CAINES HEAD
STATE RECREATION AREA

MANAGEMENT PLAN

December 1997

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF PARKS & OUTDOOR RECREATION

ALASKA STATE PARKS

Alaska Department of NATURAL RESOURCES

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KENAI/PRINCE WILLIAM SOUND AREA PARKS OFFICE

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Front cover photo by Robert Angell

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SUMMARY

This plan addresses the physical development and management of Caines Head State Recreation Area and the changing face of the recreation area's nearest community, the City of Seward and its surrounding area.

Seward, Resurrection Bay and the many Federal recreation lands surrounding them are rapidly developing and growing in popularity. The City of Seward has become a multi-industrial, all-season community. With the addition of the Seward Marine Industrial Center, the Suneel Coal Terminal, the Spring Creek Correctional Facility, and the soon-to-be developed Alaska SeaLife Center, growth projections for Seward show a dramatic increase. Seward has grown from a town of 1,843 in 1980 to nearly 3,100 in 1995. As revenues and industrial growth rates are leveling off elsewhere in the state, the City of Seward shows remarkable vitality.

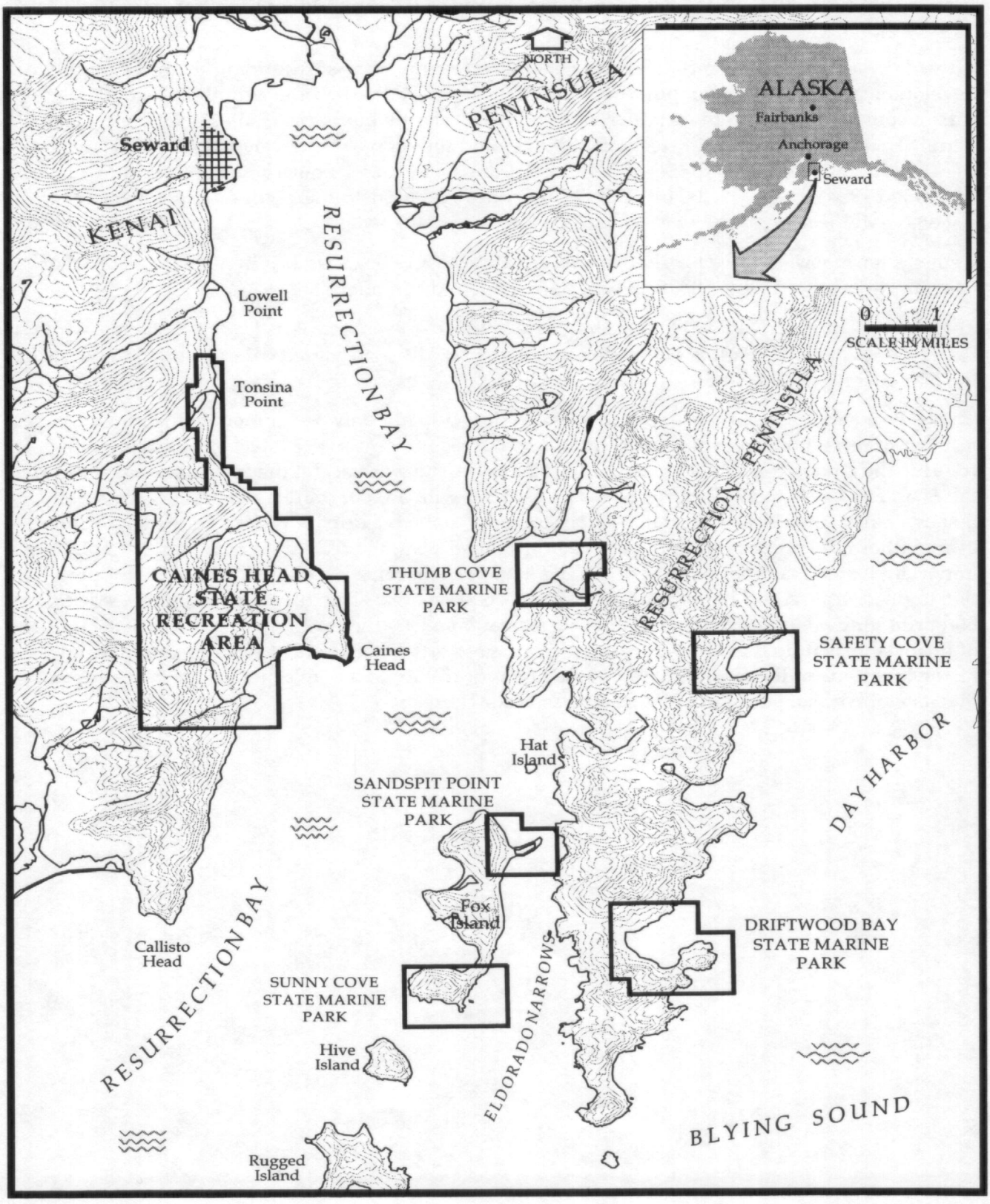
Demand for mooring space for charter and private pleasure boats in the city's small boat harbor has outgrown even a new 1,000 slip boat harbor soon to be undertaken.

The nearby Chugach National Forest shows steady increases in use of its trails and cabins, while Kenai Fjords National Park is rated one of the most rapidly increasing visitor destination points of the National Parks of Alaska.

Caines Head State Recreation Area must be developed to not only accommodate the growing number of recreation users of Resurrection Bay, but also to preserve, protect and interpret the colorful and dramatic past that exists within the bay. The existence of the high standard trailbed to the main fort overlooking Resurrection Bay, coupled with an ideal, strategic marine access point, makes Caines Head a readily-available day-use area to the majority of boaters in the bay. However, without the proper foresight of a well-developed plan, the recreation area may not only lose important historic and natural resources, but could also become a continual management problem due to uncontrolled and haphazard use of the recreation area. This plan provides the needed blueprint for developing and maintaining a recreation area which will, no doubt, prove itself to be of financial benefit to the Seward area, a recreational asset to the users of Resurrection Bay, an historical tribute to those who fought in the last World War, and a reflection of the best efforts of the State of Alaska, Division of Parks and Outdoor Recreation.

Caines Head State Recreation Area

LOCATION MAP



INTRODUCTION

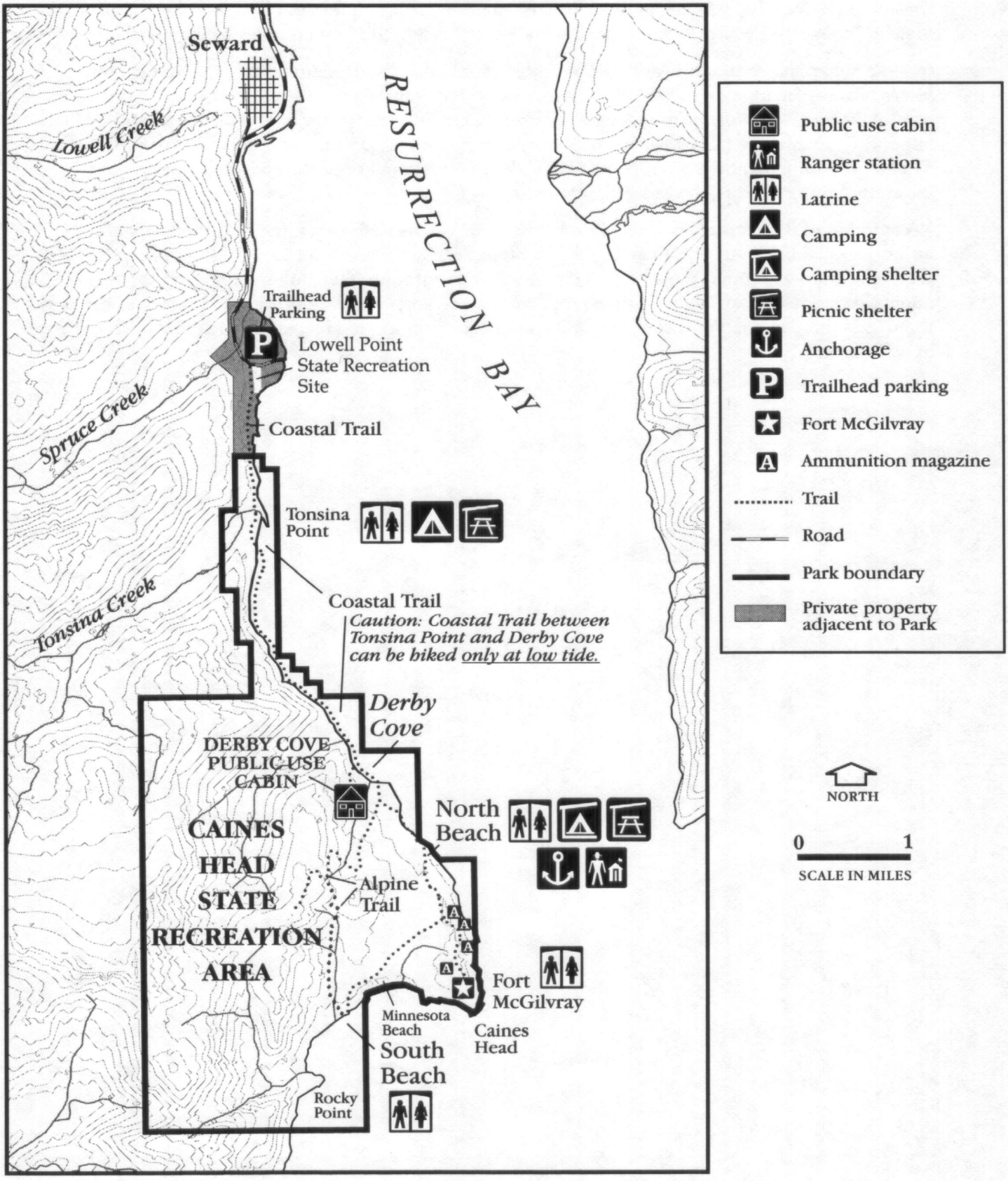
Caines Head State Recreation Area rises vertically 650 feet from the west shore of Resurrection Bay presenting a dramatic profile against a backdrop of towering mountain peaks and a panoramic view of the North Pacific Ocean. The City of Seward is less than seven miles to the north.

In 1942, when the Aleutian Islands were under aerial attack and occupied by Japanese ground forces, Caines Head, along with other Resurrection Bay vantage points, were utilized to fortify the port of Seward. The fortifications were considered essential for passage of critical war and civilian supplies. Now, more than 50 years after its use as a strategic post for the Seward Harbor Defense System, the same vantage point provides outdoor recreational opportunities in a setting both naturally impressive and historically interesting.

Recognition of the recreational, scenic and historical values of the area inspired the Legislature to authorize establishment of Caines Head as a State Recreation Area in May, 1971. Four years later, the Legislature expanded the area to include the adjacent mountain slopes, enlarging the recreation area's size to 5,961 acres. In 1995, 610 acres were added to the northern boundary of the park to include the Tonsina Point camping and trail areas, bringing the recreation area to its present size of 6,571 acres.

Caines Head State Recreation Area

EXISTING FEATURES AND FACILITIES MAP



GOALS AND OBJECTIVES

The overall goals and policies for the management of units in the Alaska State Park System, and specifically state recreation areas, are discussed in *Alaska State Park System: Statewide Framework* (ADP, 1982). In summary, the dominant management objective of a recreation area is to provide a maximum level of outdoor recreational opportunities based on the natural and historical values of the unit and its ability to sustain use without significant adverse effects on natural systems.

The management philosophy for Caines Head State Recreation Area is summarized in the following goal statements:

1. Provide recreational opportunities appropriate to the regional setting and physical character and compatible with the natural, cultural and historical values of the recreation area.
2. Protect, manage and interpret the area's natural, recreational and scenic resources and significant cultural and historical values.
3. Provide for adequate maintenance and operation of the recreation area and facilities, ensure resource protection, fulfill human health and safety responsibilities, and meet public service needs.
4. Pursue marketing, cost-effectiveness, and economic strategies to increase efficiency and effectiveness in the management of the recreation area and contribute to the role of recreation and tourism in the regional economy.

The following objectives will help the Division of Parks and Outdoor Recreation meet the management goals of Caines Head State Recreation Area:

1. Analyze existing and anticipated trends of regional use and demands, and determine Caines Head State Recreation Area's role in satisfying those demands.
2. Make specific recommendations concerning the preservation and development of historical resources and facilities within the Recreation Area.
3. Provide priority phasing of facility and resource development recommendations to serve as a basis for capital and operation budget requests.
4. Develop specific management and operational guidelines.
5. Provide for a broad spectrum of recreational opportunities and users.
6. Establish management flexibility to meet changing conditions, needs and opportunities.

PHYSICAL, BIOLOGICAL AND CULTURAL RESOURCES

PHYSICAL RESOURCES

Many of the same natural features that qualified Caines Head as a coastal defense installation make it a desirable recreation area: Commanding views, moderate climate, ample beaches with good protection, accessibility from a nearby community service center, absence of major land development constraints, a mature spruce/hemlock setting and the availability of fresh water. These are the more salient considerations upon which recommendations for the protection, use and development of the area must be based.

Climate Precipitation for the Seward area measures approximately 66 inches annually, which includes 80 inches of snowfall. Because of its higher elevations and southern headland exposures, Caines Head receives even greater snow and rainfall accumulations than Seward.

Wind and Waves The prevailing winds in Resurrection Bay are from the north during the winter and from the south during the summer months. During spring and fall, the wind direction tends to fluctuate greatly. Winds are generally stronger in winter. Wind-generated wave action affects offshore boating activities and marine access to the recreation area. Waves in the vicinity of Caines Head come from two sources: those generated by local winds, and those generated by distant storms in the Gulf of Alaska.

For more information of wind and wave conditions at Caines Head, please refer to a consultant's study prepared for the Division of Parks and Outdoor Recreation. This study also provides useful design information on developing marine access to Caines Head (see *Caines Head Marine Access Study*, CH2M/Hill, March, 1982).

Tides and Currents Tidal range can vary from a mean difference of 8.3 feet to an extreme difference of 19.7 feet between high and low tides.

Tide-induced currents are also a consideration for boating activity, anchorages and shoreline development. Tide-induced currents have a peak velocity ranging from 0.12 feet per second (0.1 knots) between mean tides to 0.30 feet per second (0.2 knots) between extreme high and low tides. Wind-induced currents, which exist in only the upper two to ten feet of water, are assumed to be 3% of wind speed. The relatively gentle tidal differences and currents that exist in Resurrection Bay attract kayak, sailboat and powerboat operators.

Geology The geology of Caines Head State Recreation Area is characteristic of most of the Chugach and Kenai mountain ranges. It is composed primarily of weakly metamorphosed sedimentary rock. The material common to the bedrock of the area is greywacke, a dark grey metamorphosed shale with cleavage parallel to the rock bedding.

The shoreline areas are largely composed of talus material resulting from the rapidly eroding slate cliffs that dominate the coastal areas. The limited beach areas are composed of surficial deposits (undifferentiated boulders, cobbles, gravel, sand, silt and clay).

A solitary glacier extends into the recreation area sloping northeast from Callisto Peak. Although this remote glacier is small in size and largely inactive, it provides an interesting destination point for mountaineers and climbers. It is also a primary source of year-round water to Tonsina Creek and should be considered an important hydrological resource to the recreation area.

Evidence of marketable mineral resources have only been found in the active gold claims located along Tonsina Creek.

The most significant occurrence in recent geologic history was the 1964 Good Friday Earthquake, when the land mass around Resurrection Bay subsided approximately five feet, resulting in sub-

stantial reduction of the rocky beaches around Caines Head. Large rock crevasses, ranging from ten to eighty feet deep, exist along both the western and southern shoreline and are evidence of ground breakage due to the 1964 Earthquake. Injury to the public should be prevented by clearly identifying these areas with signing or other appropriate information methods.

Tsunamis Seismic ocean waves generated by earthquakes (tsunamis) have been subjecting the southcentral Alaskan coastline to their power for eons. The 1964 tsunami caused considerable damage to the Seward area, and caused all shoreline developments to be destroyed or damaged in some way. Predictions by the Army Corps of Engineers for 100- and 500-year tsunamis to occur at Caines Head are: Rocky Point wave height 17.1 ft. (100 year), 41.7 (500 year); North Beach wave height 17.7 ft. (100 year), 43.6 (500 year). These are not periodic predictions, e.g. one tsunami every 100 years, but based on a one-in-one hundred or one-in-five hundred chance of a wave occurring in any single year. These odds have not prevented shoreline developments from returning to southcentral Alaska, but the visiting public should be forewarned when recreating in low-lying coastal areas. Should a tsunami warning be issued, those people not reachable by radio or sirens should know and heed the visible, physical warning signs of an imminent seismic wave. This information should be made available at the Recreation Area's trailheads and visitor centers in the Seward area.

Hydrology The maritime climate and storms of the Gulf of Alaska provide a consistent and substantial delivery of moisture to Caines Head and the Kenai Mountains. Much of the fresh water in the recreation area is stored in ponds and floating bogs. The glacier on the western boundary holds considerable water volume and drains to the north into Tonsina Creek. As a major spawning stream for both pink and chum salmon, Tonsina Creek is considered a valuable resource.

The recreation area can be said to contain six major hydrological units: Callisto Canyon, Rocky Point, South Beach, Minnesota Beach, Derby Cove and North Beach. All of these units are seasonally active and some, such as Callisto Canyon, Rocky Point and South Beach, will vary in volume from subterranean one-quarter to one mile back from the beach during some summer periods to overflowing at spring break-up. Streams in the three other areas flow over bedrock to the shoreline, usually ending in lagoons.

The military was responsible for altering three of these drainages. The Minnesota Beach drainage was utilized by the Army by damming a small pond, creating a reservoir. This provided the water supply for Fort McGilvray. Two small streams terminate at the North Beach lagoon and damp lake; the northernmost stream served as a water source by the Army for this small encampment near the pier. The South Beach drainage, although subterranean for the majority of the year for the last one-half mile, served a fire hydrant system and as a water supply for the South Beach garrison during the Army's occupation.

BIOLOGICAL RESOURCES

Vegetation The heavily wooded and dense vegetation found at Caines Head is essentially a northern extension of the lush spruce/hemlock forest found along the northern Pacific Coast. The dominant trees are Sitka spruce, which can attain an age of 750 years and a diameter of more than ten feet, although a diameter of four to five feet is about the maximum for Caines Head; and western hemlock, with heights up to 190 feet recorded, and common diameters of two to three feet. The Kenai Peninsula marks the westernmost extension of the western hemlock growth in Alaska. Mountain hemlock and occasionally black cottonwood are sometimes found in association with Sitka spruce and western hemlock. Tree line occurs at approximately the 1,200 foot elevation, with a high brush line of 1,500 feet consisting of Sitka alder.

Common undergrowth species include Sitka alder, devil's club, willow, blueberry, salmonberry,

currents and various mosses, ferns, mushrooms and lichens.

The most impenetrable understory is second-growth spruce, hemlock, and alder which are commonly five to thirty feet tall and one to six inches in diameter, and appear in disturbed areas, old roads and other World War II clearings.

Above timberline, the low shrubs give way to seasonal alpine species of plants, including arctic willow, dwarf arctic birch, arctic wormwood and various grasses, sedges and lichens. Among the bogs and ponds are varieties of bog orchids and insectivorous sundew plants and yellow bog lilies surrounded by sedges, grasses and mosses. Beyond the beach berms and at the edge of lagoons and small ponds, dwarf and common fireweed, beach peas and wild iris can be found in abundance during the mid-summer months.

Fish Fish species present in the marine waters adjacent to Caines Head utilized for sportfishing purposes include coho, chum, pink, and king salmon; halibut; sole; flounder; Dolly Varden; assorted rockfish; lingcod, Pacific cod, and tomcod. While sportfishing does not take place year-round in Resurrection Bay, during the months of May, June, July, August and September, the fishing for these species reaches its peak. The North Beach area receives the majority of the on-shore fishermen that visit the recreation area. The Army dock area (North Beach) has been traditionally known for the exceptional trolling for coho salmon during the months of July and August. A sport shrimp and crab fishery exists adjacent to the recreation area and is active throughout the summer months. Recreational sportfishing at Caines Head SRA is a growing major attraction and must be considered in all shoreline developments.

Wildlife Wildlife should be considered one of the primary resources in the Caines Head SRA. Terrestrial and marine mammals are relatively abundant in the recreation area and surrounding areas. Among the many terrestrial mammals known to exist within the region are brown and black bear, mountain goat, wolf, wolverine, coyote, lynx, porcupine, marmot and river otter. Marine mammals seen within and adjacent to the recreation area's marine waters include harbor seal; Steller sea lion; sea otter; Dall's and harbor porpoises; and orca, humpback, grey and fin whales.

Mountain goats inhabit the mountainous areas of the recreation area and surrounding lands. Their primary range during the summer months is on the alpine and subalpine slopes. As winter approaches, they migrate to lower elevations where forage is available. During spring, nannies may be found with their newborn kids on the southern cliffs of Caines Head.

Marine bird life is seasonally abundant along the shores and cliffs of Caines Head. Small colonies of horned puffin, glaucous-winged gull, pigeon guillemot, black oystercatcher, marbled and Kittlitz's murrelets, pelagic and double-crested cormorants, harlequin duck and merganser breed within Caines Head SRA.

Bald and golden eagles are seen throughout the recreation area, with bald eagle nests near the shore. One occasionally active bald eagle nest of particular interest exists on the point of land between North Beach and Derby Cove. Boaters appeared to disturb the eagles very little, if at all, on their daily approaches to view the nest. White-tailed and willow ptarmigan, peregrine falcon, and spruce grouse are also found in the recreation area, along with numerous passerine bird species including hermit, varied, and Swainson's thrush; black-capped and boreal chickadees; Steller's jay; raven; magpie; and northwestern crow.

CULTURAL RESOURCES

Native History No evidence of existing or previous settlements around Resurrection Bay was found by Russian explorers in the late 18th century. A site examination by an archaeologist produced no archaeological evidence within the recreation area. One reason offered is the absence of a good year-round water source and difficult access to salmon streams. Lack of findings to date does not preclude the possibility of future discovery of archaeological data within the recreation area.

Russian History Although extensive research has been pursued regarding the Russian settlement of Resurrection Bay, no conclusive evidence exists to prove that Alexander Baranof's Russian-American Company utilized any parts of the recreation area during their occupation in the Seward area between 1791 and 1800. Somewhere in the Resurrection Bay area is the construction site of the *Phoenix*, the first Russian ship built on the west coast of North America. Although an 1826 Russian Atlas identifies the shipyard on the west side of Resurrection Bay, no site has yet been found within the bay that confirms the location of any Russian settlement or evidence of ship construction.

Recent History Caines Head is named for Captain E. E. Caine, captain and owner of Pacific Clipper Steamship Company's wooden steamer, *Santa Ana*, which brought the first permanent settlers to Seward on August 28, 1903.

Military History The military development within the recreation area falls into two distinct phases: Pre-Pearl Harbor Attack and Post-Pearl Harbor Attack.

The first troops arrived on July 31, 1941. The earliest constructed military features of the recreation area during the pre-Pearl Harbor attack period were at South Beach and Caines Head. These were mostly log structures and tents supporting the 227 men of the 250th Coast Artillery and four 155mm guns. Base End stations coordinating the guns were located atop the 200-foot bluff east of the South Beach shoreline and another 300 feet up the craggy face of the Caines Head headland. A pile-driven pier was constructed at South Beach, only to have been removed upon completion of onshore developments. This battery interacted with the garrison at Fort Raymond in Seward with its 20 officers and 455 enlisted men to defend the railroad terminus and ice-free port of Seward. On July 20, 1942, seven months after the Pearl Harbor Attack and over one month after the attack and occupation of the Aleutian Islands of Attu and Kiska and the bombing of Dutch Harbor, the first major developments in Resurrection Bay began.

Civilian forces employed by the West Construction Company started work on July 20, 1942 on what was to be one of the most difficult, expensive and hazardous constructions of defense facilities anywhere in the world during World War II. Marine transportation presented the most hazardous problem due to the frequency and suddenness of storms, deep water and rugged coastline where no beaches were available to provide facilities for the rapid and easy unloading of cargo. The construction of the Caines Head battery was an easier task than the fortifications at Rugged Island, located at the most southerly point of the bay (see location map), but it still represented a major engineering feat. The West Construction Company had to pioneer a winding road from the beach to the battery site before blasting operations could be started for the massive concrete construction. Aggregate for construction and road surfacing was obtained from South Beach, where the contractor set up a screening plant. This supply proved insufficient, however, and had to be supplemented with aggregate barged from Seward to the various job sites.

Recognizing that Resurrection Bay was a strategic point in the supply line from the Lower 48 states to all of Alaska, the Western Defense Command, at the urgent request of the Alaska Defense Command, authorized the construction of the fixed harbor defenses for Seward on September 13, 1942. This gesture was a formality, since construction had already started in earnest throughout the bay.

The fixed defense installations included 6-inch batteries located at Caines Head and Rugged Island, together with searchlight positions, supporting fire control appurtenances and necessary housing at Rocky Point, Topeka Point, Carol Cove, Chamberlain Point, Barwell Island and Alma Point. Sea-coast radar installations were installed at Patsy Point (Rugged Island) and South Beach. Four high lines had been installed at Barwell Island, Chamberlain Point, Carol Cove and Alma Point for construction and maintenance purposes. Facilities were built for 40 officers and 787 enlisted men. Docking facilities for the Caines Head development consisted of one small pile-driven dock, 40'x100' at North Beach.

On December 14, 1942, the 558 men of the 267th Coast Artillery arrived in Seward. Of these, 145 men of "B" Battery were sent directly to South Beach to report for duty. They discovered hidden among the tall spruce and hemlock stands the beginnings of a small village complete with many services. Four barracks capable of holding 63 men each, several officers' quarters, a mess hall, a recreation hall, supply houses, and communications, sewer, water and fire hydrant systems and many other amenities were set below a protective forest canopy.

Coinciding with the South Beach developments was the construction of the 155mm gun Panama mounts at Rocky Point and support structures. The Navy operated a submarine loop station here to monitor traffic in and out of the bay. A communication cable stretched across the bay below water line connecting to a point near what is now Humpy Cove (formerly Butts Bay).

The 155mm guns of Rocky Point, formerly mounted along the waterfront of South Beach, were fired regularly each week for training purposes. Floating barge-type targets were used as well as a static target on Fox Island Spit.

The Caines Head project was 90% complete by February, 1944, and housed 2,000 troops during the course of two years. The cost of construction of the fixed harbor defenses of Seward (Caines Head, Rugged Island, et. al.) came to $4,727,000. The battery was ordered abandoned on April 7, 1944 and dismantled on March 4, 1947. Following deactivation, Fort Raymond in Seward was designated, and still serves as, a military recreation camp for Army and Air Force personnel.

With the exception of the log structures at South Beach, detailed descriptions and plans exist of all the as-constructed structures within the recreation area boundary. Refer to the Fort McGilvray Historic Structure Report on file with the Division Office of History and Archaeology. A detailed, architectural inventory was made in 1981 of most of the historic military structures (see: *Fort McGilvray Structure Survey*, RPA, ALPS, Division of Parks and Outdoor Recreation, Anchorage).

Population Seward is the region's largest community with a 1995 population estimated at 3,034. The city is growing from a seasonal fishing and tourism-based economy to a more broad-based, year-round economy.

Economic and Population Growth Projection The city recognizes that even small changes, such as the development of new businesses, parks, a fire station or the administration of a city service, are not isolated actions but affect the entire community. Therefore, the city's comprehensive plan addresses both *private* and *public* lands, facilities and services in an effort to balance long-term objectives for the greatest common benefit.

The burden on the small boat harbor to handle each summer's intensive demand for pleasure and commercial fishing vessels has become increasingly difficult. Although the harbor is limited to 650 slips, it is not uncommon to have 900 boats tied up at any one time. In 1994, there were more than 1,100 boats waiting for permanent moorage in Seward. Even if an additional boat harbor is constructed (with approximately 1,000 more slips), it is unlikely that the present demands on the city harbor will be relieved.

The city recognizes that particular opportunities in the tourist and visitor industries need to be

systematically pursued. The Seward Comprehensive Plan states as one of its goals: "Promote Seward as a marine gateway to Alaska, as well as a visitor destination to Southcentral residents, offering a broad variety of recreational experiences from the most remote wilderness treks to tour boat and bus visitors." The plan further states as one of its objectives: "To coordinate with the Alaska Division of Parks to implement a long-range *development* and *access plan* for Caines Head SRA."

REGIONAL AND LOCAL RECREATIONAL OPPORTUNITIES

Caines Head SRA is located within Southcentral Alaska, a region of diverse topography ranging from tidewater glaciers to the highest peak of the continent, and featuring some of the world's most dramatic coastal scenery. The region is home for one-half of Alaska's population, destination of more than two-thirds of the tourists who visit the state, and possesses the most extensive multi-modal transportation system in the state.

Kenai Peninsula Visitor appeal to the Kenai Peninsula is focused largely on the area's salmon sport fishery. Seward's annual Silver Salmon Derby is a major attraction in late summer with approximately 7,611 ticket holders in 1995.

Public Agencies The vast Harding Ice Field, just a few miles west of the recreation area, and the rugged fiords facing the North Pacific Ocean comprise Kenai Fjords National Park. This is an area of spectacular wilderness, recreational and scenic values. Road access to Exit Glacier and daily charter boat service to the fiords have become major visitor attractions.

Kenai Fjords National Park had approximately 56,572 visitors in 1987. In 1995, that number climbed to 231,311.The National Park Service maintains a year-round visitor center near the Seward small boat harbor. The U.S. Fish and Wildlife Service manages two major refuges in the area: The Kenai National Wildlife Refuge, bordering the northwest boundary of the National Park, and the Maritime National Wildlife Refuge, which encompasses the outer islands of Resurrection Bay, the Chiswell Island group and other islands throughout the Aleutian Chain. The U.S. Forest Service, Chugach National Forest, is manager of the majority of lands surrounding Seward and the Seward Highway corridor south of Girdwood. The National Forest offers hundreds of miles of hiking trails and an extensive public use cabin system. The U.S. Fish and Wildlife Service and the U.S. Forest Service are responsible for managing the greatest area of public lands on the Peninsula.

Records of visitation for Caines Head State Recreation Area have only been kept since 1985, then in its first year of operations. Observed visitors to the recreation area in 1985 totalled 934. In 1986, 1,965 visitors were observed using the recreation area. 1987 saw another increase with 2,430 visitors to the recreation area. By 1995, the count was 3,327. In 1996, counting hikers to Tonsina Point, the recreation area had 4,553 visitors. Adjustments to these numbers have not been made to account for turnover rates. These totals only account for observations made during one work shift (7.5 hours) per day, five days a week. No figures for visitation are available from any previous year, but should be assumed to be considerably less, since facilities were not available and trail clearing had not yet made visitor access to the recreation area convenient.

Commercial/Private Sector Two commercial use permits were issued for Caines Head SRA in 1995. These permittees mainly provided some form of transportation to and from the recreation area for the public. The U.S. Army and Air Force operate joint recreational facilities in Seward for the use of the respective military branches' families and guests. The recreation camps had a total of over 35,000 visitor days for 1996. The recreation camp offers boating and fishing as part of their recreational opportunities with a fleet of approximately 20 boats capable of carrying six to 16 people each. The number of passengers using these boats in the summer total nearly 16,000. The Army/Air Force recreation camp underwent improvements in 1996 to make it a year-round recreation destination.

Commercial boat operators serving the tourist industry are steadily increasing in Resurrection Bay. Companies now servicing Resurrection Bay and Kenai Fjords National Park are showing remarkable increases. In 1985, almost 7,000 visitors aboard one tour boat company made daily excursions through Caines Head SRA's waters to observe the Army's pier remains, eagles' nests, puffin and other seabird colonies as well as surrounding marine mammals. By 1995, that number rose to 11,772.

Caines Head SRA has become a popular destination and stopover point for kayakers in Resurrection Bay. The recreation area offers a strategic stop for those blue water paddlers desiring an intermediate-level challenge in Resurrection Bay, or a break from a long paddle to or from the Kenai Fjords National Park. Caines Head SRA is one of the recommended guided and unguided destinations of an established kayak rental and guide company in Seward. In 1995, 293 kayak visitor days were logged from this one company.

The cruise ship industry has grown from 15,750 visitors aboard in 1987 to 104,250 in 1995. All of these passengers had the opportunity to view the Caines Head headlands, where the fort and gun emplacements stand sentinel. Any developments to the fort and gun pads are clearly visible from the water at a great distance. With improvements, this impressive fortress could create added interest for those visitors seeking excursions to the recreation area for the day.

Additionally, several helicopter and fixed-wing aircraft scenic overflight tours of Resurrection Bay/ Kenai Fjords National Park were operated throughout the summer out of Seward, weather permitting. In 1996 three fixed-wing aircraft companies were providing flightseeing tours to the general public and two helicopter companies were operating almost exclusively when one or more of the 105 cruise ships were docked in Seward.

Implications The implications of this great influx of summer visitors and their wide-ranging interests are of special importance to the future of Caines Head SRA. The recreation area provides ample opportunities for a wide range of recreational pursuits: from fishing, hiking, camping and wildlife photography to exploring one of the finest representations of Alaska's military past and its involvement in the war with Japan during World War II.

Any study of past recreational preferences of Southcentral Alaska residents cannot neglect the importance of the present demand for recreational opportunities in Resurrection Bay and the important niche that Caines Head SRA has, and will continue to have, for present and future Alaska residents and visitors. The recommendations that follow will attempt to maximize the outdoor recreational opportunities based on the natural and cultural values of Caines Head SRA without adversely affecting its natural and cultural integrity.

LAND USE ZONES

The *Alaska State Park System: Statewide Framework* plan clarifies the management intent of land and resources within state recreation area units by means of land use zones. The four land use zones used in this system are: (1) recreational development zone, (2) natural zone, (3) wilderness zone, and (4) cultural zone. These specific land use designations are used to provide more detailed managerial direction.

Within the existing boundary and proposed additions to Caines Head State Recreation Area, management will be best accomplished utilizing a combination of all four land use zones.

1. Recreational Development Zone:

The purpose of recreational development is to meet the recreational needs of the public by providing:

- Easy and well-defined access points via roads, boating anchorages and high-standard trails;
- Intensive development of recreational facilities (i.e., campgrounds, picnic areas, sanitation facilities, etc.);
- Guided activities (i.e., commercial, private or state provided);
- And signs to orient visitors to the unit's special features.

Recreational development zones should be located where soils, slope, drainage and vegetation can support moderate to intensive recreational activities and allow fire control and insect and disease restraint.

The location of this zone at Caines Head will allow appropriate management of access facilities, such as boat mooring facilities, picnic shelter and congregating facilities at North Beach.

2. Natural Zone:

According to the *Alaska State Park System: Statewide Framework*, "Natural zones are established to provide for moderate to low cluster or dispersed forms of recreation" and should encompass "areas within state recreation area units that are relatively undeveloped and undisturbed, maintain high scenic values and provide visitors with the opportunity for significant natural outdoor experience." In recreation areas, landscape modification may be allowed to enhance, maintain or protect the natural setting.

Fire suppression, insect or disease control and wildlife enhancement as management techniques in this zone will be allowed if they serve to perpetuate rather than alter the natural features of the zone.

At Caines Head SRA, the natural zone encompasses most of the waterfront, the ponds and surrounding bogs and forests of the valley, and the lower slopes of the mountains. Developments within the natural zone will provide a moderate level of convenience, such as backcountry shelters, trails, bridges and observation points. Activities will include hiking, camping, hunting, fishing, rock climbing and cross-country skiing. Motorized trail activity will not be permitted due to safety concerns regarding the limited space and the lack of natural barriers for separating motorized from non-motorized recreational activities. Due to high potential for user conflicts and sensitive bog areas, non-fixed wing aircraft (helicopters) will not be permitted to land within the natural zone.

Bogs and lakes, although environmentally sensitive to human use, will be included within the natural zone because boardwalks permitted in that zone could actually reduce human impacts while still allowing enjoyment of bogs.

3. Wilderness Zones:

Wilderness zones are established to perpetuate the wilderness character of the land and its specific values of solitude, physical and mental challenge, scientific study, inspiration and primitive recreational opportunities.

The *Alaska State Park System: Statewide Framework* states that a wilderness zone will have no conveniences within its boundaries except for the most primitive of campsites and trails with minimal trail maintenance and signing. Developments or other improvements will be undertaken only where it has been determined by the Director that significant threats to public safety exist or to reduce adverse impacts on the area's resources and values. Access to and within this zone will be by foot or other non-motorized means. Motorized vehicles of any type, including the dropping of people or objects from aircraft or the landing of aircraft, will be prohibited. Activities which threaten the character of the wilderness zone will be restricted if over-use or misuse occurs. The Director may restrict entry to, and use of, the area to protect its wilderness character. Methods of restriction may include separation and control of use activities through time and space allocation.

At Caines Head SRA, the wilderness zone will include all alpine areas above 1,500 feet because of the challenge they pose for mountaineering, and because it borders the common hydrological boundary that drains into the Bear Glacier drainage, an area shared with the National Park Service and containing wilderness designations.

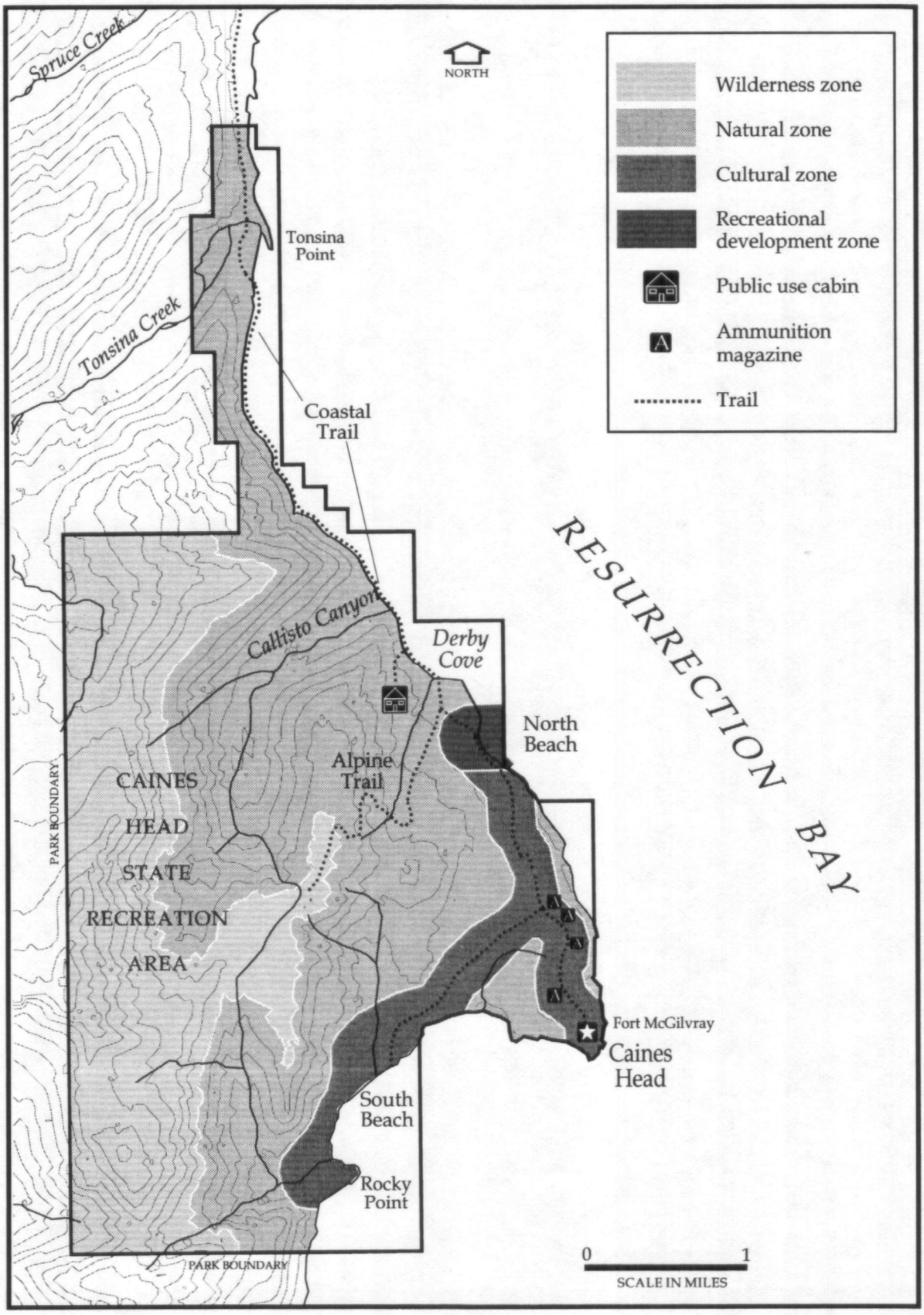
4. Cultural Zone:

The purpose of establishing a cultural or historical zone is to preserve, investigate, document and interpret Alaska's cultural resources and heritage. At Caines Head, this zone encompasses the assemblage of historical features which constitutes the World War II coastal defense installation.

The intensity of development in this zone will be managed to insure that use levels of the area do not impair the integrity of the historical resources. Any development should have minimal impact on the historical values within the unit and involve the minimal introduction of artificial features for activities not related to the resources and their values. Development will generally be associated with the necessity for public access, safety and interpretation of the cultural resources present. Activities in this zone are for educational or scientific purposes. Recreation-related facilities will be regarded as secondary and will be separated by a sufficient buffer from the site(s) of cultural resources. Activities in keeping with the historical period of the cultural resources may be encouraged in the form of adaptive reuse of the roads, observation points and barracks. The location of recreational activities and developments will correlate with historical uses: i.e., sightseeing from command post and lookouts and travel along military road systems. Activities and facilities not in keeping with historical features, such as overnight use of tactical structures, will be not be permitted in the cultural zone.

Caines Head State Recreation Area

LAND USE ZONES MAP



SPECIAL ISSUES

The contents of this section address the special constraints and issues that exist within and around Caines Head SRA.

ACCESS

The major point of departure for visiting Caines Head SRA is Seward. The recommended primary access is by watercraft. However, an overland route has been defined by way of a tidelands trail from Tonsina Point to Derby Cove.

Marine Access Marine access to Caines Head SRA has been studied to some extent in the *Caines Head Marine Access Study* by CH2M Hill in 1982. Their findings and recommendations are extensive and useful.

The consultants recommended that the development of access for small pleasure craft and chartered vessels should be approached with extreme care and should be restricted to the North Beach area. The future developments at North Beach, while not limited to the consultants' recommendations, should be sufficient to allow for continued successive development that can be added as demand increases, financing becomes available, and as carrying capacity allows.

The remains of the existing Army dock are an asset for divers and fish habitat, and serves as an historical landmark. It does not, however, provide boaters safe access to the beach, due to the uncertainty and unpredictability of the weather

The single addition of offering safe moorage to even two or three boats greatly enhances the accessibility of Caines Head SRA. As an interim measure, two mooring buoys, each sufficient to hold a 50-foot boat, should be located offshore from the North Beach. Another buoy should be designated specifically for Park personnel only.

Overland Access Presently, access to Caines Head SRA by land has been by way of a one-and-one-half mile long gravel road between Seward and Lowell Point. From there, a one-and-one-half mile road passes through private property and into the park, ending at a 200-300 foot high bluff overlooking Tonsina Creek. A steeply-sloping trail leads one-quarter mile to the North Fork of Tonsina Creek. Both the north and south forks are now spanned by foot bridges.

Two-thirds of a mile south, the Tonsina Creek aluvial effect ends. From here, the hiker's two and one-half mile walk to the recreation area is dependent upon the tides. After leaving Tonsina Point, the trail continues along the shore for one-and-one-quarter mile further south. Here, the safety of upland trails start at Derby Cove. This allows for twice-a-day passage of foot traffic in and out of the recreation area.

For the tidal trail to be safely negotiated, a low tide of at least +5 feet or lower must be determined. Otherwise, access across two rocky outcrops encroaching on the beach areas between the "Waterfall Grotto" and Callisto Canyon can be altogether prohibiting.

Since 1986, the City of Seward has permitted the Division of Parks to utilize a vacant lot next to the city's sewage treatment plant at Lowell Point for trailhead parking for the park. A long-range goal of a permanent parking solution was realized in 1997 when the Exxon Valdez Trustee Council purchased 20 acres of beachfront property at Lowell Point to serve as trailhead parking for the park, and as one of the last publicly-accessible natural beaches in the Seward area.

ACQUISITION

The surrounding islands and the Resurrection Peninsula on the east side of the bay contain the remains of the rest of the Seward Harbor Defense System. The locations of Base End Stations,

searchlight stations, and first-class gun batteries exist atop Topeka Point, overlooking Humpy Cove; Rugged Island; Barwell Island; and Chamberlain Point, overlooking Day Harbor. These lands are all presently state-owned. Efforts should be made to create with these sites a collection of National Register of Historic Places, giving Resurrection Bay and Seward recognition as being the busiest, if not the most critical, supply line in Alaska during World War II, and also protecting an important part of Alaska's heritage.

Private and city-owned lands formerly used by the Army for harbor defense are at Lowell Point, Fourth of July Creek and several areas near the downtown area of Seward. These areas should be identified and with the land owners' permission, and upon application and qualification, be included on the National Register. While not restricting the development of these areas, the National Register of Historic Places designation has in the past made the owners eligible for tax credits for preserving, restoring or improving the sites.

In 1988, a trail right-of-way and five-acre parcel were proposed for the Tonsina Point area with the Division of Land and Water Management. In 1995, an Interagency Land Management Assignment (ILMA) was approved for the trail right-of-way, the five acres and an additional 630 acres of the Tonsina drainage. This spectacular area adjacent to the recreation area not only serves as a summer recreation destination, but is now a major staging area for accessing the recreation area at low tides.

The Division should continue to improve the land management of the area. By adding the land south and west of the recreation area up to the boundary of the Kenai Fjords National Park, the Division would be filling the management "void" that exists within the two air miles separating the National and State Park units. Legislation should be introduced to achieve this goal.

As the centerpiece of Resurrection Bay, Caines Head State Recreation Area will serve as a strong support and information base for the marine parks of Thumb Cove, Fox Island, Driftwood Bay and Safety Cove. The present recreational demands on the bay will require that safe anchorages and shoreline facilities be planned and developed now to accommodate the increasing use of Resurrection Bay.

Summary of Acquisition Recommendations:

1. Purchase land at Lowell Point for trailhead parking and day use facilities.
2. Encourage and offer technical assistance for inclusion on the National Register of Historic Places: Humpy Cove, Rugged Island, Barwell Island,Chamberlin Point, and selected World War II sites at Fourth of July Creek, Lowell Point and within the City of Seward.

CRITICAL HABITAT AREAS

Caines Head SRA contains critical habitat areas which should be given special management considerations. During the spring, between April 1 and June 1, the south-facing cliffs in R1W T2S, Section 23 are mountain goat birthing areas, where nannies can occasionally be seen with their young. This area should not be developed with any modern facilities or primitive trails. Individuals or small groups travelling discreetly through the area or quietly engaged in photography or wildlife viewing are not believed to be a threat to the nannies and their young. If human interference displaces the goats, the Director will close the area during nursery times.

Sea Bird Colonies Although considered in the natural zone, this area, due in part to its precipitous nature, will remain essentially undeveloped to preserve the vitality of the several species of sea birds that nest and congregate in these areas.

Bald Eagle Nests Except under unusual conditions (such as a nesting pair that are known to be

tolerant of close human activity), a zone should be established around each tree that contains an eagle nest and extending 330 feet from the tree. The size of the zone should be adjusted to include special terrain features and use areas around the tree. During the period from March 1 through August 31, the following activities should be restricted from zones that contain actively nesting eagles:

1. Construction activities, including the building of roads or trails for the purpose of access within the recreation area.
2. Gathering of personal use firewood.
3. Access into the protected zones by large or noisy groups of people, including researchers and surveyors of property, or the sightseeing or recreational public. Individuals or small groups travelling discreetly through the area or quietly engaged in fishing or bird watching activities are not believed to be a threat to the nesting pair and their young.

HISTORIC PRESERVATION VERSUS PUBLIC SAFETY

The present deteriorated condition of many of the military facilities constitutes a hazard to visitors, and the debris, in some instances, is a visual blight in an otherwise beautiful area. Therefore, with the assistance of funding provided by the Corps of Engineers' Defense Environmental Restoration Account (DERA), a vigorous clean-up of those structures identified as hazardous should be completed by removing, burning or burying the structures. Other structures considered as having interpretive value and with little threat to public safety will be left for historical interpretation. Although the Army Corps of Engineers has kept active an application for funding for this project since 1985, no monies have yet been released for this project. The Division should continue to urge for funding and active clean-up of these public hazard areas.

The future of historic Fort McGilvray must be planned for with vandalism prevention in mind. No facility, without the presence of a 24-hour guard, is totally safe from vandalism and visitor abuse. The fort should be recognized for its remarkable, unweathered condition and protected from any damage from vandals. Thus, this plan recommends (in the Cultural Zone Recommendation section) some modifications for the fort to preserve and stabilize its condition, without departing from the historic appearance of the structure.

INTERPRETATION

Interpretation and education are important to the protection and use of the cultural and natural values of the recreation area. For many visitors, the primary focus will be the World War II defense structures. This facet of the recreation area needs continued emphasis and enhancement to clarify the function of Caines Head in relation to other sites in Resurrection Bay, Alaska, and the Pacific Theater of World War II. Both the human and military story of the Seward Harbor Defense System will be interpreted. Secondary themes to be interpreted include the recreation area's natural history. Interpreting the geology, flora, fauna, and climate will contribute to protecting the recreation area's values and promoting public safety.

INTERPRETIVE TECHNIQUES

Professional and volunteer staff will carry out personal presentation functions of interpretation and education by a variety of media to reach recreation area visitors and the general public. Non-personal methods will include brochures of the recreation area's general features as well as self-guiding types for specific areas, historic markers, interpretive panels (both on-site and off-site), and the use of original objects and exhibits will be utilized in a variety of ways.

CULTURAL RESOURCE MANAGEMENT

The cultural resources of Caines Head SRA are in need of thorough documentation. A photo record complete with any historic as-built drawings should be assembled of all existing structures with a description included in each. A partial study of the historic structures was completed in 1981, but more information on previously unknown structures has been revealed through interviews with veterans stationed at South Beach between 1941 and 1943. These structures are rapidly deteriorating and are in many cases, one of a kind, built from native logs by enlisted men. Documentation of these structures should be a priority. Future actions taken to remove, repair or restore any historic structure shall be based on this cultural resource document. In addition, the recreation area has acquired a large collection of original photographs, wartime memorabilia and artifacts that have special storage needs. Seward's museum, run by the Resurrection Bay Historical Society, has tentatively agreed to manage these collections and assist the Division with creating an exhibit on Seward's military past.

HISTORIC STRUCTURES

As a general policy, historic structures and sites will not be reconstructed. Visitor understanding will be gained through other interpretive techniques. When preservation or restoration of existing structures is specified, the intent will be to preserve existing original work and to maintain it by compatible repair or replacement of the deteriorated fabric. New work on such structures, when required for maintenance purposes, will conform to the building's original character and to be undertaken only when it can be satisfactorily documented. When restoration is not possible, the elements being replaced will be duplicated.

Certain structures may not merit preservation because of minimal significance, advanced deterioration, or excessive costs. These structures may be removed where hazardous elements exist for safety, and to avoid an attractive nuisance.

HISTORIC TRAIL CORRIDOR

Since the trails leading to both Fort McGilvray and South Beach from North Beach were originally the Army's service roads that supplied each of the outposts, the trail will be restored to represent this function. Thinning of the post-military vegetation, widening of the trail bed, and reconstructing of some of the culverts and roadways need to be done. This will not only allow for a good representation of the road's original function but also serve as an emergency and maintenance access road to each site. The second growth alder and spruce/hemlock vegetation will be cleared from some areas to allow for better views of the recreation area, to reveal an historic structure, or to provide a vista of Resurrection Bay. Ski trail standards will be accommodated by the thinning of vegetation and widening of the trail, and will, in turn, broaden the recreation area's recreational opportunities.

DEVELOPMENT RECOMMENDATIONS BY ZONE

Development of recreational facilities and restoration of coastal defense structures is recommended by zones. Where zones meet, efforts should be made to make the transition using compatible themes and interconnecting the information presented. In general, phase (A) projects address current resource conditions and use levels. Subsequent phases address providing additional facilities and providing for increased use levels. Although phasing is recommended for facility development, nothing precludes a phase (C) project from being implemented before a phase (A) project. The plan is intended to give limits to maximum development allowable. Not every facility recommended must be built during the lifetime of the plan.

RECREATIONAL DEVELOPMENT ZONE

North Beach As the site of the major proposed marine access facilities and the northern terminus of the developed trail system, North Beach will probably experience more visitation than any other place within Caines Head SRA. Limited moderate terrain suitable for intensive use and the space requirements for pedestrian travel routes, day use, overnight use and visitor information facilities will require intricate site planning. This zone constitutes an area of approximately 1,200 feet in each direction from the beach.

The North Beach area offers the site where commercial charter boat operators will be able to embark and debark passengers to visit the recreation area. Management of the commercial activities in the recreation area require coordination of facilities use with schedules of the commercial operators. Facilities and accommodations within the recreation area should consider the potential number of visitors impacting the area at any one time. Facilities to accommodate 40 to 80 day-use visitors would be necessary to handle current levels of visitors on board each charter boat. Revenues generated by the commercial activities and services within the recreation area should be able to partially defray the cost of operating the park. Onshore facilities should be developed to accommodate a wide spectrum of user groups, from hikers to the less-ambulatory visitor capable of venturing up the trail no more than one-half mile. Thus, interpretive services near the landing area will play an important part in the recreation area's facility development.

North Beach

Management Objectives:	Phase:	Scope:
Facilitate marine access.	A	1. Install 2 off-shore buoys.
Provide for interpretation of the natural and cultural history; explain the recreational area's purpose and provide limited visitor services.	A	1. Provide bulletin board. 2. Provide self-guided information for interpretation of recreation area.
	B	1. Provide interpretive exhibit addressing the opportunities at CHRSA and military past.
	C	1. Construct a ranger/visitor contact station.
Provide facilities and opportunities for onshore recreation.	A	1. Construct one shelter. 2. Remove hazardous WWII debris. 3. Construct pit latrine.
	B	1. Provide two or more tent/picnic sites. 2. Develop a potable water source. 3. Construct bridge to picnic shelter.
	C	1. Upgrade latrines.

CULTURAL RESOURCE ZONE

The cultural zone for Caines Head SRA is essentially linear in character, following the old military road system connecting North Beach with Fort McGilvray, South Beach and Rocky Point.

Besides providing access to the main historical destination points in the recreation area, the cultural zone will allow for access to the natural zone and will, in certain areas, contain facilities that relate to other areas in or outside the recreation area and subjects that are not cultural in nature. Examples of this will be interpretive exhibits near Bog Meadows and skyline exhibits describing Resurrection Bay points of interest.

Road of '42, North Beach to Fort McGilvray This two-mile-long road bed leading to all points of historical interest should be preserved and maintained since it is, in fact, a "Road of '42" much like the Alcan Highway, relating to WWII. Since 1944, when the Seward Harbor Defense System was decommissioned, second-growth vegetation gradually reclaimed the road, fort and buildings of Caines Head SRA. The trail now follows this road system through a canopy of alders, with a wall of spruce, hemlock, devil's club and assorted shrubs obscuring the views into the surrounding climax forest. In some places, the road has been washed out or is suffering from poor drainage.

The management objectives for this road are not only to provide foot and emergency access along this historical roadway, but to also give a clear image that the trail was once a road during wartime.

While completely clearing the trail of all second growth vegetation would be too great a task at present, selectively thinning areas of alder and thick stands of spruce and hemlock would result in allowing a more open forest appearance, much as the Army may have seen it.

Areas where spectacular vistas exist should be cleared thoroughly to allow for an unobstructed view. In other areas, such as road cuts through rock where drilling and blasting were necessary, clearing away brush from the rock face will allow an impression to be made about the task involved in building the road. A secondary benefit of the clearing will allow for winter access by snowshoers or skiers without hindrance by low-hanging branches.

Road of '42, North Beach to Fort McGilvray

Management Objectives:	Phase:	Scope:
Provide foot and emergency/ maintenance vehicle access along an historical roadway to historical points of interest.	A	1. Install bridges, waterbars and culverts in damaged or poorly drained areas. 2. Selectively clear second-growth timber off road beds. 3. Clear away timber and brush from certain portions overlooking scenic and historical access and viewing areas.
	B	1. Replace log bridges with historic style culverts and road surfacing materials.

War Reserve Magazines Four concrete war reserve magazines exist along the road system. These structures were to house munitions and explosives for the Army. Their hinged, eight-inch-thick doors still function when oiled and the rust seal is broken. Their historical purpose makes them ideal for equipment storage and emergency shelters since they can be readily locked and are designed for proper ventilation and drainage. Since 1985, one such bunker (Number 2), located along the trail, has been utilized for these purposes. A woodstove was installed and has been used throughout the long seasons for storage and occasional camp for the recreation area's Alaska Conservation Corps enrollees. The number 2 magazine will continue to be used for storage, an

emergency shelter and warming hut for crews on the trail. The remaining magazines are left empty and open. Number 1 is left uncleared since it has seen the least human presence. This magazine is well-hidden from the trail and is considered the most well-preserved magazine in the area. Number 2 bunker is within sight of the trail but it is normally locked and partially obscured to the hiker traveling towards the fort. Number 3 is the most visited magazine in the area, being located flush with the trail. Number 4 is 100 feet south of Number 3 magazine and is the only magazine located west of the trail. Number 1 should be cleared of all second growth vegetation surrounding it and restored to as good a working order as possible. Since this will be the first concrete structure the visitor will see, an interpretive panel explaining its specific functions and construction should be erected. By interpreting this bunker first, it should effectively dispel any mystery that may exist regarding the Number 2 magazine. (In 1987, vandals had broken the lock off #2.) A brief interpretive panel should be erected at Number 3 about plywood construction and its introduction during the war.

As a safety precaution, doors to all open bunkers should be fashioned so as to not allow anyone to close or lock them.

War Reserve Magazines

Management Objective:	Phase:	Scope:
To utilize the four magazines along the road system to further explain and interpret the recreation area's equipment storage and emergency shelter facilities.	A	1. Restore #2 magazine and make doors and damper operable. 2. Clear brush from around #1 magazine. 3. Install interpretive signing at #1 and #3 magazines.
	B	1. Install wooden loft in #2 magazine.

Fort McGilvray and Support Facilities The Fort McGilvray area is considered the main destination point for those visitors venturing past the shoreline facilities at North Beach. Recreational facilities not in keeping with the motif of original coastal defense facilities must be located apart from the military structures. The prime vantage point is the base end station atop Fort McGilvray. The station provides a relatively dry, wind-shielded location from which the inter-relating tactical features of Fort McGilvray can be described. Due to vandals and weather, the window panes and frames to the base end station are deteriorating. These will have to be replaced. It is recommended that the panes be replaced with polycarbonate shatter-proof plexiglas. This will help prevent further vandalism and incidental breaks. Replacing the azimuth instrument once mounted on the pedestals in this room will help to acquaint the visitor with the function and duties of this structure.

The self-guiding approach to portraying the historical purposes of the entire labyrinth of Fort McGilvray should be accomplished by posting signs with brief statements and reproductions of historical photographs that describe the function of each feature. Lighting will be necessary for viewing displays in the interior portions of the fort. An electrical generator or some alternative energy source should provide lighting with distribution by exposed conduits leading to light fixtures authentic to the period. Security is a primary consideration to the vitality of the fort. The three gates now in place should be replaced with full 2-inch wooden doors with metal reinforcements typical of the doors within the fort. This would allow for securing the fort when no Park personnel are available to monitor facility use. Rooms of the fort should be utilized for storage as needed since they function well as secure spaces within the fort.

The most graphic display of the fort's function should be accomplished by replacing one of the two 6-inch guns in the original mounts on either gun pad at the fort. These guns could be acquired through a nationwide search or using fiberglass facsimilies. Throughout the fort is a system of sub-

floor wiring trenches that delivers electricity to all parts of the fort. The trenches are covered with concrete slabs that sit flush to the floor. These trenches are approximately 3 to 6 feet deep. Also within the fort is a catch basin system for drainage. These basins exist inside and outside the fort, covered by square, wooden man-hole covers. Each is approximately 6 feet deep. The possibility exists of these covers being removed and the unsuspecting visitor falling into one, causing injury. By anchoring these covers with metal straps bolted into the concrete, the chance of this happening would be greatly reduced.

All wood and metal within the fort and base end station should be treated for preservation and restoration. Scraping, painting and oiling of these surfaces must be done to arrest their deterioration. The double doors on all rooms should have one door removed or permanently locked open to prevent visitors from becoming locked inside. The single doors to the plotting and spotting room and battery storage room should be secured in such a way to prevent the same thing from happening.

The vent atop Fort McGilvray needs to be reconstructed and so fashioned to prevent tampering, and from objects being tossed into it.

Efforts should be made to protect the concrete superstructure of the fort. Foot traffic to and from the base end station will continue to dislodge the rock overburden from the fort, exposing the seal coat covering the concrete. A wooden stairway built in place of the current trail near the entrance to the fort will help to prevent further deterioration.

Guardrails and/or signs are needed to direct unsuspecting visitors away from natural and human-made hazards such as the storage tank holes beside the main entrance to the fort and the cliffs sharply dropping off at the eastern edge of the fort area. The Number 5 Magazine is the anti-aircraft magazine located 300 feet from Fort McGilvray. It is 10 feet longer than the previous four magazines and had a separate function. An interpretive sign is recommended here describing its function.

Surrounding the fort are the remains of 45 structures that primarily served the construction crews that were occupying the area up to the time the Battery 293 Project was shut down (90% complete). Quarters for the enlisted men and officers were constructed as Pacific huts, all-wood and particle board buildings, used throughout the Pacific Theaters of World War II. Other buildings of the area included a mess hall, latrines, dispensary warehouse, recreation hall, and several other support service structures. All of the buildings have collapsed, many are obscured by thick second growth vegetation, but only a few are within a critical area of the trail. These are to be cleared of all debris and their perimeters marked. The remains of one Pacific hut and one quonset hut are to be interpreted. A stairway leading to each one is to be reconstructed with a marker interpreting their function.

The remains of the officers' quarters offers a unique look at the privilege of rank. These two buildings were located atop the ocean-facing bluff with a spectacular view of the bay. One building should be marked, a trail built to it, and the story of the officers' quarters interpreted.

No other observed historical features can be feasibly restored due to their state of utter collapse. A clean-up of these hazardous areas close to the main trail should be accomplished. A map of the entire fort and support facilities showing the locations and functions of all structures should be mounted at the first fork in the road approaching the fort.

Non-historical recreational facilities should be located away from the main historical points of interest. The most scenic location for these facilities is along the easternmost approach road to the fort. These should provide one sheltered picnic area along with two other unsheltered picnic sites. A latrine should be located nearby for the use of these visitors.

A water system could be installed if visitation becomes great enough.

Fort McGilvray and Support Facilities

Management Objectives	Phase	Scope
Provide a vivid historical interpretation of Fort McGilvray and its support facilities in and around Resurrection Bay; provide appropriate visitor services	A	1. Clear alder from around Fort McGilvray, the return loop road and spur road to the anti-aircraft magazine. 2. Install interpretive signs at Junction, at Fort McGilvray and on gun pads. 3. Construct latrine facility. 4. Clean up and remove hazardous building remains. 5. Install metal hold-down straps over all trench covers.
	B	1. Clear trails to one quonset hut, one Pacific hut, and officers' quarters and interpret. 2. Replace gates with solid doors able to secure fort. 3. Install interpretive signs throughout fort. 4. Install lights and generator system. 5. Locate and arrange for shipping and mounting of up to two 6-inch guns. Install 6-inch guns on pads outside fort. 6. Restore fort command station. 7. Install three picnic sites.
Provide a vivid historical interpretation of Fort McGilvray and its support facilities in and around Resurrection Bay; provide appropriate visitor services.	C	1. Install one picnic shelter. 2. Install water system. 3. Upgrade latrine.

Road from Junction to South Beach This 12-mile long military road departing from the main road to Fort McGilvray at Mile 1 leads to the South Beach garrison area where the majority of the troops stationed at Caines Head were housed.

With a southern exposure and generally lower elevations, this road suffered a large amount of damage through washouts and growth of dense thickets of second growth spruce, hemlock and alders. One washout completely destroyed the road bed for 300 feet, causing very large trees to fall into the roadway. These factors have affected the future use of this road and are maintenance considerations. The temporary rerouting around this road is necessary to avoid continued problems with the present drainage, and any attempt to restore the old roadway would be costly in terms of construction and maintenance. However, with DERA money available for clean-up of South Beach, culverts and reconstruction of the road could be accomplished. A temporary route leads to a spur road starting behind the Navy barrack.

Road from Junction to South Beach

Management Objectives	Phase	Scope
Provide foot and emergency/maintenance vehicle access along an historical roadway to natural and historical points of interest.	A	1. Thin vegetation and widen to road standard. 2. Reroute road temporarily. 3. Install bridges and culverts in washed-out areas.
	B	1. Upgrade old road. 2. Upgrade bridges and culverts to culvert with overburden typical of historical road.

South Beach Garrison and Support Facilities Good overland access by trail and marine access via light watercraft during moderate wave conditions, combined with extensive level terrain, favorable southern exposure and the remains of the military's main garrison all contribute to the attractiveness of this site as a congregating point.

The story of South Beach is unique. The first Army personnel arrived in June 1941 with the 250th Coast Artillery unit. This group's arrival before the Pearl Harbor attack is a good indication of the United States' awareness of the inevitability of war with Imperial Japan. The 250th Coast Artillery was responsible for the first structures built at South Beach. These consisted of native log structures with cobblestones and log walls surrounding them. Only two structures remain from the four that have been identified. A plotting room built against the western hillside is in a steady state of decay and the log roof has collapsed. A thorough documentation of this building is necessary to one day restore this structure. The other building is the communications shack 100 yards back from the beach and west of the center of the valley floor. This had a gable roof with a cobble-filled double wall surrounding three sides. A stove and some cooking utensils and garbage were inside in 1987. This too should be documented for reconstruction purposes.

One of the more unique discoveries at South Beach was the existence of the Caterpillar band shoes that served as the tread wheels on the 155mm guns. While almost completely buried, this artifact should be recovered, restored or preserved and mounted as a monument to the men of the 250th and 267th Coast Artillery. This would be a focal point to the South Beach operations and an excellent interpretive tool.

Twenty-two structures are located at South Beach in varying degrees of decay. All are public safety hazards in their present state and are scheduled for removal through funding by the Army Corps of Engineers DERA. The clean-up should be supervised by Park personnel to assure adequate clean-up and preservation of foundations and other important historical landmarks which will aid the visitor in understanding the role of South Beach.

The original trails of the garrison should be cleared and signs and photos posted explaining the functions of various installations once standing along these trails.

The command post, located to the east of the garrison atop the 200-foot bluff, was originally used for directing fire from the four Howitzers that once stood behind a thin line of trees at South Beach. This half-buried structure has a 4-foot concrete wall-on-slab foundation with a 4-foot wooden pony-wall topped by a flat wood-framed, asphalt/tar roof. Its construction and design are unique to the war in Alaska and should be reconstructed when funding permits. Much of the level ground is interrupted by seasonal streams making it unsuitable for facility development. An area extending more than 100 feet inland from the easternmost 200 feet of cobblestone beach is high enough for adequate drainage and offers views of the ocean. The area is suitable for overnight camping and is out of sight of the defense facilities. Tent camping space, outdoor cooking facilities and a latrine should be provided on this site.

South Beach Garrison and Support Facilities

Management Objectives	Phase	Scope
Explain South Beach garrison and interrelated function with rest of harbor defense system of Resurrection Bay.	A	1. Install bulletin boards. 2. Remove South Beach structures; leave foundations as landmarks.
	B	1. Install interpretive displays.
	C	1. Restore command post. 2. Install one latrine near trailhead.
Provide facilities and opportunities for onshore recreation.	A	1. Locate three or more campsites.
	B	2. Install campsite latrine.
	C	1. Develop potable water source.

Road from South Beach to Rocky Point Present demands on the recreation area do not warrant connecting South Beach with Rocky Point. Future developments to create access to Rocky Point should follow the old road bed. The one mile road which leads to Rocky Point from the easternmost corner of South Beach is virtually inaccessible at present. Land that subsided from the 1964 Earthquake and subsequent wave action has served to sever the connecting roadbed linking these two defense installations. The hillside adjacent to the road has sufficient slope to warrant this project. After reaching the road bed, this trail is in need of clearing and some recutting of trail to make it safe for the traveller once more. In one place, a substantial rock slide obliterated the road; however, a trail could be re-established through this area with only minor engineering. This trail would be difficult to upgrade to the safety standard necessary for vehicular access. Near the terminus of the road, a bridge foundation is staked at the crossing of the Rocky Point drainage. When funding is available this bridge should be reconstructed.

Road from South Beach to Rocky Point

Management Objectives	Phase	Scope
To provide foot access along an historical roadway to historical and natural points of interest.	C	1. Cut trail for access to old road bed. 2. Cut trail along old slide areas. 3. Clear second growth from road bed. 4. Rebuild bridge across Rocky Creek.

Rocky Point and Support Facilities Rocky Point, location of the first defense installation in the outer bay, commands an impressive view of Caines Head and the outer islands of Resurrection Bay. Here, safe waters can be reached during moderately rough conditions and access to the two beaches can be attained with light watercraft more often than at South Beach.

The structures here are an interesting contrast to those of the South Beach and Fort McGilvray areas because of their complexity of size and uniqueness.

Home to four 155mm long-rifles on Panama mounts with a range of 12 miles, Rocky Point also boasts one of the largest war reserve magazines in the Resurrection Bay area. Although the 60-foot war reserve magazine contains little today, previous evidence of use is present with the green-and-white paint neatly covering the walls.

Four hallway-type ready reserve ammo-bunkers service each of the four gun pads. Although quite deteriorated and overgrown, these structures would require very little reconstruction to restore their original appearance. Second growth alder, spruce and hemlock need to be cleared from around the pads to afford a spectacular view. The remains of a general officers' quarters and two-

hole privy stand near the entrance to the magazine and gun pads. In its deteriorated state, the general officers' quarters is a public safety hazard and should be removed or demolished. However, as with the South Beach clean-up, all landmarks and foundations should be salvaged for interpretive purposes.

The acquisition of a representative 155mm long-rifle and searchlight should be pursued by enlisting the help of the US Army Corps of Engineers, various military detachments and military service organizations. The Rocky Point battery saw more use than any other gun emplacement in Resurrection Bay and should be restored to show its function during the war.

The drop-off to the ocean at Rocky Point is not as severe as at Fort McGilvray, but it is recommended that guardrails and signs be placed to minimize a potential safety hazard. Two base-end stations and one searchlight station are located along the 350-foot-high ridge rising behind Rocky Point. These will serve as excellent viewpoints for the area. The trail leading to and around these stations should be cleared of second growth vegetation. An interpretive panel should be placed on the trail or at the station describing their purpose.

The remains of the submarine loop station exist on the smaller point north of Rocky Point. This consists of a fallen down Navy barracks and two small standing generator buildings. The submarine loop station was the western terminus of a 3" electromagnetic cable that ran the width of the bay below the ocean's surface. The other end was anchored near Topeka Point, at what is now called the Iron Doors. The purpose of this system was for detecting vessels passing in and out of the bay in periods of darkness or poor visibility. One generator building has been altered by a "squatter" to hold two bunks, a woodstove, Coleman stove and assorted camping gear. Windows have been removed and plexiglass windows installed and a corrugated plastic roof has replaced the historic asphalt shingle roof. The other generator building is still intact and has not been altered. The barrack should be removed, but the generator buildings could serve as storage facilities for Park personnel or emergency shelter for visitors to the southern part of the recreation area.

While Rocky Point is considered an important part of the Seward Harbor Defense System, present demands to visit the area do not warrant development of the trail and bridge access. The rocky face upon which the guns were mounted are nesting sites for glaucous-winged gulls and black oystercatchers. This area should remain in its undeveloped state until visitor demands warrant expansion. Sensitivity then should be used when considering any development along this abutment.

Recreational support facilities for visitors must be located apart from the defense installations. Recommended locations are on the south side of the drainage area, upstream or near the submarine loop station knoll.

Although access by boat will be possible much of the time because of protection from north and south winds, high ocean swells can often make landing by dingy hazardous. Therefore, mooring buoys and other marine access facilities should not be installed since their presence might mislead boaters into assuming that landing conditions are safe. Boaters can use their own anchors and row ashore when conditions permit.

Rocky Point and Support Facilities

Management Objectives	Phase	Scope
Explain Rocky Point defense system and its place in the harbor defense.	A	1. Remove hazardous debris/structures. 2. Clear and thin second growth vegetation from trails.
	B	1. Install interpretive and informational signs. 2. Clear trail to base end stations. 3. Locate 155mm long-rifle and searchlight for relocation.
	C	1. Restore generator buildings for storage or shelter. 2. Transport and install 155mm long-rifle and searchlight.
Facilitate daytime and over-night visits	B	1. Construct two or more picnic sites.

Other Structures

Loading Platforms: Located near the road junction to Fort McGilvray and South Beach, these served as holding stations for supplies to be transported at a later time to other destinations. They are in a state of deterioration but offer little hazard to the public. They should be reconstructed, the area cleared thoroughly of all second-growth vegetation, and interpreted as part of the historical operations.

Elephant Shelter: Close to Number 3 Magazine along the Fort McGilvray trail, it functioned as a fuse storage shed during the construction of the road and continued to serve as a storage area after the road was completed. The body of the structure is made of 12-gauge galvanized steel and shows little sign of corrosion. However, the wooden doorway and back wall are nearly rotted and should be documented for design and reconstructed. This structure is of excellent interpretive quality and an all-weather sign stating its purpose should be posted nearby.

Reservoir: At Mile 0.5 on the South Beach trail, a 300-foot road cuts off to the site of the dam, creating the reservoir. A delightful waterfall cascades from its top and continues to Minnesota Beach. An all-weather sign should be posted here depicting the construction or use of the system. Also, reconstruction of the stairway and gangplank across the dam should eventually take place. This area will also serve as a future access point to Minnesota Beach. (See Natural Zone).

Radar Tower and Support Facilities: Approximately Mile 1 along the South Beach trail, a radar tower remains standing on three of four supports. The frame of a quonset hut is also left standing opposite the tower on the north side of the trail. It is recommended that a trail be cleared around the tower to allow views of the Pacific with adequate signing or barriers near the cliff to minimize the hazards of the cliffs. The rotting struts should be replaced and the tower stabilized. At the very least, some warning to visitors should be posted to stay clear and not try to climb the tower. The quonset hut is a hazardous invitation to the curious and should be removed with DERA monies.

Other Structures

Site	Management Objectives	Phase	Scope
Loading Platforms	Interpret Use During WWII Occupation.	A	1. Clear away all second growth vegetation. 2. Identify on self-guiding maps.
		B	1. Erect interpretive marker. 2. Reconstruct.
Elephant Shelter	Interpret Use During WWII Occupation.	A	1. Identify on self-guiding maps.
		B	1. Erect interpretive marker. 2. Reconstruct facade wood facing.
Reservoir	Interpret Use During WWII Occupation.	A	1. Clear trail to site. 2. Clear away hazardous debris. 3. Identify on self-guiding maps. 4. Reconstruct stairway to safe standards.
		B	1. Erect interpretive marker. 2. Place trail sign to Minnesota Beach.
Radar Tower	Interpret Use During WWII Occupation.	A	1. Remove quonset hut remains. 2. Clear trail around tower. 3. Erect barriers or signs near cliff. 4. Identify on self-guiding maps.
		B	1. Erect interpretive marker. 2. Replace struts to stabilize structure.

NATURAL ZONE RECOMMENDATIONS

At Caines Head SRA the natural zone recommendations are minimal. Initial developments in this zone will facilitate travel to and from beach area and be integrated with the cultural, recreational and wilderness zones where their boundaries intersect. Developments within the natural zone should be undertaken as visitor use dictates. Overnight camping facilities will be developed exclusively in or near the beach areas. Campsites should not be developed along any of the inland trail corridors. Picnic and day-use facilities would, however, be appropriate along these trails to enhance the visitor's stay.

North Beach to Derby Cove Derby Cove is located one-half mile north of North Beach. It is a popular camping area during the summer but has limited access presently from North Beach at low tide. Passage between the two beaches is made by skirting the point along the shore during minus tides or using an overland trail constructed in 1986 to aid visitors camping at Derby Cove desiring to reach the rest of the park facilities and historical resources. This also assists hikers who, following the tidal trail, find the last point of tideland inundated with a "plus" tide.

North Beach to Derby Cove

Management Objectives	Phase	Scope
Provide dispersed onshore recreational opportunities.	A	1. Construct overland trail from North Beach to Derby Cove. (Completed 1987)
	B	1. Construct one Public Use Cabin at Derby Cove. (Completed 1993)

Callisto Canyon As the largest area of level terrain in the recreation area, Callisto Canyon is a preferable area for recreational facility development. This area presently receives light use from boaters and hikers. Two or more campsites should be developed to minimize site degradation, with a picnic shelter and latrine constructed as use increases.

Callisto Canyon

Management Objectives	Phase	Scope
Provide dispersed onshore recreational opportunities.	B	1. Construct two or more campsites. 2. Install one latrine.
	C	1. Construct one camping shelter or Public Use Cabin.

Minnesota Beach As the only non-historic beach on the southern shore of the recreation area, Minnesota Beach provides a quiet setting for hikers who visit to camp or picnic in a scenic bayside area. A trail should be developed starting near the dam site at the reservoir and terminating on the west side of the creek. No more than two campsites should be developed here to ensure a quiet, scenic outdoor experience.

Minnesota Beach

Management Objectives	Phase	Scope
Provide a primitive camping experience in a coastal marine setting.	B	1. Construct trail to Minnesota Beach.
	C	1. Construct two campsites.

Bog Lakes The wet soil conditions which prevent tree growth also make the bogs unsuitable for human activity. Therefore, recreational facilities should be sited to enable visual appreciation at the bogs but to discourage human activity upon them except during winter when ample snow cover makes them well suited for cross-country skiing.

Picnic facilities should be located on well-drained, forested sites surrounding the bogs. A location near the road junction would be accessible to most visitors within the area.

Bog Lakes

Management Objectives	Phase	Scope
Provide day-use recreational activities in an inland setting with diverse vegetation and mountain scenery.	A	1. Locate areas of optimum use.
	B	1. Develop one picnic site. 2. Construct latrine at road junction. 3. Construct boardwalks to facilitate enjoyment of bogs.
	C	1. Install interpretive signs on bog ecology.

Other Trails and Facilities As the need for outdoor recreation in Resurrection Bay increases, the demands on Caines Head SRA will also increase. Providing for dispersed recreation by developing a backcountry trail system will utilize the main facets of Caines Head SRA without adversely affecting the resource.

In 1996, a trail leading from the saddle between North Beach and Derby Cove to the alpine areas of the park was completed. This 3.1 mile trail currently provides access to and from the alpine areas along the same trail. A loop trail addition needs to be constructed to provide less traffic along the trail and expand the visitor experience to South Beach.

Planning logical trail routes within the area connecting destination points and allowing for dramatic vistas is recommended. Trail construction is to be undertaken as demand dictates and as monies become available. With the recent increase in popularity in kayaking in the bay, the demand for such backcountry opportunities in remote marine access areas may now be present.

Other Trails and Facilities

Management Objectives	Phase	Scope
Provide backcountry access and opportunities departing from marine access areas.	A	1. Identify trail routes to high country from beaches and main trail system. 2. Construct Alpine Trail. (Completed September 1996)
	B	1. Construct Alpine Trail Loop Addition to South Beach.
	C	1. Designate camping areas in areas where the environment can best handle increased impact.

WILDERNESS ZONE RECOMMENDATIONS

The wilderness zone of Caines Head SRA should be developed only to the extent to which basic public safety is provided and protection of fragile natural area is accomplished. Rock cairns constructed to guide able mountaineers around delicate alpine meadows and to channel use to the less environmentally fragile areas, along with an occasional primitive bridge, should be the extent of human-made structures.

An alpine brochure should be developed to aid the visitor in locating strategic overlooks, impressive natural formations and trail routes.

Trail access to the alpine regions of the recreation area will allow superb viewing of Bear Glacier and of the Harding Icefield in Kenai Fjords National Park. A trail from Caines Head SRA's alpine ridge leading into the Bear Glacier drainage would make Caines Head an ever more attractive destination and staging area for trips into the National Park. The land between the National Park and Caines Head State Recreation Area should be added to the recreation area.

Wilderness Zone

Management Objectives	Phase	Scope
Preserve a wilderness area representative of Kenai alpine environment.	C	1. Construct rock cairns on trail system. 2. Develop alpine brochure.
Entrance access to scenic views of neighboring Kenai Fjords National Park.	C	1. Develop routes to prime viewing areas in recreation area. 2. Make information on state and national parks available at trailhead.

GENERAL MANAGEMENT RECOMMENDATIONS

MANAGEMENT ACTIONS

This plan is only as good as its implementation. Numerous management actions are necessary to implement the direction of the plan and to respond to physical, social and economic conditions. These actions include establishing administrative, staffing and budgeting systems; working closely with recreational users and user groups; developing cooperative inter-agency agreements; examining management efficiencies and effectiveness; and researching visitor preferences, behavior and response to management actions and resource carrying capacity.

COOPERATIVE INTER-AGENCY AGREEMENTS

State Department of Fish and Game:

Fisheries: Develop salmon and bottom fish interpretive displays, exchange visitor-use statistics, consult on fishing regulations.

Wildlife: Monitor wildlife populations, encourage research, encourage hunter education and safety, consult on hunting regulations.

State Department of Public Safety: Coordinate with Fish and Wildlife Protection/Troopers on law enforcement procedures regarding Fish and Game regulation, Alaska State Statutes and search and rescue efforts.

State Department of Corrections: Coordinate inmate labor projects with medium security correction centers.

State Department of Education (Alaska Vocational Technical Center): Coordinate park programs with vocational development programs in various trade skills at the vocational center in Seward.

U.S. National Park Service: Coordinate visitor information services, develop interpretive exhibit for visitor information center, monitor and exchange visitor-use statistics.

U.S. Department of Defense - Army and Air Force Recreation Camp: Encourage the participation of the military in providing assistance through manpower, equipment, technical and financing in developing the recreation area.

U.S. Coast Guard: Coordinate patrol activities and exchange information on emergency rescue procedures and how the recreation area might offer a good landing for emergencies.

U.S. Army Corps of Engineers: Coordinate removal and clean-up of hazardous structures within the recreation area. Enlist the Corps' aid in locating historic equipment among abandoned sites elsewhere in Alaska and outside the state.

City of Seward/Chamber of Commerce: Encourage the City of Seward and Chamber of Commerce to utilize the recreation area as part of its tourism program and coordinate informational and promotional services.

Resurrection Bay Historical Society: Coordinate information-gathering procedures, develop historical displays for the museum, coordinate off-site summer visitor programs.

Institute of Marine Science: Interpretive displays of marine life, oceanography, etc. Encourage volunteer programs addressing tidepools, beachcombing, etc.

MANAGEMENT EFFICIENCIES

Sources of money for accomplishing many of the projects currently existing and proposed within this plan have been, and can be obtained, through the Division's Marine Recreation Project. The Marine Recreation Project, created through the Alaska Legislature in 1993, provided funds available from the Exxon Valdez Criminal Settlement with the State Of Alaska. This money was set aside exclusively for restoration projects related to the Exxon Valdez oil spill. More specifically, the legislation provided for the construction or placement of recreational amenities, including recreational cabins, trails, mooring buoys, floating docks and similar items, and the acquisition of sites and access rights for such amenities that restore or enhance recreational services lost or diminshed by the Exxon Valdez oil spill. Caines Head SRA's Alpine Trail was constructed entirely through monies from the Marine Recreation Project.

A future administrative office for Caines Head State Recreation Area and the Resurrection Bay State Marine Parks has been designed for the proposed joint administration building for the U.S. Forest Service and National Park Service. The proposed completion date is 1999.

The Division shall continue to develop visitor information programs and conduct visitor research to examine means of improving resource understanding, appreciation and protection and reducing or preventing adverse behavior patterns such as littering and vandalism. Timely information and park interpretation are needed in Seward for orienting park users to opportunities that are available in the area. In 1987, a state park information display was constructed outside the National Park Service Visitor Center. In 1988, an indoor thematic display for Caines Head SRA was constructed for the National Park Service Visitor Center. Approximately $40,000 is available from the Marine Recreation Project to assist in carrying out this objective. The new joint agency administrative building is currently being considered as the site for this project.

The Office of History and Archaeology will be consulted on specific site development at North Beach, South Beach, Rocky Point and the Fort McGilvray areas. All other areas should be clear of significant cultural resource concerns. The Division will continue to develop strategies for increasing management effectiveness and efficiency through use of volunteers, campground hosts, Alaska Conservation Corps enrollees, inmate labor and special interest groups. The Division shall also place greater emphasis on enacting cost accounting measures, implementing fee structures and encouraging private sector involvement.

With the Alaska SeaLife Center due to be completed in 1998, potential visitor information including interpretation and Leave No Trace programs, could be distributed through this high-visibility public education complex.

Whenever possible, the Division shall develop experimental programs to test design standards; survey user needs and preferences; sample visitor acceptance of new opportunities such as a public-use cabin program and marine park system; measure reception to information programs such as anti-litter, vandalism prevention, carry in/carry out backpacking, no-trace camping, fireside talks, guided tours/walks, demonstrations, and special events; and foster an enthusiastic community spirit of involvement and enjoyment at the recreation area.

WILDLIFE MANAGEMENT

The hunting or consumptive use of wildlife species shall be managed according to regulations of the Alaska Department of Fish and Game, which should take into account the following factors: (1) the relatively small population of game species, (2) the presence of nesting areas for pelagic birds and bald eagles, and (3) the need to protect visitors from the incidents due to discharged firearms. It is, therefore, strongly urged that the discharge of firearms be prohibited within one-half mile of the recreational development and cultural zones.

Bears are a potential hazard to visitors. A wildlife information program advising visitors of the potential problem, and instructing them on the safest ways of handling food items, should be provided.

STAFFING AND OPERATIONS

Although created in 1971, Caines Head SRA has, until recently, remained largely unattended. Staffing has been limited to a temporary, seasonal workforce of one person. Funding for the recreation area has been sporadic due to statewide budget cuts and competing demands for the remaining dollars.

In 1985, funding was provided for a seasonal Park Ranger stationed in Seward. The Ranger is responsible for daily management of the recreation area including patrols, supervising Alaska Conservation Corps enrollees, enforcing park regulations, implementing various recommendations of this plan, acting as liaison with other government agencies in Seward, providing public information, and seeking assistance from service organizations, along with other duties. In 1991, the operating funds for the Park Ranger I were eliminated from the state park budget. Since then, the park has remained open, being staffed with volunteer and Alaska Conservation Corps enrollees. Park knowledge, operations and maintenance have been extremely limited and restricted, due to the nearly annual retraining of new staff that must be used due to the lack of a permanent Park Ranger. The Park Ranger I position should be restored as soon as possible. The cost of the position to the state's general fund could be defrayed by using monies received from commercial permits and public use cabin rentals, contigent on authorization from the Alaska State Legislature. Absent that authorization, the Division is seeking to find funding within its existing budget by contracting management of park units elsewhere on the Kenai Peninsula.

With the addition of the 19 State Marine Parks to the Kenai/Prince William Sound Area, there is, and will continue to be, a need for a Ranger presence throughout the Resurrection Bay/Prince William Sound Region. The *Management Plan for State Marine Parks: Resurrection Bay and Prince William Sound* (March 1995) calls for a Park Ranger to be located in Prince William Sound with a Ranger Assistant to staff the Caines Head SRA operation. However, with the intensity of use throughout the marine parks more concentrated in the Resurrection Bay area, it is more desirable to have a Park Ranger I in each location. Particularly in the next several years, implementation of this plan will require the presence of a Division employee who can represent the recreation area in the community with other land managing agencies, coordinate the great amount of inter-agency work projects to be undertaken at the recreation area, carry out historical research in consultation with the Office of History and Archaeology, and conduct historical interpretive programs.

The Park Ranger I will also need an Alaska Conservation Corps Enrollee to provide assistance required on numerous routine work projects. These include safe boat handling, chainsaw operations and trail maintenance.

The Park Ranger will need a number of support services in order to function effectively. A relatively small (17') Boston Whaler has been used for local patrols and field work since 1985, along with a small inflatable dingy for transporting supplies and equipment ashore. The Whaler shall be replaced by one of the boats no longer used by the Marine Recreation Project. This boat will add an extra level of operator safety, protection from the elements, and ability to respond to emergencies throughout the bay.

A light-duty vehicle capable of launching and retrieving the park boat, as well as servicing the Lowell Point parking area, shall be acquired for the Park Ranger I and staff.

Radio contact with State Troopers, National Park Service and mariners in Resurrection Bay is considered essential in carrying out foot and boat patrols, law enforcement and coordinating visitor

assistance with other agencies. A VHF Repeater system has been established on Rugged Island, allowing radio communication between Resurrection Bay and Kenai/PWS Area headquarters in Soldotna. Several hand-held portable VHF radios capable of handling these services should be acquired.

Between 1985 and 1989, temporary overnight accommodations for Park personnel was provided at the war reserve magazine #2. In 1989, quarters at North Beach for volunteer or ranger staff was provided for on-site presence during the summer months.

Most park equipment is stored at the park during the summer. Boat trailers have been allowed to be stored at the National Park Service's maintenance yard off of the Exit Glacier road. This is considered a temporary solution, and a long-term storage area for park equipment and trailers should be pursued. When the facilities at the new Lowell Point State Recreation Site are completed, a minimal amount of storage space will only be available during the summer months.

Office support is also needed. Since 1985, the State of Alaska Employment Security Division has allowed the Division to maintain a phone and desk next to their offices in the City Hall building. The Division should seek to enter into an agreement with the National Park Service for office space in the new Kenai Fjords Visitor Center during the peak summer season months. Off-season office space could remain at City Hall or continue at the National Park Service's visitor center. Potential for interpretive, as well as office, space may also exist in the new Alaska SeaLife Center that will be located at the south end of Fourth Avenue.

At such a time when the Park Ranger I position is designated full-time or a Park Ranger II position is established in the Seward area, permanent office space should be acquired.

Funding for such items as phone, mailbox, correspondence, utilities and operation requirements is needed.

The recreation area's brochure describing the many recreational opportunities needs to be updated to include the Lowell Point and Tonsina Point properties as well as the five marine parks of Resurrection Bay. An interim publication has been done by field staff through the Office of Public Affairs, DNR. A more detailed brochure should contain input from veterans, the Resurrection Bay Historical Society, and various individuals associated with the history of the recreation area.

IMPLEMENTATION

SITE PLANNING

Prior to construction of the facilities recommended in this plan, site planning must occur. The site planning process also serves as an opportunity to review and reassess the management plan's recommendations. Although this plan's recommendations represent the Division's objectives and priorities at the time of publication, changing conditions may warrant plan revisions.

During site planning, a detailed site analysis will be performed, at which time minor revisions in the numbers and locations of the management plan's recommendations may be suggested. The standard operating procedure for site planning involves internal review and public participation. As more site-specific detail is analyzed, adjustments to the plan are expected. The Director may determine the need for public review and comment if a major departure from the intent of the management plan is suggested.

PHASING

Implementation of the plan's development recommendations are phased according to priority, program need, diversity of experiences being provided, and efficiency. Phasing is considered to be flexible, and may change as priorities and needs are annually assessed. Phasing serves to provide direction, management objectives to program implementation, budgeting and staffing, and provides for a logical progression. Development, maintenance and operation activities can be better analyzed through a phasing approach.

PLAN DEVIATIONS/MODIFICATIONS

At the time of publication, this plan will represent the best efforts of the Division of Parks and Outdoor Recreation to analyze natural features of the recreation area for their capability to provide sustained outdoor recreational opportunities without significantly compromising the area's natural character. The plan becomes a program for management and development of the area. The adopted management plan is a policy statement for the unit, requiring that developments, uses and management must be in accordance with its direction. However, the plan must be flexible in order to adapt to changing circumstances and new information. The procedure listed below is developed to permit this flexibility and ensure that the plan continues to be a useful management tool. It is excerpted from the Standard Operating Procedures for State Park Master Planning.

1. Periodic Review

A. Written public or agency request for review;

B. Policy changes within the Division of Parks and Outdoor Recreation;

C. Availability of new data;

D. Availability of new technology; or

E. Changing social or economic conditions that place different demands on the recreation area or affect the Division's capabilities.

The management plan review will include meetings, as appropriate, with interest groups, the general public, affected agencies, the Area Superintendent and other Division of Parks and Outdoor Recreation personnel. The periodic review will lead to one of the following actions:

A. No modification of the plan;

B. Modification of the plan;

C. Granting of a special exception.

2. Modification of the Plan

A. Minor Changes - These are changes which, if accomplished, would not cause a deviation from the original intent of the management plan. Minor changes may be necessary for clarification, consistency or to facilitate implementation of the management plan. Minor changes do not require public review but must be coordinated with the Area Superintendent and appropriate staff.

B. Major Changes - These are changes which, if accomplished, would cause a deviation from the original intent of the management plan. Major changes require public notice and review prior to adoption.

3. Granting of a Special Exception

Exceptions to the provisions of the management plan may be made without modification of the plan. Special exceptions shall occur only when compliance with the plan is excessively difficult or impractical *and* an alternative procedure can be implemented which adheres to the purposes and spirit of the plan.

The Division of Parks and Outdoor Recreation may make a special exception in the implementation of the plan through the following procedures:

A. The person or agency requesting the special exception shall prepare a written finding which specifies:

1. The nature of the special exception requested;
2. The extenuating conditions which require a special exception;
3. The alternative course of action to be followed; and
4. How the intent of the plan will be met by the alternative.

B. The Director will review the findings and issue a determination. If warranted by the degree of controversy or the potential impact, the Director will hold a public hearing before reaching a decision.

C. The decision of the Director may be appealed to the Commissioner of the Department of Natural Resources, whose decision will be final.

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