail.

Kirby Cove

Zone # 2 – Evolved Cultural Landscape

Rationale: This area supports military fortifications and a planted non-native forest. The end of the period of significance is the mid 1940s which would allow for the reduction of the forest footprint. The zone includes the road to the camping area, it is one of the few group campsites in the park and it will likely provide for future water trail connection.

Assets not needed: Forest reduction to historic boundaries;

New assets needed: Potential water trail amenities

Others in Marin

Marin Headlands is zoned new zone [changed to Natural](#) for marine protection. This zone allows the protection of seabird travel while allowing boat use. The Fort Baker marine area is zoned diverse opportunities [scenic corridor](#) for visitors to allow for high and varied use that will continue into the future.

Marine Headlands Marine Protection

Zone #16 – **New Zone** (we could also probably use wild for this zone; and will need to check the type of boat use)

Rationale: It is extremely valuable for seabirds rafting through area. The shoreline is completely un-developed other than Kirby Cove. This differs from Point Bonita in that there are no harbor seal haul outs (not anticipated in future) and that the area may support future water trail and other low impact recreational use.

Assets not needed:

New assets needed:

Fort Baker Marine Area

Zone #17 – Diverse Visitor Opportunities [changed to Scenic Corridor to better reflect type of uses \(sailing, kayaking, etc.\)](#)

Rationale: High diversity of water recreational activities underway and anticipated in future. Water ferry/taxis is also likely form of transportation in future. [Moderate use level; promotes non-motorized boating.](#)

Assets not needed: Sausalito Water Treatment Plant

New assets needed: To be determined following analysis of ferry/taxi use

SAN FRANCISCO

General Ideas

OFFSHORE:

East Beach offshore is Diverse as board sailing/ kite sailing.

West end of East Beach to Bridge inner area (100 yd.) is sensitive; remainder is Natural – extends west to Eagle's Point, west of China Beach.

Eagle Point south to N end Ocean Beach is sensitive to protect sea birds and mammals, inc. otters. Wildlife viewing offshore at Cliff House.

Ocean Beach south into San Mateo is Natural zone.

Fort Mason

The national landmark district is zoned evolved cultural landscape to support that designation. The Great Meadow is zoned diverse opportunities for visitors to support a variety of recreational activities in this altered landscape. Building 201 is zoned park operations to maintain park headquarters. The shoreline is zoned sensitive resources to protect the last remaining natural shoreline in San Francisco inside the Golden Gate.

Opportunity for marine resource/ research center with boat at Lower Fort Mason. Possible center for Climate Change – a refuge for dispossessed partners. Possible coast & bay orientation/interpretive center at Black Point.

Fort Mason Map

Great Meadow

Zone #1 – Diverse Visitor Use

Rationale: Significantly altered landscape use for a variety of recreational activities – active and passive. No organized sports.

Assets not needed: None. Remove dying and dangerous trees and tree stands.

New assets needed: Safe trail and pedestrian linkage at Laguna Street. Others to be determined based on extension or F Line and plan for impacts to Fort Mason

Cultural Landscape

Zone #2 – Evolved Cultural Landscape

Rationale: Part of national landmark district and historic district with diverse uses. Maintenance will stay in this

Alternative 2- Preserving and Enjoying Coastal Ecosystems

zone. Remove dying trees/ trees blocking view based on CLR. Determined maintenance guidelines. Remove trees to open view from batteries

Assets not needed: None.

New assets needed: Improved intersection at Franklin Street. Utility system upgrade –sewer and electrical. Wall and cliffs on Van Ness need study to stabilize. Pier 4 must be repaired.

Park Operations (Building 201)

Zone #3 – Park Operations

Rationale: Maintain critical operations here – park headquarters.

Assets not needed: None.

New assets needed: Accessibility upgrades. Ongoing maintenance. Seismic upgrade. Upgrade heating and electrical system, computer wiring system, visitor contact.

Shoreline

Zone #4 – Sensitive Resources

Rationale: Last remaining natural shoreline in SF inside the Golden Gate. Preserve.

Assets not needed: To be determined. Check for debris.

New assets needed: Stabilize edge of McDowell Road to preserve tide pools.

China Beach

China Beach is zoned diverse opportunities for visitors for the reasons that this area allows for a variety of recreational uses and it is not cost-beneficial to remove existing facilities to restore natural resources.

China Beach

Zone #5 – Diverse Visitor Opportunities

Rationale: Allows for a variety of recreational uses and the land is not contiguous with other park lands. Not cost benefit to remove existing developed facilities to restore natural resources not there.

Assets not needed: Bathhouse unless it becomes designated swimming beach

New assets needed: Maintain existing retaining walls, bathrooms and rescue cache, boat ramp for rescue launch

Lands End, Fort Miley, Sutro Hts

Lands End is zoned Natural to allow for a coastal corridor with varied wetlands. Ft. Miley and Sutro Heights are zoned evolved cultural landscape for the reasons of: existing fortifications will be part of the Seacoast Fortifications National Historical Landmark District, and the zone allows for restoration of natural resource features. Boundary of zone starts at end of formal promenade.

Lands End

Zone #6: Natural

Rationale: Allows for coastal corridor with varied wetlands and wildlife corridor resource values. Support a wild and rustic character which will be continued into the future.

Assets not needed: Removal of culverts

New assets needed: Trail rehabilitation, bridge, overlooks, visitor amenities including limited accessible trail segments.

Fort Miley

Zone #7: Evolved Cultural Landscape

Rationale: Existing cultural landscape surrounded by developed lands, Used operationally and has existing cultural resource features. Significance to park is its cultural resources. Reconnect Octagon House as a coastal viewing station – remove trees. – interpret marine and cultural resources.

Assets not needed: None

New assets needed: Reorganize and add maintenance and stewardship support areas within existing maintenance area.

Cliff House/Sutro Heights (includes West Fort Miley)

Zone #8 – Evolved Cultural Landscape

Rationale: Existing cultural resource which is multi-use in function and accessible to public. Existing fortifications will be part of the Seacoast Fortifications National Historical Landmark District. Zone allows restoration of natural resource features within the cultural landscape setting. Wildlife viewing opportunities.

Assets not needed: None

New assets needed: Improved access to Sutro Bath ruins, visitor facility at Lands End parking lot, safety fencing along Point Lobos Avenue.

Ocean Beach

Northern Ocean Beach is zoned diverse opportunities for visitors to focus high use in one area. Central Ocean Beach is zoned wild to protect bird habitat and address erosion and habitat restoration.

Northern Ocean Beach

Zone #9 – Diverse Visitor Ops

Rationale: Beach separated from shorebird habitat (Zone 10). Supports high level of visitor use and active recreational uses

Assets not needed: Remove underground restrooms (existing and covered up)

New assets needed: Rehabilitate existing facilities including seawall and sidewalks.

Central Ocean Beach

Zone #10 – Natural

Rationale: Continued seasonal restrictions required for snowy plover and high shore bird use. Make sure can implement protective measures into the future.

Assets not needed: Sewage outfalls and salt water intakes (City of SF). NPS excess rock rip-rap from south of Sloat. Coastal erosion should be addressed with managed retreat techniques. Dune restoration opportunities in some areas.

Alternative 2- Preserving and Enjoying Coastal Ecosystems

Fort Funston

New assets needed: None.

The dune habitat will be restored under the Natural zone designation, while access will be by fenced trail only. The Battery Davis is zoned evolved cultural landscape as it is part of the Coastal Fortifications National Landmark and in good condition. The visitor use area is zoned diverse opportunities for visitor use to support heavy and diverse visitor use. The park operations area is zoned as such to maintain operations in this area. The coastal beach and bluffs are zoned wild to allow natural processes to proceed.

Fort Funston Map

State Lands Lease

Zone #1 – Natural

Rationale: Same as Zone #3 in SF.

Assets not needed: None

New assets needed: None

Habitat Restoration Corridor

Zone #2 – Natural Zone

Rationale: Restore lost dune habitat that covered western third of SF. Lysingia recovery plan and implementation to proceed. Access by dog walkers, equestrian would be limited to fenced trail areas. Provides habitat connection along coast. Possible quail introduction and red fox elimination. Remove sewer leach field.

Assets not needed: To be determined. Remnant cultural resources, cypress forest and trails

New assets needed: Realign equestrian trail.

NOTE: Equestrian trail is inconsistent with “Natural Zone”

Battery Davis

Zone #3 – Evolved Cultural Landscape

Rationale: Part of Coastal Fortifications National Landmark still in good condition.

Assets not needed: None

New assets needed: To be determined.

Intense Visitor Use Area

Zone #4 – Diverse Visitor Experience

Rationale: Area of heaviest, diverse visitor use including hang gliding, off leash dog use, parking, etc.

Assets not needed: To be determined.

New assets needed: Restrooms hooked up to city sewer, reconfigure parking, boardwalks for trails.

Park Operations Area

Zone #5 – Park Operations

Rationale: Maintain park operations in this location. Prepare facilities/operations plan to address nursery, maintenance, le, stewardship, sf school partner space, interp.

Assets not needed: Water tank.

New assets needed: Road facilities. Maintenance facilities according plan above.

Coastal Beach & Bluffs

Zone #6 – Wild

Rationale: Allow natural processes to proceed unimpeded. Recognize loss of land and features. Bank swallow colony.

Assets not needed: To be determined. Possible outfalls. Concrete structures have fallen onto beach – may not be removed unless disrupting. Evaluate these collapsed structures for removal potential and desirability.

Assets needed: None. Maintain beach access trails where appropriate.

San Mateo

**General Notes
Thornton Beach to Mussel Rock**

Avalon Canyon and Thornton State Beach are managed as wild to allow for natural processes and natural erosion take place. [DO NOT ZONE AREAS THAT ARE NOT PART OF GMP PLANNING AREA.]

Avalon Canyon/Thornton State Beach

Zone #5 – Natural

Rationale: Inaccessible cliffs and beaches. Limited access allows only pedestrians and horses. Let natural processes to continue with natural erosion. Remove infrastructure and structures before cliff failure. Create forward looking plan with surrounding communities to implement anticipated changes to cliffs and affects to shoreline assets.

Assets not needed: Outfalls. Houses should be vacated and removed before they fall into ocean. (verify existing assets for further determination of removal or retention)

new assets needed: None

Milagra Ridge

Milagra and Connemara are managed as wild to support threatened and endangered species in the area.

Milagra/Connemara

Zone #1 – Wild

Rationale: This area supports a number of T&E species (mission blue butterfly, red-legged frog, San Bruno elfin and habitat that could potentially support San Francisco garter snakes). It is anticipated that the area will continue to support primarily local use, increasing in 20+ years do to increased development in Connemara and Pacifica/Daily City etc, however not exceeding low-moderate. The area provides for a nature immersion experience, wild in character.

Assets not needed: Water tank, paved surface on road

New assets needed: Improved small-scale parking area, trail connection from lower Milagra Ridge to Connemara,

Alternative 2- Preserving and Enjoying Coastal Ecosystems

Sharp Park

road downgrade to trail.

Sharp Park golf course and the adjacent open space lands are managed as wild to create large contiguous habitat corridors.

Sharp Park Golf Course and Adjacent Open Space Lands

Zone A – Wild

Rationale: Create large contiguous habitat corridors. Provides for low to moderate levels of use and wild character.

Assets not needed: Golf Course and other built park facilities, to include roads.

New assets needed: To be determined prior to acquisition.

Callera Creek

Zone B – New Zone

Rationale: Same as Mori (#2)

Assets not needed:

New assets needed:

State Lands Lease

State Lands Lease

Zone #6 – Wild

Rationale: See #13 (Marin Map)

Assets not needed:

New assets needed: Buoys

Mori Point

Mori Point is managed as the new zone in order to protect threatened and endangered species but also allow for visitor uses which would be less intense than current.

Mori Point

Zone #2 – New Zone

Rationale: This area supports habitat for the SF garter snake (one of the most endangered species in the country) and red-legged frog, some of the most sensitive habitat within the Park. It is anticipated that the area will continue to support primarily local use, increasing to moderate in the future with the improvements to Devil's Slide. While the current Trails Management plan provides for multi-use, under this alternative bikes and horses would be relocated (and corridor connected) to the Sharp Park golf course corridor or other adjacent area. Paragliding would be prohibited.

Assets not needed: Cement and other construction foundations

New assets needed: Boardwalk, protective fencing, perimeter bike and horse access (see Zone A for ops), visitor amenities, restroom, parking and trailhead.

Sweeney Ridge

Sweeney Ridge and Cattle Hill are managed as wild to support sensitive species and provide a contiguous San Francisco watershed. Sweeney to Corral Connection is managed as wild to provide a connection through adjacent properties.

Sweeney Ridge/Cattle Hill

Zone #4 - Wild

Rationale: Supports large amount of mission blue butterfly habitat and other sensitive species. Large intact corridor of native habitat that is contiguous with SF Watershed. This zone was chosen as it does not have easy access and requires either long hike or drive. Do not anticipate large increase in visitor use in this area.

Assets not needed: Nike site facilities and asphalt, downgrade asphalt road to trail; relocate power lines

New assets needed: Visitor amenities and improved trailhead, restrooms, primitive camping,

Sweeney to Corral Connection

Zone #6 – Wild

Rationale: New wild zone connection through adjacent properties – location to be determined – between Corral and Sweeney Ridge

Assets not needed: None.

New assets needed: To be determined.

Cattle Hill Shelldance

See Sweeney Ridge

Shelldance is managed for park operations for the reasons of: it is well-located and the NPS needs facility for maintenance in this area with increased acquisition of new lands.

Shelldance

Zone #5 – Operations

Rationale: It exists, well-located and NPS needs facility for maintenance in this area with increased acquisition of new lands.

Assets not needed: Improvement to access road at Highway 1 (potentially a 2-way intersection)

New assets needed: Improved access, stewardship and science center, native plant nursery, visitor services, trail connection to Mori Point

San Francisco Watershed

The San Francisco watershed is managed as sensitive due to the area being the core of the Golden Gate biosphere, and the large contiguous wildlife habitat. The watershed multi-use trail is managed as a sightseeing corridor to focus visitor use along the trail and limit access through the sensitive area.

Pedro Point

San Francisco Watershed

Zone #1 - Sensitive

Rationale: Core of Golden Gage Biosphere Reserve – one of largest in bay area of contiguous wildlife habitat. Influence Water District operations and facilities – maintenance, roads, fire protection, etc. Highly sensitive t&e species are concentrated here.

Assets not needed: reduce District infrastructure to minimum footprint & impacts. Remove golf course.

New assets needed: None

Existing San Francisco Watershed Multi-Use Trail

Zone #7 – Sightseeing Corridor

Rationale: Recognize existing corridor and to continue to limit pedestrian/equestrian access through sensitive natural resource area.

Assets not needed: To be determined

New assets needed: To be determined

Pedro Point is managed as wild to protect the native habitat and rare plants.

Devil's Slide

Pedro Point

Zone # 3 – Wild

Rationale: It supports a moderate amount of native habitat with some rare plant species. It has wild rugged character and will provide for moderate to low visitor use. I

Assets not needed: Large non-native forest stands that have spread. Water tank

New assets needed: Multi-use trail, parking trailhead and visitor amenities on edge of zone.

Devil's Slide is managed as wild for the reasons of: the rugged conditions, the habitat corridor, and because the terrain is not appropriate for buildings.

Devil's Slide

Zone #3 – Wild

Rationale: Existing condition except for trail due to seep conditions. Not developable. Road and cliffs will continue to erode and fall into ocean. Do not put assets in that will be lost. Good habitat area except for pampas grass intrusion. Grass will be difficult to remove (helicopter).

Assets not needed: The road – transition to trail. Infrastructure of road and other existing facilities should be removed before land erodes into ocean as well as other existing cultural resources.

New assets needed: Transition road to trail. Parking and restroom are in question at periphery.

Rancho Corral De Tierra

The majority of Corral de Tierra is managed as wild because of the need to do some habitat reconstruction such as allowing creeks to flow to the ocean. The riparian corridor is managed as sensitive to protect the riparian habitat.

Corral de Tierra (majority)

Zone # 1 – Wild

Rationale: Keep low to moderate usage with option for primitive camping. Area is undeveloped. 3 perennial creeks that have been cut off from ocean (salmon). Reopen all three creeks for ocean outlet. Restore as much riparian habitat. Remove non-native stands of trees. Stay involved in conservation easements created on adjacent properties by POST. Loop trail through zone for pedestrians and horses.

Assets not needed: Stables and supporting infrastructure. Remove or downgrade roads and trails. Other asset removals to be determined.

New assets needed: Fish ladder(s). Trail improvements (minimal) based on trail master plan for zone. Primitive camping site.

Riparian Corridor

Zone #2 – Sensitive

Rationale: Restore riparian habitat. Remove non-native stands of trees.

Assets not needed: Remove anything impeding water flow.

New assets needed: See #1 above – potential fish ladders (to make fish passage possible). To be determined.

Montara Phleger

Phleger Estate is managed as wild because existing conditions support this zone: the forest is old second growth, there is difficult access, there are threatened and endangered species, and the area provides a counterpoint to pristine Muir Woods.

Phleger Estate

Zone #2 – Wild

Rationale: Existing condition – old second growth and undeveloped with difficult access, t&e species great example of recovering logged redwood forest – counterpoint to Muir Woods. Not as sensitive as Muir Woods. Encourage continuing recovery of ecosystem. Story of logging and recovery tied to pristine Muir Woods.

Assets not needed: To be determined – impacts to creek, erosion, etc.

New assets needed: To be determined – minimize new assets to limit increased access. Do trial plan to identify minimal trail system needed to accommodate pedestrians and horses. Determine removal plan for social trails. Bridge for trail connection to get horses out of creek.

Notes: