Management Plan For

Kachemak Bay State Park

And

Kachemak Bay State Wilderness Park

March 1995

Alaska Department of
NATURAL
RESOURCES

ALASKA
STATE PARKS

Cover photo by: Jeffrey S. Johnson
View of the Kenai Mountains from
Nuka Island

This publication was released by the Department of Natural Resources, produced at a cost of $8.96 per copy to provide a Kachemak Bay State Park management plan for the public and other agencies. It was printed in Anchorage, Alaska.

Management Plan for

Kachemak Bay State Park

and

Kachemak Bay State Wilderness Park

March 1995

State of Alaska
Department of Natural Resources
Division of Parks & Outdoor Recreation

STATE OF ALASKA

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF PARKS AND OUTDOOR RECREATION

TONY KNOWLES, GOVERNOR

3601 C STREET, SUITE 1200
ANCHORAGE, ALASKA 99503-5921
PHONE: (907) 762-2600
FAX: (907) 762-2535

April 6, 1995

Dear Alaskan:

Kachemak Bay State Park, Alaska's first state park, is known for its scenic beauty, richness of wildlife, and a grand variety of recreation opportunities. Those who visit Kachemak Bay State Park and Wilderness Park are richly rewarded by their experience.

The park's last management plan was written in 1989. Since then, several important events have occurred.

- In March of 1989, the Exxon Valdez oil spill hit the beaches of the wilderness park.
- That same year, the legislature added more than 50,000 acres of state land to the park, including Nuka Island.
- The long-standing threat of logging within the park was resolved with the purchase of more than 24,000 acres of private lands and timber rights, with funds from the civil and criminal settlements against Exxon.
- Park visitation steadily increases as operating budgets are decreasing.

This management plan revision was developed in response to these events.

Citizen participation in meeting these challenges has demonstrated Alaskans' sense of pride and stewardship in these parks, and has perpetuated the values for which these parks were established. This plan was developed with the help of the Kachemak Bay State Park citizen's advisory board, other state and federal agencies, and the general public.

I believe the plan appropriately balances preservation with the development of recreation facilities and so, with my signature, adopt it as state policy.

Sincerely,

Neil C. Johannsen
Director

Summary

On May 9, 1970, Kachemak Bay State Park became Alaska's first state park. In 1972, Kachemak Bay State Wilderness Park became Alaska's first state wilderness park. Together, they encompass approximately 380,000 acres of land and water on the southwestern arm of the Kenai Peninsula. The parks include much of the southern shore of Kachemak Bay, parts of the Kenai Mountains, Nuka Island, waters in Kachemak Bay and the Gulf of Alaska, lands on the west side of Nuka Passage, and lands on the north side of Kachemak Bay, in the Cottonwood / Eastland Creek area.

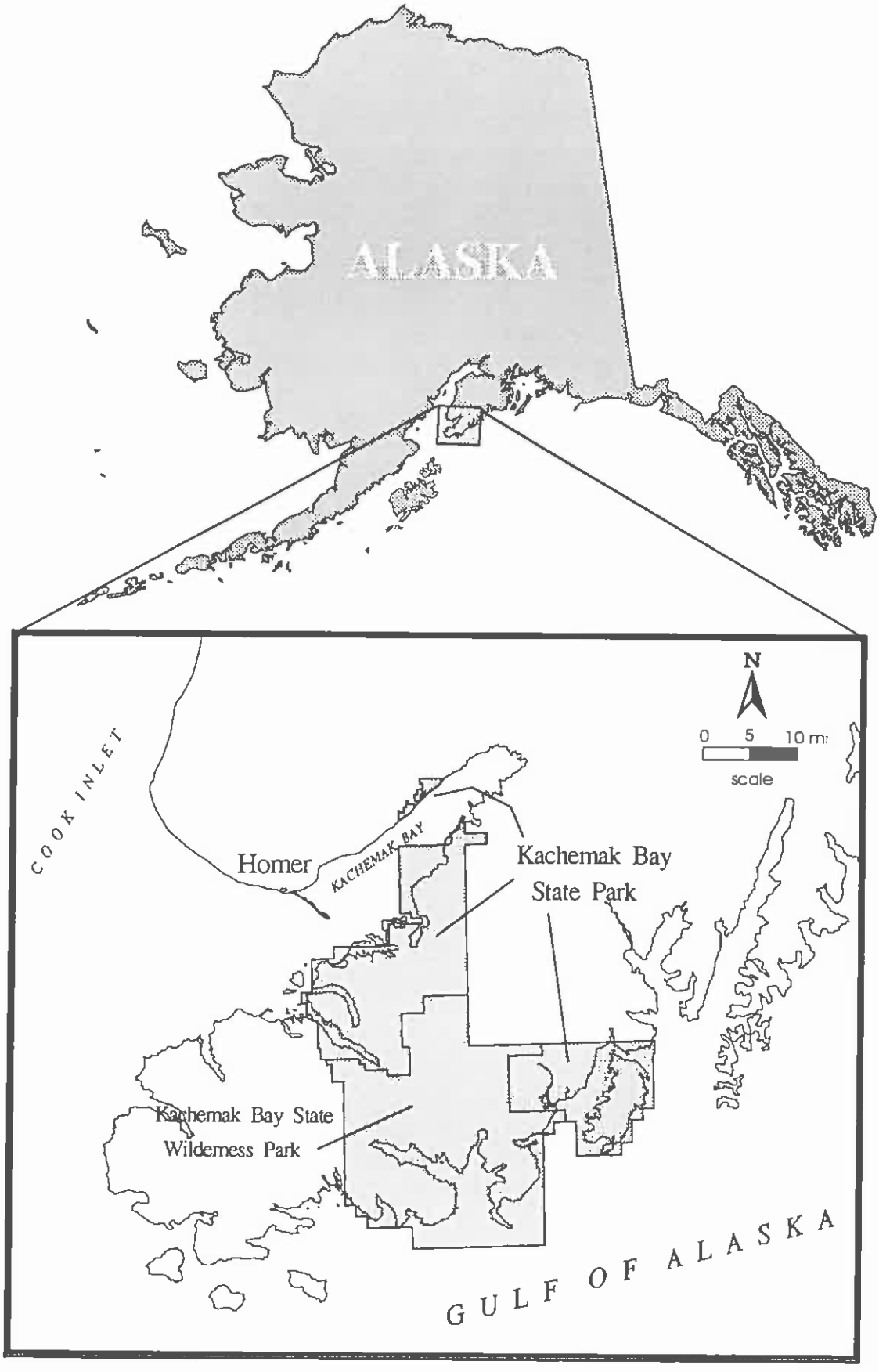
Outdoor recreation opportunities are important to Alaskans and visitors. Recreation and natural resource values are high in both parks. They include fishing, boating and kayaking along the coast, picnicking, recreational clamming, coastal and upland hiking, skiing and climbing, hunting, and berry picking are available in the park. Although access is limited to boat or plane, both parks are experiencing increased use.

This plan describes the park's natural and cultural resources, existing and expected recreation uses, and visitor preferences. The plan also identifies and discusses issues, and outlines the management goals and objectives of Alaska State Parks as they apply to these parks. The plan then applies the Alaska State Parks land use classification system to zone park lands, recommends park-wide management policies, and makes recommendations for administrative action and facility development.

Administrative recommendations include:
- Resource inventories,
- The acquisition of certain lands,
- A carrying capacity study,
- Cooperative agreements,
- Staffing increases, and
- Regulation revisions.

Facility development recommendations include:
- Trails and trail related facilities,
- Boat moorage facilities,
- Campsites, and
- Public use cabins.

Provisions for amending the plan are included at the end of the document.



Location of Kachemak Bay State Park

Table of Contents

Chapter 1: Introduction

PLAN PURPOSE

This management plan is written for Kachemak Bay State Park and Kachemak Bay State Wilderness Park. Although they retain their separate identities, this plan will frequently refer to them singularly as Kachemak Bay State Park.

The plan guides the management and development of Kachemak Bay State Park. It describes the park's natural, cultural, and recreation resources. It lists and discusses issues that affect the park. It also describes current and projected recreation demand, and makes recommendations for management and facility development that reflect the park's qualities and recreation opportunities.

The park's first plan was written in 1973, but was not implemented. The park's second plan was published in 1989. Since then, several important events have occurred:

- In 1989, the legislature added more than 50,000 acres to the park, including lands in the Cottonwood / Eastland Creek area, lands and waters in Nuka passage, and Nuka Island.
- In March of 1989, the *Exxon Valdez* oil spill hit the park's outer coast.
- In 1993, 23,000 acres of private lands within the park, slated to be logged, were purchased with funds from the *Exxon Valdez* criminal and civil settlements, and added to the park. Also from the criminal settlement, $500,000 was appropriated to Alaska State Parks for Kachemak Bay State Park visitor center facilities.

These events significantly affected the park, prompting a revision of the 1989 plan.

PLANNING PROCESS

This plan was researched and written by Alaska State Parks staff, in cooperation with other state and federal agencies, the Kachemak Bay State Park Citizen's Advisory Board, and the public. The Kachemak Bay State Park Citizen's Advisory Board provides a forum for public opinion regarding the management of the park. Public review of this plan is part of the planning process.

PARK PURPOSE

Parcels of state land and water containing 640 acres or more can only be closed to multiple purpose use by an act of the legislature. Kachemak Bay State Park and Kachemak Bay State Wilderness Park have been legislatively removed from the public domain, and designated as "special purpose areas." Specific legislative language defines these purposes:

Kachemak Bay State Park:
"In order to protect and preserve these lands and waters for their unique and exceptional scenic nature, the park is established and shall be managed as a scenic park." (AS 41.21.131)

State of Alaska statute AS 41.21.990 defines "scenic park" as:

> Relatively spacious areas of outstanding natural significance, where major values are in their natural geological, faunal or floral characteristics, the purpose of which is directed primarily toward the preservation of its outstanding natural features and where development is minimal and only for the purpose of making the areas available for public enjoyment in a manner consistent with the preservation of natural values such as camping, picnicking, sightseeing, nature study, hiking, riding and related activities which include no major modification of the land, forests, or water development that are primarily of urban character.

Kachemak Bay State Wilderness Park:
"In order to protect and preserve this land and water for their unique and exceptional wilderness values, the park is established and shall be managed as a wilderness park." (AS 41.21.140)

State of Alaska statute AS 41.21.990 defines "wilderness park" as:

> An area whose predominant character is the result of the interplay of natural processes, large enough and so situated as to be unaffected, except in minor ways, by what takes place in the non-wilderness around it, a physical condition which activates the innermost emotions of the observer and where development of man-made objects will be strictly limited and depend entirely on good taste and judgement so that the wilderness values are not lost.

Chapter 2: Environment and Resources

REGIONAL SETTING

The Kenai Peninsula is a rich and varied region, known as the "playground" of southcentral Alaska. Mountains and glaciers (including the 1,000-square mile Harding Icefield) cover much of the peninsula, but there are also extensive lowland forests, meadows, and river systems. The area's abundant fish and wildlife contribute to the quality of life of residents and visitors.

Most of the peninsula's land mass falls within large conservation areas managed by the federal government. Chugach National Forest, Kenai National Wildlife Refuge and Kenai Fjords National Park are managed primarily for multiple use, wildlife habitat and public recreation/resource protection, respectively.

The major communities of the Kenai Peninsula are situated along the peninsula's rivers and coastline. Kenai and Soldotna and their neighboring communities collectively contain the region's largest population, and are host to its main government and retail services. Homer, located on Kachemak Bay, is considered the "host" community for Kachemak Bay State Park. It has a bustling harbor and deep water dock. As the population center of the southwest Kenai peninsula, it serves the smaller communities of Kachemak Bay. Other peninsula communities include Seward, on the southeastern peninsula, Anchor Point, Ninilchik, Sterling, and Seldovia. The major economic bases for the region are oil and gas, commercial fishing, tourism, and recreation.

PARK OVERVIEW

Kachemak Bay State Park became Alaska's first state park on June 9, 1970. The park is named for Kachemak Bay; a relatively shallow, 39 mile long nutrient rich estuary, located on the southern Kenai peninsula coast. The Kenai mountains shelter the bay from the rugged outer coast of the Gulf of Alaska. The waters and tidelands of Kachemak Bay, known as the "nursery" for many marine species, were also legislatively designated a State Critical Habitat Area in 1974.

Most of the park's 171,000 roadless acres are located on Kachemak Bay's south side. The park also includes the sand and clay cliffs of the Cottonwood/Eastland Creek area (on the bay's north shore), Nuka Island (the largest island on the southern Kenai coast), and lands in the Petrof Glacier area.

Kachemak Bay State Wilderness Park became Alaska's first (and only) state wilderness park in 1972. It abuts the southern boundary of Kachemak Bay State Park in the Kenai

mountains and extends south, into the waters of the Gulf of Alaska. It contains approximately 198,399 roadless acres, including 79 miles of rugged coastline.

A wide variety of ecotypes with associated plant and animal communities occur within these parks. They range from coastal intertidal areas, glaciated river valleys, and alluvial fans, to the rocky cliffs, glaciers, snowfields, and alpine lakes of the Kenai Mountains. The parks also contain significant cultural resources, evidence of occupation by early Alaska native culture.

NATURAL ENVIRONMENT

Surface Geology

Four general geologic units have been identified in the area. They are: alluvial and beach deposits, contorted cherts with some lava, ellipsoidal lavas and graywacke, and slate with some chert limestone and basic igneous material.

Geologic History

As the Kachemak area is part of the western edge of the Kenai Peninsula, its geologic history is parallel to that of the Kenai-Chugach Mountains. The slates and graywackes in the Kachemak Bay area were probably deposited in the late Paleozoic and were likely derived from a nearby land mass that was undergoing rapid erosion. During the Carboniferous, some limestone was deposited in the sea that had covered the area. By the beginning of the Mesozoic, the area was again a land mass and the ellipsoidal lavas are believed to have originated at this time. Volcanic activity continued during the Triassic. Contorted cherts and some undifferentiated lavas of Triassic age occur along the immediate coastal zone.

On the Kenai Peninsula, the record for the Jurassic is generally unclear. No units of Jurassic age have been mapped within the park boundaries. It is known, however, that there are acidic dikes in the area and it is possible that these are Jurassic intrusions, as intrusive action was common to most of Alaska during that period. The record of cretaceous activities is also unclear. It seems likely, however, that the region stood above the sea and that the major features of the present landform were in their beginning stages.

At the beginning of the Tertiary, the area probably stood above the sea. During the Miocene, it is believed that much of the Alaska coastal belt was submerged, but again, no record exists in the Kenai Peninsula. At the close of the Tertiary, the landscape was probably similar to that of the present. Subsequent changes in landform have been largely due to glaciation and diastrophism (twisting forces that cause deformation of the earth's crust).

The Kenai Mountains, like much of southern Alaska, were occupied by glaciers in early Quaternary. Periods of glaciation in the Kachemak area occurred before, during and after the Pleistocene. Many Quaternary deposits along the coast and river valley, are probably of glacial origin.

Physiographic Features

Glaciers and diastrophism have been active in shaping the landscape of the Kachemak area. Glacial valleys and outwash plains dominate much of the area. Additionally, three significant "fault zones" (fractured and displaced sections of the earth's crust), have contributed heavily to the shaping of the area. Two of these zones, identified as the "Tutka Fault Zone" and the "Doroshin Fault Zone" (after the predominating existing surface feature with which they are associated) are roughly perpendicular to the axis of the Kenai Mountains. The other zone, identified as the "Halibut Cove Lagoon Zone," is nearly parallel to the axis of the Kenai Mountains.

The Halibut and Doroshin fault zones have truncated the glacial valleys that extend seaward from Wosnesenski, Doroshin and several other smaller glaciers. They also form the landward boundaries of a wedge shaped area of complex block faulting. This area includes China Poot Bay, Peterson Bay, Ismailof Island, Halibut Cove, Halibut Cove Lagoon, Poot Lake and several unnamed lakes in the Halibut Cove Lagoon zone and in the block area itself.

The Kachemak area is seismically active, and earthquakes are common. The Good Friday earthquake of March 27, 1964 caused subsidence, earth flows, landslides and fissuring in the Homer area. Measurements taken along the south side of Kachemak Bay indicate that the total subsidence ranged from three feet near Halibut Cove, to nearly six feet at Seldovia. The effects of this subsidence extended over a two-year period, causing the gradual loss of uplands due to saltwater inundation and wave erosion. Land subsidence killed trees along the Wosnesenski river, the bars of China Poot Bay, and the outwash plains of Grewingk and Portlock Glaciers. Seismic potential should be a consideration during site planning for facility development.

Many land forms of the Kachemak Bay area and Gulf of Alaska coast areas are extremely youthful. An example is the mouth of the Wosnesenski river. Now open principally to Neptune Bay, the river had previously entered China Poot Bay to the north.

Slopes in excess of 30% are typical in the Kachemak Bay area, the wilderness park, and on the east side of Nuka Island. Notable exceptions include the outwash plains of Grewingk, Petrof, Yalik, and Portlock glaciers, the Doroshin River valley, and several small isolated areas in the interior valleys. It should also be noted that several areas are subject to avalanches and landslides. One major landslide covered a portion of Grewingk Glacier, and other landslide scars exist up-canyon of the glacier. Several avalanche scars exist on the peaks forming the south edge of the Wosnesenski river valley. Sadie Cove shows extensive avalanche scars along most of its length. Avalanche potential should be considered when siting facilities, particularly in Sadie Cove and on mountain slopes. Landslide potential, particularly in the Grewingk Glacier and Doroshin River valleys, should also be considered.

Soils

It appears that five soil types exist in the park:

Tundra soil - is developed in the upper reaches of the area above approximately 2,500 feet of elevation. This soil is thin, poorly developed in profile, and porous.

Forest soil - develops under the forest canopy, and has a high percentage of organics. This soil is light, has poor mechanical strength and is easily disturbed by human activity.

Marsh soil - develops at the confluence of rivers and tidal flats or in bogs. This soil is highly organic, fine particled and retains moisture.

Alluvial soil - is developed along the course of streams. This soil is granular and well drained but low in organic content, and is preferred by cottonwood.

Residual soil - is poorly developed granular soil. It's parent material has been weathered through mechanical and/or chemical processes.

It is especially important to consider soil instability when planning and building trails, particularly where ground water saturates soils. Because of rugged terrain, steep slopes, thin soils and thick vegetation, trail construction will always be a challenge in these parks.

Minerals

There are no known significant mineral deposits within the park. Within the adjacent area, however, are lignitic coal deposits, chromite, beach sands with placer gold, and limestone and copper. Chromite and ferrous metals are found in the outwash plain of Grewingk Glacier and it has been reported that placer gold has been found near Grewingk Glacier, and in the Sadie Cove and Tutka Bay areas.

Climate

The principal controls of the climate in the area are the maritime influence, and the Kenai Mountains.

The Kenai Peninsula is bound by the waters of the Gulf of Alaska (east, and south) and by Cook Inlet (west). The presence of the year-round, relatively warm Kuroshio Current in the southwestern Gulf of Alaska modifies the temperatures of the Kenai Peninsula. Even though cold weather occasionally moves in from the interior, the Kenai Peninsula is one of the warmer areas in Southcentral Alaska.

Kachemak Bay is on the Kenai Peninsula, northwest of the primary ridge line of the Kenai Mountains. The mountains moderate the effects of storms that approach the Kachemak Bay

area from the Gulf of Alaska. With the passage of storms, precipitation producing winds are forced up and over the southeast side of the coastal mountains of the wilderness park. They drop increasing amounts of precipitation with increasing elevation. Conversely, as the winds descend into the Kachemak Bay area, they produce a decreasing amount of precipitation with decreasing elevation, and are warmed through the process of compression. The northwest exposures of the park are therefore dryer and warmer than the southeast exposures.

Precipitation

Annual precipitation in the bay area amounts to about 25 inches, though an estimated annual of over 60 inches of precipitation occurs in the Kenai Mountains. Due to the rain shadow effect of the mountains, the Gulf of Alaska receives far more precipitation than does the Kachemak Bay side.

Snowfall in Homer and the lower elevations along Kachemak Bay averages 54 inches. The higher elevations inland, however, receive up to three times this average, because air temperatures are significantly cooler in those areas. Local winds and vegetation cause variations. Snowfall usually starts in October and continues through April. Snow may remain until June in sheltered areas. On north slopes and the high elevations, snow remains until late summer. Avalanches are common on steeper slopes, especially where cornices are formed on ridges, as evidenced in Sadie Cove, portions of Tutka Bay and most of the higher elevations.

Temperature

Temperatures in the park are dominated by the maritime influence. Winter temperatures average between 11 degrees F and 42 degrees F (similar to Portland, Oregon). Summer temperatures average between 42 degrees F and 59 degrees F (similar to San Francisco). With increases in elevation, the mean temperature will decrease about 3 degrees for every 1,000 feet of elevation. Local variations in temperature occur due to differences in aspect, exposure, cold air drainage and mountain valley winds.

The average time between springtime's last freezing temperature and the first freeze in the fall is 133 days, May 18 to September 28.

Winds

Wind patterns in Kachemak and the gulf coast reflect the movement of high and low pressure systems through the area. The area's mountains and valleys influence the commonly light prevailing wind patterns, frequently producing dominant local winds.

In Kachemak Bay, winds typically range from 10 to 25 knots, with higher winds experienced on mountain ridges and passes, and in open areas such as the mouths of Tutka Bay and Sadie Cove. On Kachemak Bay during the summer months, the wind is typically 15 to 20 knots from the southwest (called the "day breeze"). The day breeze is light in the early mornings

and late evenings, but is stronger at mid-day. With the approach of storms from the Gulf of Alaska, the winds change to southeast. In the fall and winter, winds in the bay are more commonly from the north and northeast.

The Gulf of Alaska is subject to the severe storms of the north Pacific. Winds more than 40 knots and seas greater than 15 feet make landings on many beaches in the wilderness park difficult or impossible for extended periods.

Winds and tidal action at the mouths of the valleys and fjords, and along exposed portions of the coast, can create tide "rips" and other treacherous water conditions.

Winds must be considered before constructing mooring and dock facilities, coastal trail heads, and campsites with coastal access.

Clouds and Fog

The mean cloud cover for the year is 72%, with between 70% and 80% coverage for all months except December (with 66%) and January (with 56%). Longer periods of overcast occur in the mountains.

Homer experiences heavy fog an average of five days per year. Fog most frequently occurs in the low lying areas of the bay where cold air collects, such as downslope from the Doroshin, Wosnesenski, and Grewingk Glaciers. The sun normally dissipates fog by mid-day.

Hydrology and Hydrography

Kachemak Bay State Park has four hydrologic zones; marine, freshwater lakes and bogs, glacial and freshwater streams, and glaciers. Each zone has a unique environment, mostly determined by glaciation, block faulting, and precipitation patterns.

Marine Zone

The tides in Kachemak Bay State Park have a daily average range of 15.4 feet. Tidal extremes range from approximately 23.2 feet (high tide) to approximately -5.9 feet (low tide).

The Homer, Grewingk Glacier, Aurora, and China Poot Bay spits all curve inward, suggesting that the incoming tidal action is stronger than outgoing tidal action. Tide water movement in the smaller bays and coves, especially in shallow areas, can be extremely swift and boaters should exercise caution when navigating in these waters.

The Kachemak area continually experiences changes to its shoreline. Some changes are due to the 1964 earthquake. Other changes are due to a combination of freezing weather and strong wave and tidal action that fractures and eventually breaks down the shoreline. "Packing" may

occur when high tides and high winds combine, causing abnormally high tidal conditions that magnify these effects.

Freshwater Lakes and Bogs

There are six large lakes (more than 100 acres in size), and many small lakes within the park. In the Kachemak area, lakes formed by fault block action (the rising, tilting and sinking of the terrain) are the most common. In the area of the "China Poot Drop Block Zone," several lakes form a "chain" along the fault trace. Other lakes in the park were formed by receding glaciers. The largest of the glacially formed lakes in the Kachemak area is Grewingk Lake at the foot of Grewingk Glacier. The shoreline of this lake is constantly changing as the glacier recedes and as landslides occur.

Freshwater and Glacial Streams

There are two main stream types in Kachemak Bay State Park: the streams formed by the fault blocking of the local terrain, and those formed by glaciers.

The creeks and streams of the Poot Lake basin were probably formed by geologic faulting. The largest drainage in the park (Doroshin River) is a combination of the two types. The headwaters of Doroshin River come directly off Doroshin Glacier, Wosnesenski Glacier and some smaller unnamed glaciers.

Glaciers have formed many hydrologically significant drainage patterns in the park. Almost every valley or cut in a mountain has a small stream or spring flowing from it. Many cirques and hanging valleys have magnificent waterfalls cascading down shear cut walls. Two of these waterfalls are readily visible. Hanging Creek, as it comes down its glaciated valley and drops into Doroshin River, has a fall of about 75 to 100 feet. A small unnamed stream near the head of Tutka Bay has a fall of about 150 to 200 feet. In the winter, they become striking ice formations. The headwaters of Tutka, Halibut, Grewingk, Humpy, Portlock, and Petrof creeks are drainage from active glaciers.

Most of the streams in the park area are young, and are just beginning their erosional processes.

Glaciers and Icefields

Grewingk, Portlock, Wosnesenski, Doroshin, Petrof, and Southern Glaciers, and many small unnamed glaciers are part of the Grewingk-Yalik Glacier ice complex at the southwestern end of the Harding Icefield, in the Kenai Mountains.

Five glacier feature types within the park are:

1. The large fjords, such as Sadie Cove,

2. The "U" shaped glaciated valleys found in various locations throughout the park,
3. The many glacial lakes (cirques) that line the mountain tops,
4. The hanging valleys, where a large valley glacier has cut off a small valley glacier, and;
5. The broad plains of loose glacial till, left behind by retreating glaciers.

Water Quality

The water quality in Kachemak Bay State Park is excellent, though "glacial flour" is present in those streams originating at glaciers. The clear water streams and springs are often used for drinking water, although the potential for giardia contamination exists, and appropriate precautions should be taken.

Vegetation

The park area supports a wide variety of vegetation. Plant communities include tidelands and coastal marshes, coastal forests of spruce and hemlock, thick alder on mountain slopes, and alpine meadows and tundra.

The northernmost range for many plant species is extended by the relatively warm, wet marine climate. The result is an association, (in the lower elevations), of Sitka spruce, western hemlock, and scattered cottonwood.

This marine influence is strongest in the Gulf of Alaska and on the southwestern end of Kachemak Bay. It becomes less of an influence on the northeast end of the bay. For example, tree cover in Tutka Bay is found at higher elevation than in the Humpy Creek area. Undergrowth is much more luxuriant on the outer coast and on the south side of the bay than on the north.

Glaciation also influences vegetative associations. The most recently glaciated areas have little or no vegetation, because they lack soil. Faulted valleys (such as Tutka Bay) have more advanced vegetative development than do glacier valleys (such as Grewingk) that have not been faulted.

Local environmental effects cause several other variations in vegetation patterns. In some areas of Sadie Cove and Tutka Bay, snow slides (rather than soils and altitude) influence vegetation types. Slides form long, narrow chutes and destroy the tree cover in their path. This disrupts the plant succession process. Instead of the typical horizontal transition between vegetation types, the line is often vertical.

The 1964 earthquake and subsequent land subsidence have also caused local changes in vegetative associations. With subsidence, the water table has risen in some areas in relation to the once well drained alluvial soils, killing stands of coastal Sitka spruce and creating "ghost forests."

Vegetation Associations

There are five vegetation zones in the park. These zones are broad, and are used for planning only. A brief description of each zone follows, with a list of species found in each. This list, though far from complete, provides a summary of the plant associations within zones.

Coastal Marshes and Sea Shores

The saltwater influence dominates this zone. It is found primarily along the flat floodplains and at the head of the coves facing Kachemak Bay and Gulf of Alaska.

The vegetation in this zone is tolerant of tidal flooding and drying. Some species, along stream banks, are alternately flooded by freshwater (when the tide is out), and saltwater (when the tide is in).

Land subsidence has greatly affected this zone. Several old beaches have disappeared. New shoreline is building up in some areas, stopping tidal movement into what was once tidal marsh. Formerly flowing into China Poot Bay, the Doroshin River now flows out through Neptune Bay, changing the vegetation of both bays.

Tidal estuaries are biologically productive areas, containing critical habitat for many marine, freshwater and upland species.

Forest Zone

Two basic forest subzones in the park are Sitka spruce/western hemlock, and black cottonwood. Both are climax forests.

The Sitka spruce/western hemlock forest, in the southern area of the park, grows from sea level to an elevation of 1,000-2,000 feet. It grows in gradually lower elevation as it moves north. At tidewater, trees can grow to more than two feet in diameter and 60 feet in height. At tree line they are smaller, almost bush size. Sitka spruce is found on old alluvial soils with direct marine influence. Succession in spruce/hemlock forest starts with alder and devilsclub. Grass cover often dominates in open areas, however, and tree cover comes slowly.

The undergrowth in the spruce/hemlock forest is a solid cover of wintergreens, ferns, mosses and occasionally, alder and devilsclub. As the canopy opens, the alder, devilsclub and willow are more dominant.

Away from the direct marine influence, the tree cover changes to black cottonwood. Cottonwood is also common along rivers in the park. In the cottonwood stands, under a closed canopy, tall grasses and ferns dominate. In the more open areas, willow is the dominant species.

Facility development is appropriate within the forest zone in Kachemak Bay State Park, with a few considerations:

1. Wherever tree cover is opened and soils are disturbed, devilsclub and/or alder move in quickly. Devilsclub is a food for black bears, but it is undesirable in public use areas. Because devilsclub prefers wet soils, developments should be placed on dry, well drained soils.

2. Facility development or heavy use within the forest zone can easily damage trees, because root systems are close to the surface. Soil compaction can affect tree growth. Although roots can cause footing problems when they become exposed on the trail surface, cutting them affects tree and soil stability. Because this problem is easier to prevent than it is to treat, it should be considered before trail and campsite construction. Crews should avoid trees and root systems during trail layout.

3. Vegetation and associated soils can be easily disturbed, especially on slopes. Carefully designed and properly constructed trails drain water across (rather than down) the trail.

Subalpine Zone

The transition zone between forest and alpine is difficult to define. It is sensitive to local environmental influences. Microclimates within this zone allow tree cover to invade from below, and alpine cover from above. Snow slides and geologic activity cause breaks in vegetation.

Alder, in association with birch and willow, is the dominant species. Grasses, ferns, mosses and wild flowers grow where shrub species are absent.

Soil depth and moisture play a major role in determining the upper limit of this zone.

Alpine Zone

The alpine zone extends from the upper fringes of the subalpine zone to bare rock. Grasses, mosses, heather, lichens, low mat plants, and a variety of flowering plants grow here.

Alpine vegetation experiences severe growing conditions. Summers are extremely short, soils are fragile and shallow, and temperatures reach the lower extremes for plant growth. In spite of these conditions, however, beautiful alpine plants thrive in this zone. The alpine zone is easily disturbed, and is generally unsuitable for facility development.

Marshes and Bogs

In areas where drainage is poor and the water table is close to the surface, vegetation consists of associations of sedge and cotton grass mats, willows, and bog cranberries. In Kachemak

Bay State Park, these areas are often eutrophic lakes (lakes evolving into marshes), areas of subsidence, or stream overflows. Wetlands add to the variety of plant and animal associations and species diversity in the park, and provide wildlife habitat. Marshes and bogs are unsuitable for facility development. Trails should be located well away from wetlands and boggy lake shores.

Wildlife

The park has six general habitat types: marine, seashore/tidal marsh, forest, subalpine brush, alpine, and fresh water. The boundaries of these habitats are broad, and they overlap. Individual species identified in one habitat often range into other habitats. Species are listed in the habitat where they are most often found. The species list that accompanies the discussion of each habitat is incomplete.

Marine Habitat

The marine habitat encompasses all continuously covered saltwater areas. Many species found in the marine habitat also use the seashore and tidal marsh habitats. For example, ocean birds spend a considerable amount of time on the water, but come ashore for breeding and nesting.

Birds

Kachemak Bay is among the most important marine bird habitats in the region. More than 230 species of marine birds have been identified around Kachemak Bay. Most of the birds of the bay are migratory, using the bay area only during certain times of the year. Others complete their entire life cycle on the waters of the bay. The major categories of birds identified on or near Kachemak Bay include waterfowl, shorebirds, gulls, terns, and seabirds.

Waterfowl are the most abundant group of birds in the bay area. This group includes diving ducks, seas ducks, dabblers, geese, and swans. Species include common eiders, harlequin ducks, goldeneye ducks, mergansers, scoters, mallards, scaups, pintail, and teal. Many, such as mallards and pintail, are migratory. Others, such as oldsquaws, winter on the bay. Waterfowl have extremely diverse diets and feeding habits change by season, depending on the species.

Shorebirds, including phalaropes and sandpipers, migrate in great numbers through the area. They use the bay as an important rest stop during migration.

"Gulls" commonly seen on park waters include Black-legged kittiwakes, Glaucus-winged gulls, and shearwaters.

Arctic terns nest in small numbers on the moraine of Grewingk Glacier, and in other areas around Kachemak Bay and Cook Inlet. They congregate in the bay area in late July, and leave by September.

Seabirds include pigeon guillemots, marbled murrelets, Kittliz's murrelets, common murres, pelagic and red-faced cormorants, and tufted and horned puffins. Food supply and nesting habitats are two critical aspects of the life history of both seabird and gull species. Small fish and crustaceans make up most of their food supply. Some will feed on the ocean surface diving for small fish. Others prefer to come ashore for crustaceans in the tidal pools, or insects along the shore. Nesting habits also vary. Some build nests along the rocky shores while others lay their eggs on bare rocks high on the cliffs above the sea. The nesting period is the most critical time of the life cycle. Eggs are vulnerable to predation by other birds and mammals when left unprotected. This can happen when rookeries are disturbed. A reliable source of food and adequate nesting sites are the keys to species survival.

Gull Island, located near the park between Peterson Bay and China Poot Bay, hosts an important seabird rookery. Nine species including Kittiwakes, cormorants, gulls, murres, and puffins, nest on the island. Because outer coast colonies were damaged by the *Exxon Valdez* oil spill, the Gull Island Kittiwake colony may now be one of the most productive in the Gulf of Alaska. It is owned by the Seldovia Native Association.

Harbor Seal

Harbor seals are essentially animals of the open sea, although they are sometimes seen in rivers and lakes far from the ocean. Seals "haul out" on certain beaches and rocky shores to rest and to give birth.

Birth usually occurs on sandy beaches or remote reefs and rocks along the outer coast. One pup is born sometime between June and mid-July and is nursed by the mother for three to four weeks. Pups may be abandoned by the mother, particularly when they are disturbed. Because seals are easily disturbed by human activity, haul outs should be kept free from development.

The diet of the harbor seal includes herring, flounder, salmon, rockfish, cod, sculpin, octopus, squid, shrimp, and small crabs.

Sea Otter

The Russian fur trade nearly caused extinction of the sea otter in Alaska. This member of the weasel family, however, has made a slow recovery in Alaska, and has repopulated much of its former range.

Sea otters usually give birth to one pup every two years. The maternal instinct is strong; the female will care for a pup for nearly a year. Studies suggest that females will not mate while they have pups with them.

The diet of the sea otter includes fish, crab, crustacea, sea urchins, rock oyster, mussels, various other mollusks, and octopus.

Seashore & Tidal Marsh Habitat

The seashore/tidal marsh habitat can be described as the area between saltwater and the beginning of the upland forest. This area, which includes the intertidal zone and saltwater marsh, has the largest variety of animal life of any of the habitats. Crabs, urchins, periwinkles, barnacles, mussels, clams, starfish, limpets, and many other forms of sea life are found in this zone. They make up the diet of many shorebirds and mammals. As the transition between marine and upland habitat areas this habitat is particularly vulnerable.

The marshes in this zone are a delicate association of plant and water. They provide some of the best nesting, feeding and resting areas for migratory waterfowl in the region. Even minor disturbances to this balance can destroy this habitat.

Many mammal and bird species are dependent on the health, variety, and concentration of intertidal life. Because collection or harvest could deplete intertidal animals in a short time, they should be carefully managed.

Forest Habitat

The forest habitat (primarily Sitka spruce, alder, and cottonwood) ranges from the edge of the high intertidal zone and up the mountain slopes to the timberline. It provides cover, protection, and nesting and den sites for most of the upland mammals and birds in Kachemak Bay State Park.

The potential for conflict exists between humans and upland wildlife, and should be carefully considered. Development and concentrated use can disturb wildlife, especially near nests or dens.

Following is a brief summary of the life history of some species found in the forest habitat.

Bald Eagle

Bald eagles frequent the shores of lakes, rivers and bays. Their food consists largely of fish and carrion, and they usually nest where food can be easily obtained. They are generally non-migratory, deserting home only during the coldest weather.

Bald eagles mate for life. One brood, of one to three eaglets, is hatched and reared each year. Maturity is reached at three years, when the distinctive white plumage fully emerges. The park hosts a healthy bald eagle population. Nuka Island, in particular, is host to the highest concentration of nesting bald eagles on the southern Kenai Peninsula coast.

Because eagles are easily disturbed, no development should occur within 300 feet of nests.

Coyote

The coyote ranges from the coast to the mountains, but prefers open areas. The status of coyote populations within the park is not well known. Their abundance in this area is probably dependent on the availability of food in tidal areas and lowland forests.

Red Fox

The red fox prefers broken country, crisscrossed with hills and draws. The red fox is omnivorous and eats a variety of foods including muskrats, squirrels, hares, birds, eggs, insects, vegetation and carrion. Mice seem to be preferred. Red fox are rare in this region.

Black Bear

Though it has a decided preference for open forest, the black bear can be found in all terrestrial habitat types within Kachemak Bay State Park. Semi-open forest areas, composed primarily of fruit-bearing shrubs and herbs, lush grasses and succulent forms, are particularly favored.

In the spring, grass and other early appearing herbaceous plants appear to make up the bulk of the black bear's diet. With the approach of summer these foods are supplemented by a variety of fruit-bearing plants and shrubs. In the early fall and, varying with location, the black bear generally has an abundant variety of berries and fleshy fruits for forage; devilsclub berries, crowberries, cranberries, raspberries, blueberries and others. During the late fall, foods are less plentiful unless food sources such as fish are available. At this season, as in the spring, grass is apparently the staple food.

Black bear do not coexist well with humans. To reduce confrontations, areas with high bear concentrations and/or dens should be identified, and excluded when considering sites for facility development.

Wolves

Wolf activity is evident in some areas within Kachemak Bay State Park, though few sightings have been reported. The lack of a consistent, available food source probably accounts for the low numbers. Wolf den sites should be excluded from areas considered for facility development.

Moose

The park's small moose population frequents the lowlands and river valleys. The small population is likely due to the limited browse available in the park's predominantly climax forest type.

Grizzly and Brown Bear

Considered to be the same species, brown and grizzly bears range throughout Alaska. Exceptions are the islands south of Frederick Sound (in Southeastern Alaska), the islands west of Unimak (in the Aleutian Chain), and the islands of the Bering Sea.

While the exact habitat requirements of the brown/grizzly bear are unknown, the species is seemingly most at home in open tundra and grassland areas, and in coastal areas with strong salmon runs.

The brown/grizzly bear is omnivorous. Preferred foods include berries, grass, sedge, horsetail, cow parsnip, fish, roots, and upland animals, when available. Although the area contains good brown bear habitat, few brown bears have been seen in the park.

Other mammals found in this zone are ermine, river otter, mink, marten, wolverine, lynx, hoary marmot, red squirrel and mice.

Alpine Habitat

The Alpine habitat includes the areas of the park above the tree line. There is limited cover, and environmental conditions can be extreme. Although several mammal species frequent the alpine habitat, few are consistently found there.

Mountain Goat

Mountain goats are both grazing and browsing animals. They normally summer in high alpine meadows where they graze on grasses, herbs and low growing shrubs. As winter arrives and the more succulent species are frost-killed, the feeding habits shift to browsing. Hemlock is an important winter food. Most goats migrate from alpine summer ranges to winter at or below tree line. Surveys by Alaska Department of Fish and Game suggest healthy goat populations within the park. Goat kidding areas should be excluded from areas considered for facility development.

Fresh Water Habitat

The fresh water streams and lakes that support fish life are considered fresh water habitats. Several streams in the park are spawning areas for red, pink, chum, and coho salmon.

Special emphasis should be placed on protecting the salmon spawning areas within the park. Development near (or upstream of) spawning areas should be done with caution.

Dolly Varden

The Dolly Varden is a popular sport fish, found in many streams in coastal Alaska. Although frequently called a trout, it is actually a char. They spawn in streams during the fall and migrate to the sea in their third or fourth year of life. They have a habit of searching for streams with lakes, and are frequently found in streams without salmon. Dolly Varden are found in many of the coves and clear freshwater streams of Kachemak Bay.

Pink Salmon

The pink salmon is also called humpback salmon or "humpy," because the male develops a prominent hump on its back at spawning time. It is the smallest (and most plentiful) of the Pacific salmon species, averaging three to five pounds. Usually, it travels only a few miles up river to spawn and is known to spawn in saltwater estuaries.

Spawning takes place from July to September. The female drops 1,200 to 2,000 eggs that, depending on the water temperature, hatch out from December to February. The alevins, or sac fry, remain in the gravel until the yolk sac is absorbed, usually until April to mid May. Immediately after emerging, the free swimming fry start out to sea. They spend one year in the ocean, then head back to "parent" rivers to spawn. The most significant natural spawning stream in the park is Humpy Creek. Others are located on the gulf coast side of the park. Tutka Lagoon hatchery, located on park land in Tutka Bay, has produced pink salmon returns of over 1.6 million fish.

King Salmon

King (chinook) salmon are the largest of the salmon species. King salmon spawn in the fall in Alaska with the average fish dropping five to six thousand eggs. The adults, male and female, die shortly after spawning and the young hatch the following spring. After a year or occasionally two, they drift to sea in schools as three-inch fish. After four to five years at sea the king salmon returns to its native river to spawn. King salmon migrate and feed throughout the saltwater areas of the park. The Alaska Department of Fish and Game annually releases king salmon smolt in Halibut Cove Lagoon. Although the returning adult king salmon do not spawn there, they provide a popular sport fishery.

Silver Salmon

Silver (coho) salmon are found in streams and rivers of all sizes. They usually spawn near the sea, but some migrate farther up larger rivers. Spawning begins in August, peaks in late October or November and continues even into January. The eggs hatch in 40 to 50 days or longer depending on water temperature. The majority of the fry migrate to the ocean in their second year. After two years in the river and one in the ocean, the silver returns to its parent river to spawn. The adults, male and female, die shortly after spawning. Silver salmon can be found in Peterson Bay and at the head of Sadie Cove.

Rainbow Trout

Rainbow trout are a smaller species of the family Salmonidae. They have gained wide popularity as a sport fish. They can be easily raised in hatcheries, and stocked in fresh water streams and lakes. Rainbow trout were stocked in China Poot (Leisure) Lake in the 1950's, and are a self-sustaining population.

They feed on insects, crustacea, worms, smaller fishes and their eggs. Spawning is likely to take place in gravel-bottomed streams in which the female scoops out a hollow or redd for the eggs. When the eggs are laid and fertilized, the female covers them with sand or gravel They hatch in four to seven weeks, depending on water temperature.

CULTURAL ENVIRONMENT

Pre-Contact History

Because of its coastal location, diverse vegetation and wide range of animal life, the Kachemak Bay and Gulf of Alaska areas have long been occupied by humans. Evidence shows area occupation by Pacific Eskimo cultures along the southern Kenai Peninsula coast as early as 6,000 years ago.

Post-Contact History

In July of 1741, the Russian explorers Vitus Bering and Alexia Chirikof became the first Europeans to visit the southern Alaska coast. Cook Inlet is named for Captain James Cook, who explored the area in 1778. The Spanish conducted at least five expeditions to Prince William Sound and Gulf of Alaska waters between 1774 and 1792. Peter Doroshin, a Russian scientist, explored the region in 1850. The Russian fur traders frequented the area in the mid 1800's. In 1880, William H. Dall, a scientist and explorer who mapped Grewingk Glacier, also named Halibut Cove, Grewingk Glacier, Sadie Cove, and several other features of the bay.

Halibut Cove, a small community adjacent to the park, was established around 1911 at the start of the area's thriving herring fishery. Several herring salteries operated around Halibut cove and the nearby lagoon. The fishery ended in the early 1930's, due to depleted stocks. The remnants of herring salteries still exist at some coastal sites.

A few trappers operated in the area from the 1920's through the 1940's. Some of their original trails are now part of the park's trail system. Several features in the park were named for Henry "China" Poot, a railroad worker who hunted, fished and trapped in the China Poot Bay area in the early 1900's. "Herring" Pete Sather and his wife, Josephine, resided on Nuka Island from the 1920's to the early 1960's, and operated a fox farm there. The Nuka area also saw activity in mining and exploration during this period, but this was ended during World War II. Nuka Island was federally owned and was once proposed for inclusion in Kenai Fjords National Park, before the state selected the island.

Cultural Resources

Cultural resources are deposits, structures, ruins, sites, buildings, graves, artifacts, fossils, or other objects of antiquity over 50 years old. They are important evidence of early human occupation. If lost, they are irreplaceable. Cultural sites are studied by evaluating the horizontal and vertical "context" of evidence at the site. Context is the three-dimensional spatial arrangement of a site, artifact, feature or specimen, relative to an established point. The placement of objects relative to each other tells a story of how people lived. Once an object is moved, its context is destroyed. It is unlawful to disturb cultural resources on either state or federal lands. Cultural resources must be carefully managed so their value is

preserved. Within state parks, areas with sensitive archeological resources are often designated as cultural zones.

Investigations since the early 1930's have uncovered and documented several significant sites of ethnohistoric and American period occupation in the Kachemak Bay and Gulf of Alaska areas. They may contain features such as sites, middens (refuse deposits), and artifacts (such as tools and fire cracked rock). There are several important sites within the park.

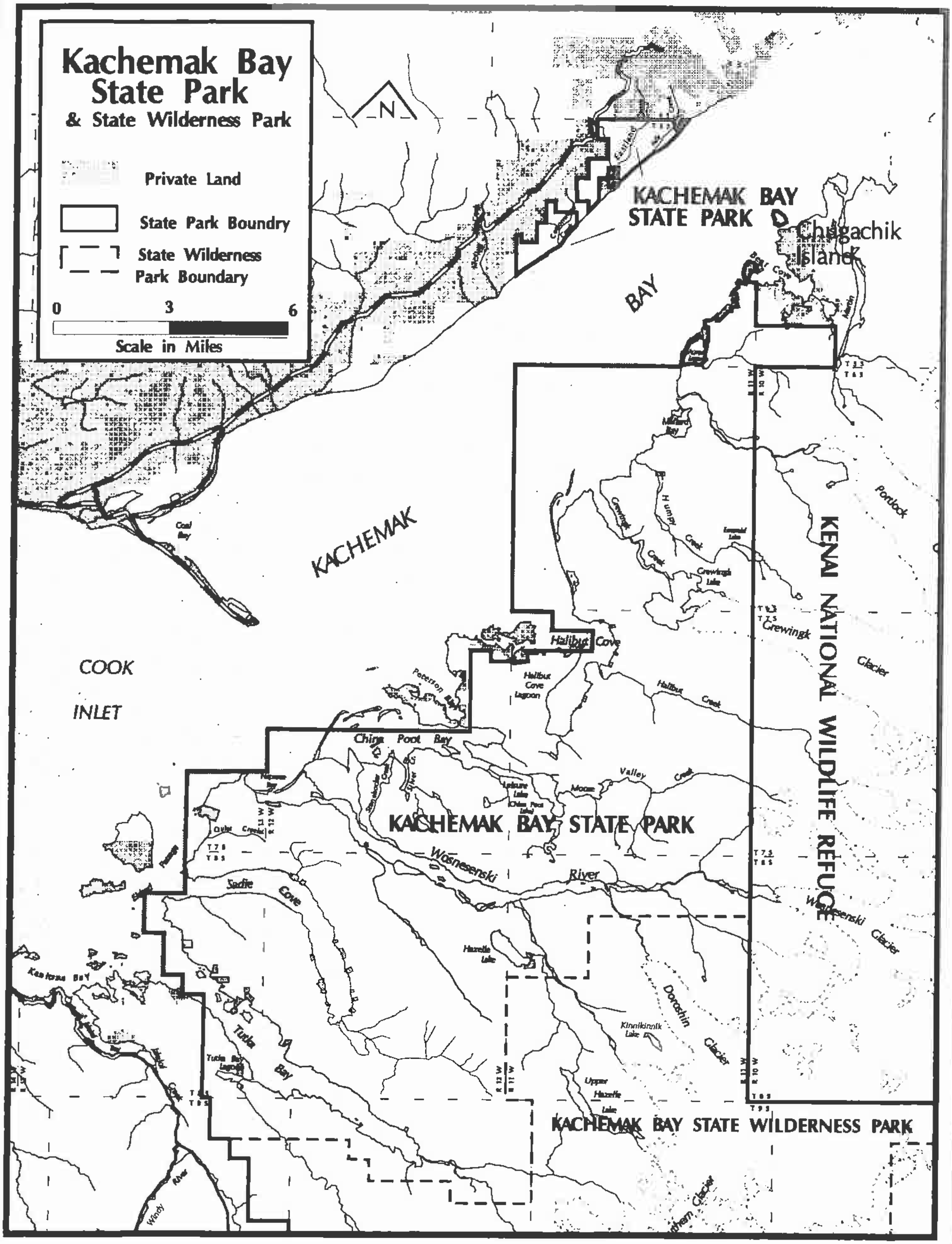
LAND STATUS

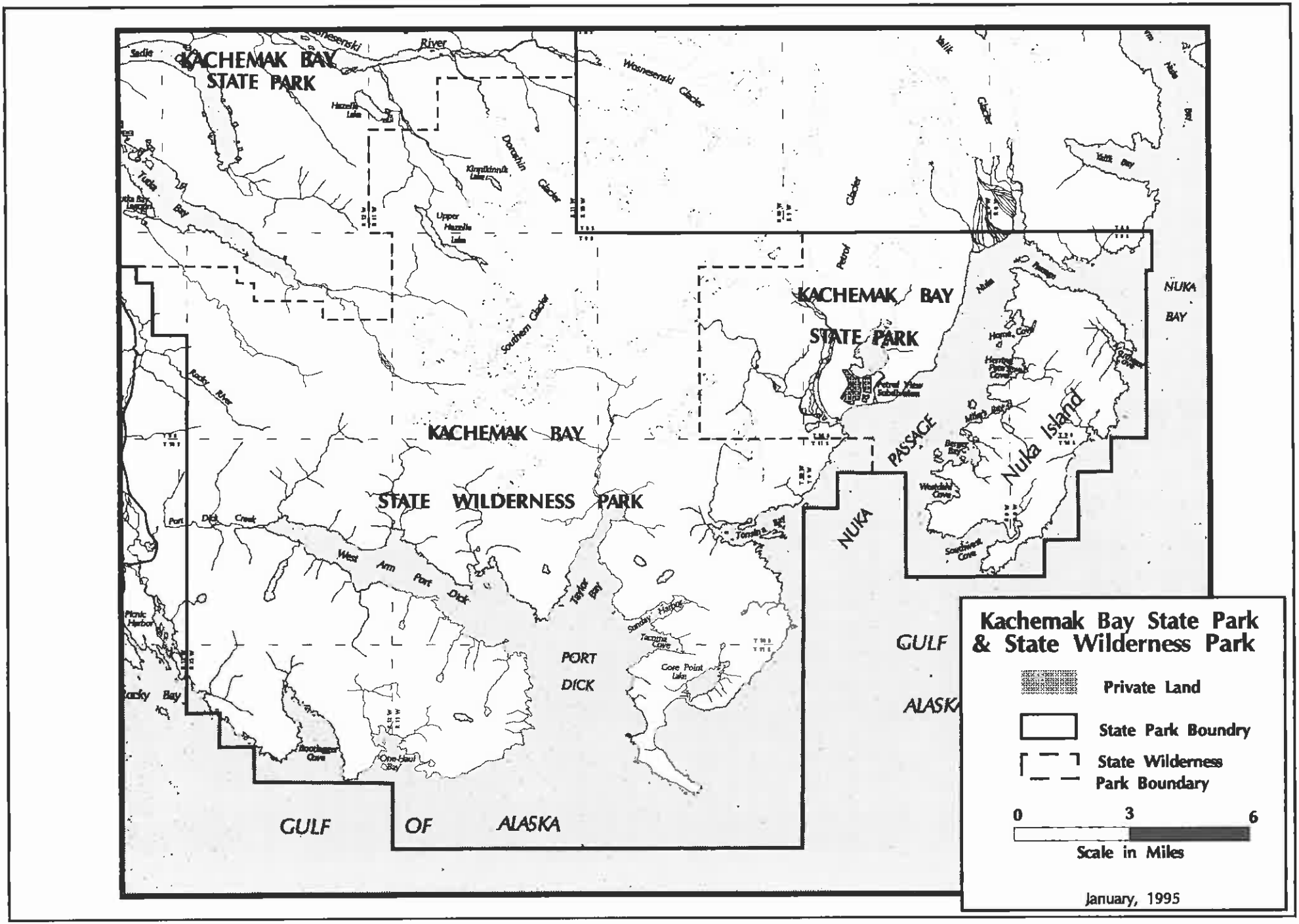
The Kenai National Wildlife Refuge and Kenai Fjords National Park are the major landowners to the east of Kachemak Bay State Park. The community of Halibut Cove lies on the northern boundary of the park. The Seldovia and Port Graham Native Associations are the primary landowners to the west and southwest. The southern park boundary extends well into the Gulf of Alaska.

The waters of Kachemak Bay were designated as the Kachemak Bay State Critical Habitat area by the Alaska legislature in 1984. Managed by the Alaska Department of Fish and Game, it was established to protect fish and wildlife habitat, and to insure long-term public use and enjoyment. The Critical Habitat area overlaps designated state park waters in some areas of the bay.

The Bureau of Land Management (BLM) owns 120 acres near Rusty's lagoon, on glacier spit (USS 4730). Part of that agency's forest preserve system, the parcel was established primarily for research. Because it has high recreation value and is surrounded by park land, the state has requested the parcel be transferred, and added to the park. Even though research could continue on the parcel following transfer, the Bureau of Land Management has held that the parcel is better protected under their management.

There are nearly 100 private "inholdings" within the park. Most are five acres or less. The majority are located along the southern coast of Kachemak Bay and in the Petrof view subdivision, on the gulf coast side. The University of Alaska owns two 25 acre parcels on the west side of Nuka Island.


Kachemak Bay State Park
& State Wilderness Park
Private Land
State Park Boundry
State Wilderness Park Boundary
0
3
6
Scale in Miles
N
KACHEMAK BAY STATE PARK
Chugachik Island
BAY
KACHEMAK
COOK
INLET
Halibut Cove
Halibut Cove Lagoon
Peterson Bay
China Poot Bay
Grewingk Creek
Humpy Creek
Grewingk Lake
Grewingk Glacier
Halibut Creek
Valley Creek
Moose
KACHEMAK BAY STATE PARK
Wosnesenski River
Wosnesenski Glacier
Sadie Cove
Hazelle Lake
Doroshin Glacier
Kinnikinnik Lake
Tutka Bay
Upper Hazelle Lake
KACHEMAK BAY STATE WILDERNESS PARK
KENAI NATIONAL WILDLIFE REFUGE
Portlock
Glacier
Coal Bay
Kasitsna Bay
Windy River


KACHEMAK BAY
STATE PARK
KACHEMAK BAY
STATE PARK
KACHEMAK BAY
STATE WILDERNESS PARK
NUKA
BAY
Nuka Island
PASSAGE
NUKA
PORT
DICK
GULF OF ALASKA
GULF
ALASKA
Kachemak Bay State Park
& State Wilderness Park
Private Land
State Park Boundry
State Wilderness
Park Boundary
0
3
6
Scale in Miles
January, 1995

ENVIRONMENTAL IMPACTS

Excluding private lands, several sites within the park have been affected to varying degrees. The following are recognized impacts, and will require evaluation and mitigation:

The former Sadie Cove rock quarry is located on a point between Sadie Cove and Tutka Bay, in Eldred Passage. In 1982, Alaska State Parks issued a permit for the extraction of armor rock one final time. In exchange, the contractor agreed to restore the site by filling and contouring. It will be many more years, however, before new vegetation completely hides the evidence of the quarry operation.

Halibut Cove Lagoon was the site of an extensive ADF&G King salmon rearing project, from 1973 to 1982. Construction materials, old power lines, and water pipeline materials remain on the site, but the area is slowly being cleaned up and rehabilitated.

China Poot (Leisure) Lake offers rainbow trout fishing, and is a popular destination for hikers and fly-in groups. The Alaska Department of Fish and Game conducts a sockeye salmon enhancement project at Leisure lake that involves the use of power boats and lake fertilization. Project equipment is stored at the lake. A small cabin is located on park land in the northeast corner of the lake. The small island on the lake is privately owned.

Several trails in the park were originally established by locals. Many were routed through marsh or straight up steep mountain slopes, without consideration for proper tread construction and drainage control. Although adequate for the low traffic volume they originally received, increased use and/or inadequate drainage has resulted in significant erosion in some areas.

Many popular camping areas of the park have, over time, been affected by heavy use. Sanitation has become a problem in some areas without facilities. This also could cause water quality problems.

The Alaska Department of Fish and Game, under a permit from Alaska State Parks, constructed a large scale fish hatchery in Tutka lagoon. The hatchery is operated by the Cook Inlet Aquaculture Association. The association operates under a memorandum or understanding with the Alaska Department of Fish and Game. The hatchery includes several buildings for staff housing, egg incubation, research, and storage.

In the mid 1970's the Alaska Department of Fish and Game constructed a cabin in the wilderness park at the outlet of Port Dick Creek. The cabin, with out-buildings, is located on a site with resource sensitivities. Site impacts and associated debris have accumulated, and degraded the area over time. It is the only structure standing in the wilderness park.

The wilderness park, Nuka Island, and the north and west sides of Nuka Passage were heavily impacted by the *Exxon Valdez* oil spill. Although the effects of the spill have diminished with

time, oil can still be found in several locations. Evidence of cleanup and research activities also remains.

Chapter 3: Recreation Use, Patterns and Trends

REGIONAL RECREATION PROVIDERS

Federal agencies

The federal government is the major land owner on the Kenai Peninsula. The units of the federal system on the Kenai Peninsula include the Kenai National Wildlife Refuge, managed by the U.S. Fish and Wildlife Service; Chugach National Forest, managed by the U.S. Forest Service; and Kenai Fjords National Park, managed by the National Park Service.

The Kenai National Wildlife Refuge extends from the north coast of the Kenai Peninsula to Kachemak Bay State Park. The refuge accommodates a variety of recreational uses that include hunting, fishing, hiking, camping, and cross-country skiing. Most recreational use is compatible with the agency's goal of fish and wildlife habitat conservation.

Chugach National Forest encompasses six and one-half million acres. It covers much of the northeast Kenai Peninsula, and much of the land in Prince William Sound. The Kenai Peninsula portion of the forest is mountainous, and is bisected by highway, roads, and trails, making it accessible to a wide variety of upland recreational users. Within the Prince William Sound area, popular activities are pleasure boating, hunting, fishing, hiking, and skiing. The Chugach National Forest manages 43 public use cabins and an extensive trail system.

Kenai Fjords National Park extends along the gulf coast, from Kachemak Bay State Wilderness Park to the City of Seward. It includes rugged coastline in the Gulf of Alaska, and much of the Harding Icefield. The entire coast of the park has been recommended as wilderness study area by the National Park Service. The National Park Service estimates that in the summer of 1993 more than 2,000 people visited the coastal portion of the park, and some 50,000 visitors viewed the park from charter vessels. Recreation opportunities in the park include camping, fishing, hiking, mountaineering, boating, and wildlife observation. The National Park Service manages four public use cabins in the park, and a visitor center at Exit Glacier.

State of Alaska

Besides Kachemak Bay State Park and Wilderness Park, Alaska State Parks manages another 30 units of the state park system on the Kenai Peninsula. Units such as the Kenai River Special Management Area, and Ninilchik, Deep Creek, and Anchor River State Recreation Areas provide access to outstanding sport fishing opportunities. The state marine parks of Prince William Sound and Resurrection Bay provide a variety of coastal recreation activities. Caines Head State Recreation Area provides a public use cabin, and camping and hiking opportunities at the site of Fort McGilvary, a World War II gun emplacement. Captain Cook

and Johnson Lake State Recreation Areas, and Stariski State Recreation Site, are popular for picnicking and camping. Clam Gulch State Recreation Area provides access to razor clam digging.

The State of Alaska, Division of Land manages the Caribou Hills north of Homer, a popular area for hunting and winter sports.

RECREATION WITHIN KACHEMAK BAY STATE PARK

Recreation Opportunities

Most recreational opportunities available in the park are found on or next to its bodies of water. Activities include pleasure boating, sport fishing, clam digging, sea kayaking, crabbing, beachcombing, photography, scuba diving, waterfowl hunting, and wildlife observation. Fishery enhancement programs in the area attract sport and commercial fishers to park waters. Enhancement programs are active in Tutka Lagoon, China Poot Bay, and Halibut Cove Lagoon.

Beaches (such as Grewingk Glacier spit) provide sites for picnicking and camping, and are important staging areas for upland activities such as day hiking, mountaineering, skiing, backpacking, and hunting. Day hiking and backpacking opportunities are increasing as the park trail system is developed. Mountaineering and skiing are available on the park's snowfields and glaciers.

More than 20 guides, charters, and air and water taxi services provide access to park lands and waters. They also offer flightseeing, photography, and wildlife viewing.

Existing Use Patterns

Kachemak Bay State Park visitor records document steadily increasing visitor use. The park received about 40,600 visitors in 1993. Trail registers indicated that more than 1,000 hikers used park trails that year.

Halibut Cove Lagoon attracts many sport fishers during the king salmon season. As many as 70 boats per day visit the lagoon during the peak period of May to July. The 1993 harvest of king salmon was estimated at 3,500 fish, with 2,300 caught by sport fishers. A ranger station, public use cabin and floating dock are located at the head of the lagoon. The trailhead to China Poot (Leisure) Lake, a popular destination for hikers, sports fishers and campers, is also located here.

The popular Grewingk Glacier Spit area is known primarily for camping, hiking, clamming, sport fishing, and beachcombing. Within this area are the popular Grewingk Glacier and Alpine Ridge trails. The Humpy Creek trail provides access for anglers during pink salmon, silver salmon, and Dolly Varden runs.

The area from Neptune Bay to Tutka Bay is rugged. The steep mountain slopes end abruptly at salt water in both Sadie Cove and Tutka Bay. There are few attractive overnight campsites or hiking trails. Sport fishing, kayaking, and clam digging are popular activities in this part of the park.

The major recreational attraction in China Poot Bay is "dip netting" for sockeye (red) salmon in July. The records of the Alaska Department of Fish and Game show a sport harvest of 4,400 fish in 1993. The China Poot Bay estuary, known as a major bird breeding and rearing area, attracts naturalists, photographers and students.

The park's outer coast, including the wilderness park and Nuka Island, has remained truly wild. Because of its remote location, it receives only a small fraction of the visitation that the Kachemak Bay area receives. Commercial fishers, mountaineers, kayakers, skiers, and hunters make up the bulk of the area's visitors. Recreational boating along the outer gulf coast is limited. The exposed coastline has few protected anchorages. Harsh weather and rough seas are commonly encountered. Occasionally, visitors arrive by foot from the nearby Rocky River Road, or by traversing the Kenai Mountains. The Alaska ferry passes along the park's outer coast on its Homer-Seward run, affording views and photographic opportunities.

PUBLIC PREFERENCES

During 1991 and 1992, Alaska State Parks commissioned Hellenthal and Associates to conduct a statewide survey of over 600 Alaskan households to identify Alaskans' outdoor recreation preferences. The following are the survey results that apply particularly to Kachemak Bay State Park:

- Alaska residents place overwhelming importance on outdoor recreation. Nearly 95% of the population considers outdoor recreation to be significantly important to their lifestyles.

- Public use cabins were supported by an average of 81% of those polled. There is also substantial support for development of new trails, tent campgrounds, for new and/or specialized types or recreational opportunities, and for the establishment of new parks.

- Five of the top six outdoor recreation activities Alaskans favor most are available in the park; sport fishing, hiking, walking, hunting, and tent camping.

In two surveys taken in 1983 and 1984 for the most recent management plan, Alaska State Parks polled residents on issues specific to Kachemak Bay State Park. The survey results clearly illustrated that:

- The public has a cautious attitude concerning facility development within the park.

- Those surveyed strongly supported foot trails and camping areas, but did not favor lodges, marinas or docks.

- The public draws a sharp distinction between Kachemak Bay State Park and Kachemak Bay State Wilderness Park. Restrictive management practices and policies are favored for the wilderness park, to protect wilderness values.

For over 10 years, public opinion has been solicited through the Kachemak Bay State Park Citizen's' Advisory Board. The board consists of residents of the Kachemak Bay communities and is consistent with state policy that calls for public participation in all phases of planning and park management. During monthly meetings the board addresses a variety of issues concerning the park and solicits public opinion. Public meetings are sometimes held to gauge public opinion on controversial park issues.

TRENDS AND IMPLICATIONS

The following indicate increasing demand for recreation opportunities in the region:

- Visitor use data and public preference surveys show an increasing demand for boating/fishing facilities and access, for trails and trail-related activities, and for public use cabins.

- The residents of Southcentral Alaska place a great deal of pressure on the recreation resources of the Kenai Peninsula. The population is growing 10-20% per year.

- The expansion of the Homer small boat harbor and improved boat launching facilities have increased public access to the natural resources of Kachemak Bay.

- Tourism is a major economic development strategy for the Kenai Peninsula. As the state and local tourist industry grows, an increase in out-of-state visitors should be expected.

Kachemak Bay State Park will play an increasingly important role in meeting recreational demand and in attracting tourism to the region. The implication for the future is that the park will see an ever-increasing demand upon its resources. Adequate staffing, management, resource protection, and appropriate facility development will all be needed if Alaska State Parks is to meet these challenges.

Chapter 4: Issues

The following issues, identified by managers and the public, affect the park. The chapter on land use classification, and the recommendations for park-wide policies, facility development, and administration, were developed in consideration of these issues.

ISSUE: PRIVATE LAND WITHIN THE PARK

More than 150 private parcels of land are within or next to the park. Many have cabins or other structures. Some are inhabited year round. For the most part, they are five acres or less in size, and are located along prime areas of the coast. Most of these parcels predate the establishment of the park and were obtained through state and federal land disposal programs. The potential for conflict exists between park users and private landowners. Conflicts could also arise between park managers and private landowners regarding management practices, policies, and the development of park facilities.

Significant blocks of privately owned lands within or next to the park include the community of Halibut Cove, and subdivisions in Peterson Bay and Petrof View. Petrof view is a remote subdivision on the gulf coast, in Nuka Passage. It consists of approximately 55 private parcels, with 100 ft. easements for roads. Development of this subdivision may result in requests for the use of park resources and will increase use of and impacts to adjacent park lands.

Following are sub-issues and examples that relate to private lands:

1. *Trespass*: The potential for trespass can create conflict between park users and land owners. In 1993, for example, campers started a campfire on a parcel of private land located within the park and left it unattended. It spread, causing significant damage to the property. Private land owners want reasonable access to their property. In doing so, however, they can encroach upon and/or impact public lands and waters.

2. *Water Quality*: Waste water discharge and the pollution of public lands and waters by property and boat owners are a concern.

3. *Water Use*: Some land owners collect water for personal use by placing water collection devices on park lands.

4. *Firewood/ house logs*: Park regulations allow for collection of dead and down wood, if used within the park. There have been instances, however, where property owners have illegally cut and removed dead and down wood, drift wood, and even standing timber from the park for personal use.

5. *Commercial development*: Lodges, tours, and related businesses on adjacent private lands can provide access to and enhance enjoyment of the park. The resulting increased use, however, can result in resource impacts.

6. *Visual impacts*: Certain building types and colors, or extensive site modification, can diminish the park's scenic values.

7. *Other uses*: Running lines, docks, and personal property have been placed on park lands and/or waters without a permit.

8. *Park management:* Owners of private property adjacent to the park may feel their activities on adjacent park lands and waters are unduly restricted by the regulations designed to protect the park.

ISSUE: ACCESS

Although several trails, campsites and mooring buoys have been developed, and water and air taxi services are available, access to the park remains difficult. The following issues are associated with park access:

1. The cost of a water taxi or air charter is prohibitive for many potential park visitors.

2. Due to topography and exposure, there are few ideal beach landing sites and protected anchorages available in the park. This is particularly true in the wilderness park and the east side of Nuka Island. Private boat operators and water taxies frequently experience hazardous conditions when attempting landings at popular beaches and trailheads.

3. Designated landing sites can concentrate use, accelerating resource impacts.

4. Improvements such as docks and mooring buoys enhance access, but can concentrate use, speed site degradation, and contribute to user conflicts. Use of these facilities may need to be controlled.

5. Trails, trailheads and other facilities are often difficult or even impossible to access by the physically challenged. An example is the floating dock at Halibut Cove Lagoon ranger station. The dock consists of an anchored main float and a smaller "running line float" used to reach the shore. It is cumbersome and can be difficult to operate, especially by children and older adults.

6. The ranger station and public use cabin in Halibut Cove Lagoon are located in an area that can be difficult to reach because of tidal action. Negotiating the channel linking Halibut Cove with the lagoon can be hazardous (or even impossible) during tides lower than + 3 feet. The channel is not marked.

7. The two parcels of park land in the Cottonwood/Eastland Creek area are separated from each other (and from the closest public road) by private property. Linking park lands together with a road or trail system may be difficult, costly, and controversial. The only roads into the Cottonwood/ Eastland creek area are private. There are no trails or other improvements to facilitate public access.

8. Section 17b of the Alaska Native Claims Settlement Act provides for identification of certain public easements across native selected lands. One of these easements provides access to the wilderness park from the Rocky river road. The easements in the Kachemak Bay area have not been adequately identified and signed.

ISSUE: AIRCRAFT AND MOTOR VEHICLE USE

As previously discussed, access to Kachemak Bay State Park (except the Cottonwood/ Eastland additions), is limited to either boat or aircraft.

Flight-seeing and air taxi services offer an important recreation service. Conflicts can arise, though, between those seeking a "backcountry" experience and those reaching the park by air. Aircraft can easily get to many remote areas in the park, where backcountry users have made considerable effort to get away from this kind of activity. Management strategies should be developed to reduce both potential and existing conflicts.

Current regulations allow aircraft landing within Kachemak Bay State Park, and on saltwater or saltwater beaches within Kachemak Bay State Wilderness Park. These regulations do not differentiate between wheeled fixed-wing, float equipped aircraft, or helicopters.

The use of inboard and outboard powered boats in saltwater has not been an issue, but the use of jet boats, jet skis, air boats, and hovercraft in rivers, streams and lakes, is. Habitat damage, disturbance to wildlife, and conflicts between user groups because of noise are some examples. Current park regulations do not specifically prohibit such use in saltwater, though the Kachemak Bay Critical Habitat Area management plan states; "Traversing areas with rooted vegetation in airboats or hovercraft is prohibited."

Motor vehicles (such as automobiles, ATV's or heavy equipment) are prohibited in the park by law. They have, however, been illegally used in the park.

ISSUE: FACILITY DEVELOPMENT

Encouraged by public comments and the advisory board, Alaska State Parks has historically taken a conservative, "go slow" approach toward facility development within Kachemak Bay State Park. Public opinion polls show a demand for additional trail development. There are concerns, though, that developments such as public use cabins, lodges and docking facilities could diminish park values.

Facilities often attract and concentrate use. Lack of adequate planning, maintenance, and resource protection can result in site erosion, resource degradation, litter, and a further reduction in scenic and/or wilderness values. Lack of adequate sanitary facilities at popular picnic areas, camp sites, and trailheads can diminish resource values and threaten water quality. Wildlife are often attracted to high-use areas, such as popular campgrounds, where campers store and prepare food. Animals can quickly become conditioned to the presence of humans in these areas, causing public safety problems.

ISSUE: RIDING AND PACK ANIMALS

Park users and managers have long been concerned with the impacts associated with riding and pack animals (except llamas). Trail erosion, grazed vegetation, degraded water quality and conflicts between user groups are examples of potential problems. The thin, unstable soils common to the park are highly sensitive. Trails constructed for stock are more difficult and costly to build and maintain than are trails designed exclusively for foot traffic.

ISSUE: TRESPASS CABINS

This issue involves private cabins (or other private facilities) placed on park lands and waters without a permit. There are at least two cabins within the park that have no current permit, title or lease. Both cabins were constructed before the park was established. One cabin is located on China Poot Lake and is used by local residents and friends and family of the owner. Another cabin is located in Moose Valley. It is a simple log cabin with dirt floor, built in the 1960's. It is occasionally used by local residents. The Kachemak Bay State Park Citizen's Advisory Board has opposed the conveyance of park land to the owners of these structures. It is not within the authority of Alaska State Parks to sell or otherwise dispose of park land.

Alaska State Parks "inherited" several structures through land acquisitions. Many of these (such as duck hunting shacks and shooting blinds) are not allowed in the park.

ISSUE: WILDERNESS MANAGEMENT

There are two ways to establish designated wilderness areas in the Alaska State Park system: through legislation, and by administrative land use classification (zoning), as described in the "Alaska State Park System: Statewide Framework." The wilderness park is an example of a legislatively designated wilderness area. Due to terrain, character, and lack of development, certain state park lands may qualify for wilderness "zone" classification. Examples include lands above the 1,000-foot elevation, or lands next to federally managed wilderness areas.

Wilderness classification can be controversial, because most facility development is strictly limited and certain uses are controlled to protect wilderness qualities. The Kachemak Bay State Park Citizen's' Advisory Board, and many Alaskans and park users support strict limits on facility development in the wilderness park.

The Port Dick cabin, located at the terminus of Port Dick Creek, is the only structure standing in the wilderness park. Constructed in the early 1970's by the Department of Fish & Game, the cabin and outbuildings supported fishery research workers. The Alaska Department of Fish and Game did not apply for or obtain a permit from Alaska State Parks prior to constructing the cabin. Although Fish and Game has not used it for many years, the agency has expressed interest in retaining the cabin for future projects. The cabin has become popular with commercial fishers, hunters, sport fishers, air taxi services, and locals.

The cabin has become an attraction, concentrating use in a small remote site with resource sensitivities. Site degradation has occurred and debris has accumulated over time. Removing the cabin and restoring the site is controversial, but leaving it creates long term management problems. Finally, this level of facility development is incompatible with the wilderness values for which the park was established.

ISSUE: COMMERCIAL FISHING

Commercial fishing was a traditional use of Kachemak Bay prior to the establishment of the park. It has included the harvest of salmon, shrimp, crab, groundfish, rockfish and halibut, herring, hardshell clams, and other species. According to the Alaska Department of Fish and Game, the trawl shrimp, dungeness crab, pot shrimp, herring, and king crab fisheries are now closed because of severely depressed stocks. Although the industry's activities have provided visitors an opportunity to observe and learn about the lifestyle of many Alaskans, conflicts occasionally arise between park users and commercial fishers. The following issues relate to commercial fishing within the park:

1. Enhancement activities provide sport fishing opportunities, but fishing boats frequently occupy popular locations for extended periods, limiting recreational boating and sport fishing access.

2. Recreational boaters occasionally disrupt commercial fishing operations by driving over and damaging nets and floating crab and shrimp pot lines. In areas such as Halibut Cove and Halibut Cove Lagoon, the concentration of commercial and recreational crab and shrimp pots creates boating hazards and visual impacts.

3. Dragging the bottom of shallow bays during seining operations may diminish the potential for sport and subsistence harvest of dungeness crab.

4. The allocation of fish and shellfish between sport and commercial interests has been and will continue to be an issue in the park. The controversial commercial harvest of hard shell clams on the park's beaches is the most recent example. Many people feel only subsistence and recreational harvest of crab and clams should be allowed in the park. The Alaska Board of Fish and the Alaska Board of Game have responsibility for allocating state managed species between sport and commercial interests.

ISSUE: COMMERCIAL ACTIVITIES

Alaska State Parks generally encourages commercial activities that provide or enhance recreation services in state parks, provided they are consistent with the purposes of the park.

Commercial uses of park lands and waters (except commercial fishing) are managed by Alaska State Parks through a commercial use permit system. Commercial fishing is managed by the Alaska Department of Fish and Game.

Commercial operators include visitor services such as water and air taxis, fishing charters, guided hiking and hunting, and wildlife tours. Production of films, publications, video guides, and commercials is also considered a commercial activity. Many of these commercial activities enhance recreational use of the park. Certain commercial activities can be controversial, however, if they are perceived to be in conflict with park values.

ISSUE: FEES

Fees are an important revenue source for Alaska State Parks. They play an increasingly important role in the continued support and maintenance of state park facilities.

Commercial operators (except commercial fishers) pay fees for permits to operate within state parks. In this way, the public receives compensation for the commercial use of public resources. Fees are opposed by some commercial operators.

User fees are also collected in some units of the state park system. Fees for camping, parking and boat launching are generally well supported where there are adequate facilities. User fees have not been charged in certain parks where facilities such as water, latrines, improved campsites and fire grates are not always provided. Kachemak Bay State Park is one of these. The issue is whether a park fee should be established for using roadless or remote parks, and how these fees should be collected.

ISSUE: FISH ENHANCEMENT ACTIVITIES

This issue concerns fishery enhancement activity in the park. The Alaska Department of Fish and Game has statutory authority to manage fisheries within the park. The Alaska Department of Fish and Game is also allowed, by law, to enhance or rehabilitate fisheries on lands within Kachemak Bay State Wilderness Park. These activities are subject to park use permit requirements. Fishery enhancement projects include egg taking, rearing, smolt release and lake fertilization.

The Department of Fish & Game has proposed several projects that affect the park. These include stream channeling and the introduction of non-indigenous species. Stream channeling provides access for salmon up creeks or streams diverted by the 1964 earthquake. It involves the use of heavy equipment within wilderness zone, and is controversial. Introducing

nonindigenous species such as deer to the park could increase visitor use, but introduced species may compete for habitat with native species.

Formerly operated by the Alaska Department of Fish and Game, the Tutka lagoon hatchery is now operated by the Cook Inlet Aquaculture Association. The hatchery has provided an important sport and commercial pink salmon fishery, attracting commercial and sport fishers to the area.

Fish enhancement projects provide valuable terminal fisheries that attract commercial fishers, fishing guides and sport fishers to the park. They concentrate use, however, and create an increasing need for facilities, public information, resource protection, facility maintenance, and public safety.

ISSUE: COMMUNITY & TOURISM GROWTH

Growth on the Kenai Peninsula increased about 10-20% per year through the 1980's. From 1990 to 1992 it increased by 8%. Since 1889, the Homer area population has increased at least 10% per year to nearly 4,500 in 1993. The number of private parcels adjoining the park, particularly at Bear Cove, Halibut Cove, Peterson Bay and the Tutka/Jackolof areas, increased, as larger parcels were subdivided and sold. Information gathered from visitor counts in the park show an increase in park use of between 10% and 15% per year. This will result in an increased demand for facilities and maintenance.

ISSUE: ADJACENT STATE LANDS

The management of state-owned lands near the park is a concern, because many of these parcels have high recreation value. The issue is whether to add these lands to the park, make them available for private ownership, or continue management through other state agencies.

ISSUE: PUBLIC SAFETY

The need for resource protection, medical emergency response, and search and rescues has been increasing with park visitation. The park is assigned only one seasonal ranger. With almost 400,000 acres of land and water to manage and with the current staffing level, it is nearly impossible to provide the full range of public safety services park wide. Alaska State Parks and other agencies responsible for public safety within the park will eventually require additional staffing.

ISSUE: WILDLIFE MANAGEMENT

The Alaska Department of Fish and Game manages many of the wildlife species that inhabit Alaska's lands and waters (including state parks). Sea otters, bald eagles and migratory waterfowl within the park are managed and protected by the U.S. Fish & Wildlife Service. Many people believe hunting and trapping within state parks should be restricted, to provide for high quality wildlife viewing and photographic opportunities. The eco-tourism industry is growing world wide. Many visitors coming to Alaska expect world class wildlife viewing opportunities, especially in designated parks.

Certain practices associated with hunting and trapping can also directly conflict with other park uses. Bear baiting, especially near public recreation facilities, is a public safety concern. Family pets could be caught in the traps set along park trails. The Alaska Board of Game establishes seasons and regulates harvest within the park

ISSUE: SPRUCE BEETLE INFESTATION (see beetle survey map in appendix)

Spruce bark beetles spread from interior forests along the Kenai Peninsula and established a foothold in Kachemak Bay in the early 1980's. Like fire, insect infestation is a natural process that has a significant negative visual impact. To date, over 40,000 acres have been affected around the bay, mostly along the north side and in the Fox River valley. On the bay's south side, beetles infested more than 14,000 acres around Mallard Bay, 2,180 acres around Halibut Cove, 934 acres around China Poot lake, 234 acres in Sadie Cove, and 311 acres in Tutka Bay. The beetle normally infects mature interior white spruce, especially old trees that have lost their ability to resist disease. Beetles prefer a warm, dry environment. Foresters believe that the beetle is not a significant threat to coastal Sitka spruce due to the normally moist, cool maritime environment. According to the 1993 USDA Forest Service Forest Health Management Report, however, beetle activity in the Kachemak Bay area increased in 1993 for the fifth consecutive year. This is most likely due to a series of unusually warm, dry summers.

ISSUE: MARICULTURE

Mariculture, or aquatic farming, began in the Kachemak Bay area in 1983 as a research project. Interest in mariculture grew, and Alaska State Parks began receiving permit applications for blue mussel farming from floating rafts within Kachemak Bay State Park. Halibut Cove Lagoon was identified by applicants as a preferred location for mariculture, due to it's protected waters and good water quality. Commercial uses of the park that do not provide a recreation service are, by law, incompatible with the purposes for which the park was established. For this reason, the park's Citizen's' advisory board opposed the issuance of permits for mariculture rafts. Temporary and conditional permits were, however, issued to applicants by Alaska State Parks and by the Department of Fish and Game. In 1989, a special and temporary act of the legislature act allowed those already holding valid permits to continue mariculture on a 20-acre site within the lagoon. This legislation stipulates that the

permits are conditional, nontransferable, and can be revoked for violation of permit stipulations. There are nine permits.

The Department of Natural Resources Division of Land, and the Department of Fish & Game manage aquatic farming activities outside the park.

ISSUE: NATIVE ALLOTMENTS

There are two active native allotment claims on file with the Bureau of Indian Affairs and the Bureau of Land Management for lands within Kachemak Bay State Park. If these lands are conveyed to the applicants they will become park inholdings, and could conflict with the existing recreational use of those areas.

ISSUE: EXXON VALDEZ OIL SPILL

In March of 1989, the oil tanker *Exxon Valdez* ran aground on Bligh Reef in Prince William Sound, spilling 11 million gallons of crude oil. The oil slick moved along the coastal waters of the Gulf of Alaska, fouling many of the best recreation sites. The wilderness park and Nuka Island and Nuka Passage were directly hit. The following issues resulted from the spill:

1. The spill oiled large segments of the park's coastline, diminishing recreation opportunities. The remaining oil is especially persistent in the sheltered areas along the outer coast that provide the best anchorages, beaches, and upland access points .

2. The values of the wilderness park have been seriously compromised. Though the effects of the spill have gradually diminished over time, visual indicators of research, cleanup activities, and oil remain.

3. Cleanup activities introduced hundreds of oil spill workers and researchers to the area, resulting in a significant increase in public and commercial interest and use of park resources. The impacts associated with the sudden influx of cleanup workers remain. Several sensitive archeological sites were looted during the cleanup effort.

4. Park staff were diverted from normal park operation to work on the spill. Normal facility maintenance, resource protection, and visitor services in the park were affected that year.

5. Oil spills in Cook Inlet and Prince William Sound could again affect the park.

ISSUE: MAINTENANCE AND OPERATIONS

Although the park was established in 1970, it was not staffed until the 1982 season. That year, the former Halibut Cove Lagoon king salmon hatchery was transferred to Alaska State Parks, and volunteers were assigned as caretakers. In June of 1984, the first seasonal park ranger and three Alaska Conservation Corps enrollees were assigned to the park.

In January of 1985, a district ranger position was established to supervise the Kenai area's south district operation that includes Ninilchik, Deep Creek, Stariski, and Anchor River State Recreation Areas, and Kachemak Bay State Park and State Wilderness Park. A district office was established in the former federal Bureau of Land Management fire guard station north of Homer. Originally full time, the district ranger position is now seasonal.

The three Alaska Conservation Corps "ranger assistants," originally assigned to the park, have been reduced to one. The park staff has come to rely increasingly on volunteers and service organizations to construct and maintain trails and facilities. Although volunteer efforts have been successful, volunteers require a great deal of training, support, and supervision. The success of volunteer recruitment, although nationwide, varies from year to year.

After personnel were assigned to the park, more than 25 miles of trail were constructed or upgraded. Trailheads and trail junctions have been signed, and bulletin boards and trail registers installed. Several campsites were constructed or improved with latrines, picnic tables, and fire grates. Three mooring buoys were installed. A cabin at Halibut Cove Lagoon (that had housed volunteers) was converted for public use. These facilities need to be maintained. When considering the size of the park, existing facility maintenance needs and increasing visitation, it is obvious that additional park staff will be needed. This issue will need to be addressed whenever new facilities are proposed.

Chapter 5: Goals and Objectives

There are eleven designations for park units within the Alaska State Park system, each with specific definitions and objectives. Designations include:

- State park
- State wilderness park
- State recreation area
- State recreation site
- State trail
- Special management area
- State marine park
- State recreation river
- State historic park
- State historic site
- State preserve

The management goals and objectives for Kachemak Bay State Park were developed by considering the park's designation, legislation, and Alaska State Park's overall management policies:

Goal One:

Preserve and protect the park's natural and cultural resources, and scenic and wilderness values, for long-term use and enjoyment.

Objectives:

1. Apply the Alaska State Parks land use classification system to Kachemak Bay State Park, and assign land use zones considering resources, existing impacts, use patterns, management goals, and the management intent for adjacent public lands.

2. Define the limits of acceptable change to the park's resources, and establish a system for periodic evaluation of changes.

3. Define appropriate activities within each land use zone.

4. Identify and protect the park's natural and cultural resource values.

5. Establish education programs and facilities that enhance the public's understanding and appreciation of the park's resource values.

Goal Two:

Efficiently and effectively provide for the outdoor recreation needs of park visitors, with consideration to public preferences, resource values and legislative intent.

Objectives:

1. Assess public needs and preferences for recreation in the park, considering recreation opportunities available in the region and the state.

2. Provide a variety of recreation opportunities while reducing user conflicts, and maintaining the quality of the recreation experience.

3. Develop facilities that meet public demand, insure public safety, protect resources, and provide quality service, without detracting from the park's scenic or wilderness values.

4. Insure a balance between consumptive and non-consumptive park uses. Educate park users concerning alternative opportunities for recreation.

5. Develop strategies to soften the effects of declining budgets, and to increase the efficiency and effectiveness of management, development, and maintenance efforts.

Goal Three:

Assist in the development of regional and statewide tourism.

Objectives:

1. In recognition of the park's value to the local and regional recreation and tourism industry and the region's economy, assist local government and community organizations in promoting the recreation opportunities available in the park.

Chapter 6: Land Use Classification by Zones

To describe the intent for management of resources within state parks, all lands and waters within the major units of the Alaska State Park system are classified into one or more of the following zones:

Recreational Development Zone

Natural Zone

Wilderness Zone

Cultural Zone

Land use zones within state parks are established to provide direction for management of park lands and resources. The table that follows describes the relative compatibility of various activities in each of the land use zones used in this plan.

Zones are assigned by considering legislative intent, management goals and objectives, environmental conditions, historic use, existing developments or other impacts, and current visitor use patterns. The Alaska State Park System: Statewide Framework says that *"The majority of lands in a state park normally will be classified as natural and wilderness zones."* The following are the zone designations that will be used to classify lands and waters in Kachemak Bay State Park and State Wilderness Park.

RECREATIONAL DEVELOPMENT ZONE

Purpose and Characteristics
Recreational development zones are established to meet the more intensive recreational needs of the public with convenient and well-defined access via roads, boating anchorages, airstrips and high standard trails; with more intensively developed recreational facilities, such as campgrounds or picnic areas; with guided activities; and visitor information centers.

The landscape within this zone can be modified to support educational and recreational activities and/or to enhance wildlife habitat and scenic qualities. Recreational development zones are established where soils, slope, drainage and vegetation can support more intensive recreational activities.

Developments and Activities
The highest level of development and activity is meant to occur in this zone. Appropriate development within this zone includes roads, trails, transportation routes, campgrounds, picnic areas, visitor centers, high standard trails, park management facilities, and commercial lodges.

NATURAL ZONE

Purpose and Characteristics
Natural zones are established to provide for moderate-to-low impact and dispersed forms of recreation and to act as buffers between recreational development and wilderness zones.

These zones are relatively undeveloped and undisturbed and are managed to maintain high scenic qualities and to provide visitors with opportunities for significant, natural outdoor experiences. An area's natural landscape character is the dominant feature within this zone. Landscape modification may be allowed to enhance, maintain or protect the natural setting according to the unit management plan.

Developments and Activities
Developments in a natural zone are intended to provide for the safety of park visitors and to provide for a moderate level of convenience in a high-quality natural setting. A medium level of activity is encouraged in this zone. Activities include, but are not limited to, bicycling, backpacking, fishing, hunting, cross-country skiing, camping, sledding, berry picking and rock climbing. Private, off-road motor vehicle use (except boats and aircraft), is prohibited within this zone.

WILDERNESS ZONE

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

These zones are distinguished by landscape, vegetation and geology. Resource modification can occur in this zone only to restore areas to a natural state. Natural processes will be allowed to operate freely to the extent that human safety and public and private property are protected.

Developments and Activities
A wilderness zone should have no human made conveniences within its boundaries except the most primitive trails with minimum trail maintenance, bridges and signing. Developments or other improvements will be undertaken only if it has been determined by the Director of Alaska State Parks 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, by boat, or by aircraft. Aircraft landing for recreational access or research may be restricted by the

director. Aircraft landing is prohibited in some areas, and restricted by permit in others. Other activities that threaten the character of the wilderness zone will also be restricted. If overuse or misuse occurs, the director may restrict entry and use of the area. Methods of restriction may include separation and control of use activities through time and space allocation, use/area rotation schemes and a permit system.

CULTURAL ZONE

Purpose and Characteristics
Cultural zones are established to preserve, investigate, document and interpret Alaska's cultural resources and heritage.

Cultural zones are designated to provide adequate protection of historical, cultural, archaeological or anthropological resources. These zones may contain a single feature or an assemblage of historic features.

Developments and Activities
The intensity of development in a cultural zone is managed to insure that use levels in the area do not impair the integrity of historical, cultural, archaeological or anthropological resources. Development within a cultural zone should have minimal impact on the cultural and historical values within the unit and should involve minimal introduction of artificial features for activities not related to the cultural resource and its values. Development generally will be associated with the necessities of public access, safety and interpretation of the cultural resources present. Activities in keeping with the historical period of the cultural resource may be encouraged.

GUIDELINES FOR APPROPRIATE ACTIVITIES AND FACILITIES WITHIN LAND-USE ZONES

Activity/Facility	Natural Zone	Wilderness Zone	Cultural Zone	Recreational Development Zone
RESOURCE MANAGEMENT				
Research and management studies. Collection of data necessary for park management decisions or to further science. Priority will be given to studies that contribute to the use and management of native fish and wildlife populations and their habitats. Studies may be conducted by Alaska State Parks in cooperation with ADF&G and other agencies, or by other researchers under permit.	Will be encouraged when consistent with the purposes of the park, under DPOR permit.	Same	Same	Same

Activity/Facility	Natural Zone	Wilderness Zone	Cultural Zone	Recreational Development Zone
Ecological monitoring. Activities or studies that address how fish and wildlife and their habits are changing, due to either natural or human causes.	Will be practiced as part of normal park operations in cooperation with the Alaska Department of Fish & Game, U.S. Fish & Wildlife Service, and other agencies.	Same	Same	Same
Fish & wildlife inventories. Using acceptable inventory techniques to obtain information on species distribution, harvests, abundance, habitats, and population dynamics, to meet park management objectives.	Compatible	Same	Same	Same

Activity/Facility	Natural Zone	Wilderness Zone	Cultural Zone	Recreational Development Zone
Fisheries enhancement/ restoration. Action taken to increase fishery stocks such as artificially incubating fish in streams, fertilizing lakes, and restoring fish access to spawning and rearing habitat.	Conditionally compatible, under DPOR permit. Equipment and structures must be removed and the site restored following project completion.	Activities conditionally compatible, under DPOR permit. Structures not compatible.	Conditionally compatible, under DPOR permit. Equipment and structures must be removed and the site restored following project completion.	Conditionally compatible, under DPOR permit. Equipment and structures must be removed and the site restored following project completion.
Wildlife habitat manipulation. Modification of habitat to increase target wildlife populations. Includes both enhancement and restoration activities, such as prescribed burning and mechanical manipulation.	Not compatible, except when restoring habitat damaged by human impact.	Same	Same	Same
Wildlife introduction. Introduction of non-indigenous or exotic species.	Not compatible.	Same	Same	Same

Activity/Facility	Natural Zone	Wilderness Zone	Cultural Zone	Recreational Development Zone
Wildlife stocking. Used to re-establish native species within their original breeding ranges.	Compatible after adequate research and public hearings, to insure there will be no detrimental impact on other species or uses.	Same	Same	Same
Predator control. Relocation or removal of predators to favor other wildlife species or populations, and the protection of re-introduced species.	Not compatible	Same	Same	Same
Pest and disease control. The use of poisons or chemicals to control or eradicate insect pests and/or diseases to indigenous animals, plants or forests.	Not compatible, except to control species not indigenous to the area, or for public safety reasons.	Same	Same	Same
Fire suppression. Actions taken to suppress wildfire.	Compatible, as managed by DPOR and the Division of Forestry.	Not compatible, except when human-caused or when life or property are endangered.	Compatible, as managed by DPOR and the Division of Forestry.	Compatible, as managed by DPOR and the Division of Forestry.

Activity/Facility	Natural Zone	Wilderness Zone	Cultural Zone	Recreational Development Zone
Resource extraction. Removal of timber, gravel, rock, sand, minerals, plants or other park resources for commercial or personal use.	Not compatible	Same	Same	Same

Activity/Facility	Natural Zone	Wilderness Zone	Cultural Zone	Recreational Development Zone
PUBLIC USES Walking, skiing, mountaineering. On foot trails, or unrestricted in the absence of a trail.	Compatible	Compatible	Conditionally compatible	Compatible
Power boating. Includes inboard and outboard gas or diesel powered boats and jet boats. Does not include air boats, hovercraft or jet skis.	Compatible in salt water, and designated lakes and streams.	Compatible in salt water, not compatible on freshwater lakes or streams.	Compatible in salt water and designated lakes and streams.	Compatible in salt water and designated lakes and streams.
Air boats and hover craft.	Compatible in salt water only.	Same	Same	Same
Non-motorized boating. Includes canoes, rafts, row boats, kayaks, boats powered with electric trolling motors, sailboats, and sailboards.	Compatible	Same	Same	Same
Land-based motorized vehicles. Includes all land-based motorized vehicles.	Not compatible	Same	Same	Same
Fishing.	Compatible, subject to state fishing regulations.	Same	Same	Same

Activity/Facility	Natural Zone	Wilderness Zone	Cultural Zone	Recreational Development Zone
Hunting.	Compatible, subject to state hunting regulations. Discharge of firearms prohibited within 1/2 mile of developed facilities. Hunting in certain areas may be limited by state hunting regulations to allow for wildlife viewing.	Same	Same	Same
Trapping. Trapping fur-bearing animals for private or commercial use.	Subject to state trapping regulations.	Same	Same	Same. Trapping in certain areas may be limited by state (Board of Game) regulations to allow for wildlife viewing.
Motorized equipment. Includes all non vehicular equipment powered by gas, propane, or diesel internal combustion engines (i.e. chainsaws and generators).	Compatible	Not compatible, except for necessary park management, research and emergency purposes.	Conditionally compatible	Compatible

Activity/Facility	Natural Zone	Wilderness Zone	Cultural Zone	Recreational Development Zone
Primitive camping. Overnight camping in undesignated sites.	Compatible, subject to existing 15-day stay limit. Disturbance of natural materials is prohibited. Campfires are restricted by regulation.	Same	Not compatible	Compatible, subject to existing 15-day stay limit. Disturbance of natural materials is prohibited. Campfires are restricted by regulation.
Dog sledding. Use of dog teams and sleds as a means of winter access and recreation.	Compatible	Same	Same	Same
Wildlife observation. Viewing wildlife and its habitat in natural conditions. Includes photography, bird watching, and educational, interpretive activities and programs.	Compatible	Same	Same	Same
Recreational gold panning. Use of simple, non-motorized tools such as pans and shovels for recreational gold prospecting.	By permit only. Commercial prospecting or use of motorized tools prohibited.	By permit only. Commercial prospecting or use of motorized tools prohibited.	Not compatible	By permit only. Commercial prospecting or use of motorized tools prohibited.

Activity/Facility	Natural Zone	Wilderness Zone	Cultural Zone	Recreational Development Zone
Horses and pack animals. (except llamas) Use of horses, mules, and burros for riding or packing supplies and gear.	Compatible, except on trails designated for hiking only. Subject to regulations	Compatible, except on trails designated for hiking only. Subject to regulations	Not compatible	Compatible, except on trails designated for hiking only. Subject to regulations
Llamas. Use of llamas for pack stock.	Compatible	Same	Same	Same
Aircraft operation. Private fixed and rotary winged aircraft that provide access to the park.	Compatible, subject to regulations. Restrictions may be imposed in high use areas.	Conditionally compatible. Landings allowed on saltwater and saltwater beaches. Landings in other areas by permit only. Special regulations may apply.	Conditionally compatible. Special regulations may apply for high use areas.	Conditionally compatible. Special regulations may apply for high use areas.

Activity/Facility	Natural Zone	Wilderness Zone	Cultural Zone	Recreational Development Zone
FACILITIES				
Improved campsites. Permanent site clearings that may include amenities such as tent platforms, fire pits, shelters, picnic tables, latrines, and interpretive displays.	Compatible as developed and maintained by DPOR.	Conditionally compatible if developed for visitor safety or resource protection.	Compatible, as developed and maintained by DPOR.	Compatible, as developed and maintained by DPOR.
Public use cabins Small, permanent structures available for overnight use by the general public on a reservation basis.	Compatible, as developed and maintained by DPOR.	Not compatible	Not compatible	Compatible, as developed and maintained by DPOR.
Sanitary Facilities. ADEC approved latrines and toilets, placed at public use cabin sites and other high use areas.	Compatible as developed and maintained by DPOR.	Conditionally compatible, if developed for resource protection.	Compatible as developed and maintained by DPOR.	Compatible as developed and maintained by DPOR.
Visitor contact facilities. Locations where the public can learn about and obtain information on the park, its resources, recreation opportunities, and park regulations.	Compatible, as developed and maintained by DPOR.	Not compatible	Compatible, as developed and maintained by DPOR.	Compatible, as developed and maintained by DPOR.

Activity/Facility	Natural Zone	Wilderness Zone	Cultural Zone	Recreational Development Zone
Mooring buoys. Permanent anchors and buoys where boats can be temporarily secured. Sites selected to be compatible with the terms of the Critical Habitat Area special area permit, when in those waters.	Compatible in saltwater areas as developed by DPOR. Alaska State Parks regulates length of stay.	Same	Same	Same
Aids to navigation. USCG approved navigational aids, buoys, markers, and lights used to mark channels and hazards.	Compatible, as developed by Alaska State Parks in cooperation with the U.S. Coast Guard	Not Compatible	Compatible, as developed by Alaska State Parks in cooperation with the U.S. Coast Guard	Compatible, as developed by Alaska State Parks in cooperation with the U.S. Coast Guard
Trails. Designated, maintained trails that may be multipurpose or limited to specific uses.	Compatible, as developed and maintained by Alaska State Parks.	Same	Same	Same

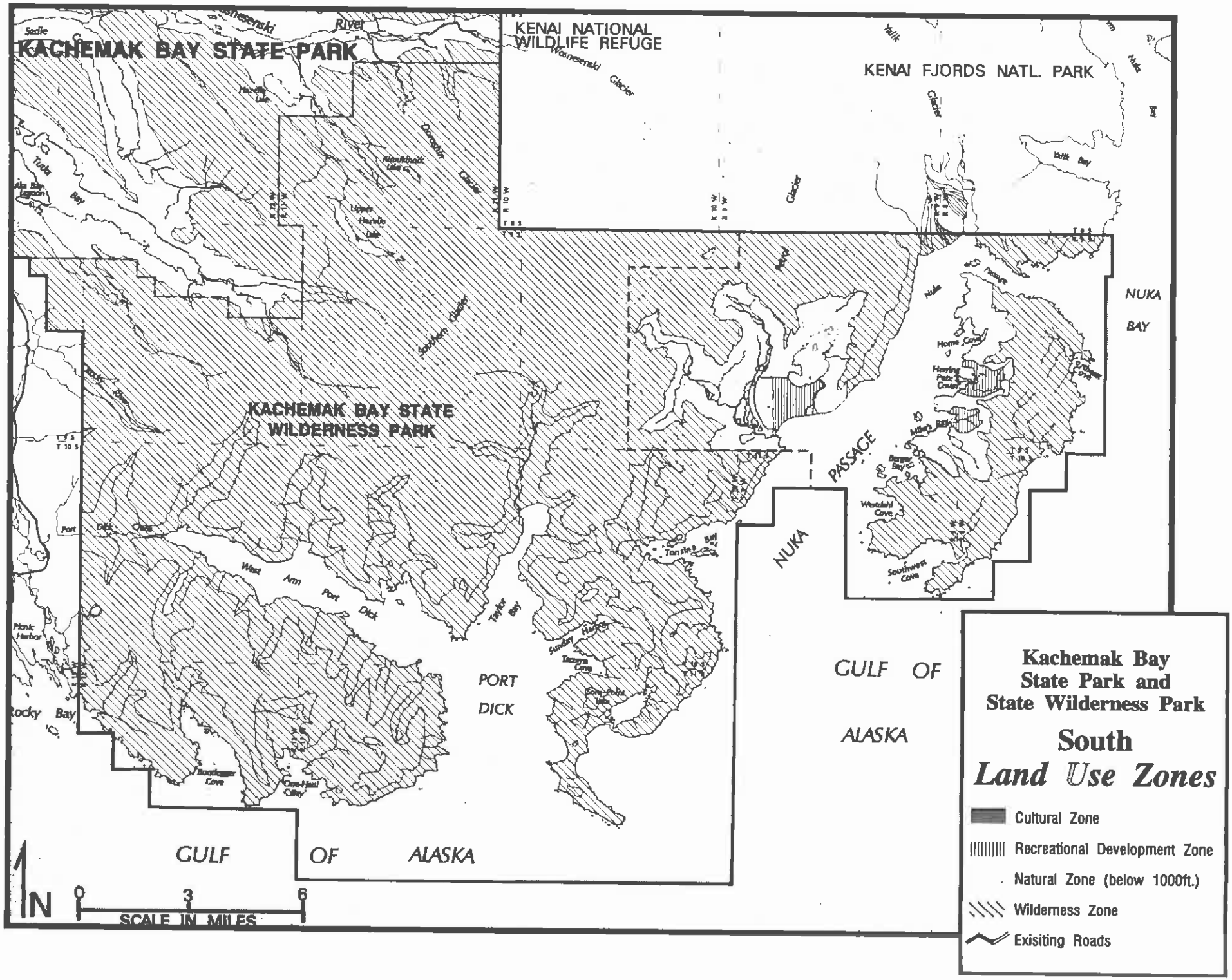
Activity/Facility	Natural Zone	Wilderness Zone	Cultural Zone	Recreational Development Zone
Docks. Anchored or piling supported floating docks, for public use.	Compatible, as developed and maintained by Alaska State Parks. Docks subject to ADF&G Critical Habitat Area permit, if in those waters.	Not compatible	Not compatible	Compatible, as developed and maintained by Alaska State Parks. Docks subject to ADF&G Critical Habitat Area permit, if in those waters.

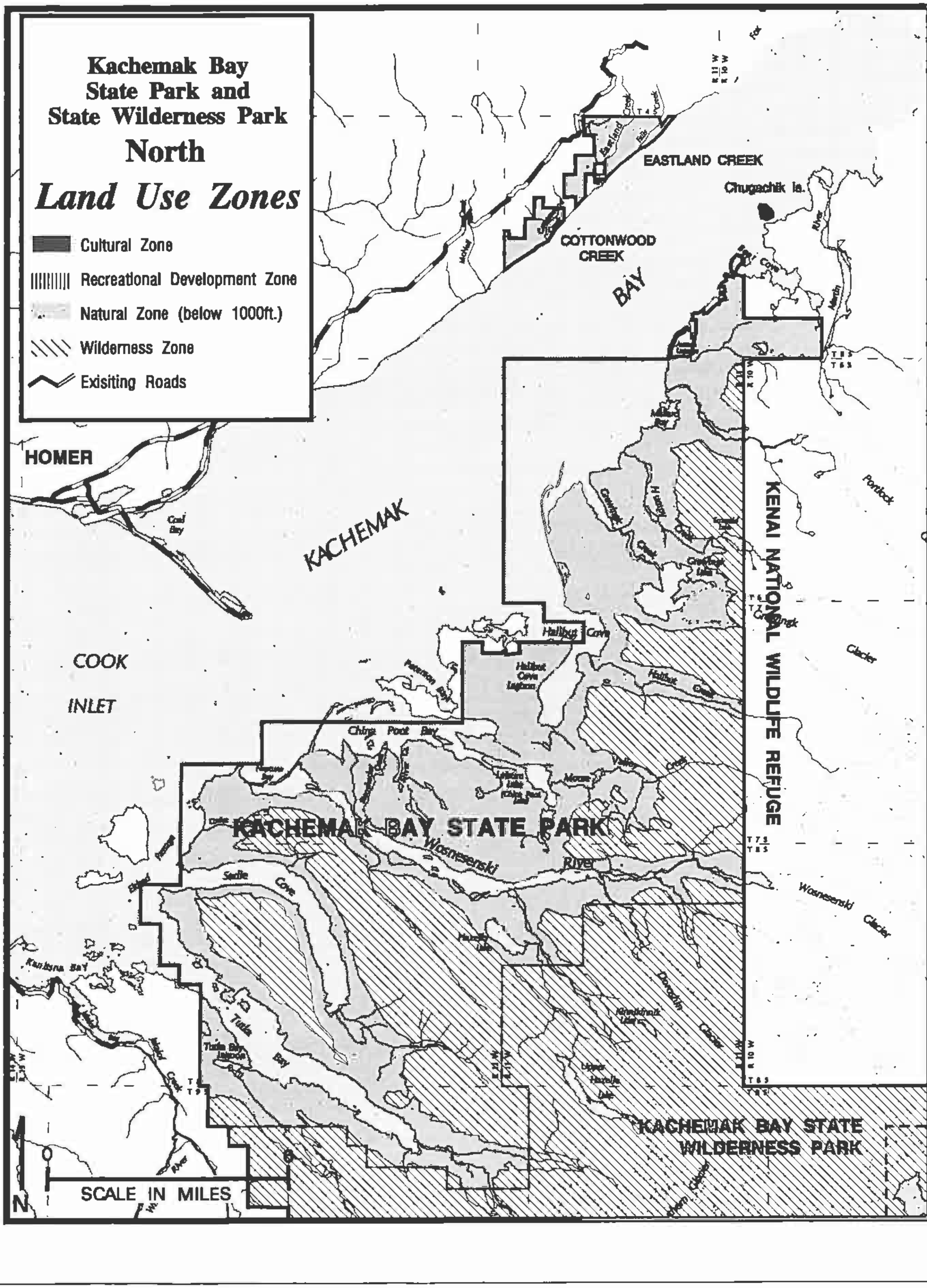
Activity/Facility	Natural Zone	Wilderness Zone	Cultural Zone	Recreational Development Zone
COMMERCIAL USES Commercial lodges. Privately-owned and operated lodging facilities located on park lands or waters.	Not compatible	Not compatible	Not compatible	Allowed only under concession contract, when consistent with management plan, and when experience cannot be provided outside park.
Resource extraction. Extraction of minerals, sand, gravel, rock, timber or plants for commercial purposes.	Not compatible	Same	Same	Same
Hydroelectric power development. Commercial development of a site, including a dam, impoundment area, powerhouse, tail race, and other forms of associated facilities.	Not compatible	Same	Same	Same

Activity/Facility	Natural Zone	Wilderness Zone	Cultural Zone	Recreational Development Zone
Mariculture. Commercial shellfish farming.	As per legislation, restricted to a 20 acre site in Halibut Cove lagoon, and then only by permit through Alaska State Parks and ADF&G.	Not compatible	Not compatible	Not compatible
Guiding and outfitting. Licensed hunting, fishing, mountaineering, and backcountry guides, outfitters, water and air taxies, and all other commercial operators who use park lands and waters, and charge for their services.	Compatible only by permit or concession contract issued by Alaska State Parks.	Same	Same	Same
Commercial aircraft operation. Fixed and rotary winged commercial aircraft that provide access to the park.	Compatible, subject to permit. Landing sites, days and times may be limited. Ceiling restrictions may be established, in cooperation with the F.A.A. and operators.	Same	Same	Same

Activity/Facility	Natural Zone	Wilderness Zone	Cultural Zone	Recreational Development Zone
Grazing. Grazing of domestic or wild animals for personal or commercial use.	Not compatible	Same	Same	Same
Utility transmission lines, pipelines. Includes telephone and electrical power lines, oil and gas pipelines, and other associated facilities.	Allowed by permit only.	Not compatible	Not compatible	Allowed by permit only.

Guidelines concerning fish and wildlife management are advisory only, and Alaska State Parks recognizes the authority of ADF&G and the Boards and Fish and Game to manage and regulate fish and wildlife within the park.


KACHEMAK BAY STATE PARK
KENAI NATIONAL WILDLIFE REFUGE
KENAI FJORDS NATL. PARK
KACHEMAK BAY STATE WILDERNESS PARK
NUKA BAY
PASSAGE
PORT DICK
GULF OF ALASKA
GULF OF ALASKA
N
0 3 6
SCALE IN MILES
Kachemak Bay State Park and State Wilderness Park
South
Land Use Zones
Cultural Zone
Recreational Development Zone
Natural Zone (below 1000ft.)
Wilderness Zone
Exisiting Roads



Kachemak Bay
State Park and
State Wilderness Park
North
Land Use Zones
Cultural Zone
Recreational Development Zone
Natural Zone (below 1000ft.)
Wilderness Zone
Exisiting Roads
EASTLAND CREEK
Chugachik Is.
COTTONWOOD
CREEK
BAY
HOMER
KACHEMAK
COOK
INLET
KENAI NATIONAL WILDLIFE REFUGE
KACHEMAK BAY STATE PARK
Wosnesenski
River
Halibut Cove
China Poot Bay
Sadie
Cove
Tutka
Bay
Kasitsna Bay
Wosnesenski Glacier
Portlock
Glacier
Doroshin
Glacier
KACHEMAK BAY STATE
WILDERNESS PARK
SCALE IN MILES
N

Chapter 7: Recommendations

PARK-WIDE POLICIES

The following apply to all lands and waters in the park unless otherwise noted. They relate to previously described issues, goals, environmental considerations, and land use classification.

Resource Management

1. Research will generally be encouraged within the park. Proposals for associated facilities or developments such as research camps shall be reviewed by Alaska State Parks staff for approval. Issuance of applicable permits will be based on expected levels of impact within the zone in which the activity will occur.

2. The park is included in the State Division of Forestry's fire management plan, which recommends minimal wildland fire control efforts within the park, except where human life or development is at risk.

3. The introduction of exotic species of plants or animals (those not indigenous to the area) should not be allowed. Proposals of this type will be reviewed by both the Kachemak Bay State Park Citizen's' Advisory Board and by the public.

4. Activities that are incompatible with the park's enabling legislation, regulations, and this management plan will be prohibited. Examples of compatible and incompatible uses are found in the "guidelines for activities within land use zones" in this plan.

5. Because of fragile soil types, horses and other stock animals (except llamas), should not be allowed on foot trails.

6. No animals should be tethered within 100 yards of freshwater streams or lakes.

7. Owners of cabins or other facilities constructed on state land before the establishment of the park must either relinquish claims of ownership, or file a preference right application with the Department of Natural Resources, Division of Land Management. If the preference right application is for land within a state park and is denied, the owner may request a temporary park use permit from the Director of Alaska State Parks. If issued, park use permits may be revoked at any time. If a permit is not issued or is revoked, the structure must be removed. All land and property claim issues will be resolved case-by-case.

8. If lands are added to Kachemak Bay State Park they will be zoned, and managed according to this management plan. If the land area is significantly large or environmentally sensitive, a plan supplement may be developed.

9. Park waters, where they overlap with the Kachemak Bay Critical Habitat Area, will be managed according to the 1989 Cooperative Agreement between the Department of Fish and Game's Habitat Division and Alaska State Parks, and this management plan.

10. The parks will generally be left to natural environmental processes. Efforts to address insect infestation will focus on public safety and prevention. Campsites and other public use facilities will be periodically inspected for dead or dying trees. If spruce bark beetle infestation is detected in a dead or dying tree that also constitutes a hazard, it will be cut for firewood or felled, debarked, and removed for other uses. Standing or fallen trees that have been dead for two or more years that have not already been infested by spruce bark beetle, are not at risk of infestation. These trees have value to wildlife and will not be cut unless they are hazards. Trees cut for use during trail and facility construction projects, and green blowdown, should be debarked. Slash (waste) will be cut into two-foot long sections and scattered, to increase exposure to the sun.

Visitor Use Management

1. "Leave no trace" / minimum impact camping techniques will be encouraged. Visitors are expected to remove waste they generate in the park. Latrine facilities may be provided in sensitive or high use areas, if soil conditions allow. Trash cans will not be provided.

2. The use of portable stoves shall be encouraged as an alternative to campfires. Fires are, by regulation, allowed only on gravel bars and beaches below timberline or in the metal fire rings provided by Alaska State Parks. Cutting standing live or dead trees and/or removing wood from the park is prohibited.

3. Ranger patrol activities include visitor assistance, resource protection, law enforcement, and monitoring and documenting park use and associated resource impacts. Patrol activities will remain a management priority.

4. Rangers and other park staff will assist the Department of Public Safety in search-and-rescue and medical emergencies within the park, as outlined in the draft search and rescue plan for Kachemak Bay State Park. Providing emergency assistance to park visitors will be the highest priority for park staff. A letter of agreement has been developed between Alaska State Parks and the Homer Volunteer Fire Department for emergency medical response within the park.

5. Promotion of Kachemak Bay State Park and Kachemak Bay State Wilderness Park shall emphasize the scenic and wilderness qualities of the parks.

6. Use of motor vehicles within Kachemak Bay State Park and Kachemak Bay State Wilderness Park, other than boats and aircraft, is prohibited. Although current state law allows aircraft use in Kachemak Bay State Park, aircraft use is allowed only on saltwater and on saltwater beaches within Kachemak Bay State Wilderness Park. Exceptions to these

regulations may be allowed by the Director. If exceptions are made, specific landing sites will be designated, and use controlled by either park use or commercial activities permit. Permits will be routinely reviewed. If park values are threatened or conflict has developed between user groups, the permit may be revoked. Landing sites will be established by the Director in consultation with the Kachemak Bay State Park Citizen's Advisory Board.

7. Hunting, trapping, and fishing are allowed in the park, subject to Alaska Department of Fish and Game regulations. Because of concern for public safety, the discharge of firearms is prohibited within one half mile of developed facilities.

8. Park regulations that support the recommendations of this management plan will be developed.

9. Visitor use will be closely monitored, and an accurate visitor count system will be developed. It will allow managers to evaluate changes in park use over time. Although the park will be able to sustain increased use, a carrying capacity study will be done to define the upper limit of use that can be accommodated at a given site. Should carrying capacity be reached, use restrictions, temporary closures, or a permit system may be used as tools to protect resources.

Private Lands

1. Alaska State Parks staff will work with the owners of private lands within and near the park, to establish voluntary guidelines for minimizing impacts to park resources and reducing conflicts between park users and landowners.

2. Applications for private water rights within Kachemak Bay State Park are made through the Division of Water and Mining. Because most freshwater streams within Kachemak Bay State Park are used recreationally, Alaska State Parks does not recommend granting water rights within the park that might affect public use. Alaska State Parks may issue permits for structures within Kachemak Bay State Park to gather and/or transport water to private property. Structures must not interfere with access to the water supply by the public, or otherwise threaten park resources or values.

3. A park use permit is required for construction or maintenance of a private dock, cabin, building, mooring system, or other structure on state park lands and waters (11 AAC 18.010). Alaska State Parks will review permit applications for private facilities placed or maintained on park land or in park waters, case-by-case. Permits issued for private docks, mooring buoys and running lines will be subject to the following:

- Applicants must either;
  - -Be year round on-site residents, or;
  - -A business that provides a recreation service in the park, or;
  - -Allow public use of the dock, and access to park lands from the dock.

- Wherever possible, docks should be constructed, maintained and used by a group of landowners, working cooperatively.
- The improvement must not interfere with navigation through park waters or access to park lands.
- Docks should be constructed only to the standard necessary for reasonable access.
- Solid fill docks will not be allowed.
- Buildings on docks, and piling supported piers, on park lands or waters, will not be allowed.
- Dock owners will be responsible for their structures. Failure to comply with permit stipulations may result in permit revocation.
- Seasonal residents may apply for running line and/or mooring buoy permits. Running lines must be marked with a floating buoy.
- Anchors must be approved in advance by Alaska State Parks. Homemade anchors such as engine blocks and fuel drums will not be acceptable.

4. Permits and/or approvals for projects may also be required by the Coastal Zone Management Program (if in the coastal zone), the Army Corps of Engineers, the Alaska Department of Fish and Game (if within the Critical Habitat Area), and the Alaska Department of Environmental Conservation.

5. Requests for access through the park to private lands will be evaluated on a case-by-case basis. Alaska State Parks generally allows land owners reasonable access to their property. Permits may be required. Exclusive uses of park land or water, however, are prohibited by law.

Commercial Activities

1. All commercial activities within the park (except commercial fishing) will be subject to Alaska State Park's commercial use permitting and contracting requirements, and will be managed according to the policies of Alaska State Parks. If permits are to be limited, competition may result in a competitive bid or lottery process to decide permit allocation.

2. Commercial operators shall be directed, through permit stipulations, to conduct their air and/or boat operations in a way that reduces disturbance to park visitors and wildlife, and prevents congestion.

3. Exclusive use of park land or water is prohibited.

4. Permanent or semi-permanent commercial facilities such as houseboats, floating lodges and tent camps, shall not be allowed in wilderness zones. Commercial facilities in other zones are allowed by permit only.

5. Temporary caches for food, fuel or other materials on park lands may be allowed, under permit, with special stipulations. Permanent caches are not allowed.

6. According to the legislative act relating to shellfish mariculture in Kachemak Bay State Park, the owners of existing mariculture rafts in Halibut Cove Lagoon are subject to the permitting requirements of Alaska State Parks. If permit holders do not meet either the permit requirements of Alaska State Parks or the Alaska Department of Fish and Game, permits can be revoked.

Facility Development

1. Recreational development and activities which provide access to or enhance enjoyment of the natural environment of state parks are encouraged, but the development of a state park must not diminish the value of park resources. Manipulations of the natural environment shall be limited to the immediate vicinity of development. Facilities must be carefully sited to avoid diminishing scenic values.

2. Proposals for facility development within Kachemak Bay State Park will be evaluated by considering public need, the amount of public use that a site receives or is expected to receive, potential or actual resource impacts, the land use zone classification assigned, and maintenance and operations considerations. No new facilities will be constructed without first considering the availability of staff and the operational funding needed to adequately maintain them.

3. Public recreation facilities should compliment (not compete with) those offered by the private sector.

4. Private recreation facilities such as lodges, restaurants, and shops can enhance recreation, but should not be placed on park land.

5. All park facilities shall be sited, designed and constructed to minimize impact on the natural environment, and on the scenic or wilderness values of the area. Sensitive habitats such as goat kidding areas, and pristine viewsheds will be avoided. No facilities will be developed within 300 feet of raptor nests, or animal den sites.

6. Although public facilities may be allowed in wilderness zones if necessary for resource protection, development within the wilderness park is strictly limited by legislation. Public safety is not a justification for facility development in wilderness zones. No commercial facilities will be allowed in wilderness zones.

7. The presence of cultural sensitivities does not necessarily preclude recreational use of an area. Facility development proposals within culturally sensitive areas will be evaluated by the Alaska State Parks History and Archeology section as part of the site planning process, prior to construction.

8. Although public survey results show substantial statewide interest in public use cabins, they must be carefully located to avoid visual and resource impacts. Consideration should be given

to purchasing private parcels with existing cabins appropriate for public use before building new cabins. Public use cabins should be "clustered," with a caretaker cabin placed nearby, to enhance service and to ease maintenance.

9. Trail development will be subject to the "trail development policy" that follows this section.

10. Except for the facilities recommended in this plan, and the possible addition of trails and campsites in the future, no further facility development is recommended within these parks.

Trail Development

Introduction
Much of the park's interior is visited only by those willing to bushwhack through devilsclub and alder, climb steep slopes, and ford frigid streams and glacial rivers. Existing trails are becoming more popular, and most need upgrading. Additional trails are needed to meet visitor demand, and to disperse use.

The following guidelines were developed by park staff in consultation with the Citizen's Advisory Board. They will apply to the construction and maintenance of all foot trails within the park.

Development Philosophy
Although high quality trails are suitable in some areas of the park, they are not appropriate in all areas. At this time, more low standard trails are preferable to a few high standard trails. Foot trails should be constructed only to a level that will adequately protect resources and define the trail.

Management Objectives

1. Develop and manage trails that reflect the management intent of the land use zones in which the trails are located.

2. Establish standards by considering public safety, aesthetics, resource protection, expected use, and user preferences.

3. Provide a logical sequence of new construction and rehabilitation that will provide maximum public benefit, and resource protection.

4. Consider the potential for future upgrades and ease of maintenance during design, layout, and construction. Wetlands will be avoided.

5. Keep visual impacts associated with construction to a minimum.

6. Expand and improve trail opportunities.

7. In areas with marginal (or sensitive) soils, construct and designate trails for foot traffic only.

Specifications

The following general specifications apply to all trails developed in the park:

1. The trail corridor will be kept clear of fallen trees, brush, and other obstructions.

2. Visual indicators of trail construction will be eliminated, whenever possible. All flagging will be removed following construction. Branch stubs will be cut flush with the tree trunk. Tree stumps will be cut flush with the ground. Bucking cuts should be angled away from the trail, whenever possible. Brush will be placed on the downslope side of the trail, cut into three to four foot lengths, and scattered out of view of the trail.

3. Standing trees will not be cut during trail construction unless they are hazards, or the tree is needed for construction materials and a suitable windthrown tree is not available. Standing trees should be selected and felled well away from the trail. Trails should be routed around standing trees to avoid injury to the root system.

4. If trees are used for bridges, water bars or similar structures, they must be either spruce or hemlock. Cottonwood and alder may not be used. Logs will be stripped of bark.

5. Wood-routed signs will be used at trailheads and trail junctions. They will be made of plywood-backed routed cedar, and will have a natural finish with brown stained lettering. Sign posts will have buried cross bracing. Metal signs may be used at coastal trailheads and coastal campsites. Small metal signs may also be used in areas where the tread is indistinct. Flagging may not be used to mark trails, except during layout and construction. If the material is available, rock cairns may be used to mark the trail on gravel bars, beaches, alluvial plains and in alpine. Rock cairns should be a minimum of 24 inches high and a maximum of 36 inches high.

The following specifications are guidelines for the MAXIMUM standards within specific land use zones. Generally, trails will be constructed to the lowest standard necessary to meet expected use and resource/public safety considerations. The main trail corridors will be of a higher construction standard than the spur trails radiating from it. Initial construction of trails will most often follow class II and class III standards as described in these guidelines. The potential for future improvement will be considered during initial design and layout.

Class I Trails

Appropriate Land Use Zone
Resource Development and Natural Zones.

Purpose
In areas with moderate to high use, these trails are appropriate. They are the highest standard trails in the park. Where possible, they will be designed and constructed to accommodate the physically disabled. They will typically be located near structures, such as ranger stations, public use cabins, and docks.

Right-of-Way
Brush cleared up to 6 feet in width, 8 feet in height.

Tread
24" minimum, 36" maximum. Will be cleared of roots and rocks. Surface may be natural, or hardened.

Grade
Generally less than 10%.

Structures
Boardwalks, staircases, handrails, bridges, puncheon, water bars, bulletin boards, and signing are acceptable. Use of dimensional lumber is acceptable for boardwalks and bridges.

Class II Trails

Appropriate Land Use Zone
Resource Development and Natural Zones

Purpose
For areas with light to moderate use.

Right-of-Way
Brush cleared up to 6 feet in width and 8 feet in height.

Tread
12" minimum, 24" maximum depending on slope. Rocks and roots that constitute hazards or interfere with drainage will be removed. Roots will not be otherwise be cut. Tread surface natural or gravel.

Grade
Generally less than 20%.

Structures
Bridges, and signs are acceptable. Bridges and other structures will be constructed from native materials.

Class III Trails

Appropriate Land Use Zone
Resource Development, Natural, and Wilderness Zones

Purpose
For areas receiving light use, these trails reflect the lowest standard for trails constructed in the park. Except routes or "game trails," these are the most challenging for hikers. They are appropriate where the least amount of site modification is desired to preserve the character of the resource. They are also suggested for areas where construction of a higher standard trail is impractical.

Right-of-Way
Brush cleared up to 4 feet in width and 8 feet in height.

Tread
12" minimum, 24" maximum depending on slope. Roots and rocks will be removed only if they are hazards. Surface will be natural materials. Organic surface material will be removed if drainage problems are expected or develop.

Grade
No more than 50%.

Structures
Bridges and signing are conditionally acceptable, but will be kept to a minimum. They may be installed for public safety or resource protection. Bridges and other structures must be constructed from native materials.

Class IV Trails (Routes)

Appropriate Land Use Zone
All land use zones

Purpose
Routes are primitive trails that receive little or no maintenance. Typically called "game" trails, the trail tread is usually established by user traffic, and is typically unmodified. Bridges, signing, and other structures are absent. These trails are most often used by experienced backcountry travellers. A route may be marked with natural materials where the treadway is obscure.

Ski Trails

Some areas of the park are frequently used for cross-country skiing and ski mountaineering. Some hiking trails may be constructed so that they can also be used as cross-country ski trails. Within natural and recreational development zones, ski trails may be marked with signs placed 10 to 12 feet above the trail surface.

DEFINITIONS:

Right-of-Way
As it pertains to trail specifications, right-of-way is the cleared area on both sides of the trail. It is known also as the *trail corridor.*

Tread
The surface upon which the hiker walks. The tread, or treadway, is the most important component of a trail.

Grade
Relative steepness of the trail as compared to a flat horizontal plane. Grade is commonly measured in slope.

Slope
Refers to the relative steepness of the terrain. Slope is the number of feet of vertical rise per one hundred feet of horizontal distance. It can be calculated in degrees, but it is more commonly expressed as a percentage. For example, a 10% slope has 10 feet of rise over a distance of 100 horizontal feet.

Outslope
Is the amount the tread slopes downward from the inside to the outside, to allow drainage.

Backslope
Is the angle of cut just above the tread, on the uphill side.

RECOMMENDATIONS

ADMINISTRATIVE

The following are administrative action recommendations for Kachemak Bay State Park and Wilderness Park. Unless otherwise noted, projects are parkwide.

CATEGORY: RESOURCE/LAND MANAGEMENT

Project	Phase	Description	Justification
Acquisition of private lands	A,B,C	Explore the potential for the purchase of the following private lands within and adjacent to the park, and acquire them if possible: - Lands that would join the two portions of, or improve access to, Cottonwood / Eastland Creek. - Parcels on Nuka Island. - Lands on the wilderness park boundary, near the Rocky River Road. - Parcels in Peterson Bay, including the island peninsula, that would provide park access. - Park inholders that have prime coastal access, or cabins suitable for public use. - Parcels within the Petrof View subdivision.	Many of these properties, if acquired, would provide public coastal or upland access, good beach camping areas, and public use cabin sites. Some already have cabins that could be easily converted for public use. The acquisition of certain private parcels would improve access to public lands, enhance recreational use, reduce conflicts, and would replace park lands that were impacted by the Exxon Valdez oil spill.

Project	Phase	Description	Justification
Acquisition of USS 4730	A	Acquire the 120 acre Bureau of Land Management experimental forest parcel on Grewingk glacier spit, or develop a cooperative management agreement with the Bureau of Land Management that recognizes the parcel's recreation value.	Consolidate and manage all public lands within the park for recreational use. This parcel of public land is surrounded by the park, and should be managed for its recreation value.
Acquisition of state lands	A A C C C	Add the following state land to the park: - State lands adjacent to the Cottonwood / Eastland creek area of the park. - Sections 1 and 12, (10S 13W SM) adjacent to the Wilderness Park, near Port Dick creek. - State lands on the Chugach Islands. - State lands on the islands of Eldred Passage. - USS 3609, lot 2, Sec. 10, 7S 12W, SM.	These multiple purpose state lands are adjacent to the park. Adding these lands to the park would ensure their continued use for recreation. The draft *Kenai Area Plan*, Alaska Division of Land, 1994, recommends sections 1 and 12 be legislatively added to the wilderness park, and that lot 2 of USS 3609 be transferred to Alaska State Parks.
Acquisition of native allotments	A	Applications for native allotments on park lands have been filed, and are under adjudication. If the allotments are granted, Alaska State Parks should explore the potential for exchange for land outside the park, before allotments are patented.	These park lands should be retained and managed for public recreation.

Project	Phase	Description	Justification
Landowner agreements	A	If fee simple acquisition is not feasible, work with private landowners to obtain conservation easements or cooperative management agreements for public access. Examples are: - A letter of agreement between the Seldovia Native Association and Alaska State Parks that would allow the State to install trail directional signs and maintain sections of the Tutka lagoon to Jackalof Bay trail that are on private land.	To improve access to park lands and provide public recreation opportunities while keeping lands in private ownership.
Resource inventory	A	Cooperate with the National Park Service, U.S. Fish and Wildlife Service and the Alaska Department of Fish and Game. Conduct inventories of wildlife, vegetation and cultural sites within the park. Gather resource inventory data. Where populations are below acceptable levels, recommend harvest closures to the Alaska Boards of Fish and Game. Copies of any documents relating to fisheries or wildlife research shall be provided to the Alaska Department of Fish and Game.	Nesting and den sites, historic and archaeological sites and critical habitat areas all need to be identified and evaluated. No facility development will be permitted that would interfere with or degrade these sites.
Wildlife viewing areas.	A	Cooperate with the Alaska Department of Fish and Game's Watchable Wildlife program to establish designated wildlife viewing areas in the park.	Most of those who visit Alaska expect world class wildlife viewing opportunities, especially in designated parks.

Project	Phase	Description	Justification
Site evaluation and monitoring	A	Site-specific resource evaluations to identify, document, and monitor resource impacts over time.	Resource impact often develops over a long time period, and can go unrecognized until the damage has been done. Routine site evaluations will enable staff to better recognize and monitor changes, and protect resources.
Identify and sign 17b easements	A-B	Locate and sign 17b easements on private lands, that would facilitate access to the park.	Identifies public access, and reduces the potential for trespass.
Beach cleanup	B	Develop a comprehensive, ongoing coastline survey and cleanup program.	Shoreline trash is a hazard to park visitors and marine life, and diminishes park values.
Oil spill restoration	B	Identify coastal sites with visual indicators of oil spill cleanup and research activities, and restore the sites to their natural condition.	Indicators of oil spill cleanup and completed research projects diminish the park's recreation, scenic and wilderness value should be removed from the park.

CATEGORY: VISITOR USE MANAGEMENT

Project	Phase	Description	Justification
Visitor use count system	A	Develop and implement an accurate and efficient visitor use data gathering system.	Understanding trends in visitor use is an important step in accommodating visitor needs and protecting resources.
Carrying capacity study	A	With public involvement, complete a carrying capacity study for both parks. Should carrying capacity in an area be reached, the established use limits would be enforced.	The amount of acceptable use and limits of acceptable change to resources in a certain area at a given time should be established before activities begin to create adverse effects on park resources or other visitors. Should visitor use ever need to be limited in the future, carrying capacity will already have been established, and can be implemented.

CATEGORY: PUBLIC SAFETY/RESOURCE PROTECTION

Project	Phase	Description	Justification
Revision of park regulations	A	Periodically review regulations. Recommend revisions and new regulations as needed.	Effective laws are valuable tools used in protecting resources and ensuring public safety, maintaining the values for which the parks were established.
Staff and volunteer training	A	Develop comprehensive skills standards for field staff and volunteers. Provide and document staff training.	Skills standards and training prepare staff and volunteers to safely and skillfully perform resource protection and maintenance functions in remote areas, under potentially hazardous conditions.
Project / patrol / work boats	A	Acquire boats for plan implementation and park operations that are designed for safety, durability, and low cost operation. - One 26-35 ft. boat with cabin, for the outer gulf coast. - Two 18' skiffs, for Kachemak Bay.	Access to the park's extensive coastline is limited to boat or plane and can be difficult. Adequate boats would provide a greater margin of safety and increase operational efficiency. The implementation of this management plan is dependant on the ability to access project areas.

CATEGORY: HUMAN RESOURCES/STAFFING

Project	Phase	Description	Justification
Adopt-a-Trail program	A	Develop an "adopt-a-trail" program for the park, recruiting local service organizations to help maintain existing hiking trails.	Encourages public participation in the stewardship of their park, promotes more efficient use of park staff, and supports the expansion of the park trail system.
Volunteer public use cabin caretakers	A	Establish volunteer caretakers to maintain public use cabins.	Enables frequent facility maintenance, provides increased service, and insures resource protection, all at a low operating cost.
Five Alaska Conservation Corps positions	A	Establish five additional positions (for a total of six park-wide), to staff additional trail crews.	The Alaska Conservation Corps program provides temporary employment for Alaskans who are interested in conservation related careers. Corps projects include the construction and maintenance of trails and facilities. Trail maintenance is tough, grueling work and requires training and specialized skills. Trail crews comprised of Corps members have a much lower staff turnover rate than volunteer crews.

Project	Phase	Description	Justification
Trail crew volunteers	A	Establish a four-person volunteer trail construction and maintenance crew at the park's south end, near Eldred Passage.	The Volunteers-in-Parks program is responsible for much the trail construction and ongoing facility maintenance in Kachemak Bay State Park. Additional volunteer trail maintainers are needed as the trail system grows.
Volunteer service groups	A	Recruit volunteer service organizations that are willing to work on park projects. Provide staff support and assistance as needed.	Service organizations like Operation Raleigh and Youth Services International have accomplished several facility construction projects in Kachemak Bay State Park.
TwopPark ranger positions.	A B	Establish ranger positions in the following locations: -Wilderness park / gulf coast / Nuka Island area -Eldred Passage / Sadie Cove / Tutka Bay area	Kachemak Bay State Park, although one of the state's largest, is assigned only one seasonal ranger. Rangers are responsible for front line park management. They monitor resources, provide visitor assistance, enforce laws, and respond to emergencies. They recruit, train, and supervise technicians, volunteers, and Alaska Conservation Corps members.

Project	Phase	Description	Justification
Three park technician positions.	 B B B	Establish seasonal park technician positions in each of the following locations: - Halibut Cove Lagoon - Eldred Passage area - Wilderness Park / Nuka Island	A technician was assigned to the park for two seasons, but was eliminated due to budget reductions. Skilled park technicians supervise crews, assist rangers, and implement facility construction and maintenance projects. They significantly improve management efficiency.
Volunteer Park Watch program	C	Recruit adjacent private property owners to assist park staff in monitoring park use.	This program has been proven effective in protecting resources and facilities.

CATEGORY: INTERPRETATION

Project	Phase	Description	Justification
Park information video	A	Develop a video program that describes the park's resources and recreation opportunities.	This project would introduce potential visitors to the park's resources and recreation opportunities.
Formal interpretive programs	A	Develop a series of interpretive programs that can be presented to interested groups upon request.	The Alaska Center for Coastal Studies already conducts regularly scheduled formal interpretive programs on the bay's natural history, in Peterson Bay. Park staff should be available, however, to present programs on park topics to groups when requested.
Park brochure	B - C	Periodic updates of the park brochure.	Brochures are a popular, efficient and low cost method of providing basic park information.
Trail brochure	B - C	Periodic updates of the trail brochure.	Trail brochures are provided at ranger stations and at trail registers in the park. They are frequently revised as new trails are added to the system, and as trail conditions change.
Visitor contact/ ranger station	A	Establish a visitor contact station with staff quarters in (or near) the park, that is centrally located and easily accessible to the public.	A central location in or near the park is needed to facilitate visitor contact, and to increase operational efficiency. Although suitable for trail crew housing, Halibut Cove Lagoon is not a good location for a ranger station, because tidal action frequently prevents access.

RECOMMENDATIONS

FACILITY DEVELOPMENT

The following are facility recommendations for Kachemak Bay State Park and Wilderness Park, listed by geographic area. The facility recommendation map following this table depicts facility locations. Recommendations for trails and bridges are subject to reconnaissance and evaluation process to determine project feasibility. Public use cabin and campsite development is subject to a comprehensive site suitability evaluation and review before construction. Phases (A, B, or C) are used to describe the sequence of implementation, but do not represent a specific time period.

AREA: COTTONWOOD / EASTLAND CREEK

Project	Phase	Description	Justification
Roadside pullout, with parking	C	Vehicle pullout along East End road near the park, with a small parking area for 15 vehicles, a latrine, and a trailhead.	Provides vehicle access to the only area of Kachemak Bay State Park that could be made road accessible.
Signs	C	Install low maintenance facility directional signs.	Signs identify the roadway pullout, trailheads, trail routes and junctions, and inform visitors about hazards and sensitive areas.
Multipurpose trails	C	Develop a ten-mile multipurpose trail system. Avoid construction in gullies and washes. Follow construction guidelines of the park trail plan. Install rest/ viewing areas where appropriate.	Promotes access to the park interior and provides more year round trail opportunities on the Homer side of Kachemak Bay.

Project	Phase	Description	Justification
Visitor information display	C	Installation of an interpretive display that depicts topics such as "leave no trace" camping techniques and park information, on the trail just beyond the parking area.	Helps to protect park values through education, and advises park users about the park's recreation opportunities and natural features.

AREA: TUTKA BAY / ELDRED PASSAGE / SADIE COVE

Project	Phase	Description	Justification
Campsites		Develop small camping areas with amenities such as tables, fire rings, cable/pulley food caches, latrines, signs, and optional tent platforms.	Provides recreation opportunities in an area of the park with few facilities. Protects sites already being used. Elevated tent platforms protect underlying vegetation and soils, and provide a level tent site. Facilities can help attract visitors to developed and manageable sites, and away from hazardous or environmentally sensitive sites.
	A	-Eldred Passage, one campsite, dependant on an acquisition.	
	A	-Sadie Cove quarry site, 6-10 campsites	
	A	-Tutka Bay lagoon, upgrade 3 existing campsites with tent platforms.	
	A	-Tutka Bay T9S R12W, Sec 5 and Sec 10, two campsites at each location	
	A	-Sadie Cove, 3 campsites.	
	A	-Tutka Bay, 2 campsites at the lake above the hatchery, and 2 campsites at small cove south of the lagoon entrance.	

Project	Phase	Description	Justification
Public use/ caretaker cabins	A A	Construct two to three public use cabins and one volunteer caretaker cabin at the Sadie Cove quarry site. Acquire park inholdings with cabins, and develop for pubic use, at the following locations: - Eldred passage, two to three cabins - Sadie Cove, two to three cabins - Tutka Bay, three to four cabins	Provides a new recreation opportunity to a wide range of park visitors at a site where there is little risk of resource degradation. Although the site has been previously disrupted, it is strategically located between Sadie Cove and Tutka Bay. Fees collected will help to maintain facilities. On-site caretakers provide daily facility maintenance and visitor assistance, and can assist with trail projects.
Trails	 A A A	Construct or upgrade the following trails: -The Tutka Lagoon / Jackalof Bay trail. -A trail up the ridge between Sadie Cove and Tutka Bay, from the Sadie Cove quarry, with possible spur trails. -A trail from Tutka Hatchery to the small lake above and south of the hatchery, continuing on to the Wilderness Park, and with a spur trail from the lake to a small cove located south of the entrance to Tutka lagoon.	Meets the demand for new and diverse hiking opportunities, and improves existing opportunities.

Project	Phase	Description	Justification
Trailhead information signs, with trail registers	A,B,C	Install small bulletin boards with trail registers at all trailheads within natural zones, immediately following the construction of each new trail.	A low key but effective method of distributing park information, bulletin boards with trail registers also provide hikers with an opportunity to leave a trip plan in case of an emergency.
Mooring buoys	B	Survey the park coastline to identify popular anchorages, and evaluate site conditions. In popular areas with existing or proposed facilities but with marginal natural anchorage (due to bottom type, water depth, or seas), install mooring buoys.	Mooring buoys improve access to coastal beaches, campsites, and trailheads.

AREA: NEPTUNE BAY / CHINA POOT BAY

Project	Phase	Description	Justification
Trails	C A C	Construct the following trails: - Eldred Passage to Hazelle lake, via McKeon flats and the south side of the Wosnesenski valley. - Eldred Passage to the ridge, via the northeast side of Sadie Cove, through hidden valley. - Spur trails that connect the above. Utilize old trails and powerline access trails, where feasible.	Meets the demand for new and diverse hiking opportunities, and improves existing opportunities.
Trailhead information signs, with trail registers	A,B,C	Install small bulletin boards with trail registers at all trailheads within natural zones, immediately following the construction of each new trail.	A low key but effective method of distributing park information, bulletin boards with trail registers also provide hikers with an opportunity to leave a trip plan in case of an emergency.

Project	Phase	Description	Justification
Campsites	 A B B C	Develop small campsites with amenities such as fire rings, cable/pulley food caches, latrines, tables, signing, and optional tent platforms. -In China Poot Bay, near the Coalition Trailhead -Neptune Bay, near spit in sec. 20 -Neptune Bay, on west side of spit, in sec. 25 -Hazelle Lake	Provides recreation opportunities in an area of the park with few facilities. Protects sites already being used. Elevated tent platforms protect underlying vegetation and soils, and provide a level tent site. In some cases, facilities can help attract visitors to developed and manageable sites, and away from hazardous or environmentally sensitive sites.
Mooring buoys	B	Survey the park coastline to identify popular anchorages, and evaluate site conditions. In popular areas with existing or proposed facilities but with marginal natural anchorage (due to bottom type, water depth, or seas), install mooring buoys.	Mooring buoys improve access to coastal beaches, campsites, and trailheads.

AREA: HALIBUT COVE / HALIBUT COVE LAGOON / CHINA POOT LAKE AREA

Project	Phase	Description	Justification
Public docks	A	Upgrade the Halibut Cove lagoon floating dock with pilings, additional floats, ramp, and piling supported landing, at Halibut Cove Lagoon ranger station site.	Improves access to the public use cabin, the hub of the trail system, and the ranger station. The existing dock and stairway are difficult for many visitors to use.
	A	Construct a floating public dock (or landing platform with stairs) at the Saddle Trailhead.	Improves public access to the most popular trailhead in the park by providing a landing/staging area for boats and passengers.
Public use cabins	A	Develop new public use cabins as follows: -Two cabins in the Halibut Cove area. One cabin near the lagoon ranger station. The site of the second cabin is dependent on land acquisition in the area. -One cabin in Moose Valley, near Moose Valley creek. Reconstruct/upgrade existing trapper cabin if feasible, by replacing the roof and sill logs, and by adding a floor. -One new cabin, on the northeast shore of China Poot (Leisure) Lake.	Provides new recreation opportunities to a broader range of users. The park's only public use cabin is fully booked throughout the season. Fees collected from cabin users help to maintain park facilities. Cabins will be within a half day's hike from each other, establishing a cabin to cabin hiking circuit in this area.

Project	Phase	Description	Justification
Campsites		Construct or upgrade area campsites as follows:	Existing campsites in this area are experiencing soil compaction and trampled vegetation. Elevated tent platforms protect underlying vegetation and soils, and provide level tent sites on slopes.
	A	-Improve old campsites at China Poot (Leisure) lake. Construct a latrine and food hanging caches near the existing campsites, but away from the lake and inlet stream. Construct one new campsite at the outlet stream.	
	B	-"Harden" impacted campsites in Halibut Cove lagoon with tent platforms. Construct food hanging caches to prevent conflicts with wildlife.	
	C	-Construct 4 new campsites along Moose Valley creek, close to the proposed public use cabin, with a latrine and food hanging caches.	
	C	-Construct a campground with 4-6 campsites near the junction of the Wosnesenski and South Poot Peak trails.	
Fish cleaning tables	C	Construct 5 fish cleaning tables at the dock, public use cabins, and the campsite, near Halibut Cove Lagoon ranger station.	The lack of fish cleaning facilities at this popular sport fishing location is causing problems associated with the improper disposal of fish waste.

Project	Phase	Description	Justification
Campground	B	Develop a 10 - 15 site campground with 2 shelters, tent platforms, fire rings, latrines and food caches on the Halibut Creek delta.	Most camp sites in this area can only accommodate small groups. This project provides camping opportunities at a site that could accommodate larger groups.
Trails	 A A A B C C	Construct or upgrade the following trails: -Lagoon trail upgrades/ section relocations -Relocate saddle trailhead. -Moose Valley Trail, from China Poot (Leisure) Lake to Moose Valley, and continue up Poot Peak to connect with the South Spur trail. Install bridges where needed. -Halibut Cove community to Peterson Bay and the Coalition trail.-Dead Valley Trail extended farther up Halibut Creek into Dead valley. If necessary, relocate the trail away from private property. -China Poot Bay to China Poot Lake, and continuing to connect with the Moose Valley Trail and China Poot Lake trails. -Coalition trailhead to China Poot Lake.	Expands and improves the park trail system to meet the demand for new and diverse hiking opportunities, and improves existing opportunities. The Moose Valley trail improvements will form a loop that will connect existing trails. Foot bridges protect fragile stream banks.

Project	Phase	Description	Justification
Trailhead information signs, with trail registers	A,B,C	Install small bulletin boards with trail registers at all trailheads within natural zones, immediately following the construction of each new trail.	A low key but effective method of distributing park information. Bulletin boards with trail registers also provide hikers with an opportunity to leave a trip plan in case of an emergency.
Mooring buoys	B	Survey the park coastline to identify popular anchorages, and evaluate site conditions. In popular areas with existing or proposed facilities but with marginal natural anchorage (due to bottom type, water depth, or seas), install mooring buoys.	Mooring buoys improve access to coastal beaches, campsites, trailheads.
Bridges	A A C	-Lagoon Trail. Construct a log foot bridge across the creek (mid way along the south lagoon trail, in section 17). -Lagoon Trail. Construct a bridge across Halibut Creek. -Replace the narrow, single stringer log bridge at the China Poot (Leisure) Lake inlet with a wider bridge, designed to span 60'.	Bridges allow hikers to safely cross rivers and streams, regardless of stream volume, and reduce bank erosion.

AREA: GREWINGK GLACIER SPIT / GREWINGK LAKE / EMERALD LAKE

Project	Phase	Description	Justification
Trails	 A A C	Construction of the following trails: -Glacier access trail from the lake to the glacier. -Emerald Lake trail, from the Grewingk trail to Emerald Lake. -Extend the Humpy Creek trail to connect with the Emerald Lake and Grewingk trails.	Expand and improve the park trail system to meet the demand for new and diverse hiking opportunities, and to improve existing opportunities.
Grewingk self-guided nature trail	B	Upgrade and expand this nature trail, originally developed as an Eagle Scout project.	Explains the natural history of the park along a popular hiking trail, educating park visitors and enhancing enjoyment of the park.
Trailhead information signs, with trail registers	A,B,C	Install small bulletin boards with trail registers at all trailheads within natural zones, immediately following the construction of each new trail.	A low key but cost effective method of distributing park information, bulletin boards with trail registers also provide hikers with an opportunity to leave a trip plan in case of an emergency.
Bridges	 A B	Following the completion of a site plan, design and construct a bridge across: - Grewingk Glacier Creek. - Humpy Creek, as a part of the Emerald Lake trail project.	Provide access across fast moving glacial rivers that separate major areas of the park.

Project	Phase	Description	Justification
Campsites	 A A C C	Construct the following campsites with amenities such as fire rings, cable/pulley food hanging caches, and latrines: -4-6 small campsites at Emerald lake. -4-6 campsites at Grewingk Lake. -2-3 campsites near the glacier, following trail construction. -2-3 campsites near the Grewingk Creek bridge.	Small developed camping areas will provide destination camping and will help protect the sites from the impacts associated with indiscriminate use.
Ski / hiking hut	B	Construction of a small "A" frame public use hut within the natural zone, along the Alpine Ridge trail.	This facility will attract overnight hikers and skiers, and may help to reduce the impacts that are associated with indiscriminate camping. It will also extend recreation opportunities past the summer season. User fees will be collected to help maintain this facility.
Mooring buoys	B	Survey the park coastline to identify popular anchorages, and evaluate site conditions. In popular areas with existing or proposed facilities but with marginal natural anchorage due to bottom type, water depth, or seas, install mooring buoys.	Mooring buoys improve access to coastal beaches, campsites, trailheads.

AREA: HUMPY CREEK / MALLARD BAY/AURORA SPIT / BEAR ISLAND / CHUGACHIK ISLAND

Project	Phase	Description	Justification
Public use cabin	A	Develop two public use cabins near Bear Cove. Explore the possibility of acquiring a private parcels with cabins suitable for public use. If this is not feasible, construct the cabins on park land in the vicinity of Bear Cove.	Provides new recreation opportunities in an area of the park with few facilities. The park's only public use cabin is fully booked throughout the season. Fees collected from cabin users help to maintain park facilities.
Trails	B A	Construction of the following trails: -Humpy Creek to Mallard Bay, through sec. 14, and to the Emerald Lake Trail. -Mallard Bay to Bear Cove, extending the existing trail from the Portlock Glacier valley to Aurora lagoon and Bear Cove.	Expand and improve the park trail system to provide new hiking opportunities, and to accommodate increased use.
Trailhead information signs, with trail registers	A,B,C	Install small bulletin boards with trail registers at all trailheads within natural zones, immediately following the construction of each new trail.	A low key but effective method of distributing park information, bulletin boards with trail registers also provide hikers with an opportunity to leave a trip plan in case of an emergency.

Project	Phase	Description	Justification
Mooring buoys	B	Survey the park coastline to identify popular anchorages, and evaluate site conditions. In popular areas with existing or proposed facilities but with marginal natural anchorage due to bottom type, water depth, or seas, install mooring buoys.	Mooring buoys improve access to coastal beaches, campsites, trailheads.
Bridge	C	Construct a bridge across the Portlock river.	Provide access across fast moving glacial rivers that separate major areas of the park.

AREA: NUKA ISLAND / NUKA PASSAGE MAINLAND

Project	Phase	Description	Justification
Public use and caretaker cabins	C	Construct 2 public use cabins and one caretaker cabin in Home Cove and/or Mike's Bay. Sites are to be selected by considering site suitability, potential scenic and environmental impacts, water availability, and ease of access. Cluster the cabins for ease of maintenance.	The Alaska legislature, in adding Nuka Island to Kachemak Bay State Park, intended that the *"island support the construction and operation of one or two public use cabins."* Revenue generated from user fees will help fund seasonal on-site caretakers.
Campsites	A	Develop small camping areas with amenities such as fire rings, cable/pulley food caches, latrines, and tent platforms. Campsites will be developed in locations with adequate coastal access, a water source, good drainage, and low environmental sensitivity. -Two to four campsites at Petrof River, near the beach. -Two campsites at Petrof Point. -Two to four campsites in the proximity of the public use cabins on Nuka Island. -Two campsites near the lake above Mike's Bay.	Provides recreation opportunities in an area of the park with few facilities. Protects sites already being used, or where increased use is anticipated. Elevated tent platforms protect both underlying vegetation and soils, and provide a level tent site. Improved facilities often attract visitors to manageable sites, and away from hazardous or environmentally sensitive areas.

Project	Phase	Description	Justification
Hiking trails	B	If a commercial lodge facility is placed on Nuka Island, develop hiking trails from: - Mike's Bay to Mike's Lake - Herring Pete's Cove to Home Cove and Mike's Bay.	Expand and improve the park trail system. Enhance recreation by providing new hiking opportunities.
Trailhead information signs, with trail registers	A,B,C	Install small bulletin boards with trail registers at all trailheads within natural zones, immediately following the construction of each new trail.	A low key but effective method of distributing park information, bulletin boards with trail registers also provide hikers with an opportunity to leave a trip plan in case of an emergency.
Mooring buoys	B	Survey the park coastline to identify popular anchorages, and evaluate site conditions. In popular areas with existing or proposed facilities but with marginal natural anchorage due to bottom type, water depth, or seas, install mooring buoys.	Mooring buoys improve access to coastal beaches, campsites, trailheads.

AREA: KACHEMAK BAY STATE WILDERNESS PARK

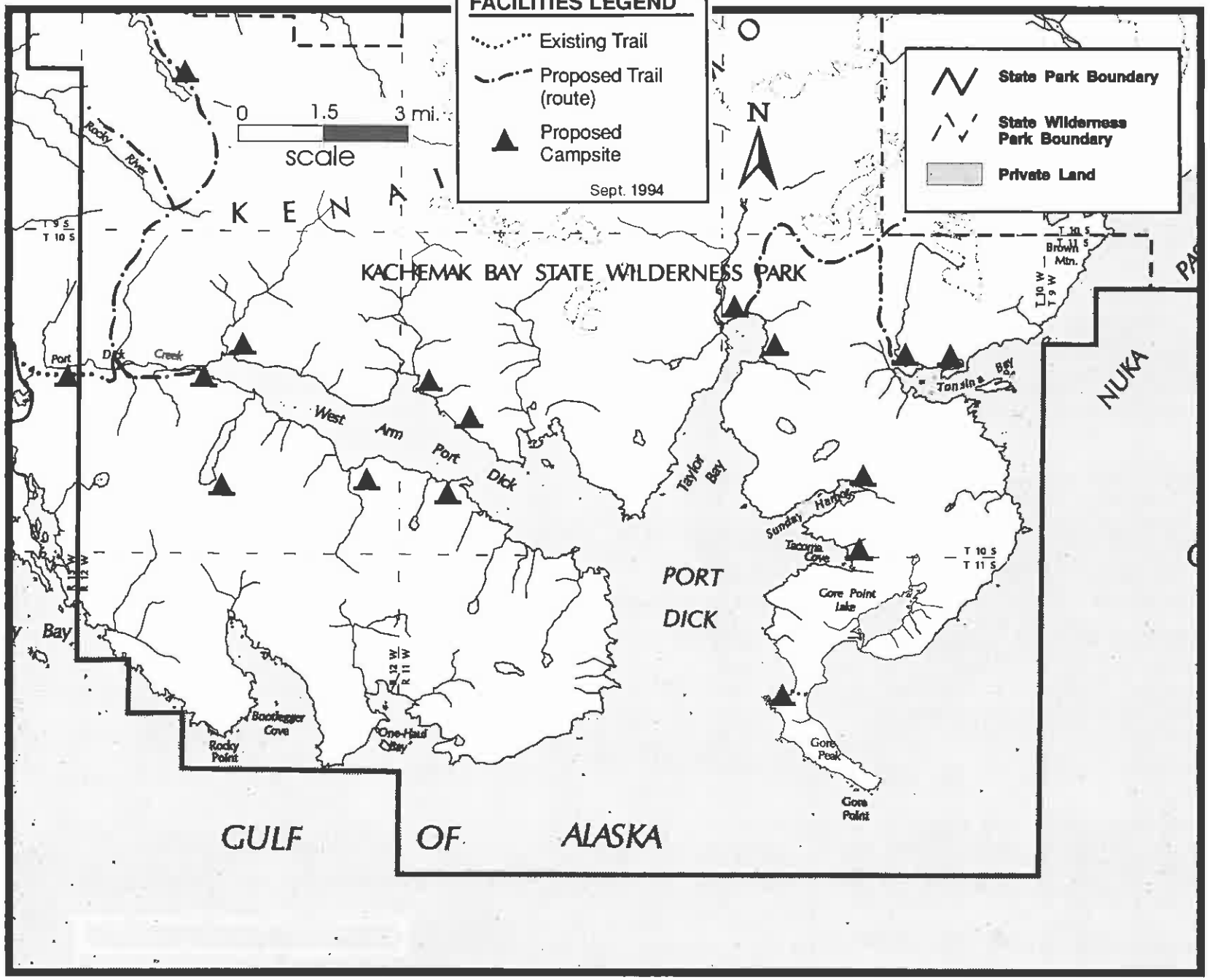
Project	Phase	Description	Justification
Trails		The following are trail routes recommended within the Wilderness park.	
	B	-Upgrade the old trail route from the Rocky River Road to Port Dick.	-This is the best alternative for access from the Rocky River Road to the Wilderness Park.
	C	-Locate and establish new routes from: 1. Taylor Bay to Tonsina Bay, and into the Petrof River valley. 2. Port Dick Creek to Tutka Bay, west side.	-Establish primitive hiking opportunities in the Wilderness Park

Project	Phase	Description	Justification
Campsites	B	Where camping impacts have occurred, upgrade sites with amenities such as fire rings, cable/pulley food caches, and tent platforms. Minimize visual impacts. Conduct site evaluations, and construct or upgrade campsites, if needed, in the following locations: -Port Dick, cabin site -Port Dick, Astro site -Port Dick, Island Creek -Port Dick, Shelter Cove -Port Dick, Middle Creek -Port Dick Lake -Sunday Harbor -Tacoma Cove -Tonsina Bay -Taylor Bay -Gore Point, west side	The justification for installing facilities in the Wilderness Park is based on resource protection. Many of the sites listed have already been impacted by users, and need to be managed. Elevated tent platforms protect underlying vegetation and soils, and provide level tent sites. Developed sites can also attract use away from environmentally sensitive areas.

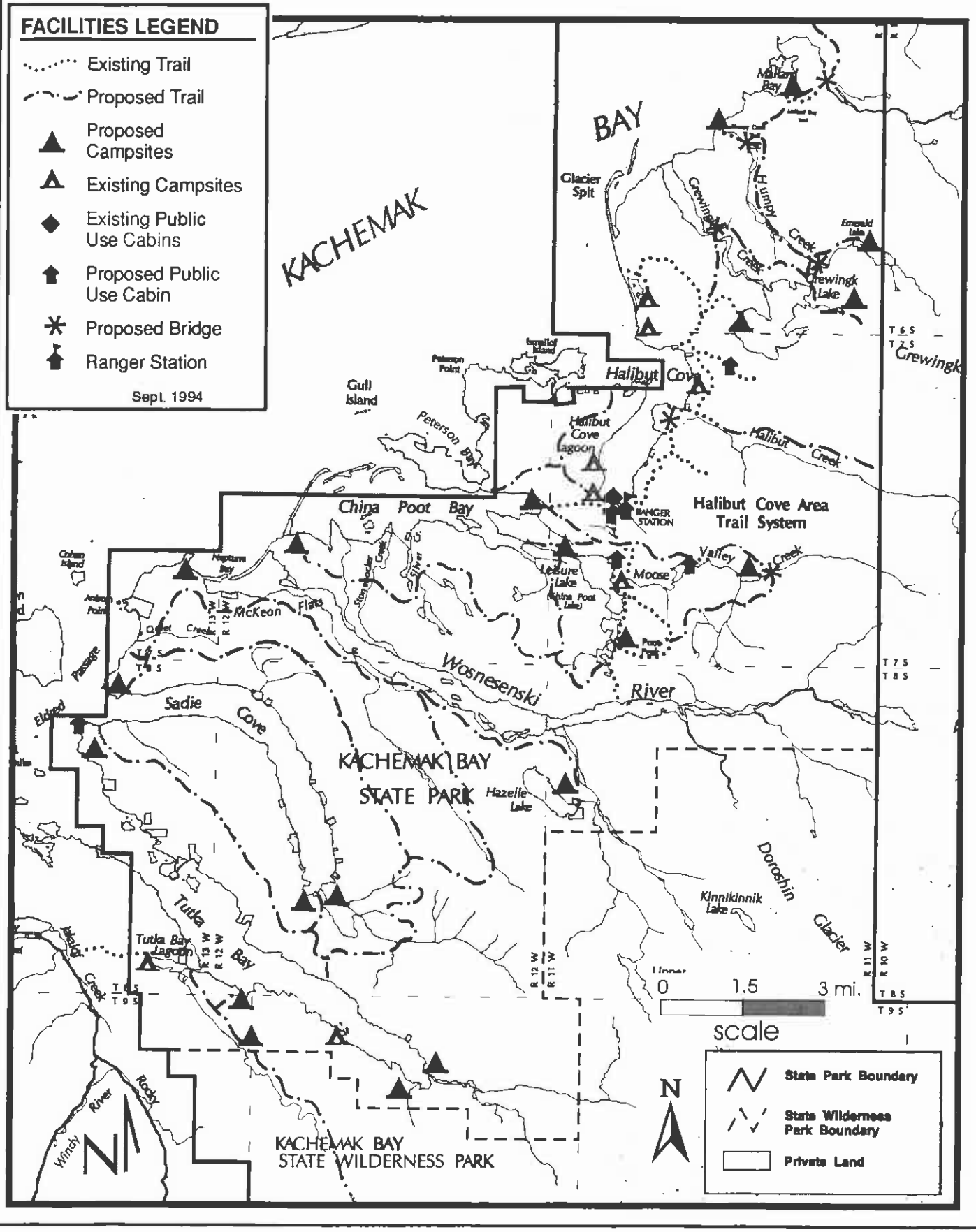
AREA: HOMER

Project	Phase	Description	Justification
Visitor information displays	A	Design and construct durable, high quality displays that describe the park's resources and recreation opportunities. Install at the Kenai area south district office, and at a variety of other strategic locations around Homer.	Well designed outdoor static displays effectively interpret park values and recreation opportunities.
Interactive park information display	A	Develop an interactive video program that provides park information on request by the user.	Where staffing is limited, this tool provides park information upon request. It has the appeal of video, but it also allows specific information to be retrieved by the user. This type of display is particularly appropriate in visitor centers and transit areas.

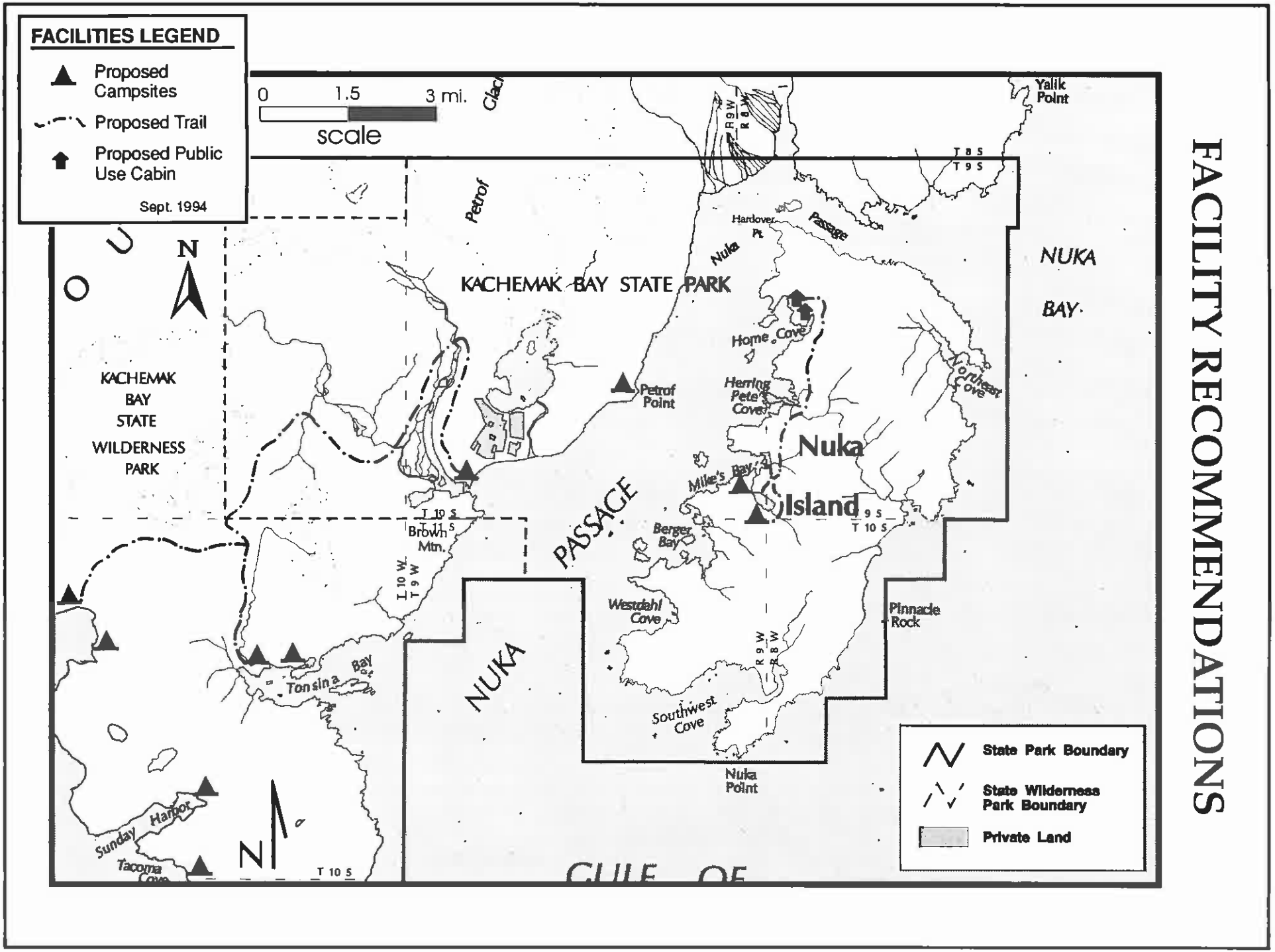
FACILITY RECOMMENDATIONS

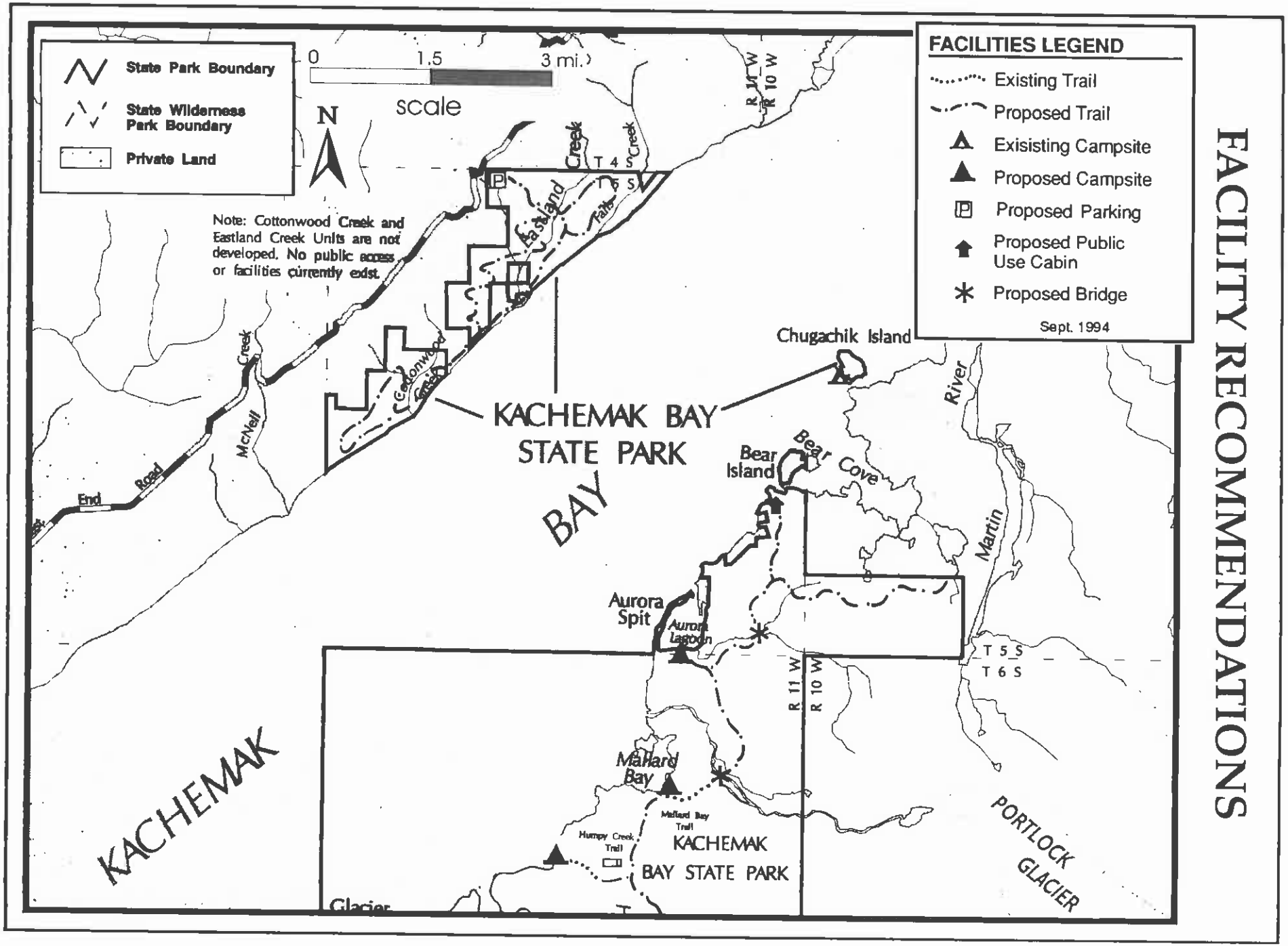


FACILITY RECOMMENDATIONS



FACILITY RECOMMENDATIONS




FACILITY RECOMMENDATIONS
FACILITIES LEGEND
Existing Trail
Proposed Trail
Exisisting Campsite
Proposed Campsite
Proposed Parking
Proposed Public Use Cabin
Proposed Bridge
Sept. 1994
State Park Boundary
State Wilderness Park Boundary
Private Land
0 1.5 3 mi.
scale
N
Note: Cottonwood Creek and Eastland Creek Units are not developed. No public access or facilities currently exist.
KACHEMAK BAY STATE PARK
KACHEMAK BAY
Chugachik Island
Bear Island
Bear Cove
Aurora Spit
Aurora Lagoon
Mallard Bay
Mallard Bay Trail
Humpy Creek Trail
KACHEMAK BAY STATE PARK
PORTLOCK GLACIER
KACHEMAK
Glacier
Eastland Creek
Cottonwood Creek
McNeil River
Martin River
End Road
T 4 S
T 5 S
T 6 S
R 11 W
R 10 W

Chapter 8: Implementation

Many projects in the recommendations chapter are "phased," indicating the order in which projects should occur. The following are guidelines for the application of plan elements that were not previously phased in the recommendations chapter:

- Parkwide policies (chapter 7) and the "Guidelines for Activities Within Land Use Zones" (chapter 6) become effective with the signature of the Director of Alaska State Parks.

- Regulations will be promulgated through public review and the Administration Procedures Act. A review of the park's regulations will be completed and any revisions will be submitted to the Director within one year of plan publication.

- Legislative language and public opinion show concern for compromising the park's scenic and wilderness values. These concerns must be considered carefully before any additional facility development or issuance of permits.

- In response to changes in capital and operating budgets and maintenance considerations, project priorities may be re-evaluated and adjusted periodically.

- The establishment of additional ranger positions is recommended in this plan, but is dependent on funding and administrative approval for implementation.

SITE PLANNING

Site planning will occur before the construction of facilities. Site planning includes the review of the management plan's recommendations and the evaluation of site conditions. The site planning process may be simple or detailed, depending on the scale or potential impact of the project.

Most site planning for small scale facility development projects (such as trails and campsites) will normally be conducted by area staff in consultation with the Director's Office, the Design and Construction section of Alaska State Parks, the Office of History and Archeology, and the Kachemak Bay State Park Citizen's Advisory Board.

Large scale or potentially sensitive facility development projects (such as public use cabins, bridges, docks, or ranger stations) may require involvement of other state, local, and federal agencies, and the public, as necessary.

Chapter 9: Plan Review and Modification

The following excerpt, from the Standard Operating Procedures for State Park Unit Management Planning, will guide revision or modification of this plan:

PERIODIC REVIEW

The Area Superintendent will coordinate periodic review of the management plan when the Director considers it necessary and so directs. The decision to review the plan may be indicated by:

- Written public or agency requests for review;
- Policy changes within the division;
- Availability of new data;
- Availability of new technology; or,
- Changing social or economic conditions that place different demands on the park or affect the division's capabilities.

The plan review will include meetings, when appropriate, with the Kachemak Bay State Park Citizen's' Advisory Board, interested groups, the public, other affected agencies, the area superintendent and other Alaska State Parks personnel. The periodic review will lead to one of the following actions:

- No modification of the plan;
- Modification of the plan, or;
- Granting of a special exception.

MODIFICATION OF THE PLAN

- Minor changes: These are changes that, if accomplished, are consistent with the original intent of the plan. Minor changes may be necessary for clarification, consistency, or to expedite the plan's application. Minor changes do not require public review but must be coordinated with the area superintendent and other affected staff.
- Major changes: These are changes that, if implemented, are a deviation from the original intent of the plan. Major changes require public notice and review before adoption.

GRANTING OF A SPECIAL EXCEPTION

Exceptions to the provisions of the management plan may sometimes be made without modification of the plan. Special exceptions may be made on a case-by-case basis, when compliance with the plan is exceedingly difficult or impractical, and an alternative procedure can be implemented that adheres to the intent of the plan.

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

- The nature of the special exception requested;
- The extenuating condition that requires a special exception;
- The alternative course of action to be followed; and,
- How the intent of the plan will be met by the alternative.

B. The Director will issue a determination with participation from field staff and the park advisory board. 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.

Appendix A: Acknowledgements

Alaska State Parks wishes to acknowledge the efforts of the following people in completing this plan:

Members of the Kachemak Bay State Park Citizen's Advisory Board, Homer:

David Stutzer, Chairman
Ralph Broshes
Willy Dunn
Olga Matkin
Sera Baxter
Dan Delmissier
David Seaman
Glenn Green
Edgar Bailey
Dave Doscher (former)
Clark Boyer (former)

Roger L. MacCampbell, District Ranger, Kenai Area, Alaska State Parks, co-author
Jeffrey S. Johnson, Marine Recreation Project, Alaska State Parks, co-author
Christine Titus, Superintendent, Kenai Area, Alaska State Parks
Dave Stephens, Chief, Policy and Planning, Alaska State Parks
Ron Crenshaw, Project Manager, Marine Recreation Project, Alaska State Parks
Wyn Meneffee, Marine Recreation Project, Alaska State Parks
Becky Knowlton, Marine Recreation Project, Alaska State Parks
Carol Larsen, Public Information Officer, Alaska State Parks
Susan Peck, Cartographer, Department of Natural Resources, Division of Land

And special thanks to all the private citizens, property owners, commercial operators and organizations who sent letters and participated in public meetings.

Revisor's notes. — Formerly AS 41.20.250. Renumbered in 1983.

Sec. 41.21.131. Kachemak Bay State Park established. (a) The presently state-owned land and water, and all that acquired in the future by the state, lying within the parcels described in this section are designated as the Kachemak Bay State Park. In order to protect and preserve this land and water for its unique and exceptional scenic value, the park is established and shall be managed as a scenic park. The land and water lying within the following described parcels is reserved from all uses incompatible with its primary function as a scenic park and is assigned to the department for control, development, and maintenance:

(1) Township 5 South, Range 10 West, Seward Meridian Chugachik Island
Sections 31 — 32;

(2) Township 5 South, Range 11 West, Seward Meridian
Section 2: Lot 1, excluding Tract A
Section 3: Lots 1 — 8, SW1/4NE1/4, S1/2NW1/4, N1/2SW1/4
Section 4: Lots 1 — 4, S1/2N1/2, SE1/4, E1/2SW1/4
Section 8: E1/2NE1/4, SE1/4
Section 9: Lots 1 and 2, NW1/4NE1/4, NE1/4NW1/4, W1/2NW1/4, N1/2NE1/4SW1/4, SW1/4NE1/4SW1/4, excluding Lot 6
Section 10: Lot 1
Section 16: Lot 1
Section 17: Lots 1, 3, 4, NW1/4SW1/4, S1/2NW1/4
Section 18: Lot 4, SE1/4, E1/2NE1/4
Section 19: Lots 1 — 6, NW1/4NE1/4, NE1/4NW1/4
Section 20: Lot 1
Sections 24 — 25, excluding tide and submerged land within the Kachemak Bay Critical Habitat Area
Section 26: SE1/4, excluding tide and submerged land within the Kachemak Bay Critical Habitat Area
Section 35, excluding tide and submerged land within the Kachemak Bay Critical Habitat Area
Section 36;

(3) Township 6 South, Range 11 West, Seward Meridian;

(4) Township 7 South, Range 11 West, Seward Meridian
Sections 1 — 4
Section 5: N1/2
Sections 7 — 36;

(5) Township 7 South, Range 12 West, Seward Meridian
Section 12, except N1/2NE1/4
Section 13
Sections 19 — 36;

(6) Township 7 South, Range 13 West, Seward Meridian

Sections 25 — 26
Sections 35 — 36;
(7) Township 8 South, Range 11 West, Seward Meridian
Sections 1 — 8
Section 9: N1/2
Section 10: N1/2
Section 11: N1/2
Section 12: N1/2
Sections 17 — 18;
(8) Township 8 South, Range 12 West, Seward Meridian;
(9) Township 8 South, Range 13 West, Seward Meridian
Sections 1 — 2
Sections 10 — 14
Section 15: E1/2
Section 23: N1/2 and SE1/4
Sections 24 — 25
Section 26: E1/2
Section 35: E1/2
Section 36;
(10) Township 9 South, Range 8 West, Seward Meridian
Section 2: W1/2
Section 3 — 10
Sections 15 — 22
Sections 27 — 34;
(11) Township 9 South, Range 9 West, Seward Meridian;
(12) Township 9 South, Range 10 West, Seward Meridian
Sections 10 — 15
Sections 22 — 27
Sections 34 — 36;
(13) Township 9 South, Range 12 West, Seward Meridian
Sections 1 — 6
Section 8: NE1/4
Sections 9 — 12
Section 13: N1/2
Section 14: N1/2;
(14) Township 9 South, Range 13 West, Seward Meridian
Sections 1 — 2;
(15) Township 10 South, Range 8 West, Seward Meridian
Sections 4 — 8
Sections 17 — 19;
(16) Township 10 South, Range 9 West, Seward Meridian
Sections 1 — 4
Sections 10 — 15
Sections 22 — 24.

(b) The following public domain land shall be selected by the state, and classified as scenic park land and designated as part of Kachemak

Bay State Park immediately upon receipt of management authority by the state:

(1) Township 6 South, Range 10 West, Seward Meridian: W½;
(2) Township 7 South, Range 10 West, Seward Meridian: W½;
(3) Township 8 South, Range 10 West, Seward Meridian
Section 6
Section 7: N½.

(c) Land lying within the parcels described in (a) and (b) of this section upon which there are valid entries or upon which there are valid applications for lease filed under AS 38.05 before May 9, 1970, is excepted from (a) and (b) of this section. However, if any land excepted under this subsection is subsequently relinquished to the state, it shall be included as part of Kachemak Bay State Park. (§ 1 ch 115 SLA 1970; am § 2 ch 110 SLA 1989)

Revisor's notes. — Formerly AS 41.20.260. Renumbered in 1983.

Cross references. — For legislative findings in connection with the 1989 amendment of (a) of this section, see § 1, ch. 110, SLA 1989 in the Temporary and Special Acts.

Effect of amendments. — The 1989 amendment, effective September 12, 1989, made numerous changes in the land description in subsection (a).

Editor's notes. — Section 4, ch. 110, SLA 1989 provides: "This Act does not prohibit the commissioner of natural resources from conveying 50 acres, more or less, on Nuka Island to the University of Alaska in accordance with the final finding of the commissioner of natural resources issued December 4, 1987, or its amendments. This Act does not apply to land conveyed to the University of Alaska under the commissioner's decision dated December 4, 1987."

Legislative history reports. — For legislative letter of intent in connection with the amendment of (a) of this section by § 2, ch. 110, SLA 1989 (SCS CSHB 8(Res)), see 1989 Senate Journal 1110.

Sec. 41.21.132. Incompatible uses. The commissioner shall designate by regulation incompatible uses within the boundaries of the Kachemak Bay State Park in accordance with the requirements of AS 41.21.130 — 41.21.142, and those incompatible uses designated shall be prohibited or restricted, as provided by regulation. (§ 1 ch 115 SLA 1970)

Revisor's notes. — Formerly AS 41.20.270. Renumbered in 1983.

Cross references. — For exception to this section for certain mariculture activities, see § 2, ch. 187, SLA 1990 in the Temporary and Special Acts.

Sec. 41.21.133. Discharge of firearms. [Repealed, § 2 ch 126 SLA 1984.]

Sec. 41.21.134. Purchase authorized; eminent domain prohibited. The commissioner may acquire, by purchase in the name of the state, title to or interest in real property lying within the boundaries of the Kachemak Bay State Park. The state may not acquire by eminent domain privately owned land for inclusion in the Kachemak Bay State Park. (§ 1 ch 115 SLA 1970)

Revisor's notes. — Formerly AS 41.20.290. Renumbered in 1983.

Sec. 41.21.140. Kachemak Bay State Wilderness Park established. (a) The presently state-owned land and water, and all that acquired in the future by the state, lying within the parcels described in this section are designated as the Kachemak Bay State Wilderness Park. In order to protect and preserve this land and water for its unique and exceptional wilderness value, the park is established and shall be managed as a wilderness park. The land and water lying within the following described parcels is reserved from all uses incompatible with its primary function as a wilderness park and is assigned to the department for control and maintenance:

(1) Township 8 South, Range 11 West, Seward Meridian
Section 9: S1/2
Section 10: S1/2
Section 11: S1/2
Section 12: S1/2
Sections 13 — 16
Sections 19 — 36;

(2) Township 9 South, Range 10 West, Seward Meridian
Sections 1 — 3;

(3) Township 9 South, Range 12 West, Seward Meridian
Section 7
Section 8: S1/2 and NW1/4
Section 13: S1/2
Section 14: S1/2
Sections 15 — 36;

(4) Township 9 South, Range 13 West, Seward Meridian
Section 11: NE1/4
Sections 12 — 13;

(5) Township 10 South, Range 9 West, Seward Meridian
Sections 5 — 7;

(6) Township 10 South, Range 10 West, Seward Meridian;

(7) Township 10 South, Range 11 West, Seward Meridian;

(8) Township 10 South, Range 12 West, Seward Meridian;

(9) Township 11 South, Range 10 West, Seward Meridian;

(10) Township 11 South, Range 11 West, Seward Meridian;

(11) Township 11 South, Range 12 West, Seward Meridian
Sections 1 — 10
Section 11: W1/2 and E1/2
Sections 12 — 17
Sections 21 — 24.

(b) The following public domain land shall be selected by the state, and classified as wilderness park land and designated as part of

Kachemak Bay State Park immediately upon receipt of management authority by the state:

(1) Township 8 South, Range 10 West, Seward Meridian
Sections 4 — 5
Section 7: S1/2
Sections 8 — 9
Sections 16 — 21
Sections 28 — 33;

(2) Township 9 South, Range 10 West, Seward Meridian: W1/2;

(3) Township 9 South, Range 11 West, Seward Meridian. (§ 1 ch 82 SLA 1972; am § 3 ch 110 SLA 1989)

Revisor's notes. — Formerly AS 41.20.261(a) and (b). Renumbered in 1983.

Cross references. — For legislative findings in connection with the 1989 amendment of (a) of this section, see § 1, ch. 110, SLA 1989 in the Temporary and Special Acts.

Effect of amendments. — The 1989 amendment, effective September 12, 1989, made numerous changes in the land descriptions in subsection (a).

Sec. 41.21.141. Certain land excepted. Land lying within the parcels described in AS 41.21.140 upon which there are valid entries or upon which there are valid applications for leases filed under AS 38.05 before March 9, 1972 or that is withdrawn for or selected by Native village or regional corporations under 43 U.S.C. 1610, 1611 and 1613 (P.L. 92-203, §§ 11, 12 and 14 of the Alaska Native Claims Settlement Act), is excepted from AS 41.21.140. However, if any land excepted under this subsection is subsequently relinquished to the state, it shall be included as part of Kachemak Bay State Wilderness Park. (§ 1 ch 82 SLA 1972)

Revisor's notes. — Formerly AS 41.20.261(c). Renumbered in 1983.

Sec. 41.21.142. Stream rehabilitation permitted. Nothing in AS 41.21.140 — 41.21.142 prohibits the Department of Fish and Game from engaging in stream rehabilitation enhancement and development under AS 16.05.092 on land lying within the parcels described in AS 41.21.140. (§ 1 ch 82 SLA 1972)

Revisor's notes. — Formerly AS 41.20.261(d). Renumbered in 1983.

Sec. 41.21.143. Discharge of firearms. [Repealed, § 2 ch 126 SLA 1984.]

Sec. 41.21.150. Purpose of AS 41.21.150 — 41.21.152. The purpose of AS 41.21.150 — 41.21.152 is to restrict state-owned land and water described in AS 41.21.151 to use as a state park. Under AS 38.05.300, state land, water, or land and water containing more than 640 acres may be closed to multiple use only by act of the legislature. Because the area described in AS 41.21.151 exceeds 640 acres, AS 41.21.150 — 41.21.152 are intended to provide for the closing of the described land and water to multiple use in conformity with AS 38.05.300 and its designation as a special purpose area in accord with art. VIII, § 7 of the Constitution of the State of Alaska. (§ 2 ch 233 SLA 1970)

Revisor's notes. — Formerly AS 41.20.300. Renumbered in 1983.

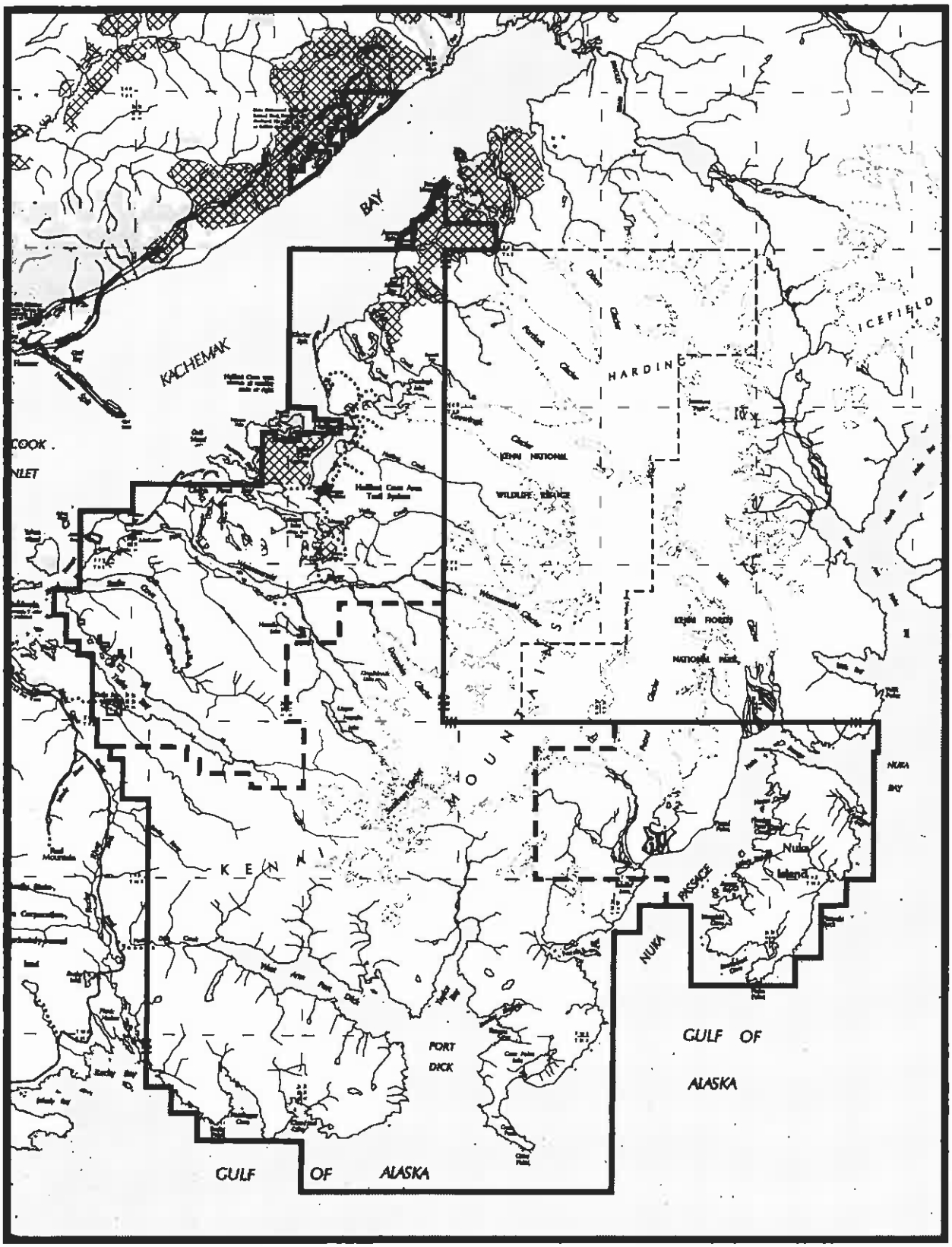
Sec. 41.21.151. Denali State Park established. The state-owned land and water and that acquired in the future by the state lying within the parcels described in this section are designated as the Denali State Park. This land and water is reserved from all uses incompatible with its primary function as park area. Land covered by AS 41.21.150 — 41.21.152 is that within the following described parcels:

(1) Township 29N Range 6W, Range 5W, and that portion of Range 4W lying north and west of the Alaska Railroad right-of-way; Township 30N Range 5W and that portion of Range 3W and 4W lying north and west of the Alaska Railroad right-of-way; Township 31N Range 5W, Range 4W and that portion of Range 3W and Range 2W lying north and west of the Alaska Railroad right-of-way; Township 32N Range 4W, Range 3W and that portion of Range 2W lying north and west of the Alaska Railroad right-of-way; and Township 33N Range 4W, Range 3W and that portion of Range 2W lying west of the Alaska Railroad right-of-way, all in the Seward Meridian;

(2) Township 29N, Range 7W; Sections 1-27 and 34-36, Township 29N, Range 8W; containing approximately 42,240 acres, all in the Seward Meridian. (§ 2 ch 233 SLA 1970; am § 1 ch 135 SLA 1976)

Revisor's notes. — Formerly AS 41.20.310. Renumbered in 1983.

Cross references. — For authority of commission to adopt regulations designating incompatible uses, see AS 41.21.020(6); for legislative declaration that certain electrical transmission line is a compatible use in Denali State Park, see § 14, ch 118, SLA 1981.



Spruce Bark Beetle Infestation - 1993

COOPERATIVE AGREEMENT
between the
Alaska Department of Fish and Game,
Habitat Division
and the
Alaska Department of Natural Resources,
Division of Parks and Outdoor Recreation

This cooperative agreement is designed to assist the agencies in cooperatively managing the area of overlap of the Kachemak Bay State Park and the Kachemak Bay Critical Habitat Area. The agreement pertains to the responsibilities of the Alaska Department of Fish and Game, Habitat Division and the Alaska Department of Natural Resources, Division of Parks and Outdoor Recreation within Kachemak Bay and in no way alters existing authorities and responsibilities either between or within the agencies.

WHEREAS, the Alaska Department of Fish and Game (ADF&G) has a legislatively mandated responsibility to manage the Kachemak Bay Critical Habitat Area (AS 16.20.590); and

WHEREAS, the Alaska Department of Natural Resources (ADNR) has a legislatively mandated responsibility to manage th Kachemak Bay State Park (AS 41.21.130-143); and

WHEREAS, portions of Kachemak Bay are designated as both state critical habitat area and state park; and

WHEREAS, it is desirable to have maximum consistency between state park and state critical habitat area regulation and administration; and

WHEREAS, it is the intention of the ADNR/Division of Parks and Outdoor Recreation (DPOR) and the ADF&G/Habitat Division to coordinate administrative efforts in managing overlapping portions of the state park and state critical habitat area;

NOW, THEREFORE, the parties hereto agree as follows:

THE DEPARTMENT OF NATURAL RESOURCES, DIVISION OF PARKS AND OUTDOOR RECREATION AGREES:

1. To consult with ADF&G, through the Habitat Division, in the development of a management plan for Kachemak Bay State Park.

2. To seek the advice of ADF&G, through the Habitat Division, on regulations and major park policies o decisions which apply to the portions of Kachemak Ba which are designated both state park and state critical

habitat area. These include the management of mariculture, sport fishing charters or other commercial operations, and the development of park facilities when habitat values or use conflicts can reasonably be anticipated to be affected.

3. To monitor tideland and water use activities, to report any special area permit violations or other resource management problems within the area covered by this agreement promptly to the Habitat Division, and to coordinate compliance operations where appropriate.

4. To review and comment on state critical habitat area management plans, regulations, major policies, or decisions and permits for that portion of the critical habitat area which is in the state park.

5. Comply with the notice and, if applicable, ADF&G special area permit requirements of AS 16.20.520-530 and 5 AAC 95 for park developments, uses, and activities in the critical habitat area.

THE DEPARTMENT OF FISH AND GAME, THROUGH ITS HABITAT DIVISION, AGREES:

1. To consult with DPOR in the development of a management plan for the state critical habitat area.

2. To monitor multiple use activities, to report state park permit violations or other resource management problems in the portion of Kachemak Bay which is a state park to DPOR, and to coordinate compliance operations where appropriate.

3. To review and comment on state park management plans, regulations, major policies or decisions, and permits for the portion of the state park which is in the critical habitat area.

4. To seek the advice of DPOR on regulations and major policies or decisions which apply to the portion of the critical habitat area that is in the state park (such as mariculture, habitat enhancement activities, introduction of non-native species or placement of structures or facilities).

5. To apply for a park use permit when required under 11 AAC 18.010 for developments or uses and activities in the state park.

THE DEPARTMENT OF NATURAL RESOURCES AND DEPARTMENT OF FISH AND GAME MUTUALLY AGREE:

1. Nothing in this cooperative agreement alters the obligation of DPOR and the ADF&G resource management divisions (Wildlife Conservation; Sport Fish; Commercial Fisheries; Fisheries Rehabilitation, Enhancement, and Development; and Subsistence) to work with each other on issues regarding management of fish and wildlife populations and harvest.

2. Nothing in the cooperative agreement shall obligate any party in the expenditure of funds or for future payments of money in excess of appropriations authorized by law.

3. Each party agrees that it will be responsible for its own acts and the results thereof, and each party shall not be responsible for the acts of the other party, and each party agrees it will assume to itself risk and liability resulting in any manner under this agreement.

4. Each party will comply with all applicable laws, regulations, and executive orders relative to equ employment opportunity.

5. Nothing herein is intended to conflict with federal, state, or local laws or regulations. If there are conflicts, the laws and regulations shall prevail; this agreement will be amended at the first opportunity to bring it into conformance with conflicting laws or regulations.

6. Either the ADNR or the ADF&G may terminate its participation in this cooperative agreement by providing to the other party notice in writing 60 days in advance of the date on which its termination becomes effective.

7. A free exchange of research and information between agencies is encouraged and is necessary to attain the management goals of the state.

8. To follow permit consultation procedures that are in compliance with state regulations governing notice and review periods.

9. Amendments to this agreement may be proposed by either agency and shall become effective upon approval of both agencies.

10. The effective date of this agreement shall be from the date of final signature.

Don W. Collinsworth
Commissioner
Alaska Department of Fish and Game

1-11-89
Date

Lennie Gorsuch
Commissioner
Alaska Department of Natural Resources

7/24/89
Date

Kachemak Bay Critical Habitat Area
Cooperative Agreement
Concurrence Sheet

I concur with the cooperative agreement (attached) between the Alaska Department of Fish and Game, Habitat Division and the Alaska Department of Natural Resources, Division of Parks and Outdoor Recreation to facilitate the cooperative management of the area of overlap of the Kachemak Bay State Park and the Kachemak Bay Critical Habitat Area.

Donald E. McKinley for — 1/10/89

Lew Pamplin, Director
Division Of Wildlife Conservation — Date

Norval Netsch — 12/30/88

Norval Netsch, Director
Sport Fish Division — Date

Ken Parker — 1/3/89

Ken Parker, Director
Commercial Fisheries Division — Date

Steve Behnke/cj — 1/4/89

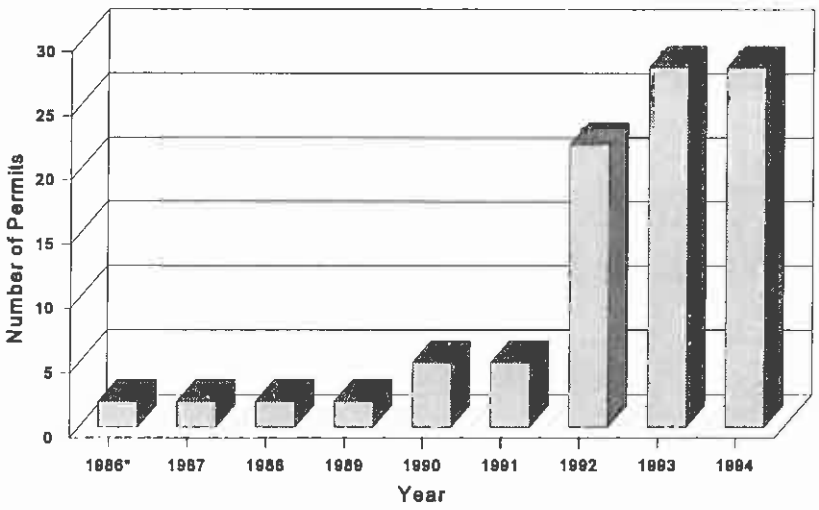
Steve Behnke, Director
Subsistence Division — Date

D. J. Hubbard for — 1/9/89

Brian Allee, Director
Fisheries Rehabilitation,
Enhancement and Development
Division — Date

Commercial Operator Permits

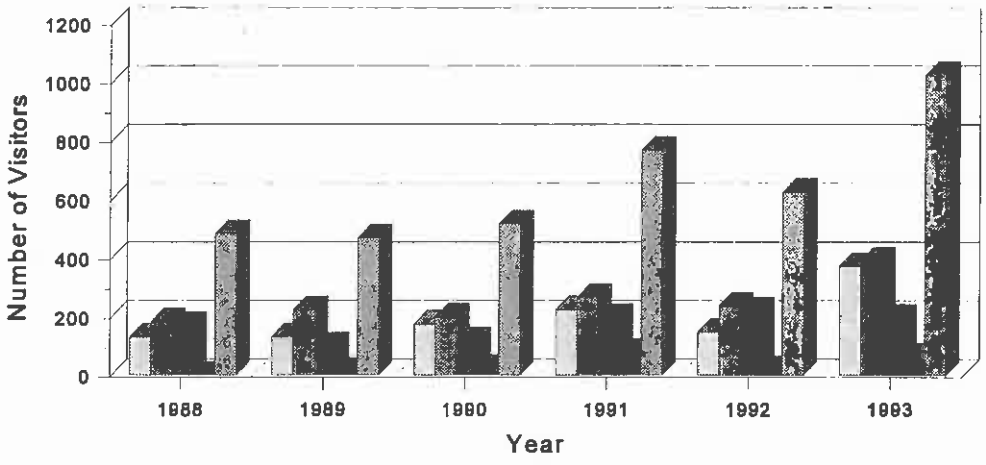
(water / air taxi / guides)

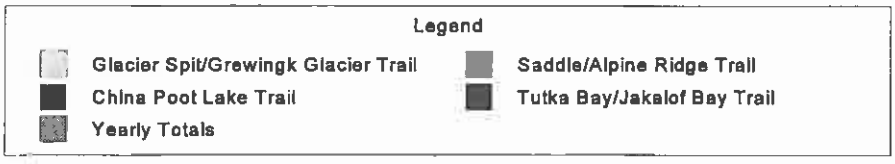


* First year commercial use (other than commercial fishing) permit required.

Kachemak Bay State Park Trail Count

1988-1993





Bibliography

Alaska Department of Fish & Game, "*Kachemak Bay and Fox River Flats Critical Habitat Area Management Plan* " 1993.

Alaska Department of Natural Resources, Division of Land and Water Management, "*Nuka Island and Vicinity Management Plan* " 1986.

Alaska Department of Natural Resources, Division of Land, draft "*Kenai Area Plan*" 1994.

Alaska Division of Parks and Outdoor Recreation, "*Alaska State Park System: Statewide Framework* " 1992.

Alaska Division of Parks and Outdoor Recreation, "*Alaska's Outdoor Legacy* " 1993.

Alaska Division of Parks and Outdoor Recreation, *"An Evaluation of the Recreation Potential of the Land in the Cottonwood and Eastland Creeks Area, Kachemak Bay, Alaska* " 1979.

Hellenthal & Associates, Inc., "*Recreation Preference Survey, State of Alaska, Division of Parks* " 1992.

McMahan, J. David. "*Archaeological Investigations in the Gulf of Alaska: A State Response to the Exxon Valdez Oil Spill* " Office of History and Archaeology Report Number 20. Alaska Division of Parks and Outdoor Recreation, Anchorage, 1993.

USDA Forest Service, Forest Health Management Report, "*Forest Insect and Disease Conditions in Alaska--1993* " 1994.