

Analysis of Fundamental Resources and Values

2.2 Coastal Ecosystems -A rich assemblage of coastal native plant and animal habitat that include forests, coastal scrub, grassland, freshwater, estuarine, and marine habitats, beaches, coastal cliffs and islands.

Importance of Resources and Values

The Golden Gate National Recreation Area includes many plant and animal species that reach the extent of their geographic range, and the park protects numerous remnant, isolated, and fragmented habitats in the broader San Francisco Bay Area because of underlying physical processes and the long history of human use. Native plant and wildlife habitats within the park are situated in the central California Coast Range, which is one of only five regions in the world with a Mediterranean climate. This climate fosters ideal habitat for nearly 900 native plant species and at least 387 vertebrate species (11 amphibians, 20 reptiles, 53 fish, 53 mammals, and 250 birds), representing an exceptional level of biodiversity within a relatively small geographic area. The existence and continued survival of these diverse biota is based on several ecological drivers, including wind, climate, natural erosional processes, flooding, fire, winter storm events, predator-prey relationships, grazing/herbivory, plant-animal interactions, and impacts from loss of keystone species such as the California grizzly and tule elk. Terrestrial invertebrates in the park are less well known, with the exception of the Marin Headlands and Milagra Ridge which support diverse butterfly populations.

Current Conditions and Trends

While the park supports an extremely diverse array of plant and wildlife species and their habitats, a broad range of forces threaten the viability of these plant and animal populations and the habitats they depend upon. Visitor use occurs throughout the park with more than 20 million people annually. Historic domestic grazing and ranching, military installations, manipulation of topography through grading, blasting, and road building, and planting non-native species has significantly influenced native plant communities.

Habitat fragmentation, degradation and isolation are inherent features of Golden Gate National Recreation Area's situated along the urban interface. Fragmentation and isolation of wildlife habitat is increasing with further development on lands that surround the park. Therefore, Golden Gate National Recreation Area becomes even more important as a plant refuge and corridor for wildlife populations. Ongoing monitoring includes plant community mapping and species-specific documentation to track current and changing conditions of these resources.

Potential Threats

Threats to wildlife and their habitats throughout Golden Gate National Recreation Area include habitat fragmentation, non-native animals, human disturbance including high levels of recreational use, domestic and feral animals, habitat change caused by non-native plant establishment, environmental contaminants, wildlife diseases, and wildland fire.

The spread of non-native plants represents the most significant threat to the biodiversity of native plant species in the recreation area. Non-native species thrive in the park, especially in areas affected by intensive historic land use (grazing, military occupation, etc.) and on land adjacent to urbanized areas that serve as a constant weed source. Other threats include development of social trails, non-natural erosion, and poorly maintained/managed infrastructure.

Stakeholders

Local and Regional Organizations:

Adjacent land management agencies, local universities, colleges, and school districts, non-profit community organizations, park partners, local and national conservation and community corps, and state and national environmental organizations.

- Golden Gate National Parks Conservancy—provide support for natural resource stewardship, and their staff has taken a primary role in numerous habitat restoration projects
- California Department of Fish and Game
- Golden Gate Audubon
- PRBO Conservation Science—research organization, assists the park with many wildlife monitoring programs
- Salmon Protection and Watershed Network
- User Groups
- Park Volunteers—assist with species monitoring and stewardship
- City of San Francisco—adjacent landowner
- Marin County Open Space—adjacent land owner
- California State Parks – Mt. Tamalpais State Park, Angel Island – adjacent land owner
- Marin Municipal Water District – adjacent land owner
- San Francisco Watershed District – adjacent land owner
- City of Pacifica – adjacent landowner
- Weed Management Areas – Marin-Sonoma, San Francisco, and San Mateo

National Organizations:

Government Agencies and Tribes:

- Point Reyes National Seashore—adjacent park service unit, partner in several restoration and monitoring programs.
- United States Fish and Wildlife Service
- U.S. Geological Survey- Biological Resource Division
- National Oceanic and Atmospheric Administration- Fisheries Service
- California Department of Fish and Game
- California Department of Food and Agriculture

Educational and Cultural Institutions:

- Regional research universities
- Community colleges

Law and Policies

A. Natural Resources

Source:

NPS *Management Policies 2001*; NPS-77 “Natural Resources Management Guideline”, NP Omnibus Mgmt Act, 1998, Migratory Bird Treaty Act

Policy Direction:

The National Park Service will maintain as parts of the natural ecosystem, all native plants and animals in the park. Actions to insure this maintenance include the following:

- Cooperate with Federal and State agencies to ensure that management actions comply with written requirements of the Federal and State ESA and other conservation directives.

- Ensure that park operations do not adversely impact native species habitat within or outside the park.
- Undertake programs to inventory, monitor, restore, and maintain native habitats and implement research relevant to habitat restoration.
- Cooperate with other agencies, conservation groups, and adjacent landowners to protect and restore native habitats.
- Conduct actions and allocate funding to address habitat impacts and restoration.
- The NPS will determine all management actions for the protection and perpetuation of native habitats through appropriate planning and consultation with lead federal and state agencies.

Management Direction:

The National Park Service will take the following kinds of actions to meet legal and policy requirements related to native wildlife and vegetation:

- Complete a base-line inventory of the plants and animals in the park and regularly monitor the distribution and condition of selected species that are indicators of ecosystem condition and diversity.
- Develop methods to restore native biological communities.
- Minimize human impacts on native plants, animals, populations, communities and ecosystems and the processes that sustain them.
- Restore native plant and animals populations in the park that have been extirpated by past human-caused action, where feasible.
- Whenever possible, natural processes will be relied upon to maintain native plant and animal species, and to influence natural fluctuations in populations of these species.
- Protect a full range of genetic types (genotypes) of native plant and animals populations in the park by perpetuating natural evolutionary processes and minimizing human interference with evolving genetic diversity.

Issues

(Add issues once they have been explored with park staff and the public)