Sinkyone Wilderness State Park

Preliminary General Plan & Draft Environmental Impact Report

California Department of Parks and Recreation

June 2006

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EXECUTIVE SUMMARY

DESCRIPTION OF SINKYONE WILDERNESS STATE PARK

Since its acquisition by the California Department of Parks and Recreation (the Department) in 1973, Sinkyone Wilderness State Park (SP) has become one of the most valued state parks in California. It is known for its rugged coastline, wild character, sandy coves, sweeping ocean vistas, and unique natural, cultural, aesthetic and recreational resources. Sinkyone Wilderness SP stretches for approximately 19 miles along the northern Mendocino County coastline from Usal Beach at the southern end to Whale Gulch on the northern end. It also extends inland, encompassing portions of the watershed of the Upper Mattole River. Numerous creeks including Usal Creek and Jackass Creek (also known as Wolf Creek) traverse the main portion of Sinkyone Wilderness SP.

PURPOSE FOR GENERAL PLAN

Since Sinkyone Wilderness SP was acquired in 1975 and additional lands were added to the original acquisition in 1976 and 1986, a General Plan has not been prepared. In 1980, legislation was passed requiring portions of the Park to be designated as State Wilderness upon the approval of a General Plan. The large stretch of undeveloped coastline, wild character of the Park, and unique and important natural, cultural, and aesthetic resources warrant protection and restoration. Recognition of these and other issues prompted the preparation of this General Plan (Plan) and Environmental Impact Report, which provide a long-term management approach and a planning framework that addresses the various management challenges facing Sinkyone Wilderness SP today.

APPROACH TO THE PRELIMINARY GENERAL PLAN

The Plan reflects the Department's dual mandates as the stewards of sensitive resources and the providers of recreational opportunities. The protection and restoration of natural, cultural, and aesthetic resources are key components of the Plan. The Plan includes goals and guidelines aimed at natural resources and water quality protection, the preservation of scenic and cultural resources, recreational opportunities community involvement, health and safety issues, interpretation and education, fire management, roads and trails, facility improvements, potential construction of new developments, environmental constraints, and recent and expected near-term property acquisitions.

The Plan also considers the carrying capacity for Sinkyone Wilderness SP with regards to resource protection and the desired high-quality visitor experiences. The approach to carrying capacity emphasizes the importance of long-term sustainability, the use of environmental indicators, and adaptive management practices. It is acknowledged that achievement of the stated vision in the Plan would be done in increments as funding becomes available, and would be accomplished over time through operational actions taken by Department staff.

PLANNING PROCESS

A thorough analysis of existing conditions and an assessment of critical planning issues identified by the Department as well as the public and stakeholders of the Park were the first steps undertaken as part of the planning process. Key planning issues were obtained through consultation with Department staff, the public, interested organizations, and local, state, and federal agencies, using a visioning survey, four public meetings, newsletters, and a notice of preparation letter. The identified issues include Park purpose and vision, land use (wilderness designation), circulation and facility development, natural and cultural resource management, acquisition policies, recreation planning and interpretation, coordination with agencies and community stakeholders, road and trail maintenance and management, public access, and off-road vehicles. At the same time, information regarding the physical characteristics of the Sinkyone Wilderness SP was collected and analyzed. A geographic information system (GIS) database containing information on the physical, natural, and cultural resources at Sinkyone Wilderness SP was completed using existing data and current field survey results. The resulting maps and associated data were used to make informed decisions regarding environmental constraints to development.

The second step of the planning process began with consideration of the broadest planning objective (e.g., Mission of the Department and Unit Classification) and consisted of developing the Purpose and Vision for Sinkyone Wilderness SP. A Purpose was defined and a Vision was developed to reflect the current knowledge of the resources within the Park and the significance and value of Sinkyone Wilderness SP with respect to recreation and educational opportunities for the region and the State. Planning concepts, such as goals, guidelines, and management zones were developed to achieve the vision. All comments received were considered and incorporated into the Plan as appropriate.

The third major step in the planning process consisted of the environmental analysis and the consideration of alternatives. The Plan includes an Environmental Impact Report (EIR) that identifies the potential environmental

effects resulting from implementation of the Plan, consistent with the requirements of California Environmental Quality Act (CEQA). The Plan establishes resource-specific management guidelines in order to become a "self-mitigating" plan, designed to avoid, minimize, or reduce environmental impacts to a less-than-significant level. Based on the environmental analyses, alternatives were developed and considered for the purpose of minimizing impacts to the extent feasible. The opportunity for public review of this Preliminary General Plan/Draft EIR is also provided during the CEQA process. The CEQA environmental review process and the opportunity provided for written comment are described in Section 4.1 of this document.

SUMMARY AND STRUCTURE OF THE PLAN

The Plan is comprised of four main sections: (1) Introduction; (2) Existing Conditions; (3) Park Plan (e.g., goals and guidelines); and (4) Environmental Analysis.

Some of the goals and guidelines comprising the Plan recommend the preparation of specific management plans and other investigations or programs subsequent to the adoption of the Plan, including the following:

- Visual Resources Management Plan,
- Vegetation Management Plan,
- Cultural Resources Management Plan,
- Wildfire Management Plan,
- Roads and Trails Management Plan, and
- Facilities Management and Development Plans.

Some of these management plans must be prepared and implemented before certain management actions may take place. Others may be prepared when determined to be necessary by the Department.

The environmental analysis and the consideration of alternatives contained in the Plan were prepared in conformance with CEQA. The environmental analysis is programmatic in scope and does not contain project-specific analysis for the facilities that are considered in the Plan. However, the Plan also includes guidelines that govern project-level environmental review of site-specific projects to avoid or minimize potential adverse site-specific effects to resources during construction or operations of the facilities and improvements. Specific projects would also undergo subsequent CEQA review as appropriate. Because the Plan contains goals and guidelines that are designed to avoid or minimize potential adverse environmental effects, no significant program-level impacts were identified.

Based on the environmental analysis, the Maximum Wilderness Alternative was determined to be the environmentally superior alternative because it would minimize ground-disturbing activities and construction- and service-related impacts. However, it was not chosen as the preferred alternative due to its failure to meet one of the fundamental objectives of the Department, which is to provide high quality recreation to the residents of the State. In addition, this alternative would not allow vehicles in a wilderness and use of the Needle Rock House as a visitor center, which sets up a potential conflict with Section 5002.45 of the PRC that allows vehicles to continue using the county road and establishes Needle Rock House as a Visitor Center to be maintained. The extensive wilderness designation included in the Maximum Wilderness Alternative would restrict public vehicular access to the Park's recreational opportunities for citizens who are unable to hike or ride horseback into the Park. The Preferred Alternative, presented as the General Plan in Chapter 3.0, balances the interests of natural, cultural, and recreational resources at the Park and best meets the intent of the Sinkyone Wilderness legislation in providing public vehicular access and facilities in perimeter areas and providing for the retention and public use of Needle Rock House.

1 INTRODUCTION

Jackass Creek at dusk and high tide, Source: EDAW 2003

1.1 INTRODUCTION TO THE PARK

1.1.1 LOCATION AND SETTING OF THE PARK

Sinkyone Wilderness State Park (SP) is located on the north coast of California in the northwest corner of Mendocino County and the southwest corner of Humboldt County (Exhibit 1-1). The Park covers approximately 7,800 acres and is composed of three distinct areas: the main parcel, Shadowbrook, and the river corridor parcels (parcels along the Mattole River and Briceland Road). The Park comprises part of California's "Lost Coast" and is bordered by the Bureau of Land Management's (BLM) King Range National Conservation Area (KRNCA) to the north, the Pacific Ocean to the west, unincorporated areas of Mendocino County to the south, and lands owned by private parties and the InterTribal Sinkyone Wilderness Council (Council) to the east (Exhibit 1-2).

The Park is characterized by steep slopes that are heavily wooded with Douglas-fir forest on the west side and tanbark oak woodland on the inland side. Coastal terraces are covered with coastal prairie and coastal scrub. The Park also contains several groves of old-growth redwoods. Sandy beaches and steep rocky headlands form the western boundary. Recreational opportunities within the Park include hiking, backpacking, horseback riding, limited mountain biking, camping, and beachcombing.

1.1.2 PURPOSE FOR ACQUIRING THE PARK

Sinkyone Wilderness SP was created to preserve the wild nature of an extensive part of undeveloped northern California coastline, provide wilderness and other recreational experiences, and preserve the significant resource values of the area. Initial acquisition of lands currently included in Sinkyone Wilderness State Park began in 1975. Substantial additions were acquired by the State in 1976 and 1986.

1-1 Regional Location of Sinkyone Wilderness State Park

1-2 Surrounding Land Uses of Sinkyone Wilderness State Park

1.1.3 SPIRIT OF PLACE

Spirit of place refers to qualities that imprint upon visitors' senses and make a place memorable. What someone might see, hear, smell, or feel creates an intangible spirit a person can later recall; however, each individual brings their own expectations and preferences to a place, with senses focused upon particular aspects of their surroundings. Therefore, each visitor takes away his or her personal impression of the spirit of place. The following is representative of a backpacker's spirit of place for Sinkyone Wilderness SP:

> *…"I hear the rush and thunder of crashing waves on the mysterious black sand, the salty ocean spray smells calm and refreshing in the air. My feet feel the wind against them, the cool wet sand moving beneath them and between my toes. A curious sea lion pops his head up through the white water of the restless surf and pelicans patiently float on the surface, gently rising and dipping with the waves. The fog is beginning to fill the canyon, rolling in high above me; its mystic patterns paint the sky.*
>
> *As the sun begins its descent in the sky, the canyon fills with thick intensifying gray fog muffling the sounds of the waves crashing and birds calling. The canyon begins to take on a enchanting glow of azure blue. Everything the eye can see is glowing with pride in nature's glory.*
>
> *The fresh babbling creek flows through the canyon twisting and turning as it reaches the meadow, making one large dramatic bend before it meets the ocean. The tide has come in to meet the creek and overflows the creek bed with ocean water. The barrier beach is now isolated between the ocean and the grassy meadow at the floor of the valley.*
>
> *As I nestle up to the crackling fire, hidden by the fog and the night, I remember my day … hiking through deep cool canyons, jumping rocks and scaling logs over rushing creeks, standing among triumphant redwood trees thousands of years old reaching hundreds of feet into and above the forest canopy, hearing whispers of past Native Americans and European settlers once at home on this land echo in the silence of the forest, wildflowers gracing the trail's edge and forest floor intriguing me with their brilliant colors and unique designs, gazing at sweeping coastal*

terraces reaching out to the ocean and dramatic mountains thrusting up from the ocean floor high into the sky … and I think to myself, what a splendid and magnificent expression of nature's possibilities."

1.1.4 Regional Planning Context

Mendocino and Humboldt County General Plans and Local Coastal Plans

Sinkyone Wilderness SP is located within the planning areas of the Mendocino and Humboldt County General Plans and Local Coastal Plans (LCPs). While the County General Plans do not apply to state-owned properties, such as Sinkyone Wilderness SP, the LCPs are applicable as major portions of the Park lie within the designated Coastal Zone. The County General Plans and LCPs directly affect the surrounding land use and thereby the context of the Park.

The Mendocino County General Plan is currently being updated. The purpose of the General Plan update is to review and revise the 1981 General Plan to reflect changing conditions, issues and requirements as well as to direct the future growth and development of the unincorporated County through 2025. Elements within the General Plan most applicable to the Sinkyone General Plan include Land Use; Beaches, Parks and Recreation; Open Space Conservation, and the Coastal Element. The Coastal Element is discussed in the LCP section below.

The current General Plan Land Use Element contains goals and policies for natural resources, culture resources and services, development policies, and land use classifications. The Beaches, Parks, and Recreation Element includes a discussion of cooperating efforts with all agencies owning land in Mendocino County, and a discussion of focused priorities and goals related to State

Black sand beach seen from Briceland Road

Redwoods along Lost Coast Trail

Elk grazing north of Orchard Camp

Dusk on the Lost Coast Trail

Source: EDAW 2003

Lands. The Open Space Conservation Element contains goals and policies for conserving the natural resources of the County, increasing recreational opportunities, enhancing cultural well-being, and ensuring the health and safety of Mendocino County residents and visitors (Mendocino County 2005).

The Humboldt County General Plan is currently being updated to reflect changes in land use, resource management, community needs, and community values. The County's current *Framework General Plan* was completed in 1984. It has 36 different sections, dating from the 1960s to the 1990s. The updated General Plan will unite all of the sections into a coherent and accessible document. Eleven elements are proposed in the new general plan including the following: Land Use, Transportation, Community Design, Parks and Recreation, Conservation and Open Space, Health and Safety, Noise, Housing, Coastal Policies, Economics, and Social Services (Humboldt County 2005).

Elements of the new General Plan that will be applicable to Sinkyone Wilderness State Park planning include Land Use, Parks and Recreation, Conservation and Open Space, and Coastal Policies. The Land Use Element will identify the location and intensity of planned uses for unincorporated areas of Humboldt County. The Parks and Recreation Element will include policies and standards for parks, trails and open space, coastal access and recreation, and cultural programs. The Conservation and Open Space Element would include specific provisions regulating the development and preservation of open space, agricultural lands, forestry lands, and acquisition (Humboldt County 2003).

The current Humboldt County General Plan contains land use designations, zoning, and overall goals and policies to guide the County on growth and development. The General Plan is comprised of numerous community plans. The Humboldt County General Plan Volume II contains the Community Plans for towns near the Park including Garberville and Redway.

Local Coastal Plans

The California Coastal Act of 1976 established a permanent coastal zone management program in California. The Act transferred the responsibility of preparing the coastal plan from the state and regional commissions to the counties and cities along the coast. The Coastal Commission is required to review locally developed and implemented plans at least every 5 years (Mendocino County 2005).

The local coastal plan for the Mendocino County coastal zone is the Coastal Element of the Mendocino County General Plan. The General Plan Element contains a Land Use Plan outlining the issues and policies related to resources

and development. Policies are established for numerous resource areas including, but not limited to, Habitats and Natural Resources, Agriculture, Forestry and Soils Resources, Visual Resources, Special Communities, Archaeological Resources, Shoreline Access and Trail/Bikeway System, Recreation, and Visitor Serving Facilities (Mendocino County 2005).

The Humboldt County General Plan Volume II is the South Coast Area Plan of the Humboldt County Local Coastal Program. The Coastal Program includes land use designations, and development and resource protection policies and standards. Zoning plan amendments, public work extensions, land divisions and other development activities in the coastal zone of southern Humboldt County are governed by the Coastal Program.

NEARBY CITY GENERAL PLANS

The nearest incorporated cities are Rio Dell and Ferndale in Humboldt County and Fort Bragg in Mendocino County. Because these cities are located more than 20 miles from the main portion of the Park and all portions of the Park are located outside the city boundaries, the general plans of these cities do not directly affect the Park and the surrounding land uses.

The smaller communities in the vicinity of Sinkyone Wilderness SP, including Garberville, Whale Gulch, Whitethorn, Leggett, Rockport, Piercy, and Shelter Cove, do not have their own general plans and are subject to the Humboldt and Mendocino County General Plans described above.

Other Local and Regional Plans

The BLM recently updated its Resource Management Plan (RMP) for the KRNCA, which is located directly adjacent to Sinkyone Wilderness SP. The conservation area encompasses over 60,000 acres of land in both Mendocino and Humboldt counties. The plan will be used to guide management and stewardship of KRNCA public lands for the next two decades. The Lost Coast Trail, which runs the length of Sinkyone Wilderness State Park, continues north through the KRNCA, totaling over 50 miles of trail along northern California's north coast.

Sanctuary Forest, and the Upper Mattole River and Forest Cooperative (UMRFC) are leading regional efforts to protect water quality, fisheries, and old-growth redwood forest, in the Upper Mattole River watershed, east of Sinkyone Wilderness SP. The UMRFC is a consortium of entities, including California State Parks and Sanctuary Forest, joined through a memorandum of understanding to cooperatively manage and restore the headwaters of the upper Mattole. The UMRFC and Sanctuary Forest are in the early stages of preparing a management plan.

1.2 PURPOSE OF THIS GENERAL PLAN

1.2.1 GENERAL PLANS AND THE STATE PARK PLANNING PROCESS

General plans are broad-based policy documents that provide management guidelines for a Park by defining a framework for implementing diverse missions of resource stewardship, interpretation, and visitor use and services. By legal mandate, every State Park in California must develop a General Plan. The General Plan defines the purpose, vision, and long-term goals and guidelines for the management of the Park. More focused planning must follow to address the details that cannot be addressed in a general plan. Management plans identify more definite criteria and/or designs for attaining the goals established in general plans.

General planning provides opportunities to assess the Park's resource stewardship, its facility development and management, and its interpretation to the public. It provides guidelines for future land use management and designation, including land acquisition, and assesses the facilities required to accommodate expected increases in visitation.

The General Plan provides a comprehensive framework that guides the Park's development, ongoing management and public use for the next 20 years or more. To assure the plan's long-term relevance, it must be general in scope and provide viable guidelines that sustain the vision for the Park.

1.2.2 SUBSEQUENT PLANNING ACTIONS

Major programs and projects that will be implemented during the lifespan of the General Plan will require additional planning. Future planning efforts may include the preparation of specific Resource and Recreation Management Plans or site specific Development Plans for new facilities.

Future planning efforts may also include the preparation of project-specific environmental compliance documents for implementation of management plans and subsequent development projects. These documents should tier off and be consistent with the General Plan's Program Environmental Impact Report (EIR). Securing any permits required for future implementation projects would also be part of subsequent planning actions.

Finally, all general plans can be amended by drafting a proposed amendment that is reviewed and approved by the State Parks and Recreation Commission. If required, an environmental analysis is conducted in compliance with CEQA. This allows the plans to be flexible if new situations arise.

1.2.3 PUBLIC INVOLVEMENT

Public input is an important component of the general planning process. Public involvement is sought at the very beginning and throughout the planning process for a variety of reasons. State Parks are managed to provide resource preservation and recreational opportunities for the people of California. Constituency building is needed to ensure the public's support for their Parks. Local residents and stakeholders as well as specific user groups may also be able to provide important information about the Park that is not commonly known or contained in Park records.

A variety of methods, such as public meetings, user surveys, and interviews, were used to identify Park stakeholders and to identify their needs and concerns for the future of Sinkyone Wilderness SP.

1.3 CONTENTS OF THE GENERAL PLAN

1.3.1 EXISTING CONDITIONS

The existing conditions section of the plan (Chapter 2) describes the current physical and social conditions of Sinkyone Wilderness SP. It includes information on land use, significant physical, biotic, cultural, aesthetic and recreation values, and existing facilities. The existing conditions section also lists system-wide and regional planning influences affecting Sinkyone Wilderness SP, describes its demographic resident and visitor profile, and lists issues to be addressed in the General Plan that have been identified during the early phases of the planning process. Input for the existing conditions section has been gathered through a variety of sources including:

- review of the unit data file,
- review of other applicable technical documents,
- review of local and regional applicable planning documents,
- database searches,
- limited fieldwork,
- contact with agencies and other knowledgeable individuals, and
- user surveys and public meetings.

1.3.2 PLAN SECTIONS

The Park Plan component of the General Plan (Chapter 3) contains the following sections:

- Planning Mandates
- Parkwide Goals and Guidelines

< Park Carrying Capacity
< Park Management Approaches and Management Zones.

1.3.3 PROGRAM ENVIRONMENTAL IMPACT REPORT

The Program EIR contained in the General Plan (Chapter 4) includes the following sections:

< Introduction to the Environmental Analysis,
< Summary,
< Project Description,
< Environmental Effects Eliminated from Further Analysis,
< Environmental Impacts,
< Other CEQA Considerations, and
< Alternatives to the Proposed Project.

In addition to these sections, the EIR contains a list of the organizations and persons consulted during its preparation, the report preparers, a complete list of references, a glossary of terms, technical appendices, exhibits and tables.

Volume II of the Final General Plan and EIR will contain all public and agency comments received during the circulation of the Preliminary General Plan/Draft EIR, responses to these comments, and additional appendices, as applicable.

1.3.4 PURPOSE OF THE PROGRAM EIR

The purpose of the Program EIR is to analyze and disclose the preferred alternative's effects on the environment. It discloses any significant and potentially significant effects that may result from the implementation of the General Plan. The EIR informs decision-makers and the public about the environmental consequences of the adoption of the General Plan, consistent with the requirements of the California Environmental Quality Act (CEQA) and State CEQA guidelines.

1.3.5 PROGRAM EIR SCOPE

Because the EIR prepared for the General Plan is programmatic in scope, it does not contain project-specific analysis for any of the projects recommended in the General Plan. Specific projects will undergo subsequent CEQA review in the future as described above under "Subsequent Planning Actions" (Section 1.2.2).

2 EXISTING CONDITIONS

Late day surf at Bear Harbor, Source: EDAW 2003

2.1 SUMMARY OF PARK CONDITIONS AND RESOURCES

2.1.1 EXISTING LAND USE

PARKWIDE LAND USES

Over its years of operation, Sinkyone Wilderness State Park has developed patterns of land use based on existing roads, facilities and open space areas. The Park contains land uses related to vehicular circulation, trails, public recreation and accommodation, resource protection, open space and administrative areas. Exhibit 2-1 is a base map of the Park providing an overview of existing access and facilities. Exhibit 2-8 shows recreational opportunities within the Park.

Vehicular access within the Park is limited. The main road within the Park is Briceland Road, which enters Sinkyone Wilderness SP from the north and extends in a southerly direction to Orchard Camp. Other vehicular access areas within the Park include Usal Road, which traverses the eastern boundary of the Park, and parking areas at the Shadowbrook parcel, Needle Rock Visitor Center and Usal Beach Campground.

Trails are available for hiking/backpacking, and limited opportunities are available on designated trails for horseback riding, and mountain biking. The primary hiking trail is the Lost Coast Trail, which extends from Usal Road at the southern end through the entire length of the Park to north of Whale Gulch. A portion of the trail is located along Briceland Road from Orchard Camp to Needle Rock. The Lost Coast Trail continues north of Sinkyone Wilderness SP into the King Range National Conservation Area (KRNCA), totaling over 50 miles of trail from beginning to end. The Lost Coast Trail accommodates both hikers and horseback riders; however horseback riders are only permitted from north of

Wheeler to Jones Beach. The Hotel Gulch trail is available for horses from Usal Beach Campground to Wheeler. Some trail camps are available along the trail.

Public recreation uses and overnight accommodations include trail and drive-in campsites, picnic areas, and the Needle Rock Visitor Center. The trail campsites are primitive hike-in sites, some of which have primitive toilets nearby (Exhibit 2-8). Drive-in campsites are located at Usal Beach Campground at the southern boundary of the Park. Environmental campsites easily reachable from the southern end of Briceland Road are located at Orchard Camp, Railroad Camp, and Bear Harbor Camp. Wheeler Camp, Little Jackass Creek Camp, and Anderson Gulch Camp are environmental camps located along the Lost Coast Trail, between Usal Beach and Bear Harbor. Jones Beach Camp, Streamside Camp, and Needle Rock Camp are environmental camps easily accessible from the parking area at Needle Rock House. A large number of the drive-in campsites at Usal Beach are not officially designated sites, but have been established by long-term use patterns of the area. The Needle Rock House and its associated barn are remnants of the historic shipping and dairy community that once thrived at Needle Rock. The existing structures have been adapted for use as a park host residence, visitor center, and camp area.

Administrative areas within or associated with the Park include the Needle Rock Visitor Center, which also serves as a park host residence, and the Shadowbrook administrative site, located north of the

Car campers at Usal Beach

Needle Rock Visitor Center

Alders along the creek

Coastal terrace north of Streamside Camp

Source: EDAW 2003

2-1 Basemap

11x17 pg 1

Exhibit 2-1 Basemap

11x17 pg 2

main portion of the Park along Briceland Road. The Shadowbrook site includes a staff residence, as well as an administrative building that serves as a park office. Also present at Shadowbrook are a maintenance shop, with a small nursery and water treatment plant.

The use associated with the majority of the Park would be considered to be open space, and is recommended to be classified and managed as a State Wilderness Area. Open space areas are generally those areas managed to remain in a state where facilities and public use is limited and where natural processes are allowed to continue. Historically, these lands have experienced Native American and Euro-American habitation and exploitation. Various stages of ecological succession are represented throughout the Park as a result of historic uses such as timber harvesting, urbanization, agriculture, and other human activities.

SURROUNDING LAND USES

Sinkyone Wilderness SP is bordered by the Pacific Ocean to the west, KRNCA to the north, lands owned by the Intertribal Sinkyone Wilderness Council (Council) to the east, and privately-owned lands to the south (Exhibit 1-2).

Approximately 3,800 acres bordering Usal Road to the east are owned by the Council and three parcels totaling 430 acres are owned by the Save-the-Redwoods League. The lands owned by the Council have been subject to timber harvesting and are within the viewshed and watershed of Sinkyone Wilderness SP. The Department has an interest in the management of these lands and has committed to working with the owners to develop a cooperative management system. The Council is currently considering the development of a management plan for its lands.

The southern boundary of the Park is bordered by privately-owned lands that are subject to timber harvesting. These lands are within the viewshed of the Park and are within the Usal Creek watershed.

Other lands north of the Park are privately-owned and include residences and forested areas, including some old-growth stands. The Mattole River watershed encompasses the majority of this area and efforts are underway to protect the stands of old-growth forest, water quality, fish and wildlife habitat, and endangered species in the area. Parcels on the northeast boundary of the Park are also privately owned and are subject to timber harvesting.

The 60,000-acre KRNCA, immediately northwest of the Park, is owned and managed by the Bureau of Land Management (BLM). The Lost Coast Trail,

which runs the length of Sinkyone Wilderness SP, continues north through the KRNCA, totaling over 50 miles of trail along northern California's "Lost Coast."

The coastal marine and estuarine areas of KRNCA are a Marine Managed Area (MMA) which protects habitat, species, cultural resources and water quality while enhancing recreational opportunities and contributing to the economy. MMAs are discrete geographic marine and estuarine areas along the coast designated using legislative, administrative or voter initiative processes, and intended to protect, conserve or otherwise manage a variety of resources and their uses. Sinkyone Wilderness SP is not listed as an official MMA, however it would qualify for such a designation (Resources Agency 2000).

Sinkyone Wilderness SP is located within a California Coastal Sanctuary that is under jurisdiction of the California State Lands Commission pursuant to the California Sanctuary Act. In 1994 the California Sanctuary Act prohibited the leasing of any State Tidelands for oil and gas development (California Public Resources Code Sections 6240 *et. seq.*)

REGIONAL CONTEXT

The KRNCA, managed by the BLM encompasses 35 miles of coastline and 60,000 acres of forests and grasslands in northern California's Humboldt and Mendocino counties north of the Park. The region is known as the "Lost Coast" because the steep terrain, harsh weather, earthquakes and unstable soils have limited road construction, development and access. Concurrent with the planning for the Sinkyone Wilderness SP General Plan/ Environmental Impact Report, BLM recently updated the Resource Management Plan (RMP) for the KRNCA. Both plans will guide management and stewardship of these public lands with cooperative goals and objectives for regional conservation and natural resource management.

The California Coastal National Monument, created by presidential proclamation in January 2000, includes all undesignated rocks, islands, exposed reefs and pinnacles above mean high tide extending 12 nautical miles off the California coastline. The presidential proclamation creating the California Coastal National Monument mentions the geologic features and scenic values, as well as the importance of these rocks and islands to sea birds and the many forms of sea life using them as a safe haven. BLM completed the Resource Management Plan for the Monument in 2005.

PARK ACCESS

Vehicular access to the Park is limited to two points, one on the northern boundary and one on the southern boundary. Northern access is available from

Redway via Briceland Road. Briceland Road is a county-maintained road. Portions of the road are unpaved, steep and narrow. The road leads to Needle Rock and the Visitor Center and continues on to Orchard Camp. The segment between Needle Rock and Orchard Camp is open to vehicular use only during the summer season. During the fall and winter, the road is closed because of the dangers and challenges of road maintenance from weather-related rock falls and landslides. The road is not designed for year-round use and would require re-engineering to be open year-round. Access to the Mattole River Corridor parcels, Shadowbrook, and the 3V parcel is provided by Briceland Road.

Usal Road runs parallel to the coast from the northern boundary of the Park southwest along Jackass Ridge and Timber Ridge past the southern end of the Park where it provides access to Usal Beach Campground and trailhead. It joins Highway 1 south of the southern boundary of Sinkyone Wilderness SP. Northern portions of the road lie within the boundaries of the Park. As the road travels south, it eventually runs east of the Park boundary adjacent to Council land along the ridge. It ties back into the Park at the southern end near Usal Creek.

2.1.2 VISITOR PROFILE

Existing and Potential Future Park Visitors

The majority of users of Sinkyone Wilderness SP are hikers, backpackers, nature lovers, and campers. Horseback riders and mountain bikers are able to enjoy riding on the trails designated for those uses. Most visitors value the solitude and wilderness character of the Park and come to enjoy the ocean views and dense forests. Backpackers come from the surrounding area, local communities, the Bay Area, and all over the world. Divers enjoy the area for the abalone diving off the coast and local surfers seek out good surf conditions. Nature-related activities are the focus of many visitors to Sinkyone Wilderness SP. Popular activities include birding, botanizing, whale watching, wildlife watching, and beach combing. The Park is a popular place for families with children to learn about the region's heritage and history as well as wildlife and nature. In addition, many people seek the Park's solitude and spirit for meditating, soul searching, and religious and spiritual experiences.

The extreme southern end of the Park at Usal Beach Campground experiences more intensive uses, such as drive-in camping. However, other uses not consistent with departmental policies, such as driving on the beach, beach bonfires, and late night partying, periodically take place at Usal Beach.

Local Park visitors largely come from the nearby communities of Whale Gulch, Whitethorn, Garberville, Redway, Laytonville, and Leggett. Others come from

communities within the larger region, such as Eureka, Arcata, Scotia, and Mendocino. Sinkyone Wilderness SP also draws users from great distances such as Sacramento, San Francisco, and Los Angeles. The Park also is visited by Park users from outside California, including visitors from foreign countries.

Existing visitor use includes day use and overnight use at Sinkyone Wilderness SP. The Park experiences fluctuation in use patterns from summer to winter, which are generally determined by weather and road conditions. Winter use is estimated at approximately 20% of the total use the Park experiences throughout the year. The majority of winter use is comprised of day-use by visitors from local communities. Summer use accounts for approximately 80% of total use and includes overnight use and use by visitors from farther distances (Urbach 2003).

2.1.3 Demographic Profile

Local and Regional Residents

The local and regional residents constitute a large portion of Park visitors (40% annually). In addition, local schools and the California Conservation Corps (CCC) use the Park for educational opportunities and also provide help to Park maintenance staff in the form of manual labor (e.g., manual vegetation removal). Local schools and the CCC account for approximately 20% of the Park visitors. Another 20% of Park visitors are Bay Area residents. The remaining percentage is a combination of California residents from other regions, out-of-state and international visitors.

Demographic Diversity

The Lost Coast, including Sinkyone Wilderness SP, is increasing in national and world recognition and interest. The majority of the Park's visitors are Caucasian Americans, ranging in age from late teens to mid-50s. In the past several years, a considerable number of Park visitors have been traveling from India, Germany, Canada, and France (Urbach 2003).

2.1.4 Physical Resources

Meteorology

The Resource Inventory conducted for Sinkyone Wilderness SP in 1989 supplies information on the meteorology of the County as well as limited information taken directly from a weather station previously located within the Park (DPR 1989). Currently there are no weather recording instruments within the Park, except a precipitation gauge at Shadowbrook. Precipitation has been

recorded at Shadowbrook from 1986 to 2003. The average annual precipitation is 90 inches and monthly averages range from 0.02 inch in the summer to 19.36 inches in the rainy season. For nine years, weather records were kept at the town of Wheeler near the mouth of Jackass Creek. The station was located 50 feet above mean sea level, and collected temperature, evapotranspiration, frost, precipitation, and snowfall data. In addition, a station in Fort Bragg gathered records for over 26 years. The combination of these records and an understanding of the statewide meteorology provide a general knowledge of the site's meteorological history.

The climate of the area is dominated by a semi-permanent high pressure area in the North Pacific Ocean that moves northward in the summer and southward in the winter. The high pressure source affects the amount of precipitation and temperatures depending on its location throughout the year. In general, on the western side of the Coast Range, the winters are warm and summers are cool. Fluctuation in the daily and seasonal temperatures are small. The area is subject to maritime influences, which result in high relative humidity, although they decrease with distance from the ocean. The basins and valleys adjoining the coast are subject to large variation in climate within short distances due the influences of topography on the circulation of marine air. These areas also experience a more continental type of climate with warm summers and cool winters, lower humidity, and greater variations in temperatures.

Another significant factor to characterizing the weather in the vicinity of Sinkyone Wilderness SP is the steady flow of air from the northwest that drives the Pacific Ocean current southward parallel to the coast line. The ocean current flows slightly offshore, causing an upwelling of colder, deeper water from immediately off the coast. Therefore, the temperature of the water reaching the coast from deeper levels ranges from 49 to 55 degrees Fahrenheit (°F), which is at least 10°F cooler than water several hundred miles offshore.

The temperature and precipitation data collected from a station located in Wheeler is summarized in Appendix A. This data stems from the Resource Inventory prepared in 1989 (DPR 1989). Air temperatures along the coast average 52°F, ranging from 24 to 90°F throughout the year. Maximum temperatures are usually observed in late spring and early fall. Temperatures below 32°F have been documented inland in the fall and winter; however temperatures on the coast rarely reach the freezing point. The growing season near the ocean is approximately 300 days per year as a result of these moderate year-round temperatures.

The majority of precipitation (80–90%) falls from November through April. Annual totals throughout the County are generally less than 50 inches but reach up to 100 inches along the northern coast. Snow may fall from December to March

and while snowfall is very light at low elevations measurable amounts of snow occur most years at the higher elevations throughout the County.

California lies in the range of the prevailing westerly winds, which is a predominantly northwestern flow of marine air. These winds are enhanced during the warm summer months and weakened in the cold winters. The mountain ranges and valleys channel the prevailing winds on a local scale. The exposed headlands and coastal valleys experience moderate winds at a persistent pace during much of the summer.

Sunny days occur along the coast on an average of 55% of the time over the course of a year, fluctuating from 45% in the winter to 65% during the rest of the year. The same amount of sunshine reaches inland, however in the summer it can increase up to 80% inland. Fog reaches its maximum during July and August on the coast, where it can be present 15–18% of the time.

TOPOGRAPHY

Information in this section is based on the Sinkyone Wilderness SP Resource Inventory conducted in 1989, which was based on data from U.S. Geological Survey (USGS) topographic maps, literature, and field observations (DPR 1989). The majority of the Park lies within the Bear Harbor, Hales Grove, and Mistake Point USGS 7.5-minute quadrangle maps. The outlying parcels north and northeast of the main Park area are within Briceland/Bear Harbor and Honeydew USGS 7.5-minute quadrangles. The Park lies between latitudes 39°58'30" and 39°49'30" and within longitudes 123°50'30" and 124°00'00". Elevations within the Park range from sea level to approximately 1,780 feet. A general topography map of the Park is provided in Exhibit 2-2.

Sinkyone Wilderness SP is located on the northern portion of the Coast Ranges Geomorphic Province, which extends from southern Oregon to the Santa Ynez Mountains in Southern California. The Coast Ranges trending north-northwest consist of multiple mountain ranges, including the King Range where Sinkyone Wilderness SP is located. The King Range extends from Punta Gorda to Point Delgada, south of Cape Mendocino. The King Range is known for its rugged and steep terrain, which caused highway engineers to route Highway 1 eastward to avoid it. This area subsequently became known as the Lost Coast.

Sinkyone Wilderness SP consists of a narrow strip along the coast from just south of the Mattole River to south of Usal Creek. The Park is bordered by the Pacific Ocean to the west. The majority of the eastern boundary lies west of Jackass and Timber ridges, with the exception of the northern portions of the Park which lie east of the ridgeline. Most of the Park is characterized by steep slopes and

rugged terrain. Vertical coastal cliffs drop abruptly into the ocean and black sand beaches are present along the shore.

Marine terraces are located within the Park, the most prominent occurring between Low Gap Creek and Flat Rock Creek. This terrace marks a relatively higher sea level than present day conditions. Ocean waves eroded a flat surface (abrasion platform), which was left "high and dry" when sea level abrubtly dropped relative to the land. Needle Rock is a prominent sea stack that serves as a landmark with an ocean-carved arch visible from great distances. Small coves are scattered along the coast of Sinkyone Wilderness SP. Bear Harbor, the site of a former logging settlement, is the largest and most protected cove. Few areas within the Park are level, except along Jackass Creek, the mouth of Usal Creek, and the marine terrace between Low Gap Creek and Flat Rock Creek.

Many creeks drain from the western slope of the Park into the ocean. These watersheds are generally steep and narrow. The larger creeks, including Jackass, Usal, and Indian creeks have wider canyons characterized by flatter topography.

Slope and aspect analysis were conducted in 1987 in preparation for the Resource Inventory using maps and calculating distances between contours. Tables 2-1 and 2-2 display the acreage and percentage of both slope and aspect ranges throughout the Park. The study was conducted for general planning purposes and site-specific field investigations would be required for accurate determinations of specific locations. Knowledge of the slope and aspect of the site can assist in determining microclimates, soil conditions, vegetation composition, and solar exposure.

Table 2-1
Slope Range and Acreage for Sinkyone Wilderness State Park

Slope Class	Slope Range (%)	Acres	Percentage (%)
A	0–8	0	0
B	9–15	109	2
C	16–25	161	2
D	26–50	2,994	45
E	51+	3,403	51
Total		6,667	100

* Based on assumption: topographic lines run perpendicular to aspect
Source: California Department of Parks and Recreation, Sinkyone Wilderness SP Resource Inventory 1987

Table 2-2 Aspect Range and Acreage for Sinkyone Wilderness State Park		
Aspect Range	Acres	Percentage (%)
North	610	9
East	987	15
South	1,432	21
West	3,530	53
< 15% slope	108	2
Total	6,667	100
Source: California Department of Parks and Recreation, Sinkyone Wilderness SP Resource Inventory 1987		

GEOLOGY

The Resource Inventory conducted in 1989 did not include a geologic inventory (DPR 1989). However, a summary of geologic conditions was prepared. This discussion is based primarily on the information provided in the geologic summary.

Sinkyone Wilderness SP lies within the northern Coast Ranges geomorphic province. The Coast Ranges extend approximately 400 miles from the Transverse Ranges in southern California into southern Oregon. The South Fork Mountain Fault Zone separates the Coast Ranges from the Klamath Mountains geomorphic province (Exhibit 2-3). The Coast Ranges are underlain by rocks of the Franciscan complex, which originated as ocean floor sediments deposited 100 to 150 million years ago.

Sinkyone is within the Coastal Belt of the Coast Ranges. Graywacke is the dominant component of the Coastal Belt, with minor amounts of siltstone, shale, conglomerate and volcanic rocks. The rocks off the Coastal Belt (Franciscan Complex) of the Coast Ranges include oceanic sediments, oceanic crust, and metamorphic rocks associated with subduction and tectonic plate collisions. Three tectonic plates interact off the coast of Sinkyone, producing enigmatic uplift rates, seismic activity, and adjustments to differential motions.

Along the coast marine terraces and sea stacks give clues about the dynamic geologic history of the Park. Two elevated terraces are located between Whale Gulch and Bear Harbor. They were formed when sea levels were relatively higher than the current conditions. The upper terrace is estimated to be 62,000 years old and the lower terrace approximately 45,000 years before present. The estimated ages are comparable to average tectonic uplift of one meter (3.28

2-2 Topography

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Exhibit 2-2 Topography
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feet) per 1,000 years. Wood samples from the base of the lower terrace yielded radiocarbon ages of 42,000 to 57,000 years old. Landslides, including rotational slumps, debris avalanches and flows, and rock/block falls are common along the sea cliffs. Rotational slides and debris flows are common along incised streams, road cuts, and trail cuts.

The beaches along the Park's coast are dark-colored from magnetic and ferromagnesian minerals. The dark color is derived from the volcanic greenstones and lithic fragments. Unique pink beaches occur ephemerally when special conditions of waves cause a lag deposit of garnets. These minerals are sorted by the wave wash and due to their high specific gravity and uniform size and shape, they can produce a striking veneer of pink sand.

The Bear Harbor fault zone has been mapped from Usal to Whale Gulch. The fault was inferred from geologic features and lineations (DPR 1989). There are several sag ponds in the Park. A sag pond is an area of crustal weakness where sheared rocks have dropped (sagged) down creating a depression that can fill with water (SCR 2003). Sag ponds are visible signs of tectonic activity that have high geological research potential and are worthy of additional protection. Two sag ponds formed near Whale Gulch and a small ephemeral sag pond occurs near Anderson Cliffs. The inferred fault is generally parallel to a minor gravity low that parallels the offshore San Andreas Fault. Due to its proximity within 1.5 miles of the gravity low and San Andreas Fault, offshore seismic activity can be expected, including ground shaking and liquefaction. There are also several designated areas within the Park in the Tsunami Run-up Zone.

SOILS

The Natural Resources Conservation Service (NRCS) published the Soil Survey of Mendocino County, California, Western Part in 2001 (Exhibit 2-4). The information included here is based on information contained in the recent Mendocino County Soil Survey and the Sinkyone Wilderness SP Resource Inventory prepared in 1989 (NRCS 2001, DPR 1989). Soil information included in these sources has not been field verified.

Sinkyone Wilderness SP is located in the Northwestern Coast Range Soil Region. This region includes steep northwest-southeast mountain ranges and small parallel valleys. The majority (90%) of the Park is comprised of steep terrain with 30 to 99% slopes, which results in serious erosion problems.

The soils in the Park are derived from the Franciscan Complex, primarily sedimentary rock, with some igneous and metamorphic rock material. The

primary rock material is graywacke, a highly variable sandstone with angular medium-sized grains. Graywacke sandstone is the product of underwater landslides that carry sand, silt, rock fragments, and plant and animal debris off of the continental margin and rapidly deposit them in deep ocean environments. Graywacke is associated with subduction zones, where sediments are being shed off a continent at high rates (NPS 2003). The remaining 10% of the rock material is shale, including siltstone.

The upland soils in the Park are gray brown and alfisolic in character. Alfisols have a high base content, therefore they are less acidic and inherently more fertile. Generally they are deep, well-drained red and yellowish soils. The soils in the valleys of the Park are azonal with acid reaction and low available phosphorus. Azonal soils are those characterized by the nature of the parent material. They are generally immature soils, such as shallow soils over bedrock, unconsolidated sand dunes and loess deposits, and Recent alluvial soils. Azonal soils are lacking in significant horizon differentiation, and the climate has a significant influence on the development of the azonal soils (Pritchett & Fisher 1987).

A total of 23 soils have been identified in Sinkyone Wilderness SP. NRCS has mapped 20 separate mapping units, based on similar use and management requirements (Exhibit 2-4). Most of the mapping units in the Park are complexes, which are composed of two or more related soils that are intermingled such that a separate delineation is not practical. Appendix B summarizes each of the 20 soil mapping units, the extent and location within the Park, and other characteristics, including the NRCS capability subclass.

NRCS determines a capability classification for each soil unit based on the suitability of the soils for field crops. The soils are grouped into units according to their limitations, risk of damage, and response to treatment. The broader groups are capability classes I through VIII, indicating a progressively greater limitation and narrower choices for practical use (Appendix B). Capability subclasses are groups within one class that are further designated for specific characteristics. Appendix B describes the characteristics assigned to each subclass.

Most of the project area, including the lands immediately adjacent to the coast and the lands directly east of the Park boundary, were used in the past for settlements, grazing, and timber harvesting. Various disturbances and different methods of timber felling and extraction have resulted in erosion problems from roads and large areas of disturbance.

2-3 Geology

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Exhibit 2-3 Geology

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HYDROLOGY AND WATER QUALITY

Sinkyone Wilderness SP is located in the North Coastal Hydrologic Basin. The Park lies on the western slopes of a coastal range and 85% of the Park has rugged topography with deeply incised canyons and cliffs. The majority of the Park is composed of first, second, and third order streams that drain directly into the Pacific Ocean. A small portion of the north end of the Park drains into tributaries of the South Fork of the Eel River and the Mattole River. The Park lies in an isolated hydrologic subarea along the coast composed of numerous small drainages, both perennial and intermittent, that drain into the ocean. Table 2-3 provides a summary of the drainages, and their watershed length, acreage, and percentage within the Park. Exhibit 2-5 displays the streams and watersheds of the Park.

Watersheds

Approximately 120 acres of land, approximately 1.7% of the Park, on the north end of the Park are within the Mattole River watershed. Surface water from this area drains north into the Mattole River. In the northeast portion, water flows into the South Fork of the Eel River via Indian Creek and also into Anderson Creek, a tributary to the South Fork of the Eel River. These drainages are located in the headwaters of the South Fork of the Eel River and together comprise 540 acres, or 7.8%, of the Park.

Table 2-3
Summary of Hydrologic Drainages Within Sinkyone Wilderness State Park

Drainage	Total Watershed Area (acres)	Watershed Area within Park (acres)	Portion of Watershed Area within Park (%)	Length of Creek Drainage in Park (feet)	Portion of Linear Drainages within Park (%)
Coastal Tributaries					
Anderson Gulch	639	350	55	5,000*	5.0
Bear Harbor Creek	1,100	525	48	4,500	7.6
Dark Gulch	352	176	50	5,500	2.5
Duffy Creek	203	202	99	4,000*	2.9
Flat Rock Creek	228	228	100	5,500*	3.3
Homestead Creek	143	143	100	4,500*	2.1
Jackass Creek	3,458	906	26	4,500	13.1

Little Jackass Creek	545	527	97	4,500*	7.6
Low Gap Creek	592	572	97	9,500*	8.2
Northport Gulch	109	109	100	2,000*	1.6
Usal Creek	17,654	290	2	4,000	4.2
Whale Gulch		245		3,000	3.5
Miscellaneous unnamed		2,003			28.9
Subtotal Coastal		*6,276*			*90.5*
Eel River Hydrologic Unit					
Anderson Creek		214		2,500	3.1
Indian Creek		326		4,000	4.7
Subtotal Eel River		*540*			*7.8*
Mattole River Hydrologic Unit					
	154880	120		0	1.7
TOTAL		6,936			
* Department has 100% ownership of creek length Source: Sinkyone Wilderness SP Resource Inventory 1989					

The remaining 90% of the Park is comprised of small, mainly unnamed, watershed basins that drain directly into the Pacific Ocean. The larger named ocean tributaries are under multiple ownership and management. State Parks manages the lower elevations and channel mouths of Anderson Gulch, Bear Harbor Creek, Dark Gulch, Jackass Creek (also known as Wolf Creek) Usal Creek, and Whale Gulch Creek.

Bear Harbor Creek is a small second-order tributary to the Pacific Ocean, the main fork of which flows westward. An unnamed tributary enters Bear Harbor Creek less than 500 feet from its outlet to the ocean, and Orchard Creek and Railroad Creek are both tributary to the northern channel. Bear Harbor Creek terminates in a small coastal lagoon that periodically breaches during high winter flows. Jackass Creek, or Wolf Creek, is a third-order ocean tributary, similar to the Bear Harbor Creek system. Jackass Creek has two main channels, the North Fork and the Main Fork, both of which are approximately 2 miles in length. Both forks of Jackass Creek originate outside of the Park boundary, and the North Fork branches again within the Park into the main branch and east branch. Similar to Bear Harbor Creek, Jackass Creek terminates in a small coastal lagoon that occasionally breaches into the ocean during peak winter storm flows.

2-4 Soils

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Exhibit 2-4 Soils
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2-5 Streams and Watersheds

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Exhibit 2-5 Streams and Watersheds

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A small portion of the floodplain of Usal Creek, a large tributary to the Pacific Ocean, is located within the southern Park boundary. The Jackass and Timber ridges separate Usal Creek from the other creeks mentioned above. Within Sinkyone Wilderness SP, two minor tributaries (Hotel Gulch and Shady Dell) converge with Usal Creek. Usal Creek also terminates in a small coastal lagoon that breaches into the ocean with high winter flows.

Stream discharge data is not available for the streams within Sinkyone Wilderness SP. All streams within the Park have similar flow patterns. Seasonal precipitation characteristics vary widely throughout the year, peaking in January and dipping in September. Maximum stream flows can be up to 100–200 times minimum stream flows. Stream flows in the Park respond quickly to high levels of precipitation because of the steep topography, shallow soils, type of vegetative cover in the watersheds, and the lack of precipitation storage. Although there is no data specific to the drainages within the Park, data for the Ten Mile River located south of the Park near Fort Bragg (USGS Station #11468600) can provide some comparative data. The Ten Mile River's middle fork is approximately 20% larger than Usal Creek and indicates a pattern and magnitude of stream flow that is similar to Usal Creek. Table 2-4 provides mean and low monthly flow data for the middle fork of the Ten Mile River. The mean flow data was collected from 1964 to 1973, and the low flow data was collected in 1968.

Table 2-4
Mean and Low Monthly Flow Data for the Middle Fork of the Ten Mile River

Month	Mean Flow (1964-1973) cfs	Low Flow (1968) cfs
January	379	167
February	147	186
March	137	107
April	77	26
May	23	12
June	12	7
July	7	4
August	4	4
September	4	3
October	6	8
November	44	13
December	235	87

Source: Sinkyone Wilderness SP Resource Inventory, DPR 1989

Groundwater

Information on groundwater in the Park is also limited. On a regional scale, the coastal area of northwestern Mendocino County is underlain by sandstone and shale bedrock that is not water-bearing. Only 3% of the area is underlain with water-bearing deposits, the majority (2/3) of which is alluvium from old river valleys, and (1/3) is marine terrace deposits.

Flood-Prone Areas

The Park has three flood-prone areas. The Bear Harbor Creek alluvial flats are a minor flood-prone area, the larger alluvial floodplains of Jackass and Usal Creek present major flood-prone areas. Coastal flooding by storm surges is also recognized as a hazard by the Federal Emergency Management Agency (FEMA). As mentioned previously, the size of the watersheds and nature of the topography in the Park result in heavy winter flows and inundated floodplains, especially prior to the breaching of the barrier beaches. The natural vegetation and hydrologic conditions of these drainages have been significantly altered. During the last century, most of the northern Mendocino Coast was logged at least once. Logging operations, roads and skid trails have resulted in local erosion and sediment deposition in the floodplains. Over time, the elevation of the floodplain has risen (and will likely continue to rise in the near term) from deposits of sediment. This has resulted in an increased elevation of the streambed. Jackass and Usal Creek have been affected by increased sediment accumulations.

2.1.5 BIOLOGICAL RESOURCES

Significant biological resources in the study area were determined through a review of existing documentation; consultation with biologists familiar with the local biological resources; and consultation with State Parks employees. Sources of information also include limited field work, the California Natural Diversity Database (DFG 2003), California Native Plant Society's Electronic Inventory of Rare and Endangered Plants of California (CNPS 2002) and a number of documents on file with State Parks, as listed in the Chapter 5, References.

REGULATORY BACKGROUND

Many biological resources in California are protected and/or regulated by laws, regulations, and policies. Key regulatory compliance issues that may need to be addressed prior to implementation of the General Plan include the following:

< Federal Endangered Species Act

< Migratory Bird Treaty Act
< Marine Mammal Protection Act
< Section 404 of the Clean Water Act
< California Endangered Species Act
< California Native Plant Society (CNPS) lists
< Native Plant Protection Act
< Section 401 of the Clean Water Act
< Section 3503.5 of the California Fish and Game Code
< Section 4700 of the California Fish and Game Code
< Section 1600 of the California Fish and Game Code

A description of each is provided in Appendix C.

PLANT LIFE

Information in this section was primarily based on field work and Frederica Bowcutt's detailed floristic studies previously completed for the Park (Bowcutt 1987, 1994–1996). Botanical nomenclature follows the Jepson Manual (Hickman 1993). A general vegetation map is provided as Exhibit 2-6.

Plant Communities

In the Resource Inventory of Sinkyone Wilderness SP (Bowcutt 1987), plant communities were mapped using nomenclature primarily derived from the vegetation classification of Holland (1986). State Parks has since adopted the California Manual of Vegetation of Sawyer and Keeler-Wolf (1995) as its vegetation classification system. Therefore, all plant community descriptions except for landscaped areas will be presented according to this classification.

In some cases, previously described vegetation types were grouped because they are not readily distinguishable in the field or on aerial photographs. The following plant communities are present in the study area:

< Blue blossom series
< Bulrush–cattail series
< California annual grassland series
< California bay series
< Coyote brush series
< Douglas-fir–tanoak series
< Douglas-fir series
< Eucalyptus series
< Landscaped areas
< Red alder series
< Redwood series

< Sand-verbena–beach bursage series
< Spikerush series

These plant communities are described below in alphabetical order. A preliminary map of existing plant communities was produced through aerial photograph interpretation and refined through a limited amount of subsequent ground-truthing in the field (Exhibit 2-6). A plant species list compiled during field work in 2003 and previous rare plant surveys by EDAW (EDAW 2002) in the Park is provided in Appendix D.

Blue Blossom Series

This shrub dominated plant community occurs on steep slopes that have shallow soils and are easily eroded. The blue blossom series is a transitional plant community, which typically establishes in areas that have been disturbed by either logging or fire. It is dominated by blue blossom (*Ceanothus thyrsiflorus*), a nitrogen-fixing shrub. Blue blossom series often intergrades with and is transitional to the Douglas-fir series. Associated species include coyote brush (*Baccharis pilularis*), cow parsnip (*Heracleum lanatum*), tanoak (*Lithocarpus densiflorus*), sword fern (*Polystichum munitum*), and Douglas-fir (*Pseudotsuga menziesii*). On the eastern River Corridor parcel, just south of the Whitethorn School, the dominant shrub in this plant community is coast whitethorn (*Ceanothus incanus*). However, this rather disturbed area was mapped as blue blossom series because coast whitethorn is typically associated with this series and is not described within other Sawyer and Keeler-Wolf (1995) shrub series. This area most likely represents a localized variation in dominance within this transitional series.

Bulrush–Cattail Series

This wetland plant community occurs at two sag ponds located immediately south of Whale Gulch. It is dominated by emergent herbaceous plants, including broad-leaved cattail (*Typha latifolia*) and spike rush (*Eleocharis macrostachya*), also called bulrush, as well as other wetland species such as horsetail (*Equisetum arvense*) and Pacific rush (*Juncus effusus* var. *pacificus*). California blackberry (*Rubus ursinus*) is also common along the fringe of bulrush–cattail series at the Park. This wetland plant community occurs only in areas that are permanently flooded and qualifies as a wetland community subject to U.S. Army Corps of Engineers jurisdiction under Section 404 of the Clean Water Act (CWA).

California Annual Grassland Series

This grassland plant community occurs in areas of the Park that have been disturbed in the past. The native vegetation in these areas has been stripped for the purpose of conversion to various land uses, including farming, grazing, homesteading, and logging. Once these land uses cease and the land is left fallow, it typically becomes dominated by introduced grasses and forbs. On coastal terraces, which formerly supported coastal prairie vegetation, the California annual grassland series may contain scattered patches of native perennial grasses. Due to the broad level of surveys and mapping, coastal prairies were not mapped separately or characterized at the series level. Historically, these areas were regularly burned by native tribes and were subsequently used by ranchers (Harris, pers. comm., 2003a). Non-native grass species that now dominate these disturbed terraces include wild oats (*Avena* spp.), soft chess brome (*Bromus hordeaceus*), velvet grass (*Holcus lanatus*), and Harding grass (*Phalaris aquatica*), which were introduced into California intentionally for livestock forage (Bowcutt 1994–1996). Coastal prairies are considered a sensitive natural community in the CNDDB. California annual grassland series also occurs in openings on the slopes above marine terraces, where native herbs such as Douglas iris (*Iris douglasiana*), bracken fern (*Pteridium aquilinum* var. *pubescens*), California buttercup (*Ranunculus californicus*), and blue-eyed grass (*Sisyrinchium bellum*), are a common component of the dominant vegetation. In addition, the California annual grassland series occurs on several acres of previously grazed pastures located at the mouth of Usal Creek and near the mouth of Hotel Gulch. Non-native grass and forb species in former pastures include soft chess brome, redstem filaree (*Erodium cicutarium*), wild barley (*Hordeum leporinum*), and English plantain (*Plantago lanceolata*).

California Bay Series

This forest community occurs on the moist canyon bottoms and lower slopes of Bear Harbor Gulch and Duffy's Gulch. The California bay series is characterized by a dense canopy of California bay (*Umbellularia californica*) with little or no understory. Where an understory is present, sword fern (*Polystichum munitum*) typically is the most common understory species in this plant community. Other associated understory species include horsetails, lady fern (*Athyrium filix-femina* var. *cyclosorum*), redwood sorrel (*Oxalis oregana*), and salmonberry (*Rubus spectabilis*).

Coyote Brush Series

This coastal scrub plant community is dominated by coyote brush (*Baccharis pilularis*). Although many coastal bluffs in the Park are bare due to natural erosion, some areas support sparse vegetation. In these areas, coyote brush series is comprised of mostly perennial herbs that are tolerant of harsh environmental factors, such as high winds, sand blast, salinity, and little or no soil development, that are typically associated with coastal bluffs. Common associated species include powdery live-forever (*Dudleya farinosa*), sea-fig (*Carpobrotus chilensis*), Pacific gum-plant (*Grindelia stricta* ssp. *platyphylla*), seaside daisy (*Erigeron glaucus*), beach-bur (*Ambrosia chamissonis*), coastal mugwort (*Artemisia suksdorfii*), and bush lupine (*Lupinus arboreus*). In less exposed bluff areas, this plant community intergrades with a stunted form of Douglas-fir forest that has been called krummholz Douglas-fir forest (Bowcutt 1987). The coyote brush series also occurs on other windy, exposed sites such as marine terraces and at the bases of slopes near the coast. Characteristic associated species on these sites include a mix of shrubs such as bush lupine, California blackberry, sticky monkeyflower (*Mimulus aurantiacus*), and poison-oak (*Toxicodendron diversilobum*), as well as herbs such as cow parsnip, pearly everlasting (*Anaphalis margaritacea*), and non-native grasses.

Douglas-fir–Tanoak Series

This forest plant community is dominated by several species of evergreen broadleaved trees and conifers such as California bay, coast redwood (*Sequoia sempervirens*), Douglas-fir, madrone (*Arbutus menziesii*), and tanoak. California rose-bay (*Rhododendron macrophyllum*) is a common understory shrub in this plant community. An herbaceous understory is typically sparse or absent. The Douglas-fir–tanoak series occurs primarily in the northern portion of the Park and can intergrade with redwood and Douglas-fir series on moister sites.

Douglas-fir Series

This forest plant community is the predominant plant community in the Park, occurring mostly on coastal slopes. These forests were logged starting in the late 1880s, thus there were many old logging roads interspersed throughout them that have since been removed. The Douglas-fir series is characterized by a dense canopy of Douglas-fir with occasional tanoak. California huckleberry (*Vaccinium ovatum*) is common in openings such as those created by old logging roads. Common understory herbs include bracken fern, sword fern, redwood sorrel, trail plant (*Adenocaulon bicolor*), and white-flowered

2-6 Vegetation Types
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Exhibit 2-6 Vegetation Types

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hawkweed (*Hieracium albiflorum*). As mentioned above, a stunted form of Douglas-fir series intergrades with coyote brush series on coastal bluffs.

Eucalyptus Series

At Sinkyone Wilderness SP, the eucalyptus series plant community consists of groves of blue gum (*Eucalyptus globulus*), a non-native tree introduced from Australia. Allelopathic chemicals that are released into the soil from the leaves of *Eucalyptus* species typically prohibit the development of an understory in this plant community. Around the turn of the century, the groves were planted near Jones Beach, Orchard Camp, and Railroad Camp as well as at the old town site of Usal (Bowcutt 1994-1996).

Landscaped Areas

Landscaped areas exist on the Shadowbrook parcel of the Park and around the visitor center. Lawns, gardens, as well as native and landscape trees and shrubs are found adjacent to the existing ranger station and to some degree at the Needle Rock Visitor Center. A native plant nursery is also located on the Shadowbrook parcel. Non-native poplars (*Populus* sp.) appear to have been planted in a small area within one of the River Corridor parcels.

Red Alder Series

This forest plant community occurs along stream banks throughout the Park. The canopy in this riparian community is dominated by red alder (*Alnus rubra*). The open shrub layer often includes California hazelnut (*Corylus cornuta*), willows (*Salix* spp.), California blackberry, and red elderberry (*Sambucus racemosa*). The understory varies from sparse to dense and is comprised of herbaceous species such as five-finger fern (*Adiantum aleuticum*), sword fern, horsetails, coltsfoot (*Petasites frigidus*), and stinging nettle (*Urtica dioica*).

Redwood Series

This forest community occurs in canyons and on slopes that are protected from ocean winds (Bowcutt 1994–1996). Characteristic species in the redwood series include coast redwood, Douglas-fir, tanoak, California huckleberry, redwood sorrel, salal (*Gaultheria shallon*), sword fern, and thimbleberry (*Rubus parviflorus*). In many areas, coast redwood and Douglas-fir are co-dominant, forming a two-tiered canopy. Other associated species in these transitional areas include bracken fern, California hazelnut, Douglas iris, and hedge-nettle (*Stachys ajugoides*). There are three old-growth redwood stands remaining in the Park: J. Smeaton Chase Grove, School Marm Grove, and Sally Bell Grove.

Sand-verbena–Beach Bursage Series

This herbaceous plant community occurs only on the sandy beach at the mouth of Usal Creek. This plant community is dynamic in nature because of the shifting substrate, which results in harsh growing conditions similar to those described earlier for the coastal bluff environment. The sand-verbena–beach bursage series is characterized by low-growing perennials adapted to high salinity, wind and sand blast, and sandy soils. Common species in this plant community include yellow sand-verbena (*Abronia latifolia*), the non-native sea rocket (*Cakile maritima*), beach morning-glory (*Calystegia soldanella*), and beach primrose (*Camissonia cheiranthifolia*).

Spikerush Series

Spikerush series occurs near the mouth of Usal Creek. This herbaceous wetland plant community is typically found in areas that are seasonally, intermittently, or permanently saturated. Within the Park, common spikerush (*Eleocharis macrostachya*) is dominant, but other spikerush species can occur within the series. Associated species within spikerush series near Usal Beach include rushes (*Juncus* spp.), silverweed (*Potentilla anserina*), and saltgrass (*Distichlis spicata*).

Special-Status Plant Species

A list of special-status plant species with potential to occur at Sinkyone Wilderness SP was derived from performing database searches of the California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS 2002) and California Department of Fish and Game's (DFG) California Natural Diversity Database (DFG 2003), field surveys, and personal communications with State Parks staff (Underwood 2002, Casaday 2002, Harris, pers. comm., 2003a) and DFG staff (Golec 2003, LaBanca 2003). Biological references for the Park including the Plant Life section of the Resource Inventory (Bowcutt 1987) and A Floristic Study of Sinkyone Wilderness SP (Bowcutt 1994–1996) were also reviewed. Appendix D shows the recorded occurrences of special-status species within the Park.

Forty-six special-status plant species (including one lichen) have potential to occur at Sinkyone Wilderness SP. Appendix D lists these species and provides information on their listing status, habitat, distribution, flowering period and potential for occurrence. Because series-level habitat information (Sawyer and Keeler-Wolf 1995) is lacking for many of these species, the broader habitat types designated in the CNPS Inventory (CNPS 2002) are provided. Descriptions of special-status plants that are federally or state listed or known to occur at Sinkyone Wilderness SP are provided below. A total of eight special-status plant species (including one lichen) are known to occur within the Park. These include

leafy reed grass (*Calamagrostis foliosa*), Oregon coast Indian paintbrush (*Castilleja affinis* ssp. *litoralis*), Mendocino Coast Indian paintbrush (*Castilleja mendocinensis*), redwood lily (*Lilium rubescens*), leafy-stemmed mitrewort (*Mitella caulescens*), California pinefoot (*Pityopus californicus*), maple-leaved checkerbloom (*Sidalcea malachroides*), and long-beard lichen (*Usnea longissima*).

Humboldt Milk-vetch

Humboldt milk-vetch (*Astragalus agnicidus*) is a state-listed Rare and CNPS List 1B (plants rare, threatened, or endangered in California and elsewhere) species. This perennial herb is a member of the bean family (Fabaceae) that grows in disturbed openings within North Coast coniferous forest and broadleaved upland forest. It produces white, pea-like flowers from May to September. The flat, hairy seed pods of Humboldt milk-vetch distinguish it from a related species, *A. umbraticus* (Golec 2001). Humboldt milk-vetch is known from only four occurrences (CNPS 2001). Although this species has not been reported from the Park, suitable habitat is present.

Leafy Reed Grass

Leafy reed grass (*Calamagrostis foliosa*) is a state-listed Rare and CNPS List 4 (plants of limited distribution–a watch list) species. It is a perennial grass that grows on rocky sites in coastal bluff scrub and North Coast coniferous forest. The blooming period for this species extends from May to September. Leafy reed grass was observed in the Park at numerous locations on coastal bluffs and on rock outcrops and roadcuts in Douglas-fir forest (Bowcutt 1994–1996). Thousands of individuals occur within the Park in locations such as Dark Gulch, south of Railroad Creek at Bear Harbor.

Oregon Coast Indian Paintbrush

Oregon coast Indian paintbrush (*Castilleja affinis* ssp. *litoralis*) is considered a List 2 (plants rare, threatened, or endangered in California but more common elsewhere) species by CNPS. This perennial herbaceous member of the snapdragon family (Scrophulariaceae) produces showy inflorescences with orange bracts and has oblong leaves. Oregon coast Indian paintbrush blooms in June and grows on sandy soils in coastal bluff scrub, coastal dunes, and coastal scrub. Six occurrences have been reported in the Park along Briceland Road and the Lost Coast Trail, specifically north of Mistake Point and south of Low Gap Creek (DFG 2003).

Mendocino Coast Indian Paintbrush

Mendocino coast Indian paintbrush (*Castilleja mendocinensis*) is a CNPS List 1B species. Like Oregon coast Indian paintbrush, it produces showy inflorescences, but the bracts are typically red. Other distinguishing features of Mendocino coast Indian paintbrush are its slightly fleshy, round leaves and glandular hairs below the inflorescence (Golec and Matthews 1997). The blooming period for this species extends from April to August. Suitable habitat consists of coastal bluff scrub, closed-cone coniferous forest, coastal dunes, coastal prairie, and coastal scrub. Two historical occurrences of Mendocino coast Indian paintbrush have been reported on coastal bluffs in the vicinity of Usal and Needle Rock (Bowcutt 1994–1996).

Howell's Spineflower

Howell's spineflower (*Chorizanthe howellii*) is federally listed as Endangered, state listed as Threatened, and on CNPS List 1B. This annual herb belongs to the buckwheat family (Polygonaceae) and has prickly inflorescences with small white flowers. Its blooming period extends from May through July. Suitable habitat for Howell's spineflower consists of sandy soils within coastal scrub, coastal prairie, and coastal dunes. Although not currently reported from the Park, this plant could occur in sandy habitats near the coast.

Menzies' Wallflower

Menzies' wallflower (*Erysimum menziesii* ssp. *menziesii*) is federally and state listed as Endangered and on CNPS List 1B. It is a perennial herbaceous member of the mustard family (Brassicaceae). This species produces yellow flowers from March to June and grows on coastal dunes. While Menzies' wallflower could occur within the Park, the potential is considered low due to the limited extent of potentially suitable habitat.

Redwood Lily

Redwood lily (*Lilium rubescens*) is listed on CNPS List 4. It is a bulb-forming perennial herb that flowers from June to August and produces fragrant and attractive white flowers that become purplish pink as they mature. This species grows in broadleaved upland forest, chaparral and montane coniferous forest. In the Park, five occurrences of redwood lily were observed growing in dense Douglas-fir series and Douglas-fir–tanoak series and cut road banks of old logging roads, Wheeler Road, Usal Road, Northport Road, and Silverado Road (Bowcutt 1994–1996, Bowcutt 1995, EDAW 2002). Redwood lily prefers roadside locations perhaps due to the increased light and aeration of the soil from

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Exhibit 2-7 Special-Status Species Occurrences

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grading activities (Bowcutt 1994–1996).

Leafy-stemmed Mitrewort

Leafy-stemmed mitrewort (*Mitella caulescens*) is a rhizomatous perennial herb that belongs to the saxifrage family (Saxifragaceae). This CNPS List 2 species blooms from May to July and grows in mesic areas within broadleaved upland forest, montane coniferous forest, and North Coast coniferous forest. Leafy-stemmed mitrewort produces small cream-colored flowers that mature from the top of the inflorescence down. In the Park, this species was found growing in moist habitats within red alder series and redwood series plant communities. Three occurrences and over 1,000 individuals were documented in the vicinity of Hotel Gulch Road and Usal Road intersection and along Little Jackass Creek at its intersection with Wheeler Road (EDAW 2002).

California Pinefoot

California pinefoot (*Pityopus californicus*) is a small, perennial herb in the blueberry family (Ericaceae). It bears a superficial resemblance to a white fungus, lacks chlorophyll, and is non-photosynthetic. California pinefoot is easily overlooked due to its small size and because it grows amid leaf litter in broadleaved upland forest as well as montane and North Coast coniferous forest. It is listed on CNPS List 4. This plant produces inconspicuous flowers from May to August. One occurrence of California pinefoot has been observed within Douglas-fir–tanoak series along the Lost Coast Trail, west of the peak named "Jackass South 2" on the Mistake Point 7.5-minute quadrangle (Bowcutt 1994–1996).

North Coast semaphore grass

North Coast semaphore grass (*Pleuropogon hooverianus*) is a state-listed Threatened and CNPS List 1B species. It is a rhizomatous grass that grows in open, mesic areas within broadleaved upland forest and North Coast coniferous forest as well as in meadows and seeps. The blooming period for this species extends from April to June. It is known from fewer than ten occurrences (CNPS 2001). Although this species has not been reported from the Park, suitable habitat is present.

Maple-leaved Checkerbloom

Maple-leaved checkerbloom (*Sidalcea malachroides*) is a subshrub or tall perennial herb in the mallow family (Malvaceae). This CNPS List 1B species produces white flowers from April to August. It often grows in disturbed areas within broadleaved upland forest, coastal prairie, coastal scrub, and North

Coast coniferous forest. At least six occurrences of maple-leaved checkerbloom are located in the Park growing in moist areas of red alder series, Douglas-fir series, and redwood series plant communities (EDAW 2002, Bowcutt 1994–1996). Specifically, these occurrences were associated with roadsides, creeks, and tree gaps created by landslides. This species was found along Wheeler Road, within J. Smeaton Chase Grove, in the Jackass Creek watershed, and in a *Eucalyptus* grove north of Bear Harbor (EDAW 2002, Bowcutt 1994–1996).

Long-beard Lichen

Long-beard lichen (*Usnea longissima*) is included on the Special Plants List of the DFG and recommended for listing on CNPS List 1B by the California Lichen Society. As its common name suggests, this lichen has the appearance of pale yellow-green strands of hair. Long-beard lichen typically hangs from trees in mesic coastal montane coniferous forests, but it can occasionally occur further inland along riparian corridors and drainages that receive sufficient fog from large river systems (Lovelace, pers. comm., 2002). This species was observed in coastal areas within the Park (Gedik, pers. comm., 2002).

Sensitive Natural Communities

Sensitive natural communities are natural communities that have been afforded special recognition and protection by local, state, and federal regulations. Many of these communities are documented in DFG's CNDDB. Sensitive natural communities often include those that have experienced a precipitous decline since the arrival of the European descendants to California. These plant communities have been lost due to conversion of the land to agricultural, commercial, or residential uses. In some cases, poor management and the influx of invasive species have also reduced the extent and integrity of sensitive natural communities.

Sensitive natural communities at Sinkyone Wilderness SP include the bulrush-cattail, red alder, sand-verbena–beach bursage, Douglas-fir, Doulas-fir–tan oak, spikerush series, old-growth redwood stands, coastal prairies, and aquatic habitats. Coastal prairies are discussed under California annual grassland series and were not mapped separately due to the overview level of surveys and mapping. All of the sensitive natural communities are discussed in the Plant Communities section, except for aquatic habitats, which are discussed below under Aquatic Habitat Values.

Invasive Non-native Plant Species

Non-native (exotic, alien, non-indigenous) species in the Park are those that did not evolve or occur naturally in the Park, and have been introduced through human activities, either incidentally or deliberately. Many non-native plant species are not invasive and do not have adverse effects on natural plant and animal communities. Nevertheless, some non-native species have resulted in the conversion of native plant communities to non-native plant communities with resultant reduction of native plants and degradation of wildlife habitat. The invasive, non-native plant species discussed below were identified as being of particular concern in the Park through literature review, personal communications with State Parks ecologists, and field observations (Bowcutt 1994–1996; Harris, pers. comm., 2003a; Underwood, pers. comm., 2003).

The California Invasive Plant Council (Cal-IPC) has developed a list of non-native plants that pose serious problems in native ecosystems and rangelands (California Exotic Pest Plant Council 1999). These species are classified into different list categories based on the level of threat and invasiveness. Seven invasive, non-native species in the Park are on List A-1 (most invasive wildland pest plants; widespread): Jubata grass (aka: Andean pampas grass) (*Cortaderia jubata*), French broom (*Genista monspessulana*), Scotch broom (*Cytisus scoparius*), cape ivy (*Senecio mikanioides*), blue gum (*Eucalyptus globulus*), ice plant (*Carpobrotus edulis*), and Himalayan blackberry (*Rubus discolor*). These species have been documented as aggressive invaders that displace natives and disrupt natural plant communities.

Jubata grass has infested areas in the Dark Gulch and Little Jackass Creek watersheds that were logged during the 1980s (Bowcutt 1994–1996). It was also observed within the Usal Creek watershed during surveys. State Parks attempted control of French broom by a variety of methods throughout the 1980s and again in 2002–2003 (Bicknell et al., 1993; Harris pers. comm., 2003a). Cape ivy is particularly invasive in riparian habitats, and manual eradication efforts were conducted by the California Conservation Corps in red alder woodland near the coast (Underwood, pers. comm., 2002). As mentioned earlier, historic blue gum groves exist in the Park. However, evidence for extensive naturalization of this species has not been observed (Bowcutt 1994–1996). Eucalyptus eradication efforts include removal of saplings at Jones Beach and smaller trees Orchard Camp and Railroad Camp (Underwood, pers. comm., 2003). Larger trees may be considered historic resources (Underwood, pers. comm., 2003). Iceplant occurs in the Park and has the potential to displace native coastal bluff vegetation (Harris, pers. comm., 2003a). Himalayan blackberry has infested streamside areas near Bear Harbor, Orchard Camp, and Usal Beach (Underwood, pers. comm., 2003).

Invasive, non-native plants documented in the Park that are on Cal-IPC List B (wildland pest plants of lesser invasiveness) include tansy ragwort (*Senecio jacobaea*), Harding grass (*Phalaris aquatica*), English ivy (*Hedera helix*), and periwinkle (*Vinca major*). Tansy ragwort eradication efforts similar to those mentioned for French broom were conducted by State Parks. A 75% reduction of tansy ragwort infestation was reported in 1984 (Bicknell et al. 1993). Restoration of marine terrace vegetation and control of invasive, non-native grass species, including Harding grass, has been attempted through prescribed burning (Bowcutt 1994–1996; Underwood, pers. comm., 2003). English ivy has infested red alder woodland near Usal Beach. Periwinkle persists at historic sites in the Park (e.g., Bear Harbor).

Although not considered potentially invasive in Bowcutt's most recent floristic study of the Park (1995–1996), thistles were noted to be of management concern in the Resource Inventory. Thistle species in the Park that may become particularly problematic include bull thistle (*Cirsium vulgare*), milk thistle (*Silybum marianum*), and Italian thistle (*Carduus pycnocephalus*). With the exception of milk thistle, all of these are on the Cal-IPC List. Infestations of these thistles should be monitored carefully because, while they are not currently extensive, they could pose future threats to native vegetation in the Park.

Blackwood acacia (*Acacia melanoxylon*) has become problematic at Jones Beach as a result of its prolific root sprouting (Underwood, pers. comm., 2003). However, control efforts have not been initiated because non-native plantings in this area may be considered historical resources. Blackwood acacia is on Cal-IPC's "Need More Information" List. In addition, calla lily (*Zantedeschia aethiopica*) has become invasive at Bear Harbor within the stream channel. This horticultural escape was considered but not listed by Cal-IPC.

ANIMALS

Sinkyone Wilderness SP encompasses a rugged and remote portion of California coast line. The Park includes offshore rocks, black sand beaches, marine terraces, coastal prairie and bluffs, wetlands and riparian areas, and old-growth forests. Because of the variety of marine, freshwater, and terrestrial habitats, the Park supports abundant and diverse wildlife. Many of these wildlife species are common, but some of the species are considered to have significant resource value.

A resource is deemed significant if it is (1) important to the essential character of the unit, and contributes, in part, to its statewide significance; or (2) regionally significant, is an important component of a systemwide plan, or contributes to the preservation of regional or statewide biodiversity; or (3) documented as

significant on recognized preservation or protection lists or otherwise designated with special status by a recognized authority.

Significant animal resources were determined through a review of existing documentation, consultation with biologists familiar with the local biological resources, and consultation with State Park employees. Sources of information reviewed by EDAW biologists also included the California Natural Diversity Database (DFG 2003), Northwestern California Birds (Harris 1996), and the Animal Life Resource Inventory for Sinkyone Wilderness SP (Didion and Taylor 1986).

A list of special-status species known to occur, or that could occur, in the unit is included in Appendix D. Exhibit 2-7 shows documented occurrences of special-status species in the Park. Intensive wildlife surveys have not been conducted in Sinkyone Wilderness SP. However, based on the result of a field reconnaissance and other biological studies, it has been determined that the unit may provide important habitat for the following special-status animal species and that these species should be considered significant resources:

< marine resources including California brown pelican (*Pelicanus occidentalis californicus*), rhinoceros auklet (*Cerorhinca monocerata*), tufted puffin (*Fratercula cirrhata*), and Steller sea-lion (*Eumetopias jubatus)*;

< aquatic resources including coho salmon (*Oncorhynchus kisutch*), steelhead (*Oncorhynchus mykiss*), and chinook salmon (*Oncorhynchus tshawytscha*), tidewater goby (*Eucyclogobius newberryi*), southern torrent salamander (*Rhyacotriton variegatus*), tailed frog (*Ascaphus truei*), northern red-legged frog (*Rana aurora aurora*), foothill yellow-legged frog (*Rana boylii*), northwestern pond turtle (*Emy marmorata*); and

< terrestrial resources including Cooper's hawk (*Accipiter cooperii*), northern goshawk (*Accipiter gentilis*), sharp-shined hawk (*Accipiter striatus*), golden eagle (*Aquila chrysaetos*), northern harrier (*Circus cyaneus*), osprey (*Pandion haliaetus*), merlin (*Falco columbarius*), American peregrine falcon (*Falco peregrinus anatum*), western snowy plover (*Charadrius alexandrinus nivosus*), marbled murrelet (*Brachyramphus marmoratus*), northern spotted owl (*Strix occidentalis caurina*), Vaux's swift (*Chaetura vauxi*), black swift (*Cypseloides niger*), willow flycatcher (Empidonax traillii), purple martin (*Progne subis*), yellow warbler (*Dendroica petechia*), yellow-breasted chat (*Icteria virens*), Townsend's western big-eared bat (*Plecotus townsendii* townsendii), red tree vole (*Arborimus pomo*), Humbolt marten (*Martes americana humboldtensis*), and Pacific fisher (*Martes pennanti pacificus*).

Although they are not special-status species, four other species should also be considered as providing significant resource values to the Park, because of management concerns identified by resource agencies or significant scientific and public interest: Roosevelt elk (*Cervus canadensis roosevelti*), abalone (*Haliotis* spp.), harbor seal (*Phoca vitulina*), California sea-lion (*Zalophus californianus*) and areas where marine mammals haul-out. A brief description is provided below for special-status species known to occur or that may potentially occur within the unit and other significant animal resources.

Marine Life

Sinkyone Wilderness SP spans almost 15 miles of dramatic coast line, with sheer cliffs, near-shore rocks, and remote black sand beaches and coves. The offshore rocks, which are under the jurisdiction of the BLM and designated as a California Coastal National Monument, are managed in cooperation with State Parks and DFG under a cooperative agreement. Significant resources in the Monument include abalone, sea birds, and marine mammals.

Abalone Species

Of the seven species of abalone found in California, the Sinkyone Wilderness SP coast is likely to support three species: red *(Haliotis rufescens*), pinto (*Haliotis kamtschatkana*), and flat (*Haliotis walallenis*). Of these, only red abalone is allowed to be collected by recreational fisherman. Pinto and flat abalone are presumed to be in Sinkyone Wilderness SP because of their distributional range; however no surveys have been conducted to confirm their presence in the Park. These species are found in intertidal zones to waters up to 80 feet deep. Abalones are found in boulder and rock habitat, and are usually associated with kelp forests. All are long-lived and slow-growing species.

None of these species are given any special listing status under the state or federal Endangered Species Acts; however the DFG Code mandates the management of abalone to recovery of their populations under Sections 5520–5522. DFG has drafted an Abalone Recovery and Management Plan (ARMP) in California to prevent further population declines and ensure the sustainability of current and future fisheries.

Northern California red abalone populations have supported a viable fishery, but recent studies have revealed four trends which are cause for concern: (1) a concentration of fishery effort and increased take, (2) evidence of poor recruitment, (3) declines in deep-water stocks, and (4) serial depletion (DFG 2002). Pinto and flat abalone have not been major components of the commercial or recreational fisheries and less is known about their populations. The management component of the ARMP focuses on the northern California

red abalone sport fishery and establishes size and take limits and management zones based on the species biology. The extent of abalone populations along the Sinkyone Wilderness SP coast is unknown, but recreational diving for abalone does occur within the Park, especially in the vicinity of Bear Harbor.

Seabirds

The offshore rocks have potential to support nesting seabirds, two of which are considered California Species of Special Concern: rhinoceros auklet and tufted puffin. The California brown pelican, a federally and state listed Endangered species, forages and roosts along the Sinkyone Wilderness SP coast, but does not nest in northern California. Auklets and puffins nest in burrows or crevices on protected islands or cliffs. To be suitable, nest sites need to have adequate sand and dirt to allow for creation of burrows, which measure 4 to 25 feet deep (Burridge 1995). No confirmed nesting sites of either species are known from the Sinkyone Wilderness SP coast, but scattered individuals may be present. Puffins are known to nest at Sugarloaf Island, off Cape Mendocino. Auklets are only confirmed to nest at Castle Rock, near Crescent City, but are occasionally observed near Sugarloaf Island (Harris 1996).

Marine Mammals

Sinkyone Wilderness SP, with its remote and undisturbed beaches, provides important haul-out areas for the marine mammals. The most common marine mammals observed on the coast of Sinkyone Wilderness SP are California sea-lions and harbor seals; northern elephant seal and the federally-listed Threatened Steller sea-lion are seen occasionally (Didion and Taylor 1986).

The beach at the mouth of Little Jackass Creek is a particularly important haul-out area for migrating sea-lions. It is the largest mainland haul-out and one of only three mainland haul-outs in California. The beach is used almost year-round by adult and subadult males during their migrations between northern feeding grounds and southern breeding rookeries. The only period that they may be absent is from mid-June to late July when they are in their breeding grounds in Southern California and Mexico. The largest numbers of California sea-lions, over 1,200 individuals, have been observed during the southerly migration early in the year (Didion and Taylor 1986).

Harbor seals are one of the most common marine mammals in California. They are non-migratory and feed in cold water along the coast. They characteristically congregate onshore in groups to rest and rear their young at traditional sites that are generally used year-round. They can be seen in many locations along the coast, but they gather in a large colony at Northport Gulch and at Seal Rocks, near Duffy's Reef/Gulch (Didion and Taylor 1986).

Whales, including the endangered gray (*Eschrichtius gibbosus*) and humpback whales (*Megaptera novaeangliae*), are observed from the Park, but are not likely to occur within the current management boundary because they are usually found in deep offshore waters.

Aquatic Resources

Sinkyone Wilderness SP includes several perennial drainages, including Usal Creek, Anderson Creek, Northport Gulch, Little Jackass Creek, Jackass Creek, Flat Rock Creek, Low Gap Creek, Whale Gulch Creek, and Indian Creek. Most of these streams flow directly into the ocean and are first- and second-order streams; Jackass and Usal creeks are third-order streams (Didion and Taylor 1986). A few drainages in the northern part of the Park flow into the Mattole Watershed and south fork of the Eel River. Two ponds occur in the Park in the Whale Gulch and Jones Creek area (Didion and Taylor 1986). These streams and ponds provide habitat for several significant species of fish, amphibians, and one reptile.

Fish

Three anadromous and one estuarine special-status fish have potential to occur within Sinkyone Wilderness SP. Tributaries to the Mattole River and south fork of the Eel River and other coastal streams within the Park may support anadromous fish at various stages of their life cycles. During sampling in summer 1985 and 1987, Whale Gulch Creek, Bear Harbor Creek, Jackass Creek, Little Jackass Creek, and Usal creeks all supported fish. Other creeks were checked, but because of barriers at their mouths or low flows, fish were presumed to be absent from these creeks (Didion and Taylor 1986). Each of the special-status fish species with potential to occur is discussed below.

Coho salmon are found in short, coastal drainages. In larger coastal drainages, they are found primarily in the lower sections. Two Evolutionary Significant Units (ESU) or distinctive groups of coho salmon may occur within the Park. The Central California Coast ESU is federally listed as Threatened and includes all naturally spawned populations of coho salmon from Punta Gorda at the Mattole River mouth in Humboldt County, approximately 25 miles north of the park boundary, south to the San Lorenzo River in central California. This ESU also includes populations in tributaries to San Francisco Bay, excluding the Sacramento-San Joaquin River system (NMFS 1996). The Southern Oregon/Northern California Coast ESU is also federally listed as Threatened. This ESU includes the Mattole and Eel river watersheds and extends from Cape Blanco in Oregon to Punta Gorda (NMFS 1997). Critical habitat for coho was designated in May 1999 to include all river reaches accessible to coho salmon from Punta Gorda south to the San Lorenzo River for the Central California Coast

ESU and from the Mattole River north to the Elk River in Oregon for the Southern Oregon/Northern California Coast ESU (NMFS 1999a). Excluded are areas above specific dams or above longstanding, naturally impassable barriers (i.e., natural waterfalls in existence for at least several hundred years).

The steelhead within the unit are considered to be the Northern California Coast ESU. This ESU was federally listed as Threatened in June 2000 and includes all naturally spawned populations of steelhead (and their progeny) in California coastal streams from Redwood Creek, approximately 90 miles north of the Park in Humboldt County, south to the Gualala River, approximately 70 miles south of the Park at the border of Mendocino and Sonoma counties (NMFS 2000a). Critical habitat was designated for this ESU in 2000, but was withdrawn in 2002 under litigation that challenged the adequacy of the economic analysis. Unlike other Pacific salmon, steelhead may survive after spawning and return downstream to re-enter the ocean. There are two distinct spawning types of steelhead: winter (ocean-maturing) and summer (stream-maturing). Summer steelhead are known from the Mattole River near Four Corners (DFG 2003), but summer steelhead are not expected to occur south of the Mattole River (Moyle 2002). Other streams in the Park are likely provide suitable habitat for winter steelhead. Surveys conducted in 1985 and 1987 in Whale Gulch, Bear Harbor and Jackass creeks revealed the presence of steelhead. Usal Creek was not sampled but DFG records indicate it supports steelhead as well. Other coastal creeks within the Park were observed to have barriers present at their mouths or small flows that were presumed to preclude fish (Didion and Taylor 1986).

Chinook are the largest Pacific coast salmon. Chinook salmon are found from the Bering Straight south to southern California. Historically, they ranged as far south as the Ventura River, California. The California Coastal ESU of chinook salmon includes all naturally spawned populations of chinook salmon from rivers and streams south of the Klamath River to the Russian River. This ESU was federally listed as Threatened in September 1999 (NMFS 1999b). Like the designation for steelhead, critical habitat was designated for this ESU in 2000, but was withdrawn in 2002 under litigation that challenged the adequacy of the economic analysis. The chinook in this ESU exhibit the ocean-type life history traits. Ocean-type chinook typically migrate to sea within the first three months of emergence, but they may spend up to a year in freshwater prior to emigration. They also spend their ocean life in coastal waters. Ocean-type chinook salmon tend to utilize estuaries and coastal areas more extensively for juvenile rearing. The ocean-type life history may have been a result of the limited carrying capacity of smaller stream systems and glacially scoured, unproductive, watersheds, or a means of avoiding the impact of seasonal floods in the lower portion of the watershed. The Mattole and Eel rivers provide potentially suitable habitat for chinook passage, spawning and rearing, but the

smaller coastal streams are probably not suitable because they lack the passage, flow, and rearing conditions.

The tidewater goby is federally listed as Endangered (USFWS 2000). Critical habitat was designated for tidewater goby on November 20, 2000, but does not include any area of the coast within the Park (USFWS 2000). Tidewater gobies are found in shallow lagoons and lower stream reaches where the water is brackish to fresh. Tidewater gobies may range upstream into fresh water, up to two kilometers from the estuary. They prefer slow-moving, but not stagnant waters, and avoid open areas where there is strong wave action or strong currents. Particularly important for their persistence in the lagoons is the presence of backwater, marshy habitats where they can avoid winter flood flows. One of the healthiest populations of tidewater gobies in the state has been documented in Ten Mile Estuary, north of MacKerricher State Park (DFG 2003). It is not known whether they occur within the Park, but the lagoon at the mouth of Usal Creek may be potentially suitable habitat.

USFWS has conducted recent surveys for tidewater gobies along the Mendocino coast. However, the surveys were started at Cottaneva Creek (south of Usal Creek), and have proceeded southward. Gobies have been found at all the previously known locations, and no new populations have been documented. The population closest to Sinkyone Wilderness SP is at Ten Mile River, north of MacKerricher State Park. Surveys at Usal Creek may be conducted in the future depending on staff and funding availability (Goldsmith, pers. comm., 2003).

Amphibians and Reptiles

Sinkyone Wilderness SP contains habitat for four special-status amphibians (the southern torrent salamander, the tailed frog, the northern red-legged frog, and the foothill yellow-legged frog) and one special-status reptile species (the northwestern pond turtle). Each of these species is discussed below.

The southern torrent salamander is a federal and California Species of Special Concern. It is found near cold, permanent seeps and small streams with rocky substrates. It is also associated with seeps, springs, streams, and waterfalls in wet or mesic coastal old-growth habitats. Because of its relatively narrow hydric and thermal requirements, the southern torrent salamander is particularly vulnerable to changes in its environment (Jennings and Hayes 1994). Surveys have not been conducted within the Park, but the southern torrent salamander has been reported near Indian Creek and near Solider Creek, upstream from the confluence with Usal Creek (DFG 2003). The potential habitat identified below for tailed frogs may also support this salamander.

The tailed frog is a federal and California Species of Special Concern. The male has a unique short tail-like copulatory organ, with the vent opening at the tip. No other frog has this structure, which makes it of great scientific interest (Didion and Taylor 1986). Tailed frogs require permanent streams of low temperature. They are often associated with old-growth stands of Douglas-fir, redwood, Sitka spruce, Ponderosa pine, and western hemlock. In California, they are restricted to coastal forests with over 100 cm (40 inches) annual precipitation (Jennings and Hayes 1994). Tailed frogs are known to occur in the vicinity, including Little Fork drainage and Buckhorn Creek, which are tributaries to the Ten Mile River, Slaughterhouse and Kimball Gulches, which are tributaries to Cottaneva Creek, and Hardy Creek (DFG 2003). Potential habitat for tailed frogs was mapped along Whale Gulch, Low Gap, Flat Rock, and Usal creeks and other unnamed drainages and springs within the Park (DPR 1985).

The northern red-legged frog is a federal and California Species of Special Concern and occurs along the Pacific coast, west of the Cascade ranges to northern California. Northern red-legged frog breeding habitat typically consists of permanent or temporary water bordered by dense grassy or shrubby vegetation. During the non-breeding season, northern red-legged frogs may be found in upland habitats that maintain significant substrate moisture, such as willow thickets and dense sedge swales (Jennings and Hayes 1994). Some red-legged frogs from southern Del Norte to northern Marin County along the Coast Range exhibit intergrade characteristics with the other subspecies of red-legged frog, the California red-legged frog (*R. a. draytonii*), which is federally-listed as Threatened. In the listing determination for California red-legged frog, northern Marin County was established as the approximate dividing line between the two subspecies (USFWS 1996a). However, recent research based on intensive field sampling and DNA analysis has indicated that the division between the subspecies may be the Navarro River in Mendocino County (Shaffer, unpublished data, 2002). The Park may contain limited suitable habitat for red-legged frogs, but surveys have not been conducted.

The foothill yellow-legged frog is a federal and California Species of Special Concern. Foothill yellow-legged frogs require shallow, flowing streams with some cobble-sized substrate on which they deposit large masses of eggs. They have been found in streams lacking cobble and in riparian zones at various times of the year, but it is unclear how regularly these habitats are used (Jennings and Hayes 1994). The distribution of foothill yellow-legged frogs in the Sinkyone Wilderness SP is not known, as comprehensive surveys have not been conducted. However, suitable habitat may be present in several small streams within the unit. They have also been reported in the Mattole River, near Four Corners (DFG 2003).

The northwestern pond turtle is a federal and California Species of Special Concern. This aquatic turtle is found in a variety of habitats, including lakes, rivers, streams, and stock ponds. They usually leave aquatic sites to reproduce and overwinter. Pond turtles nest in upland habitat, sometimes almost ¼ mile from aquatic sites. Pond turtles have been reported in the Mattole River (DFG 2003).

Terrestrial Wildlife

Sinkyone Wilderness SP includes a tremendous variety of terrestrial habitats, including coastal bluffs and prairies, riparian corridors along streams, and forested mountains. A variety of significant terrestrial wildlife potentially occurs in the Park, including a shorebird species, many species of raptors, riparian-associated wildlife, and other forest-associated wildlife.

Western Snowy Plover

The western snowy plover is federally-listed as Threatened and as a California Species of Special Concern. For nesting, they use barren or sparse vegetated marine and estuarine shorelines, and other salt-influenced areas, such as salt evaporation ponds and levees (USFWS 2001). Most nesting occurs from March through mid-August. The Pacific population of western snowy plovers historically inhabited coastal beaches along the Pacific coastline from Washington to Baja California, but the current population is fragmented throughout the range because of loss of habitat to encroachment of introduced beachgrass and urbanization, nest predation, and human disturbance (USFWS 2001). Potential suitable habitat for snowy plovers is present at Usal Beach, but is considered to be low quality habitat (Harris, pers. comm., 2003b).

Raptors

Many special-status raptors have potential or are known to nest within the Park, including Cooper's hawk, northern goshawk, sharp-shinned hawk, golden eagle, northern harrier, osprey, American peregrine falcon, and northern spotted owl. Merlin may winter in the Park. The northern spotted owl is federally listed as Threatened and is a California Species of Special Concern. The peregrine falcon is a state Endangered and California Fully Protected Species. The USFWS has delisted the species and the population is being monitored and has the same status as a federal Species of Special Concern. All of the other species mentioned above are California Species of Special Concern. All raptors are protected under Section 3503.5 of the DFG Code, which prohibits the destruction of raptors and their nests.

Northern goshawks nest in coniferous forests, typically on north slopes, near water, and in red fir, lodgepole or Jeffrey pine. Northern goshawks are known to nest in the vicinity of the Park at the Angelo Coast Range Reserve and the Big Flat area, southwest of Leggett (DFG 2003). There have also been several sightings of northern goshawks in the Mattole River watershed; however, survey efforts associated with timber harvest review have not detected any nest sights. Potentially suitable nesting habitat for goshawks has been mapped along Indian Creek (DPR 1985).

Sharp-shinned and Cooper's hawks nest in montane coniferous and deciduous forests. Cooper's hawks especially prefer riparian woodlands. Northern harriers nest on the ground in marshes, grasslands, or fields and forage in a variety of open habitats. Although nest sites are not documented for these species within the Park, suitable habitat is present and it is likely that nesting occurs.

Golden eagles nest in large trees or on cliffs, in foothill or montane areas with open grasslands for foraging nearby. Golden eagles are known to nest in the Mattole area. Although it is unknown if golden eagles nest in the Park, the coastal prairies and adjacent large trees in the Park provide suitable foraging and nesting habitat.

Osprey typically nest in large trees or snags near shorelines, bays, or large streams. They are commonly observed in the Park foraging along the entire coastline. Although no nesting has been documented in the Park, suitable nesting habitat occurs along larger streams and creeks in the Park such as Low Gap, Jackass, and Usal Creeks, and Anderson Gulch (DPR 1985) and in coastal areas.

Merlin do not nest in California, but winter in coastal areas, especially in open lowlands where there are concentrations of shorebirds. Some of the stream and beach areas within the Park likely provides suitable wintering habitat for merlin.

American peregrine falcons nest on cliffs or rocky outcroppings and forage over a variety of open habitats, where aerial prey are present. Beginning in 1999, several peregrine falcon nests were detected in large residual old-growth redwoods on timberlands above Humboldt Bay. The majority of the nests were located in trees with broken tops that were 100 to 150 feet above the supporting canopy. Potential nesting habitat was identified along the Anderson Cliffs within the Park (DPR 1985, Didion and Taylor 1986) and may also occur in some of the residual old-growth redwoods.

Northern spotted owls typically nest in mixed conifer forests with old-growth characteristics. Spotted owl territories have been documented in many areas in the vicinity of the Park in preparation for timber harvesting activities in the past

(DFG 2003). The timber management history has created a forest with a variety of age classes and complex canopy structure that provides ideal habitat for spotted owls. Although systematic surveys have not been conducted recently, several pairs of owls are likely to breed in the Park (K. Hoffman, pers. comm., 2003). Critical habitat has been designated for northern spotted owls, but does not include any areas of Sinkyone Wilderness SP (USFWS 1992). Surveys for spotted owls have not been conducted in the Park, but the Park contains many areas of mature forest that may support old-growth associated wildlife and spotted owls are likely to occur (DPR 1985).

Riparian-associated Wildlife

Four riparian songbirds that potentially occur within the Park are considered California Species of Special Concern: willow flycatcher, purple martin, yellow warbler, and yellow-breasted chat. These species nest in riparian woodlands during spring and summer.

Willow flycatchers are considered rare to locally uncommon summer resident in wet meadows and montane riparian habitats from 2,000–8,000 feet in elevation. Most of the remaining breeding populations occur in isolated mountain meadows of the Sierra Nevada and Cascades (Williams and Craig 1998). However, willow flycatchers have been confirmed breeding in Humboldt County in a second-growth conifer forest in a 15-year-old clearcut (Redwood Region Audubon Society 1999) and near the mouth of the Van Duzen River (Harris, pers. comm., 2003a). The distribution of breeding willow flycatchers in the Park is unknown, but potentially suitable nesting habitat occurs in the riparian scrub community and possibly in early successional conifer forests in the Park.

Purple martins nest in cavities of snags within open areas and forage over lagoons and in woodlands. Yellow warblers and yellow-breasted chats build cup nests and prefer willow and alder thickets and riparian woodlands. Yellow warblers do not appear to nest in riparian areas immediately adjacent (within 1–2 miles) of the coast (Harris 1996). Yellow-breasted chats have been commonly documented holding breeding territories along the lower Eel River during surveys in 1998 and 1999 (CALPIF 2000). Although the breeding status of these species in the Park is unknown, potentially suitable habitat exists, especially in the Shadowbrook area.

Other Forest-associated Species

The forested canyons and ridges throughout the rugged mountainous Park provides habitat for marbled murrelet, Vaux's and black swifts, Townsend's

western big-eared bat, red tree vole, Humboldt marten, Pacific fisher, and for Roosevelt elk.

The marbled murrelet is a seabird that is federally listed as Threatened and state-listed as Endangered. Marbled murrelets nest in older forest stands up to 50 miles from the coast. They forage and spend the non-breeding season in marine environments. Nest trees must have large branches or deformities for nest platforms. Nesting occurs over an extended period from mid-April to late September. In California, populations of murrelets are known to occur within remaining blocks of old-growth coastal conifer forests. Most forests have been logged in Mendocino County and probably only very small numbers still nest there (USFWS 1997). Sinkyone Wilderness SP is designated as critical habitat for marbled murrelets. Critical habitat includes any areas within the Park that contains the primary constituent elements for murrelets, such as the following: (1) space for individual and population growth, and for normal behavior; (2) food, water, air, light, minerals or other nutritional or physiological requirements; (3) cover or shelter; (4) sites for breeding, reproduction, rearing of offspring; and (5) habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species (USFWS 1996b). Although breeding surveys have not been conducted within the Park, murrelets are known to occur along the coast in the Park (DFG 2003, Harris 1996) and suitable nesting habitat occurs throughout the Park in areas of mature forest (DPR 1985).

The two species of swift that may nest in Sinkyone Wilderness SP are both federal and California Species of Special Concern. Black swifts nest in montane habitats, especially on ledges of sea cliffs or in crevices of caves. Often their nests are near or behind waterfalls and they sometimes nest in colonies of a few pairs. Vaux's swifts nest in forests, especially burned or cutover areas providing snags. Recent nest and roost site surveys indicate that Vaux's swifts most often use redwoods, and especially trees that had been burned in the past and have formed basal hollows (Hunter and Mazurek unpublished data). Basal hollows are cavities formed at the base of a redwood bole when fire injury to a green tree allows entry of fungal rot to the base of the tree, which then causes internal decay that is subsequently burned out during a fire. Nests are shallow bundles of twigs or pine needles glued together with saliva and attached to the inside of a hollow tree. Nest and roost sites are typically used repeatedly (Hunter and Mazurek unpublished data). It is unknown if either of these species nest in the Park, but suitable habitat is likely to be present.

Townsend's western big-eared bats typically form colonial maternity roosts in caves and mines. Anthropogenic structures are also used in coastal California where caves and mines are rare. However, recent research has reported a maternity colony in a basal hollow of a live coast redwood in Humboldt County

(Mazurek, in press). Basal hollows in redwoods may provide an important roosting habitat for a variety of bats along the northwestern coast (Mazurek, in press). An inventory of suitable redwoods in the Park has not been conducted, but there is potential for suitable roosting habitat for Townsend's western big-eared bats in the Park.

The red tree vole is a federal and California Species of Special Concern. Red tree voles live exclusively along the coastal fog belt. They are almost exclusively arboreal and prefer Douglas-fir forests, although they may occasionally be found in redwood and montane hardwood–coniferous forests. They create nests out of conifer needles for food and shelter, which are reused by many generations. Red tree voles are likely to occur in mature forests in the Park. They have been reported in many areas along the Mendocino Coast, including the north fork of Usal Creek, near the confluence with Solider Creek (DFG 2003).

Martens and fishers are carnivorous mammals that are strongly associated with late-seral forests. Both of these species occurred historically from the Mattole watershed (Twining and Hensley 1947). The Humboldt subspecies of the American marten was described as being smaller and darker in coloration than the other subspecies of martens. The range of Humboldt marten included the narrow coastal strip from the Oregon border to northern Sonoma County, and corresponded primarily with the redwood belt (Zielinski and Golightly 1996). Detections of martens along the coast during recent surveys have been extremely rare and the population is considered to be very small or extirpated from California (Zielinski et al. 2001). However, Humboldt martens have been detected recently in northern Humboldt County and potentially suitable habitat occurs in the Park (Harris, pers. comm., 2003a).

Fishers are uncommon along the coast, especially south of Cape Mendocino (Zielinski et al. 1995). The USFWS recently reviewed a petition to list fishers as Endangered and they have concluded that listing the fisher in Oregon, Washington, and California may be warranted. The USFWS is beginning a 12-month status review to determine if the petitioned action is warranted (USFWS 2003). The presence of fishers in the Park is not known, but they have been recently detected on private land north of the Jackson Demonstration State Forest near Fort Bragg in Mendocino County and suitable habitat is present in the Park (Harris, pers. comm., 2003).

Roosevelt elk were reintroduced into the Park in 1982. Historically, elk inhabited moist forests and coastal areas from San Francisco Bay north to Vancouver Island, but populations were extirpated by over-hunting. Elk are not classified as special-status species, but should be considered a significant resource because of public interest. Elk are associated with the coastal forest, as well as coastal prairies and riparian areas. Elk are often observed on grassy marine terraces

from Bear Harbor to Whale Gulch, particularly in the vicinity of the Needle Rock ranch house (Didion and Taylor 1986) and near Usal Beach. However, elk are very mobile and can travel long distances, so they may be found throughout the area. Coastal prairies, which are used as foraging habitat for Roosevelt elk, were mapped and are mainly distributed in the northern portion of the Park (DPR 1985).

Feral Species

Non-native or feral wildlife can have a substantial negative effect on native wildlife populations. Wild pigs can cause extensive damage to plant communities and wildlife habitat by rooting for acorns or other food in the understory and by wallowing in riparian areas. Feral cats prey heavily on native wildlife, particularly small and medium sized birds and mammals. Black rats have been documented as the primary predators of bird nests in some riparian habitats in northern California. The numbers of feral wildlife species can be increased by incompatible management actions and visitor uses. Feral pigs have been known to exist in the Park.

2.1.6 Cultural Resources

Natural History

The topography, coastal setting, presence of numerous perennial and seasonal water sources, wide range of floral and faunal species and other natural resources made this region a prime location for human habitation and economic pursuits over thousands of years. The region is rich in cultural heritage and activity associated with tanbark processing, shipping, logging, grazing and recreational industries.

Prehistoric Setting

The Paleo-Indian Period (10000 B.C. to 6000 B.C.) saw the first demonstrated entry and spread of humans into California with most known sites being situated along lakeshores. Characteristic artifacts noted in the lithic assemblages include fluted projectile points and flaked crescents. Numerous occurrences of this Pattern's distinctive artifacts are reported and can be affiliated with documented assemblages in California and throughout North America.

The beginning of Lower Archaic Period (6000 B.C. to 3000 B.C.) coincides with the middle Holocene climatic shift to more arid conditions that brought about the drying up of the pluvial lakes. Subsistence appears to have been focused more on plant foods although hunting clearly still provided important food and raw material sources. Settlement appeared to be semi-sedentary with little

emphasis on material wealth. Distinctive artifact types include large projectile points, milling slabs and handstones.

The Middle Archaic Period (3000 B.C. to 1000 B.C.) starts at the end of mid-Holocene climatic conditions when weather patterns became similar to present-day conditions. Discernable cultural change was likely brought about in response to these changes in climate and accompanying variation in available floral and faunal resources. Economic systems were more diversified and likely included the introduction of acorn processing technology. Hunting remained an important source of food and raw materials although reliance on plant foods appears to have dominated the subsistence system. Typologically and technologically important artifacts characteristic of this period include the bowl mortar and pestle and the continued use of large projectile points.

A marked expansion of sociopolitical complexity marks the Upper Archaic Period (1000 B.C. to A.D. 500), with the development of status distinctions based upon material wealth. Shell beads gained in significance as possible indicators of personal status and as important trade items. This period retained the large projectile points in different forms, but the milling stone and handstone were replaced throughout most of California by the bowl mortar and pestle.

The Emergent Period (A.D. 500 to 1800) is distinguished by the advent of several technological and social changes. The bow and arrow were introduced, ultimately replacing the atlatl. Territorial boundaries between groups became well established and were documented in early historic accounts.

Cultural traits that distinguish this pattern include pre-interment grave-pit burning, tightly flexed burials and cremation. Artifact assemblages include *Dentalium* shells, bone and antler harpoons, adzes, wedges and mauls, net sinkers, *Haliotis* ornaments, mortars and pestles (Moratto 1984).

ETHNOGRAPHIC SETTING

The area from the northern Mendocino coast to southern Humboldt was occupied by a group of five tribelets collectively called the Sinkyone. These five groups spoke related Athabascan dialects and shared cultural similarities (Evans 1987). Numerous villages were recorded by Baumhoff (Evans 1987) though only one, Usal, was noted as being on the coast. Pre-contact population estimates range from 740–4,000 individuals, based on various formulae, however Kroeber (1925) estimated that only approximately 200 remained by 1910.

Sinkyone villages were mainly located inland, along rivers and drainages. These would have been used primarily during winter. In the other months, family groups would go to the hills to hunt or gather plant foods or to the coast to

collect shellfish, fish, sea mammals, waterfowl or seaweed (Evans 1987). Seasonal salmon runs were especially important as a source of winter food.

Other products collected by the Sinkyone included iris, spruce, fern, hazel and redwood fibers for basketry or rope, skins for blankets or clothing, wood and horn chisels, obsidian traded from distant locations, redwood building slabs, madrone bark for structures, and shell beads.

The Indian Wars of Humboldt and Mendocino (1860–1865) were spurred by the increasing American population in the area following California's admittance to the Union. In 1850, the California legislature passed laws making it possible to force Indians into labor and to bind their children over to white citizens. These acts were met with some resistance, including a range of events from theft to murder. A number of Indian families and tribal groups were massacred during these times.

One such event has become notorious locally. Sally Bell, a Wailaki woman interviewed by Kroeber, saw her family massacred at Needle Rock as a child. She hid in the woods for several months until she was found by her brother, taken to Philipsville, and was subsequently raised by a white family. She had either two or three Indian husbands, and eventually received a 160-acre allotment of land in the Sinkyone region, where she and at least one of her husbands lived (Evans 1987).

HISTORIC SETTING

The first European settlers known in the project area were Archibald Hamilton and William Oliver, who claimed land in Shelter Cove in the 1850s (Roscoe 2002). Oliver was subsequently killed by Indians whom they had accused of stealing cattle. Hamilton then left the area, which was next homesteaded by the three Ray brothers, who married Indian women and settled at Shelter Cove Ranch.

Settlers began occupying land around Bear Harbor in the 1860s, using the land for cattle and sheep grazing. Until then, the only paths in the area were Indian trails which generally followed ridgelines in from the coast. The European settlers built the Humboldt Trail in 1862, which went to Eureka. Another trail was built from the Eel River valley to Bear Harbor in 1865. New settlers, including the Kaiser brothers, added to the industry in Bear Harbor. Ranching, logging and tanbark operations expanded. Surf landing spots for shipping soon gave way to wharfs and wire chutes (Roscoe 2002). By 1890, a railroad had been constructed to run between the coast at Bear Harbor and J.B. Stetson's sawmill, 3 miles inland.

Bear Harbor continued to grow as a port, with concomitant expansion of the wharf and railroad line, as well as local ranches, timber shipping ports and other

businesses, residences, and a school. Damage from the 1906 earthquake started the decline of the local industry. The local school closed in 1908 because of lack of work (and presumably people) in the area. The town of Needle Rock likewise enjoyed a lumber boom, then bust (Roscoe 2002), and later converted to ranching. Needle Rock Ranch included two residences, bunkhouses, other outbuildings, and a railway (DPR 1988).

Northport (Anderson Landing) began as a shipping point developed by Robert Anderson in the 1870s using a wire chute (Roscoe 2002). Wheeler, located in the old Northport area, was one of the last logging company towns established in California. Sawmill operations there commenced in 1948 and had shut down by 1959.

Usal began as a ranching area, but lumber interests had moved into the area by 1888 (Roscoe 2002). A small town, population approximately 160, grew to support the business. There were approximately 40 buildings, a wharf, and sawmill.

The towns of Bear Harbor, Usal, Wheeler, Northport and Needle Rock all supported working communities, however successive waves of industry recycled or removed construction from the previous one, leaving little surface evidence of these activities today (Resource Protection Division 1988).

BACKGROUND RESEARCH

Background research began with an interview with National Park Service archaeologist Karin Anderson, who provided an overview of archaeological efforts in Sinkyone Wilderness SP. Documents regarding archaeology, historic documentation, and copies of State Parks site record forms for most of the resources within the Park were obtained from the State Parks North Coast Redwood District Office in Eureka.

An information request was submitted to the North Coast Information Center (NCIC), for the project area as a whole. The purpose of the NCIC search was to determine whether there were previously recorded historic resources or if archaeological surveys had been performed within or in the vicinity of the project area. The NCIC had records of almost 20 archaeological surveys that had been conducted within the project area (Appendix E, not publicly available). Site record forms pertaining to resources identified during those surveys are on file with Sinkyone Wilderness SP. Archaeological surveys within the Park have focused on the interior sections of the Park, rather than the coastal strand.

Archaeology of the Project Area

Formal archaeology in the Park vicinity began in the late 1970s. Archaeological surveys have been conducted in relation to prehistoric resources, logging operations, road repair, and slope restoration, as well as other projects.

Prehistoric and historic use of the project area appears to be well understood. Historic maps and deeds round out the historic picture.

Cultural resources within Sinkyone Wilderness SP have been subjected to a number of impacts that have caused damage or destruction. Chiefly, erosion of various types (coastal, stream, alluvial) has washed away site components. Other factors, such as removal, destruction or recycling of structures in the historic lumber towns and mill areas have left little surface evidence of the large-scale exploitation of lumber in the 19th and 20th centuries in the project area. Foot or equestrian traffic, looting, construction or maintenance of Park facilities, and road removal or re-contouring has caused cumulative damage to some sites. In spite of the imposing terrain of the project area, it clearly has been the focus of significant prehistoric and historic development. The potential for retrieving important data from known and as-yet undiscovered resources is significant.

Native American Interests

The InterTribal Sinkyone Wilderness Council (Council) was formed in 1986 to address local Indian tribe concerns in the Sinkyone region. The Council consists of 11 federally recognized tribes whose goals include reinstatement of traditional values and land use in the Sinkyone region. The Council owns lands located adjacent to and east of the Sinkyone Wilderness SP. The Council developed conservation easements to protect in perpetuity the cultural and natural resources within the InterTribal Sinkyone Wilderness. The Council administers projects in cultural resource protection, land management planning, reforestation, salmon stream restoration, and watershed rehabilitation. The Council emphasizes traditional cultural uses by local tribal members, resource restoration and stewardship, and ecology education. InterTribal Wilderness priority projects include: (1) development of public access low-impact campgrounds and trails that will link directly to the Lost Coast Trail within the Park, which traverses the longest stretch of coastal wilderness in the lower 48 states; (2) continued salmonid habitat restoration work at Wolf Creek (Jackass Creek) and other Sinkyone streams; (3) Tribal Heavy Equipment Operator Training Project 2004–05 for the Sinkyone Wilderness SP Watershed Rehabilitation-Roads Removal Program; (4) development of a Forest Management Plan and an Integrated Resource Management Plan to guide the InterTribal Parks

possessive long-term stewardship; and 5) partnership projects with California State Parks in the adjacent Sinkyone Wilderness SP (Trees Foundation 2003).

The Council has formally commented during the planning process to express their concerns and ideas for the General Plan/ Environmental Impact Report. Among the topics brought for discussion were protection of cultural resources in cooperation with the Council and other stakeholders, cooperative management of Park resources, watershed restoration, road to trail conversions, and maximum wilderness designation.

2.1.7 Interpretative and Educational Resources

Topics

The majority of the interpretative materials available at Sinkyone Wilderness SP are located at the Needle Rock Visitor Center. Historic photographs and books about the local logging communities and Native American heritage are available. Interpretive posters, brochures and books on general ecological concepts, ocean life, whales and seals, and various wildlife, such as Roosevelt elk and mountain lions, are also on display. A telescope is available for whale watching from the porch of the Needle Rock Visitor Center. The Park desires to have more information on the historical uses of the Park and continues to gather additional information (Urbach 2003).

Programs and Special Events

Park Rangers arrange formal and informal programs and events that include junior ranger trail walks, interpretive seminars, and campfire talks on an impromptu or scheduled basis, depending on the visitor group and interests. School groups and the California Conservation Corps are provided with programs based on their interests and local elementary schools visit for lessons on biology, ecology, and the ecological practices conducted at the Park. Other interpretive programs are available from a variety of outside sources. In addition, the Richardson Grove Interpretive Association sells maps and firewood at the Park (Urbach 2003).

2.1.8 Scenic Resources

A field survey of scenic resources was performed in 1986 as part of the Resource Inventory for Sinkyone Wilderness SP. The majority of the information described in this section is based on accounts in the inventory.

Sinkyone Wilderness SP is known for its spectacular ruggedness and remote isolation. Visitors experience unique views of the coast, ocean, black sand beaches and dramatically steep ridges covered with a dense forest canopy.

The deep forested areas within the Park provide an enclosed view from beneath the forest canopy, topped with tree crowns and surrounded with a lush understory of wildflowers and herbaceous growth.

Because of its remoteness, only a few areas in the Park yield opportunities to easily experience the Park's vast aesthetic vistas. The most extensive and varied views can be seen from the Lost Coast Trail, which traverses the entire length of the Park paralleling the coastline. The trail traverses steep mountains, deep drainages, gently sloping coastal prairies, coastal scrublands, Douglas-fir, old-growth and second-growth redwood, and mixed evergreen forests. The Hotel Gulch Trail, a former road, provides opportunities for aesthetic appreciation with access for horses.

Views from the Lost Coast Trail depend on weather conditions, especially fog cover, which is a common occurrence on the north coast during the summer months. On clear days, the open blue sky and sparkling ocean contrast with scrubland, forests and grasslands in various shades of green. In the forests, the sun trickles through the foliage of the trees and reflects off early morning dew. During foggy conditions, the ocean fog flows up the coastline and into the valleys and forests. While views are generally restricted on foggy days, the atmosphere created by the fog provides its own aesthetic quality with the mystery of fog-filled forests with muffled sounds and smells.

Sinkyone Wilderness SP offers an abundant amount of wildlife habitat that contributes significantly to the aesthetic quality of the Park. The diverse coastal and inland habitat types provide habitat for many species. A variety of sea birds and raptors can be seen from various locations. Marine life along the coast is varied and abundant. Tidepools contain colorful displays of anemones, starfish, and mollusks. Roosevelt elk roam the coastal prairies. The unique patterns of native plant communities add to the aesthetic beauty of Sinkyone Wilderness SP. Riparian areas characterized by deciduous species provide autumn colors and spring wildflowers add color to the forest floor, coastal scrub, and prairie habitats.

The two prominent hiking trails, the Lost Coast Trail and Hotel Gulch Trail, offer most of the opportunities for viewing the scenery of Sinkyone Wilderness SP. Other scenic areas within the Park include a sag pond area near Whale Gulch, which is a small marsh area tucked behind a steep coastal cliff. The sag pond area is frequented by native wildlife and the resulting abundance of animal tracks and scat provide a feeling of true wilderness and nature to the visitor.

Some remains of historic buildings at Usal and Jackass Creek provide an intriguing aesthetic interest for the history of the area. The historic Needle Rock

ranch house and associated barn provide for a rustic atmosphere at the visitor's center.

Past human activities of Sinkyone Wilderness SP have resulted in some negative aesthetic features in the Park. Exploitation of resources such as logging, agriculture and fishing has caused disturbances of the native vegetative cover and resulted in unsightly erosion or land clearing. In addition, views of off-road vehicles at Usal Beach and the resulting impacts to native vegetation have resulted in the degradation of scenic resources at the southern end of the Park. Short cuts and new trails created by hikers have resulted in removed vegetation and increased erosion, causing negative aesthetic impacts to the trail corridors in some areas. Low-flying aircraft and garbage left behind by backpackers and campers also contribute negative affects to the aesthetic beauty of the Park.

2.1.9 Recreational Resources

The information presented in this section reflects the natural and manmade attributes that provide the opportunity for visitors to engage in recreational activities at Sinkyone Wilderness SP. A field survey, literature review, and unit data file review were conducted in preparation of the Resource Inventory produced in 1989 for the Park. The majority of the information discussed in this section is based on information provided in the resource inventory. Exhibit 2-8 provides a map of the recreational opportunities in the Park.

Recreational Activities

Historically, the Park and the surrounding area experienced development related to logging (e.g., towns, mills, and roads), horseback riding, sightseeing, hunting and target practice, surf and stream fishing, and swimming. In the 1960s, public demand for access to coastal areas increased significantly. These demands lead public agencies to purchase lands in the area.

Recreational activities currently enjoyed in the Park are resource-oriented and focused on the wilderness aspect of the Park. Destination-type activities (i.e., weekend or vacation trips) are popular because of the distant location of the Park from major population centers. Active recreation, involving physical activity and/or quiet relaxation and solitude are common at the Park. Off-road vehicle use in the park is not permitted, but does occur, particularly in the Usal area, due to limited enforcement capability.

Recreational demand at the Park is generally low to moderate, although it increased substantially when the connection of the Lost Coast Trail between the KRNCA and Sinkyone Wilderness SP was completed in 1986. Wilderness exploration is the primary activity in the Park and includes hiking, backpacking,

camping, and horseback riding. Other activities include observing scenery, studying plants and wildlife, photography and painting, picnicking, and mountain biking on designated dirt roads, beach recreation, fishing, swimming, sea kayaking, scuba diving, and sunbathing.

RECREATION FACILITIES

Recreational facilities in the Park are provided for access and enjoyment of natural resources, although limited, because of its wilderness objective. Access roads, limited parking areas, hiking trails, camp sites, picnic areas, beaches, and a visitor center that provides vault toilets and potable water are current facilities provided at the Park.

Access roads to the Park are unpaved and some are closed during the rainy season. Usal Road, which runs the length of the Park from north to south, follows the Jackass and Timber ridgelines east of the Park boundary. The northern portion of the road provides access to the northeastern area of the Park. The remainder of the road runs east of the Park boundary. Briceland Road (County Road 435) runs parallel to the coast within the Park starting at Four Corners and ending at Orchard Camp. The road is narrow, subject to washouts, and is closed during the rainy season. Parking is limited in most areas of the Park, but available in designated areas such as overnight parking at Usal Beach Campground, and day use parking at Orchard Camp and Needle Rock. Parking at Needle Rock currently is arranged in a manner that intrudes upon the scenic beauty of the area.

Two main trails are provided within the Park: the Lost Coast Trail and the Hotel Gulch Trail (formerly a road). The most extensive and widely used trail in the Park is the Lost Coast Trail. The trail runs the length of the Park along the coastline and traverses most of the plant communities in the Park. The trail begins at the south end of the Park at Usal Beach Campground and remains a foot trail until it reaches Bear Harbor. From Bear Harbor to Needle Rock the trail follows Briceland Road (County Road 435) and then resumes to a hiking trail north of Needle Rock. The Lost Coast Trail extends to the northern boundary of the Park and continues into the KRNCA.

The second longest hiking trail in the Park is the former Hotel Gulch Road which extends from the southern end of the Park at Usal Beach Campground to the Wheeler campsite at Jackass Creek where the trail ends at the intersection with the Lost Coast Trail. The Hotel Gulch Trail follows the eastern boundary of the Park to Sally Bell Grove, and then turns west for a short portion before it heads north again and intersects with Jackass Creek and the Lost Coast Trail. This trail accommodates hiking and limited horseback riding in designated areas.

Camping opportunities are provided by 62 campsites throughout the Park, ranging in use from drive-in camping to beach and trail camps for backpackers and hikers (Exhibit 2-8). Fifty two of the environmental campsites are primitive, consisting of a cleared flat area for a tent, nearby vault toilet, a picnic table and fire ring. Several of these primitive campsites are available at Jones Beach (4), Streamside (3), Needle Rock (5), Orchard Creek (3), Railroad (3), and Bear Harbor (4), respectively. Environmental campsites located along the Lost Coast Trail are equipped with a fire ring and vault toilets nearby. They are located at Wheeler (4), Little Jackass (4), and Anderson Gulch (2). Other informal campsites are located at Usal and along the trails. Table 2-5 provides a summary of the type and quantity of campsites available in the Park. Thirty vehicle accessible campsites are available at Usal Beach.

Table 2-5
Existing Recreation Facilities in Sinkyone Wilderness State Park

Facility Description	Total	
	# Sites	Visitor Capacity
Family Camping Facilities		
Primitive/undeveloped (up to 8 people and two vehicles, tent space, stove, table, and nearby piped water, chemical or vault toilet)	52	416
Developed	0	0
RV Hookup	0	0
Trail Campsite	12	96
Hike-in or Bike Campsite	0	0
Group Camping Areas		
Tent or RV use – primitive or developed	1	16
Horse Camps	1	16
Overnight (non-camping) Facilities-Structures		
Tent Cabin/Shelter	0	0
Rustic Cabin	1	6
Picnic Facilities		
Family picnic facilities	4	32
Group Picnic Areas	0	0
Trails		
Hiking and Backpacking Trails Horse Trails Mountain Bike Trails	4 trails 23.9 miles	

Source: California Department of Parks and Recreation 2003

2-8 Recreational Opportunities
11x17 pg1

Exhibit 2-8 Recreational Opportunities

11x17 pg2

Several beaches can be found along the coastline of Sinkyone Wilderness SP. The beaches are sandy or gravelly beaches and generally narrow and limited in size. There are four major beaches within the Park: Usal, Jackass Creek, Bear Harbor, and Whale Gulch. Usal Beach is the largest beach (5 acres), with the most extensive use and the easiest access from main roads, which makes it vulnerable to unauthorized off-road vehicle use. Bear Harbor is also a large beach (3–4 acres) and accessible by Briceland Road (County Road 435), except during the rainy season. Jones Beach and the beach at Jackass Creek are not accessible by road, so they experience less use compared to Usal or Bear Harbor. The fourth beach, Whale Gulch Beach, is 2 acres and accessible only by hiking trail or the shore. Most of the Park's beaches are resting areas for sea birds, including some protected birds, and marine mammals. The beach at Little Jackass Creek is a haul-out site for migrating California sea lions, and Northport Gulch beach is a haul-out site for harbor seals.

PATTERNS AND LEVELS OF RECREATIONAL USE

The pattern of recreational use at the Park is seasonal. The winter brings heavy and frequent rains to the area, which restricts visitor access on unpaved and narrow roads. In addition, the remote distance from populated areas limits visitors to the weekends or summer season, when vacation time is available. The summer offers a mild coastal climate with foggy days and cool temperatures, which draws visitors escaping from the heat of summer at inland locations.

2.1.10 OPERATIONAL FACILITIES

BUILDINGS

Sinkyone Wilderness SP includes 14 buildings that are located throughout the Park and 21 vault toilets. The most well known and most often used buildings are the Needle Rock Visitor Center and the old barn house, both located on the north end of the Park on Briceland Road. Needle Rock was a small settlement established in the 1920s as a shipping point and dairy operation. The Needle Rock Visitor Center was the home of the Calvin Cooper Stewart family that settled at Needle Rock. The house now serves as the Park Visitor's Center with year-round camp hosts. Interpretive materials such as historical photos and books, as well as information on the native wildlife, are available at the Visitor's Center. The barn, located several hundred yards from the Visitor's Center serves as a campsite with protective walls and a roof.

Shadowbrook houses a staff residence, an administrative building, a carport for vehicle storage, seasonal living quarters, a maintenance shop, a generator building, a water treatment plant, a pump house, a glass greenhouse, a potting shed, and two cool houses (nursery buildings). The administrative building is

used for State Parks office needs, including document storage, job materials, communication equipment, and a meeting area. The nursery is used for the propagation of native plant material for revegetation needs within the Eel River Sector.

There are no official entrance stations to the Park. The north end is accessed by Briceland Road and Usal Road. The Needle Rock Visitor Center serves as a place to give and receive information; however, it is well within the Park boundary and does not serve as an entrance station. The southern end at Usal Beach Campground has campsites and a parking area, but is not an entrance station.

No public restroom facilities with running water, showers, or flush toilets are available in the Park. Vault toilets are available throughout the Park in all developed use areas.

2.1.11 CIRCULATION

ROADS

Roads within the Park are limited. Briceland Road and Usal Road are county roads and serve as the main access and circulation for the Park. Briceland Road enters the Park from the north at Four Corners. It continues south 3.5 miles to Needle Rock, and 2.7 miles further to Orchard Camp. The portion of the road from Four Corners to Needle Rock is generally maintained and open year-round, although four-wheel drive may be advisable during extreme weather because it is a steep narrow dirt road periodically experiencing slip-outs. During the summer season when conditions allow, Briceland Road is also open from Needle Rock to Orchard Camp.

Additional roads within the Park include the access roads to Shadowbrook, Usal Beach Campground, and an access road to Usal Beach. Table 2-6 summarizes the roads within the Park and their distance in miles. The southeastern boundary of the park lies down the centerline of Hotel Gulch Road with Council lands to the east.

Table 2-6 Road Mileage Within Sinkyone Wilderness SP	
Road Name	Mileage
Usal Road	25.0
Briceland Road	6.2
Shadowbrook	0.45
Usal Beach Campground	0.80
Usal Beach	0.40
Source: Department of Parks and Recreation, Resource Inventory	

PARKING

Limited parking is available in the Park. Several parking places are available at the Needle Rock Visitor Center and approximately 5 are available at Orchard Camp. At the southern end of the Park, Usal Beach Campground and Usal Beach also provide parking areas.

2.1.12 UTILITIES AND SERVICES

Sinkyone Wilderness SP is very remote and public utilities are not available inside the Park. The nearest utility connections are 4.5 miles north at the Park boundary. The Needle Rock House is equipped with a water source, which is fed from a creek via a gravity system. The water is filtered, chlorinated, and stored in a 2,500-gallon tank. The house also has a septic system, and a propane tank that serves the refrigerator, lights, hot water, and cooking needs.

Shadowbrook is located north of the main Park boundary and on the public utility system. Shadowbrook houses the staff residence and administrative building. Shadowbrook is serviced by Pacific Gas and Electric out of Garberville and has basic utilities, such as electricity, heat, a septic system, telephone, and running water. The staff residence is equipped with a back-up propane generator and a gas station for the state vehicles. In addition, Shadowbrook house, a water plant, and small nursery. These facilities, and all other buildings, systems, and grounds are operated and maintained by the Park maintenance staff. Shadowbrook water is supplied by a spring and by the Mattole River. A large water tank/cistern was purchased in July of 2003 to be used for fire suppression and the nursery. It will also be used to collect rain water to be used for Park operations and drinking water.

EMERGENCY SERVICES

Fire Protection

Fire protection for the Park is provided by the California Department of Forestry and Fire Protection (CDF). CDF has stations in Whitehorn and Garberville. The Whitethorn station will respond during excess summer seasonal demands (Urbach 2003).

Park Public Safety

Park public safety is provided by the Park Ranger at Shadowbrook. All Rangers of the Eel River Sector are available for patrol coverage or additional support to the Sinkyone Wilderness Park Ranger if needed.

Medical Aid

Medical aid is provided by Park Rangers, CDF, volunteer emergency medical responders or other professional first responders. The Park Ranger is the first responder, and contacts a paramedic or EMT if needed.

2.1.13 AIR QUALITY

Air quality in Sinkyone Wilderness SP area is regulated by several jurisdictions, including the U.S. Environmental Protection Agency (U.S. EPA), California Air Resources Board (ARB), the Mendocino County Air Quality Management District (AQMD), and the North Coast Unified AQMD. The U.S. EPA has established primary and secondary National Ambient Air Quality Standards (NAAQS) for carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), respirable particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), and lead, which are referred to as criteria air pollutants. The primary standards protect the public health and the secondary standards protect the public welfare. The California ARB has established California Ambient Air Quality Standards (CAAQS) for these same pollutants, as well as sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particulates, which in most cases are more stringent than the NAAQS.

The Mendocino County AQMD and the North Coast Unified AQMD are the agencies primarily responsible for assuring that national and state ambient air quality standards are not exceeded and that air quality conditions are maintained in Mendocino and Humboldt Counties through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. Mendocino and Humboldt Counties are classified non-attainment for the state respirable particulate matter (PM_{10}). The Counties are in attainment or designated unclassified for all

remaining CAAQS and NAAQS (Mendocino County AQMD, North Coast Unified AQMD 2003).

In an attempt to meet the State's health-based standard for PM_{10}, the North Coast Unified AQMD adopted its Particulate Matter (PM_{10}) Attainment Plan in May, 1995. The purpose of the plan is to achieve and maintain healthful air quality throughout the air basin, through measures that reduce PM_{10} emissions from mobile sources, as well as from wood stoves and other combustion sources. Both the Mendocino County AQMD and the North Coast Unified AQMD also ensure that air quality is protected through review of local development projects under CEQA (Mendocino County AQMD, North Coast Unified AQMD 2003).

In general, the area covered by the State Park General Plan has good air quality as compared to other areas within the District. The remote location, minimal roads and traffic, and coastal weather result in minimal air quality problems in the General Plan area.

2.1.14 HAZARDS AND HAZARDOUS MATERIALS

Previous logging operations in the Park involved underground storage tanks (UST) at Wheeler that were identified as causing contamination in the soil and groundwater. Monitoring wells were installed to determine the level of contamination over time. The Department of General Services is responsible for the removal of the USTs; however, funding has been cut and will not support the removal of the USTs at this time. It is unknown whether additional hazardous materials or hazardous sites are present in the Park; however, previous logging activities and community sites potentially have hazards or hazardous materials associated with them.

2.1.15 NOISE

Noise is generally defined as sound that is loud, unpleasant, unexpected, or disagreeable. Federal, state, and local governments have established noise standards and guidelines to protect citizens from potential hearing damage and other adverse physiological and social effects associated with noise. The federal government regulates noise levels in the work place, near aircraft, and for certain products. The State of California regulates vehicular and freeway noise affecting classrooms, sets standards for sound transmission and occupational noise control, identifies noise insulation standards, and determines airport noise/land use compatibility criteria. Local communities generally regulate land use/noise level compatibility by establishing allowable noise levels on private property and levels associated with the use of certain types of sources.

Regarding increases in noise levels, knowledge of the following relationships will be helpful in understanding this report (EPA 1971):

- Except in carefully controlled laboratory experiments, a change of 1 dB cannot be perceived by humans.
- Outside of the laboratory, a 3-dB change is considered a just-perceivable difference.
- A change in level of at least 5 dB is required before any noticeable change in community response would be expected.
- A 10 dB change is subjectively heard as approximately a doubling in loudness and would almost certainly cause an adverse change in community response.

Noise can be generated by a number of sources, including mobile sources such as boats, automobiles and trucks, and stationary sources such as construction sites and parking lots. Noise generated by mobile sources typically attenuates (is reduced) at a rate between 3.0 to 4.5 dB per doubling of distance; whereas, stationary source noise typically attenuates at a rate of approximately 6 dB per doubling of distance. The rate generally depends on the atmospheric conditions, types of ground surface, as well as the number or type of objects located between the noise source and the receiver.

The State Park General Plan area has minimal noise sources due to its remote location and rugged access roads. The large contiguous area surrounded by Council lands, KRNCA, and the Pacific Ocean allows for minimal noise intrusions, with the exception of motor vehicles on the roads and illegal off-road vehicle use.

2.2 PLANNING INFLUENCES

2.2.1 SYSTEMWIDE PLANNING

CALIFORNIA STATE PARKS MISSION STATEMENT

The State Parks Mission Statement is to "provide for the health, inspiration and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high-quality outdoor recreation."

STATEWIDE TRAILS PLAN

The California Recreational Trails Plan addresses the mission and overall role of the California State Parks Statewide Trails Office as well as providing guidelines for future actions of the Statewide Trails Office. The mission and vision of the Statewide Trails Office is to:

> Establish and maintain a system of trails and greenways that serves California's diverse population while respecting and protecting the integrity of its equally diverse natural and cultural resources. The system should be accessible to all Californians for improving their physical and mental well-being by presenting opportunities for recreation, transportation and education, each of which provides enhanced environmental and societal benefits.

This plan serves as general direction for parks and integrates the State Parks trail programs with the local and private organizations that operate and maintain the trails. Moreover, it will serve as a planning guide for the future development of the Roads and Trails Plan for Sinkyone Wilderness SP.

CALIFORNIA COASTAL TRAIL PROJECT

The California Coastal Trail is a proposed multi-use trail that would stretch 1,300 miles along or near the coastline from Oregon to Mexico. Pursuant to Senate Bill 908, the California Coastal Conservancy, in partnership with the Department and other federal, state, local, and private organizations, has released a draft of the Completing the California Coastal Trail report, which includes goals and objectives, general standards, recommendations for action, and maps of the conceptual alignment of the California Coastal Trail. The Lost Coast Trail traversing the entire length of Sinkyone Wilderness SP is part of the California Coastal Trail. However, portions of the Lost Coast Trail within Sinkyone Wilderness SP are not multi-use.

NATURAL COMMUNITIES CONSERVATION PROGRAM

The Natural Communities Conservation Program (NCCP), developed by CDFG in 1991, is an effort unique to California. NCCP provides regional planning strategies for the protection of plants, animals, and their habitats, while allowing suitable economic development. The primary objective of NCCP is to conserve natural communities at the ecosystem scale while accommodating compatible land use. There are no designated NCCP areas within Sinkyone Wilderness SP; however, this General Plan/ Environmental Impact Report adheres to the principles established in the NCCP regarding the protection of biodiversity.

EMPLOYEE HOUSING POLICIES

Employee housing policies for Sinkyone Wilderness SP are determined by the Department. Based on the existing District housing plan, employee housing in the Park is provided based on housing availability and employee classification. Employees are not guaranteed housing.

SYSTEMWIDE PARK OPERATIONS AND CONCESSIONS POLICIES

The statewide concessions program provides a very important part of the visitors' experience in California State Parks. Concessionaires offer the facilities, services, and goods that the State cannot otherwise provide, ranging from traditional food services and campground grocery stores, to Jeep tours and rafting trips. Within the system's historic Parks, concessionaires help achieve its educational mission by providing historical re-enactments and other educational programs, known in the Park profession as "interpretation." These programs add vitality, interest, and excitement to the fascinating California heritage preserved and protected by the Department.

The Department partners with a variety of businesses, non-profits, and public agencies through concession contracts, co-operative agreements, and operating agreements to offer the public these goods and services. How these opportunities are made available to the public is regulated by the California Public Resources Code, Sections 5080 et seq.

Because of the remote nature and wilderness aspect of the Park, Sinkyone Wilderness SP does not currently have concessions.

AMERICANS WITH DISABILITIES ACT AND STATE PARKS ACCESSIBILITY GUIDELINES

The Americans with Disabilities Act (ADA), the federal law that prohibits discrimination on the basis of disability, is applicable to all actions by the states, including the preparation of state park general plans. In compliance with the ADA, the Department published the *State Parks Accessibility Guidelines*, which was first issued in 1994 and last revised in 2005. The *State Parks Accessibility Guidelines* details the procedure to make State Parks universally accessible while maintaining the quality of park resources. Also included in the guidelines are recommendations and regulations for complying with the standards for accessibility. The Department has also published the *All Visitors Welcome: Accessibility in State Park Interpretive Programs and Facilities (2003a),* which provides guidance on developing accessible interpretive programs and facilities.

The Department's *Transition and Trail Plans for Accessibility in State Parks* (2001) outlines the Department's commitment to achieve programmatic access throughout the State Park System and in each of the parks. The visions of these guidelines and plan are embodied in this General Plan.

California Heritage Task Force

Established in 1981 by the California State Legislature, the California Heritage Task Force (CHTF) was created to develop a set of policies and programs for the State's cultural heritage resources. In 1984, the CHTF Report was published as a guide to cultural resource management legislation writing.

California Coastal Act

The California Coastal Act (CCA) (California Public Resources Code Section 30000 et seq.) was enacted by the state legislature in 1976 to provide long-term protection of California's 1,100-mile coastline for the benefit of current and future generations. The CCA created a partnership between the State (acting through the California Coastal Commission) and local government (15 coastal counties and 58 cities) to manage the conservation and development of coastal resources through a comprehensive planning and regulatory program. Most of the land encompassed in the Park is located in the Coastal Zone.

The Department received a permit in 1985 from the California Coastal Commission for the construction of a hiking trail, hike-in campsites, trailhead facilities, 50 drive-in campsites, potable water, a septic tank, and an employee trailer pad at Usal Creek and Hotel Gulch Road. The permit outlines standard and special conditions including vehicle restrictions to roads and vehicle camps, except for the following uses: 1) loading and unloading for fishing purposes under supervision; 2) Department land management activities; 3) emergency events; 4) Department construction, reconstruction, replacement, repair or maintenance of recreational developments; and 5) an approved timber salvage operation. A copy of the permit is included in Appendix F.

Public Resources Code

California Public Resources Code (PRC) Sections 5019.50-5019.80, *Classification of Units of the State Park System*, provides policy direction for the designation of State Park units and broad management goals and objectives for classified units. These code sections in addition to PRC Section 5002.45 were used as reference to plan appropriate Park improvements within Sinkyone Wilderness SP. In addition, PRC Sections 5093.3-5093.4 the *California Wilderness Act* provided policy and guidance to the General Plan. PRC Sections applicable to Sinkyone Wilderness SP are included in Appendix G of this document.

California Coastal Monument

The California Coastal Monument (Monument) was created by President Clinton in January of 2000 and was proclaimed a biological and geological treasure that is extremely rich in biodiversity and provides essential habitat for many species of scientific interest. The Monument consists of all unappropriated or unreserved islands, rocks and outcroppings along the coast of California that are above the mean high tide line and not contiguous to the shore within a distance of 12 nautical miles offshore. The monument includes more than 11,500 islands, rocks and outcropping, totaling approximately 900 acres. The designation as a National Monument mandates the protection of historic and scientific objects, particularly wildlife species that normally inhabit the monument area.

The BLM was originally charged with managing the Monument. In June 2000 the DFG signed a Memorandum of Understanding (MOU) with the BLM to collaborate in the management of the Monument. State Parks also signed an MOU with the BLM, as approximately 25% of California's coastline is under the Department's management. The BLM prepared a Resource Management Plan for the Monument in 2005. The plan provides management objectives and guidelines for the Monument. The plan also attempts to integrate, where possible, the numerous related management issues of the various coastal partners who desired to be included in the planning effort.

Inventory, Monitoring, and Assessment Program

As indicated by its name, the purpose of the Department's Inventory, Monitoring, and Assessment Program (IMAP) is to inventory, monitor, and assess the condition of natural resources in the State Park System. The goal of the program is to prepare IMAP plans for each of the state parks using the Environmental Condition Assessment (ECA) process. ECA is a multi-level process for establishing long-term monitoring that uses environmental indicators as a primary tool to assess current resource conditions and to detect change in these conditions over time.

The natural resources that may be included in the ECA are wildlife, vegetation, and physical assets. The ECA process is used to identify the significant resources that will be inventoried/monitored. The resulting data is then used to modify and update the monitoring program, in adaptive management of the park, and for proactive planning. ECA emphasizes scientifically based resource management practices and allows park staff to understand how the resource condition of the park affects the visitor experience and the health of ecosystems outside of the park.

The level of ECA (i.e., preliminary, reconnaissance, baseline, comprehensive, intensive) implemented at each park depends on the priority of issues identified during the preliminary-level ECA and Department resource availability. Baseline assessments are performed for new property acquisitions. Limited funding has been obtained since 2000 to initiate the development of IMAP plans for each of the parks in the system (DPR 2001e). No ECA has been conducted at Sinkyone Wilderness SP to date, but the Park has been identified as an IMAP-Park and Department staff hope to conduct assessments in the future, as funding becomes available (Harris, pers. comm., 2004).

2.2.2 PUBLIC CONCERNS AND COMMENTS

Public input is an important component of the general planning process. Input for public concern and comment for this General Plan/ Environmental Impact Report was solicited in the following ways:

- Release of the Notice of Preparation (NOP) for Sinkyone Wilderness SP Preliminary General Plan/Draft Environmental Impact Report on February 27, 2003;
- Development of a comprehensive mailing list of Park stakeholders;
- Announcement of the start of the planning process in Newsletter No. 1;
- First public scoping meeting in Garberville on March 19, 2003;
- Second public scoping meeting in Leggett on April 24, 2003;
- Hardcopy and on-line visioning surveys available with Newsletter No. 1 at the scoping meeting and through the State Parks website;
- Public workshop at the Needle Rock Visitor Center at Sinkyone Wilderness SP on May 28, 2003; and
- Alternatives Public Workshop at the Richardson Grove Visitor Center on July 22, 2003.

Summaries of all public meetings, hardcopy and on-line surveys received to date, and the NOP and letters received from public agencies in response to the NOP are included in Appendix H.

2.3 ISSUES ANALYSIS

The North Coast Redwoods District requested that the Department prepare a General Plan/ Environmental Impact Report for Sinkyone Wilderness SP to help

guide future management of the Park. Important issues to be addressed in the Plan were Park Purpose and Vision, Land Use (wilderness designation), Circulation and Facility Development, and Natural and Cultural Resource Management. As the general planning process proceeded, additional issues were identified and incorporated into the planning process. The most significant of those additional issues identified during the planning process included:

- acquisition policy,
- recreation planning and interpretation,
- ongoing coordination with other agencies and landowners in the vicinity of the Park,
- road and trail maintenance and management,
- public access, and
- off-road vehicles and other illegal uses at Usal Beach.

The issue statements in this section summarize the issues that the General Planning Team identified through the planning process. Public input into the planning process was gathered through a series of four public workshops and through visioning surveys that were available in hard copy and online. A discussion of goals and guidelines relating to the issues are outlined in Chapter 3, Park Plan.

PARK PURPOSE AND VISION

In 2000, the original Declaration of Purpose was revised to describe the Park's presently understood significance and value with respect to California and the State Park system. The purpose of Sinkyone Wilderness SP is to preserve and protect a substantial portion of the longest pristine stretch of Pacific shoreline in California. A Vision with images of what the Park may ultimately be like in the future was also developed as part of this planning process. The Park's Vision is defined to carefully balance the protection of natural and cultural resources with ongoing and future recreational uses.

The Planning Team updated the Declaration of Purpose revised in 2000 and facilitated the process of establishing an updated Vision for the Park. The Declaration of Purpose and Vision (Section 3.1.2) provide a context and direction for Park management and planning. These statements inform and guide consideration of various alternatives and proposals through the general plan process, and beyond. The Planning Team conducted site investigations and analyzed information to identify the opportunities for resource enhancement and protection, improve Park operations and services, establish recreation goals and guidelines, and assess potential impacts.

LAND USE

PRC 5002.45 describes legislative intent for land use within the Park and is included in the Appendix G. The General Plan and Environmental Impact Report translate this intent into a plan of action, balancing the needs of resources protection and wilderness values with appropriate public use. The General Plan and Environmental Impact Report provide guidance on the following issues:

- inclusion of Upper Mattole River lands into the Park,
- continuation of the cooperative management with the Council and others, and
- extent of development that should take place on the River Corridor parcels.

The Planning Team identified the significance of Sinkyone Wilderness SP from a regional perspective and evaluated opportunities for improving connectivity and coordinating management with other nearby public and private lands. In addition, the Team interpreted the legislative intent for land use within the Park, balancing the needs for resource protection and wilderness values with appropriate recreational uses. All relevant adjacent landowners and the public were consulted during this process.

As of the preparation of this General Plan/ EIR, a piece of property previously owned by the North Coast Land Trust, commonly known as the 3 V parcels, is in the process of being added to the Park. This property is located east of the River Corridor parcels and north of Shadowbrook and would be a potential location for a north-end staging area and visitor center.

CIRCULATION AND FACILITY DEVELOPMENT

The majority of facilities at Sinkyone Wilderness SP, including roads, trails, campgrounds, visitor center, and restrooms, were established as interim facilities. The Planning Team reviewed the existing facilities and established needs for new or different kinds of facilities. The intent was to determine if existing facilities, including roads and trails, are adequate and properly located, or if improvements or additional facilities and alternative placements are needed. All relevant adjacent landowners and the public were consulted during this process.

Natural Resources

Sinkyone Wilderness SP is characterized by a remarkably varied natural setting, including underwater areas, intertidal zones, and fragile marine terraces with sandy beaches separated by rocky bluffs, wetlands, riparian areas and streams. Grasslands, woodlands, and conifer forests add to the complexity. Information was gathered to identify and protect the natural resources of the Park to the extent possible.

The preservation of the old-growth redwood forests and restoration of second-growth forests and coastal prairie ecosystems are addressed in this General Plan/ Environmental Impact Report.

Invasive weed removal is addressed in the General Plan/ Environmental Impact Report. Various stakeholders identified the control of invasive weeds and protection of native species as important issues. Species specifically mentioned include eucalyptus, jubata grass, and French broom, but other invasive plants have also been documented in the Park.

During the scoping process some members of the public expressed strong feelings about herbicide use in the Park and would like to see an effort to control invasive weeds without the use of herbicides. While herbicides have not been used at Sinkyone Wilderness SP for over 10 years, Park management staff considers the use of herbicide as part of an integrated approach to resource management.

Several special-status species are known to occur in the Park and suitable habitat is available for other special-status species that have not yet been documented. Protection of known and undocumented populations of special-status species populations in the Park is addressed in the General Plan/ Environmental Impact Report. Impacts to special-status species and other sensitive resources resulting from recreational activities are also addressed in the environmental analysis. The need for continued enforcement of fish and game protection laws and visitor education of special-status species protection and management was identified.

The protection and management of other wildlife species were identified in the scoping process. In particular, the evaluation and management of the existing wildlife habitat in the Park and control of poaching were identified.

The protection of the Mattole River and Indian Creek watersheds was identified as an important goal of the General Plan/ Environmental Impact Report. While the majority of each of the watershed areas is located outside the Park,

collaboration with nearby property owners such as DFG and the Upper Mattole River and Forest Cooperative (UMRFC), should occur to protect and restore the water quality of the Mattole River and Indian Creek.

Tributaries to the Mattole River, south fork of the Eel River, and other coastal streams within the Park may support anadromous fish at various stages of their life cycles. Critical habitats for three species were previously identified in the Park, but the designations were subsequently withdrawn in 2002 because of a legal challenge. Reintroduction and habitat protection for coho and chinook salmon and steelhead are considered in the General Plan/ Environmental Impact Report. Genetic structure of the local species was considered as part of the restoration work that would be done in close cooperation and assistance from NOAA-Fisheries and DFG.

Cultural Resources

Culturally significant areas within the Park were identified as part of the planning process and the General Plan/ Environmental Impact Report aims to protect these resources and includes coordination with authorized Native American stakeholders to identify and preserve the important Native American sites. Protection and management of significant resources are important issues addressed in the General Plan/ Environmental Impact Report.

Historic lumber towns and mills existed at Needle Rock and Bear Harbor. Removal, destruction, or recycling of structures has left little surface evidence of the large-scale exploitation of lumber in the 19th and 20th centuries in the Park. Foot or equestrian traffic, looting, construction or maintenance of Park facilities, and road removal or re-contouring has caused cumulative damage to some historic sites. Adequate protection and interpretation of appropriate resources and the evolution of cultural landscapes for their historic significance are addressed in the General Plan/ Environmental Impact Report.

FUTURE LAND ACQUISITION

The 3 V parcels are currently in the process of being transferred to ownership by the Department. The scoping process identified suggestions to expand the Park to Highway 1, to encompass watersheds and viewsheds, as well as to purchase portions of the adjacent timberlands. Opportunities to acquire properties in the future may be limited. However, property acquisitions for the purpose of conjoining several small, isolated parcels within the Park or properties that help achieve goals of the general plan may be considered. The General Plan/ Environmental Impact Report identifies conditions that may make the addition of neighboring or other properties desirable and recommends evaluating other

properties for their potential values as biological wildlife linkages for targeted species, public use areas, and/or facility development sites.

The Park is adjacent to public land to the north (KRNCA) and some private lands that are maintained or planned for conservation and limited recreational purposes. The General Plan/ Environmental Impact Report considers coordinating with adjacent properties for establishing trail connections and joint-use facilities.

RECREATION PLANNING AND INTERPRETATION

The locations of the current and potential future visitor center(s) are addressed in the General Plan/ Environmental Impact Report. The current Park visitor center is located at Needle Rock. Visioning surveys conducted as part of the planning process showed that while some members of the public prefer not to have a visitor center in the Park to discourage concentration of visitor activities, others suggested additional visitor center(s) at Whitethorn, Baker Creek, Usal Beach or Piercy.

Many public comments requested that no new structures or buildings be added to the Park, however, it was suggested that a low-impact ranger station at Usal Beach be added to curtail illegal uses on the beach and trails. The General Plan/ Environmental Impact Report includes provisions for the evaluation of a new ranger station and its potential location.

The visioning surveys showed divergent views regarding the appropriate number and the level of development of the campsites. Additional campsites may not be compatible with the isolated, pristine qualities of the Park. The Planning Team considered potential expansions and/or additional access to existing campgrounds, potential additions of new campgrounds and outhouses, as well as the concept of limiting camping facilities to those currently existing. Informal campsites that adversely affect resources (e.g., Usal Beach) have been addressed in the General Plan/ Environmental Impact Report.

The surveys reflected divergent views regarding mountain biking and horseback riding in the Park. The General Plan/ Environmental Impact Report identifies where mixed-use sections of trails would be located in the Park in the future and outlines provisions to minimize environmental degradation and recreational incompatibilities.

Coordination With Agencies, Land Owners, and Stakeholders in the Vicinity of the Park

The General Plan/ Environmental Impact Report was developed to be consistent with other local and regional planning efforts, such as the Humboldt County General Plan, the Mendocino County General Plan, and the BLM California Coastal Monument RMP, and the RMP for the KRNCA. Other planning documents with specific bearing on the Sinkyone Wilderness SP include the management plans currently being prepared by Sanctuary Forest, and the Upper Mattole River and Forest Cooperative (UMRFC) for lands in the Mattole Watershed, as well as the management plan for the lands owned by the Council located adjacent to the Park to the east. These documents were considered during the preparation of the General Plan/ Environmental Impact Report. The UMRFC and Council have released a Draft Management Plan for the Department to review and evaluate consistency; however, representatives from both UMRFC and Council participated in and contributed to the public planning process and preparation of the General Plan/ Environmental Impact Report.

Road and Trail Maintenance and Management

The level of maintenance of trails and roads and road- and trail-related erosion in the Park have been raised as an issue in the surveys; however, the scoping process revealed divergent views that range from paving most roadways to providing additional and improved access, to closing roads and converting them to trails to limit vehicle access. Drainage improvements to minimize runoff and sedimentation from the roadways and the appropriateness of a bridge over Whale Gulch Creek were also raised as issues and are considered in the General Plan/ Environmental Impact Report.

The extent and types of improvements made to the trails were also raised as important planning issues and are addressed in the General Plan/ Environmental Impact Report.

The General Plan/ Environmental Impact Report identifies the need for a comprehensive Road and Trial Management Plan addressing all issues related to trail and road siting, maintenance, associated amenities, and road and trail conversions.

Public Access

The number of access points, parking areas, and new roadways or trails in the Park affects the amount and distribution of human activities in the Park. The General Plan/ Environmental Impact Report addresses potential locations and

the number of access points and parking areas desired while considering resource protection, visitor needs, and convenience.

Off-road Vehicles and Other Uses at Usal Beach

Visioning surveys and public input at public meetings showed divergent views regarding the use of OHVs on Usal Beach. While a constituent of Park visitors would like to be able to drive on the beach, others do not appreciate the noise, disturbance and site degradation associated with these activities.

The use of off-highway vehicles (OHV) at Usal Beach has been identified as a source of problems such as erosion, water quality impairment, degradation of riparian and dune areas, and visitor disturbance. The evaluation and management of the impacts from OHVs, such as four-wheel-drive trucks at Usal Beach, are addressed in the General Plan/ Environmental Impact Report.