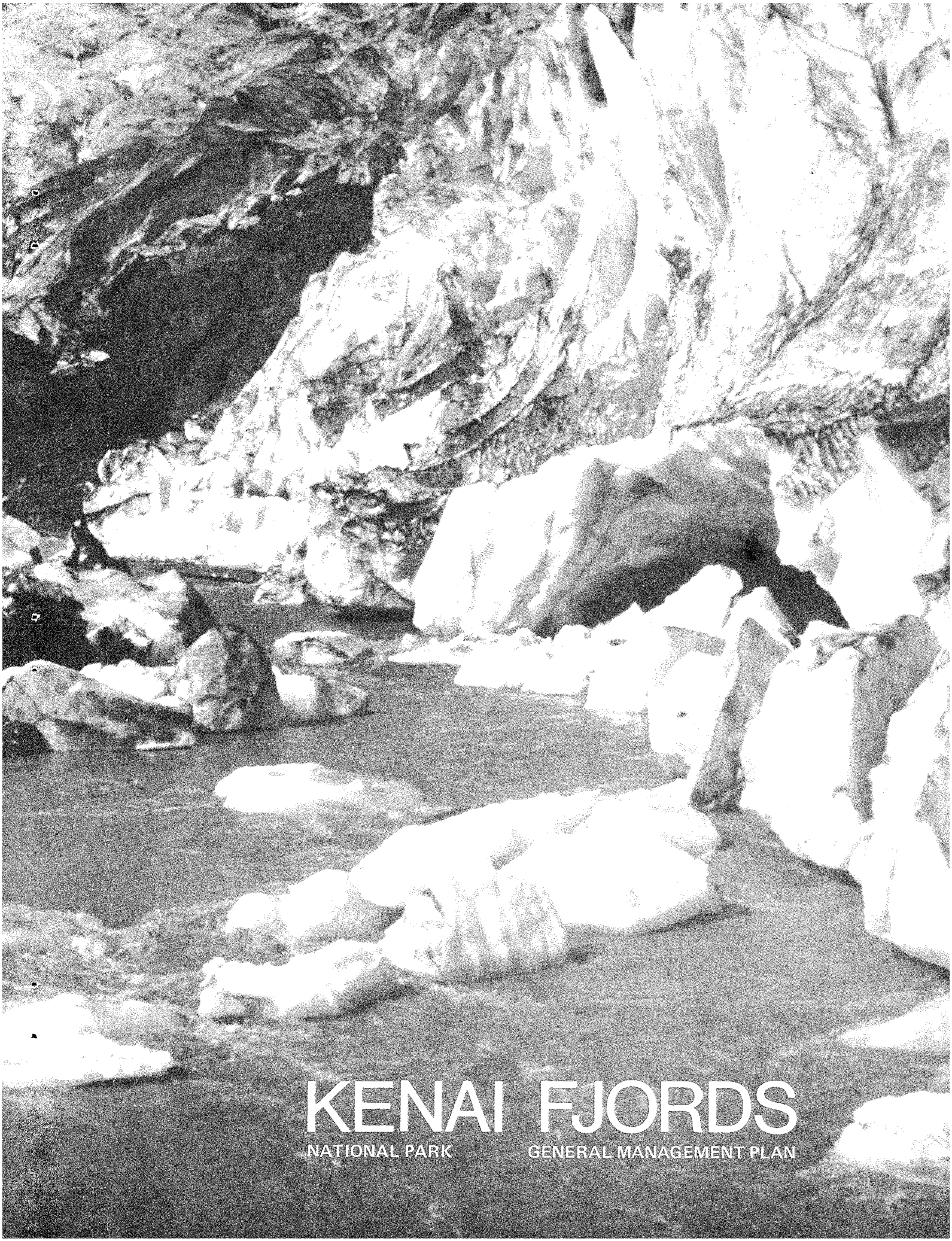

KENAI FJORDS

NATIONAL PARK GENERAL MANAGEMENT PLAN

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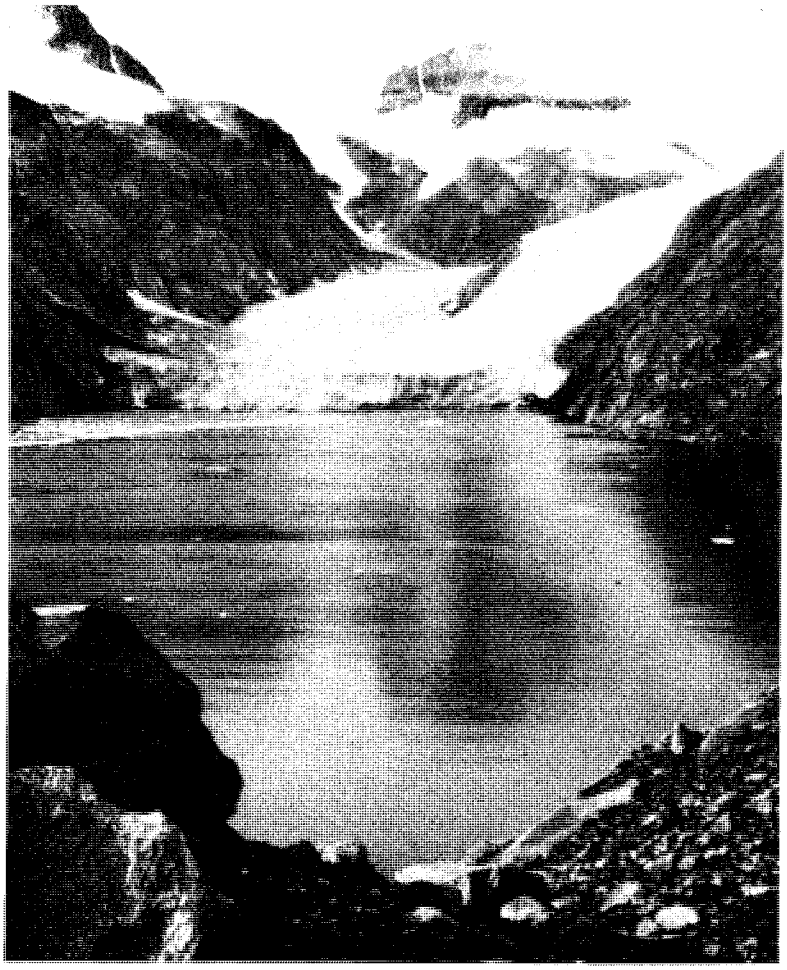
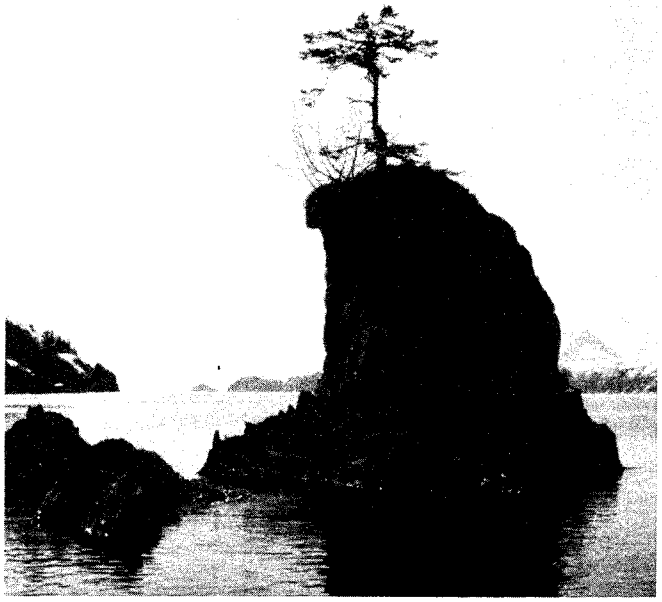




INTRODUCTION

BACKGROUND

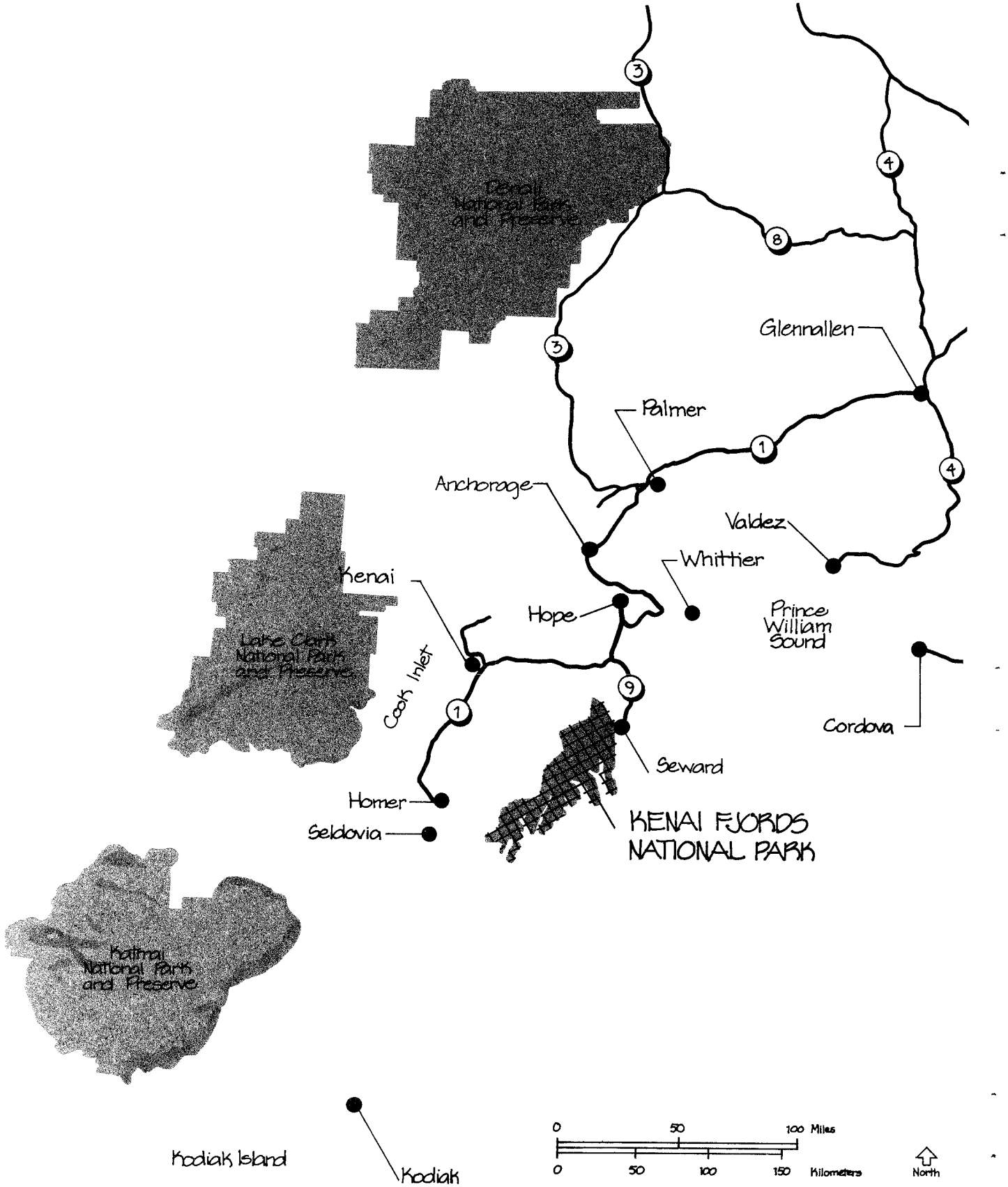
Kenai Fjords National Park is a new park that was established as a national monument by presidential proclamation in 1978 and gained national park status in 1980 by an act of Congress. The park consists of a massive icefield in the Kenai Mountains and a fjord system on the Gulf of Alaska. The high, barren icefield stands in stark contrast to the rich marine environment of the fjords. Because the park is near the highway system in relatively populous southcentral Alaska, it is one of the most accessible and visited national parks in Alaska.

This General Management Plan will serve as a guide for management of Kenai Fjords National Park. The plan presents approved approaches to management of resources, visitor use and development, land management, and administration. The plan is envisioned to be useful for 10-15 years. If conditions that affect the park change substantially during this period, the plan will be amended or a new plan will be prepared. Any significant amendment or new plan will require additional public and agency participation. (An overview of the NPS planning process is presented in appendix D.)

The National Park Service developed this General Management Plan in consultation with knowledgeable members of the public and other state and federal agencies. The project began in May 1982, when the public was notified and meetings were held with interested parties. Research and further contacts were conducted during the summer, fall, and winter of 1982. An "Alternatives Workbook" was distributed in the fall which presented some preliminary alternatives for addressing the principal issues for management of the park. Thirty-one of these workbooks were returned by the public and other agencies. The workbooks contained responses to the alternatives as well as presented other ideas for management of the park. A Draft General Management Plan/Environmental Assessment was released in May 1983. This document presented a number of alternatives for management of the park and an analysis of the environmental consequences of implementing each alternative. The document was available for public comment for a 60-day period. Public meetings on the draft plan were held in Seward and Anchorage; other meetings were held in Anchorage upon request. This final General Management Plan benefitted from the ideas, concerns, and preferences expressed in the meetings and in the letters received on the plan.

Most of the components of this plan can be implemented by park managers without further study or environmental documentation; however, some of the more complex elements require more detailed study and planning. Examples of topics requiring further planning before they can be implemented are major building projects and treatment of private lands within the park boundary.

A topographic map of the park has been included in a pocket at the back of this document for the reader's convenience.



REGION

KENAI FJORDS NATIONAL PARK

United States Department of the Interior/National Park Service

186	20028B
DSC	Nov. 83

MANDATES FOR MANAGEMENT OF THE PARK

Kenai Fjords National Park was established in 1980, by the Alaska National Interest Lands Conservation Act (ANILCA), Public Law 96-487. Section 201 (5) of this act specifies that

> the park shall be managed for the following purposes, among others: To maintain unimpaired the scenic and environmental integrity of the Harding Icefield, its outflowing glaciers and coastal fjords and islands in their natural state; and to protect seals, sea lions, other marine mammals, and marine and other birds and to maintain their hauling and breeding areas in their natural state, free of human activity which is disruptive to their natural processes. In a manner consistent with the foregoing, the Secretary is authorized to develop access to the Harding Icefield and to allow use of mechanized equipment on the icefield for recreation.

Sections 101(a), (b), and (d) of ANILCA state the general purposes for all the conservation system units established by the act (see appendix B). Other sections of the act that are relevant to park management include sections 103(c), 203, 204, 206, 907, 1010, 1301, 1302, 1303, 1306, 1307, 1308, 1310, 1314, 1316, 1317, and title XI.

Section 203 of ANILCA directs that Kenai Fjords National Park be administered as a new area of the national park system, pursuant to the provisions of the organic act of the National Park Service (39 stat. 535), as amended. Management and use of all units of the national park system are also directed by federal regulations (title 36, chapter I, Code of Federal Regulations), some of which are specific to national park system units in Alaska, and by NPS "Management Policies" and guidelines.

Subsistence uses were not known to occur within the area to be designated as the park at the time ANILCA authorized Kenai Fjords; therefore, subsistence activities are not permitted within the park under this legislation.

MANAGEMENT OBJECTIVES

A "Statement for Management" for Kenai Fjords National Park was approved in January 1983. This document presents objectives for the management of natural and cultural resources, visitor use and interpretation, and for visitor protection and safety, development of facilities, concessions, administration, and cooperative planning. (See appendix A for a complete description of the management objectives.) These objectives guide all subsequent planning and management; they are subject to public review and comment and will be periodically updated.

PARK ISSUES

The major issues of the park that the General Management Plan addresses are access, private and state lands within the park boundary, levels and

types of appropriate development, tidelands and submerged lands, and acceptable types of motorized use in the park. An approved course of action by the National Park Service to address each of these issues is presented in this plan. Other topics that are addressed in the plan are resources management, interpretation, information, wilderness, management zoning, and boundary adjustments. A discussion of the major issues that have been identified to date follows.

Access

Access to the fjord and icefield portions of the park can be difficult and expensive. Stormy weather can stop access to the icefield and can restrict access to the fjords for all but the most seaworthy craft. Scheduling tours of the park is a problem because of uncertain weather conditions. Access to the park, other than to the Exit Glacier area on the northern end of the park, is relatively expensive. Most visitors to the fjord portion of the park gain access by charter boats or by personal boats. A day boat charter into the fjords costs a minimum of $60 per passenger. Aircraft can also be chartered for flights to the fjords and the Harding Icefield. The rates for air service vary, depending on flight time and aircraft type.

Private Lands Within the Park

There are native corporation land selections within the park boundary. It is expected that approximately 77,450 acres (31,367 hectares) within the park will be conveyed to these corporations. These lands will likely be along the shoreline of the fjords, in most of the desirable locations for public uses such as camping, hiking, and fishing. The National Park Service has no authority to manage private lands in the park without the consent of the landowner; however, the Park Service has been given authority to enter into cooperative agreements with private landowners and to acquire native lands with the consent of the landowner.

State Lands Within the Park

Nuka Island and a strip of nearby land on the mainland are within the boundary of the park but are owned by the state of Alaska. The National Park Service has no management authority over these lands. Congress included these lands in the park because it was felt that they relate to and complement the park and may serve as good locations for providing visitor services. The congressional committee reports that accompany ANILCA direct the National Park Service to explore, with the state of Alaska, the possibilities of developing cooperative management and visitor facilities on Nuka Island or in another more appropriate locale. A cooperative survey of Nuka Island during the summer of 1982 explored the potential for recreational and administrative opportunities. Although the National Park Service has no management authority over Nuka Island and other state lands within the park boundary, this plan presents approaches for uses of these lands that would remain compatible with adjacent national park lands.

Appropriate Developments Within the Park

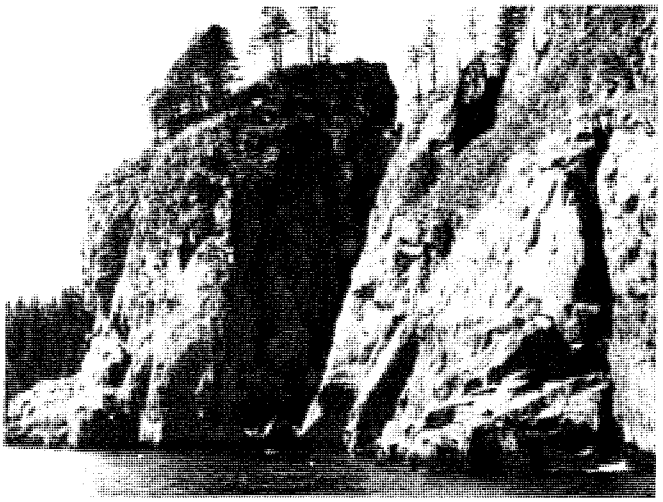
Construction of visitor facilities, such as campgrounds, cabins, and trails, increases the potential for visitation and the comfort of visitors. Such facilities also decrease the wild and natural qualities of the park. An acceptable level of development should be achieved which maintains the resource values while allowing for people to use and enjoy the park.

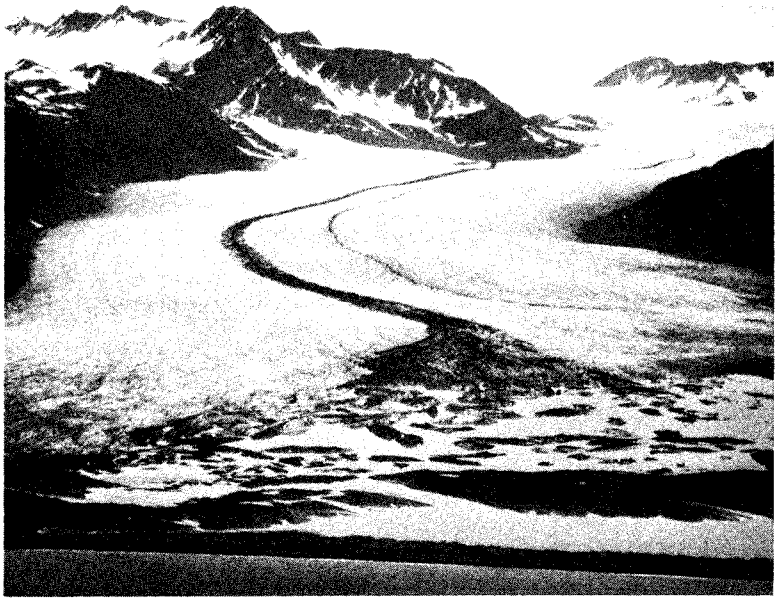
Tidelands and Submerged Lands

The park boundary is at the mean high tide line along the shoreline of the fjord portion of the park. Tidelands below the mean high tide line and all submerged marine lands are in state ownership. Fjords are elongated bays that lie between steep-sided peninsulas, and these bays are integral elements of the fjords in that they are inseparable parts of the fjord ecosystem and the scenic and recreational resources of the park. The activities that occur on state tidelands and submerged lands will directly affect the resources and visitor use of the park.

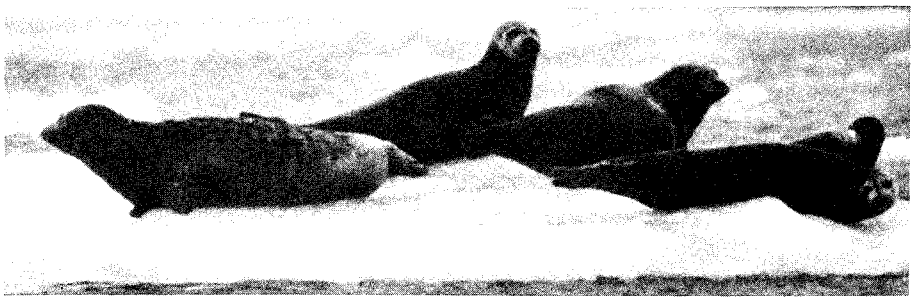
Access To and Motorized Use of the Harding Icefield

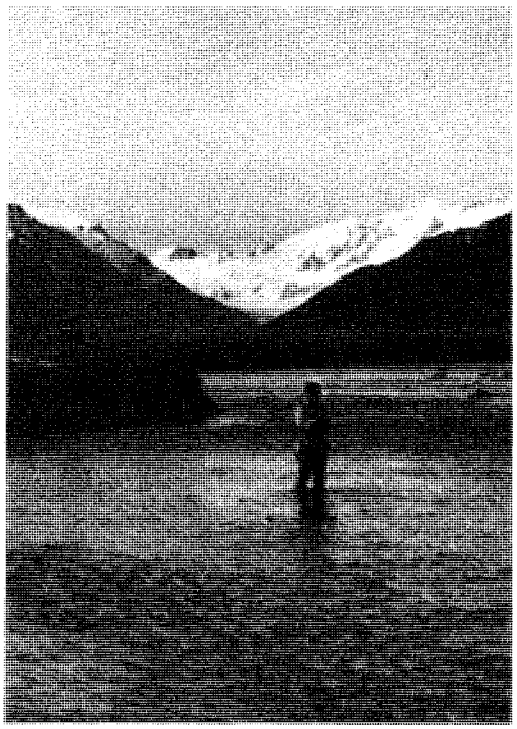
ANILCA (section 201(5)) states, ". . . The Secretary is authorized to develop access to the Harding Icefield and to allow use of mechanized equipment on the icefield for recreation." The development concept plan for the Exit Glacier area contains a provision for a trail route to the icefield. The allowable forms of access to the Harding Icefield and various types of motorized use, visitor services, and support facilities on the icefield are crucial to the natural qualities and visitor use of this vast environment.





THE ENVIRONMENT





ADJACENT LANDS

Kenai Fjords National Park is in southcentral Alaska, approximately 75 air miles (120 kilometers) south of Anchorage. The park is on the southeastern coast of the 100-mile-wide (160 kilometers) and 170-mile-long (270 kilometers) Kenai Peninsula. Cook Inlet lies to the west and Prince William Sound to the east.

The region surrounding the park is comprised of lands under a variety of jurisdictions and differing management policies. To the west of the park are the Kenai lowlands and the Kenai National Wildlife Refuge. In addition to supporting approximately 6,000 moose, the area is also host to significant numbers of Dall sheep, mountain goat, black bear, and other mammal, bird, and fish populations. Recreational opportunities in the refuge include camping, picnicking, boating, hiking, canoeing, winter sports, sport fishing, and sport hunting. Recreational visits exceed 1,000,000 annually. Oil development has been occurring in the wildlife refuge since the late 1950s.

To the southwest of the park lie Kachemak Bay State Park and Kachemak Bay State Wilderness Park. Kachemak Bay State Park is composed of approximately 120,000 acres (48,600 hectares) near the southwestern tip of the Kenai Peninsula. The state park contains a portion of the coastline and inland areas on the southern shore of Kachemak Bay. Kachemak Bay State Wilderness Park includes an additional 208,320 acres (84,370 hectares) to the south of Kachemak Bay State Park on the coast of the Gulf of Alaska. Impressive lakes, glaciers, mountains, and coves lie within these parks where sport fishing, hunting, sightseeing, and pleasure boating are the primary recreational activities.

Another state park, Caines Head State Recreation Area, lies approximately 6 miles (10 kilometers) south of Seward and 3 miles (5 kilometers) east of the eastern boundary of the national park. While plans exist for a docking facility, campground, and day use facilities within the area, there is currently no development in the state park.

Other parcels of state land in the region, which are managed by the Alaska Division of Land and Water Management, include lands north of the national park boundary and lands on the southern end of and within the national park.

To the north and east of Kenai Fjords National Park is the Chugach National Forest. This 6,626,000-acre area (2,683,500 hectares) contains extensive mountains, glaciers, fjords, and islands that receive heavy recreational use, primarily by Anchorage residents. Sightseeing, camping, hiking, backpacking, mountain climbing, sport fishing, hunting, recreational gold panning, and skiing are popular activities in the national forest.

The islands off the coast of the park are in the Alaska Maritime National Wildlife Refuge. This national wildlife refuge is comprised of islands, islets, reefs, capes, and headlands along the coast of Alaska. Off the coast of Kenai Fjords National Park, the Pye and Chiswell island groups and smaller islands within the fjords are in the Alaska Maritime National

Wildlife Refuge. The primary purpose of the refuge is to conserve fish and wildlife populations and habitats in their natural diversity. The Pye and Chiswell island groups support great concentrations of marine mammals and seabirds.

Other state, borough, and private lands are contained within the region. Extensive native village and regional corporation lands lie along the western side of the peninsula, and village corporation selections are within the boundary of Kenai Fjords National Park. The park lies within the boundary established by the Alaska Native Claims Settlement Act of the Chugach native region in southcentral Alaska. The entire Kenai Peninsula lies within the Kenai Peninsula Borough.

BRIEF DESCRIPTION OF THE PARK

Kenai Fjords National Park encompasses a coastal mountain system on the southeastern side of the Kenai Peninsula. A 300-square-mile, nearly flat icefield overlies all but the tops of the central portion of the Kenai Mountains. The Harding Icefield is almost a mile above the Gulf of Alaska. Glaciers radiate out from the icefield in all directions. To the southeast they descend to a fjord system. Mountain ridges extend out into the Gulf of Alaska; their seaward ends have been depressed by tectonic forces so that only mountain tops remain above sea level. Glaciers carve the valleys between these jagged ridges, and fjords are created when ocean waters replace receding glaciers. Mature forests cover the ends of the peninsulas. Bald eagles nest in the spruce and hemlock trees along the shoreline and mountain goats inhabit the rocky slopes above treeline. Sea otters live in the shallow, protected bays and lagoons. Harbor seals spend their summers on the icebergs calved from tidewater glaciers, and thousands of seabirds seasonally nest on the steep cliffs and nearby offshore islands.

ACCESS

Access to the park is by highway, air, and water, and occasionally railroad. While passenger rail service on the Alaska Railroad was once available on a regular basis between Anchorage and Seward, this link today is available only for freight, except for special occasions each year.

Year-round road access is along the Seward Highway that connects Seward with Anchorage (130 road miles or 208 kilometers). The Exit Glacier area of the park is accessible via a gravel road that begins 2 miles (3 kilometers) north of Seward and traverses state and Forest Service land for approximately 8 miles (13 kilometers). At the road terminus on national forest land a footbridge connects this access route with Kenai Fjords National Park on the opposite bank of the Resurrection River. The development concept plan for the Exit Glacier area calls for replacement of the footbridge with a permanent two-lane vehicular bridge and improvement of 1.4 miles (2.2 kilometers) of road in the park. This improved access will put visitors within comfortable hiking distance (about 0.5 miles or 0.8 kilometer) from the toe of Exit Glacier.

Scheduled air service is provided between Anchorage and Seward, and charter flights can be arranged in Seward and other communities for access to the park. Sightseeing of the park by aircraft offers spectacular views of the vast Harding Icefield, its outflowing glaciers, and the fjords and islands. Chartered plane service (ski-equipped light aircraft) is also used to gain access to the icefield for purposes of skiing and expedition trips. Floatplanes can land safely in many of the sheltered bays in the fjord portion of the park.

The Alaska state ferry, M.V. Tustumena, provides service connecting Seward, Kodiak, Seldovia, Homer, Valdez, and Cordova. The ferry does not stop within the park, yet service between Seward and Kodiak provides opportunities to view the coastline of the fjords.

The coastal area of the park is also accessible to visitors by private or charter boats originating in Seward and Homer. While bays and coves offer sheltered waters within the fjords, access to this area requires the passage of one or more headlands that are subject to the tempestuous and unpredictable weather in the Gulf of Alaska. Thus, pleasure boating within the fjords is generally limited to larger watercraft.

NATURAL RESOURCES

Climate

The Kenai Peninsula has relatively mild winters and cool summers because of the influence of the North Pacific Drift that directs warm ocean currents into the Gulf of Alaska. The Kenai Peninsula can be divided generally into two distinct climatic zones separated by the Kenai Mountains: the maritime zone and the Cook Inlet transitional zone. The park lies within the maritime zone, which is characterized by moderate temperatures and high precipitation.

Spring is usually the driest time of the year; fall and early winter are the wettest. Mean annual rainfall for the Seward area is approximately 63 inches (160 centimeters). Snowfall is common at sea level from November through the end of April. Snowfall on the Harding Icefield is approximately 400 inches (1,016 centimeters) or more annually and remains year-round. Average maximum mean temperatures during the summer months on the Kenai Peninsula are in the mid to upper 50s (F), whereas mean winter lows range from 0° F to 20° F.

Storms generally originate over the northern Pacific Ocean and move eastward along the Aleutian Chain into the Gulf of Alaska. Storms are most prevalent during the winter months when waves to 30 feet (9 meters) in height have been reported.

While comprehensive data are not available, the air quality of the park and surrounding area is considered excellent. The lack of concentrated point sources of pollution and the fluxing of air (particularly along the coast) should deter the accumulation of air pollutants well into the future. The presence of increased numbers of boats and human activities in the future may cause some degradation of air quality, particularly at the heads of bays when the fluxing action of air diminishes.

Geology

The Chugach and the Kenai mountain ranges were formed primarily by the forces of uplift and erosion during the Jurassic to the late Cretaceous periods. This time period is evidenced on the park landscape by the presence of weakly metamorphosed, marine sedimentary rock. The major rock types within the region are interbedded slate and graywacke, granite, chert, greenstone, limestone, and conglomerate. The graywacke is a medium to dark gray sandstone of medium grain. When compared to indigenous slate this sandstone has a greater degree of resistance to erosion that enables it to form slopes of 70 degrees or greater. The slate common to the bedrock of the area is a dark gray metamorphosed shale with cleavage parallel to the rock bedding (see Geology map). The Harris and Aialik peninsulas and the offshore islands in the Pye and Chiswell groups are composed of granitic rocks of the Tertiary and late Cretaceous periods. Unconsolidated glaciofluvial deposits overlie bedrock in most low-lying areas and are composed of boulders, cobbles, gravel, sand, and clay.

Four major Pleistocene glaciations took place during Quaternary times and helped to shape the landscape of the Kenai Peninsula. Today extensive icefields and large glaciers continue to carve and shape the mountainous terrain. Glacial gravels, silts, and clays are prevalent in the lowland areas. These deposits are collectively known as till, and when pushed into ridges by the edge or toe of glaciers, are known as moraines.

The Harding Icefield forms essentially a continuous cover over a large portion of the Kenai Mountains. (See Topography map in back of document.) The icefield, which represents a vestige of the formerly vast Pleistocene icefields, covers more than 300 square miles (77,400 hectares) and ranges generally in elevation between 4,000 feet (1,220 meters) and 6,000 feet (1,830 meters) within the park. Impressive peaks of the Kenai Mountains protrude through the surface of the Harding Icefield and are known as nunataks. Some 34 major glaciers radiate from the icefield. The Aialik, Holgate, Northwestern, and McCarty tidewater glaciers plunge into the Gulf of Alaska. Several glaciers are thought to be retreating at a comparatively rapid rate.

The process of glaciation, combined with tectonic movements, has created the numerous submerged canyons, half-moon bays, and sheer rock walls of the fjords. In many locations within the fjords, lines of boulders (moraines) stand above or near the waterline, clearly marking the past extent of glacial surges. This is particularly evident at Northwestern Lagoon, where a long, deep moraine lines the entrance of the lagoon.

Southcentral Alaska is one of the most seismically active areas in North America. This region is part of a larger seismically active arc that follows the coastline of the North Pacific and is known generally as the "Ring of Fire."

An analysis of data depicting interval length between seismic events shows that the Kenai Peninsula is subject to an earthquake of a magnitude of 7.3 or greater on the Richter scale every 75 years. The effects of earthquakes can be devastating and oftentimes include ground breakage,

avalanches, landslides, subsidence, shoreline changes, tsunamis, and flooding. The park area and the entire Kenai Peninsula is within seismic zone 3, where potential structural damage as a result of earthquakes is considered greatest.

This seismic activity is caused by the collision of two tectonic plates. The Pacific plate is colliding with the continental plate along the North Pacific coastlines. The southeastern edge of the Kenai Peninsula is being pulled down as the Pacific plate slides under the continental plate. The peninsulas of the fjord portion of the park clearly show submergence typical of a "drowning mountain range." The ends of these peninsulas dropped several feet during the 1964 earthquake.

The primary metallic minerals that have been found within the region include chromium, nickel, copper, gold, and platinum. These substances are found along a 15-mile-wide (24 kilometer) zone that traverses the center of the Kenai Peninsula in a northeast to southwest direction. This mineralized zone does not extend into the park. The only known metallic mineral resources within the park are several lode gold deposits in the north and west arms of Nuka Bay.

The potential for oil and gas exists in the Gulf of Alaska petroleum province off the coast of the fjords. A section of exposed Cenozoic rocks in this area contains organically rich material that may include oil. Exploration to date has not led to the discovery of commercial quantities of oil or gas in the Gulf of Alaska.

Hydrology

The storms off the Gulf of Alaska provide a consistent and substantial delivery of moisture to the Kenai Mountains. Snow is the primary source of moisture on the vast Harding Icefield. Freshwater storage in the park is generally in the form of ice and snow on the Harding Icefield. Many short, glacier-fed streams occur throughout the park.

Surface water temperatures within the area range from 32° F to 56° F. The chemical quality of the freshwater streams in the park is generally good; yet there are high levels of suspended solids during the summer months in glacier-fed streams. During the winter when the glacial melt subsides or ceases, the sediment load in these streams decreases and the streams are generally clear.

The Resurrection River follows the park's northern boundary before flowing into Resurrection Bay near the town of Seward. The river experiences peak flows during the summer months as a result of glacial melt and runoff from rains.

Groundwater sources within the park are most abundant in sand and gravel deposits in floodplains and alluvial fans. The inherent instability of these deposits causes problems in the development of permanent wells. Most of the steep mountain slopes and terraces of the Kenai Mountains are poor quality groundwater sources. While the fractured bedrock near the surface in these areas does contain some water, the potential for

development of an appreciable water source is limited. Along the coast, small aquafers are known to yield substantial volumes of good quality water.

Flood data for major streams in the park are not available. Flooding has been known to occur in the region as a result of snowmelt, river ice jams, and winter flooding, as well as heavy localized rainfall.

The Kenai Peninsula is generally free of permafrost (perennially frozen ground), which is known to cause substantial difficulties for construction in Alaska's interior.

Soils

Lands within and near the park are primarily ice-covered or are characterized by steep mountain slopes. Over 90 percent of the park is unvegetated.

High mountain slopes generally have highly acidic, gravelly, and shallow soils. On lower slopes within the park, gravelly and well-drained stony loam is found. On the lower slopes where seeps and small rivulets are located, partially decomposed peat has accumulated locally and supports a variety of grasses and sedges.

Low-lying, flat coastal areas are made up of poorly drained, clayey, and silty sediments. Some peat is found in lower tidal areas and depressions. Recent moraines are composed of stony to very gravelly till, whereas older moraines contain some loamy acidic soils.

The soils of the forested uplands within the general area, including lands flanking the Resurrection River drainage, are gravelly, shallow, and acidic. Peat soils are oftentimes found in association with these soils.

Erosion potential of soils in the area is moderate on lower slopes and high on older moraines and mountain slopes.

Vegetation

Plantlife within the park has developed in response to such influencing factors as climate, topography, altitude, soils, and the recency of glaciation. Along the coastline of the fjords is a narrow forest belt that is dominated by Sitka spruce and western hemlock. This band also rings many of the offshore islands in the Gulf of Alaska and occurs in some inland valleys. This coastal forest is essentially a northern extension of the lush forest along the Pacific coast. Sitka spruce can attain an age of 750 years and a diameter at breast height (dbh) of more than 10 feet (3 meters), although a diameter of 3 or 4 feet (1 meter) is about the maximum in southcentral Alaska. Western hemlock is generally restricted to the coastal area within the park boundary. While heights of up to 190 feet (58 meters) and diameters of 5 feet (1.5 meters) are not unknown for this species, pure stands occurring within the park are shorter statured, with common diameters of 1.5 to 3 feet (0.5 to 1.0 meters). The Kenai

Peninsula marks the westernmost extension of the western hemlock growth in Alaska. Mountain hemlock and occasionally black cottonwood are sometimes found in association with Sitka spruce and western hemlock. Tree line occurs at approximatley 500- to 1,000-foot elevations (150 to 300 meters) in the park.

A lush understory is characteristic of these coastal forests and is often so dense that it limits hiking opportunities. Included in this understory are devil's club, Sitka alder, willow, blueberry, salmonberry, and various mosses, ferns, mushrooms, and lichens. Also within the lower elevations of the park near the northeastern boundary, white spruce and black cottonwood are found. This association is common on low river terraces and within floodplains across southcentral Alaska and is dominant within the Resurrection River drainage.

A high brush zone, composed principally of Sitka alder, can extend to nearly 2,000 feet (600 meters) in elevation, depending on slope, aspect, soils, and microclimate. Devil's club, skunk cabbage, and numerous ferns compose the understory. Where the soil mantle is deeper, bluejoint reed grass, fireweed, and sedges are found.

From the upper reaches of tree line to the icefield, alpine vegetation produces a low mat. Arctic willow, dwarf arctic birch, arctic wormwood, and various grasses, sedges, and lichens are on the drier slopes. On wetter sites saxifrages, mountain avens, grape fern, wood rush, and other plants grow.

Kenai Fjords National Park is not considered to be susceptible to extensive or devastating fires. Extreme dry periods are virtually nonexistent, and the fjords, glaciers, and streams act as natural fire barriers.

No threatened or endangered plant species are known to occur within the park.

Wildlife and Fish

Wildlife is a primary resource of Kenai Fjords National Park. Terrestrial and marine mammals are relatively abundant in the park and surrounding area. Twenty-two species of terrestrial mammals are known or presumed to exist within the region. Among these are moose, black bear, brown/ grizzly bear, mountain goat, wolf, wolverine, and porcupine.

Moose, while more abundant on the western half of the interior of the Kenai Peninsula, are also found in the park. In general, moose are most abundant in areas of transitional vegetation that include alder, willow, and aspen. These areas within the park are located primarily within braided river drainages and areas affected by glacial retreat. Moose occupy the drainages of the Nuka River and the Resurrection River in the park.

Mountain goats inhabit the mountainous areas of the park and surrounding lands. Their primary range during the spring and summer months is on

alpine and subalpine slopes. As winter approaches, they migrate to rocky areas at lower elevations, where forage is available. A 1981 survey conducted by a National Park Service staff scientist found 534 mountain goats within the park boundary.

Approximately 2,000 Dall sheep are found on the Kenai Peninsula; few Dall sheep inhabit the park. Dall sheep occupy an area near Bradley Lake northwest of the park boundary and have reportedly been seen on rock outcrops on the Harding Icefield in summer. Dall sheep are generally not found along the coastline, where wetter conditions prevail.

Black bears are relatively abundant throughout the Kenai Peninsula and the park, particularly along the coastline and western slope of the Kenai Mountains. Grasses and sedges, carrion, berries, and salmon are primary food sources of black bear. Open forests are preferred to expansive open areas. Within the park, the Resurrection River drainage and areas along the coastline provide the best black bear habitat.

Brown/grizzly bear numbers are limited in the park. There are fewer brown/grizzly than black bears found throughout the Kenai Peninsula. These bears are most common within the park along the Resurrection River and Nuka River drainages where adequate habitat exists.

Wolves, wolverine, and coyotes occur in the park. Habitat, however, is generally better to the north and west on the Kenai Peninsula. Hoary marmots, shrews, squirrels, marten, mink, lynx, and weasels are presumed to inhabit the park although research census data are lacking.

The marine waters off Kenai Fjords National Park support 23 species of marine mammals. These mammals are an important part of the visitor experience in the fjords. The marine species are whales, porpoises, dolphins, sea lions, harbor seals, sea otters, and fur seals.

Whales common throughout the Gulf of Alaska include the killer, humpback, minke, gray, and sei species. Dall porpoises range offshore and throughout the entire North Pacific Ocean. Harbor porpoises are found also, but they are generally restricted to coastal bays and fjords.

Steller sea lions are limited primarily to the Gulf of Alaska coast and the Aleutian Islands in Alaska. A number of important hauling out areas are located on points along the mainland and on isolated islands along the southern coast of the Kenai Peninsula. Concentrations of sea lions are found off the coast of the park on Outer Island in the Pye Island group, on the southernmost point of Nuka Island, on two islands within the Chiswell island group, and on three islands in Resurrection Bay (see Mammals map). The sea lions generally remain at these locations but do have some seasonal movement; they feed on a variety of shellfish and fish.

Harbor seals are common in the waters of the fjords and can often be seen on floating glacier ice and on offshore rocks. Groups of more than 500 harbor seals have been observed at times on the floating glacier ice in front of Aialik, Holgate, and Northwestern glaciers. These seals feed on a variety of fish and crustaceans and are common throughout much of the Pacific Ocean.

Sea otters, whose numbers were seriously depleted by Russian fur traders in the 18th and 19th centuries, are increasing in number and range. Approximately 125,000 sea otters inhabit the Gulf of Alaska, while approximately 1,500 are found in the coastal waters off Kenai Fjords National Park. Large numbers of individuals can sometimes be found congregating in shallow, fertile waters. Sea otters feed on mussels, crabs, and other benthic invertebrates. River otters also inhabit the coastline of the park.

Many northern fur seals migrate through the Gulf of Alaska each year, from their breeding grounds in the Pribilof Islands to their wintering grounds on the Pacific Coast, as far south as California.

Few amphibians are in the park. The wood frog has been sighted on the Kenai Peninsula and likely occurs in the park. Additionally, the boreal toad has been observed within coastal forests throughout southeastern and southcentral Alaska and may occur within the park.

Dolly Varden and king, silver, red, chum, and pink salmon spawn in clearwater drainages within the park. Shrimp, crabs, and other shellfish inhabit areas off the coast. Commerical shrimping areas are Aialik Bay, Nuka Bay, Northwestern Lagoon, Resurrection Bay, and around Nuka Island. Commercial salmon fishing occurs in Resurrection, Aialik, Harris, and Nuka bays, as well as in other waters off the coast. Herring and bottomfish are also commercially fished along the coastline of the park. Sport fishing for salmon and bottomfish in marine waters is popular in Resurrection Bay and to some degree in Aialik Bay. Sport fishing also occurs on several short tributary streams and small lakes in the fjord portion of the park.

Marine birdlife is seasonally abundant along the fjords and the offshore islands. Some 175,000 birds, including 18 species, breed and nest in this area. Major colonies of seabirds (see Seabird Colonies map) are found on the Pye and Chiswell island groups during peak breeding periods, and smaller colonies are scattered along the peninsulas and smaller islands. Tufted puffins, horned puffins, and black-legged kittiwakes are the most numerous breeding species in the area. Murres, murrelets, cormorants, gulls, auklets, petrels, guillemots, oystercatchers, scoters, and terns also breed along the shoreline. Use of the area is greatest during the summer season when many birds arrive from more southerly areas of the Pacific Ocean. Seabird numbers decrease significantly in the fall when most species migrate south, although some seabirds, ducks, and shorebirds remain in the ice-free coastal and offshore waters during the winter months. Seabirds feed on fish, crustaceans, and mollusks.

Peregrine falcons (marine subspecies) have been observed in the Chiswell and Pye island groups among the seabird colonies. Bald eagles nest in trees near the shoreline, generally at the ends of points that project into the fjords. The white-tailed ptarmigan, willow ptarmigan, and spruce grouse are also in the park.

No threatened or endangered species of animals are known to be residents of the park or to depend on it for portions of their habitat. The marine subspecies of the peregrine falcon is not classified as a threatened or endangered species. Bald eagles are not classified as threatened or endangered in Alaska.

CULTURAL RESOURCES

The prehistory and history of the park have not been thoroughly documented. Several archeological, anthropological, and historical studies have been published for the Kenai Peninsula area, but specific park-oriented surveys and studies are generally lacking. Exceptions include reconnaissance surveys performed for the Exit Glacier area and the Resurrection River drainage area and a historic mine evaluation in Nuka Bay.

Through an examination of existing information (literature, reconnaissance studies, aerial photographs), several historic and prehistoric sites have been identified in the park. The historic sites relate to mining and trapping and are located along the coast and along the Resurrection River. The prehistoric sites are aboriginal village and camp sites. None of these reported sites has been fully studied or evaluated.

No properties in the park have been listed on or nominated to the National Register of Historic Places, nor have any structures been listed on the List of Classified Structures.

The potential for discovering extensive cultural resources in the park is relatively low. Although much of the coastline and lands within the Resurrection River Valley have been open for habitation for an extensive period, portions of current ice-free lands in the fjords were glaciated until the early part of this century. Therefore, only approximately 36,000 acres (14,500 hectares) of land in the park have archeological potential. Similarly, because the primary nonnative use of the area in historic times was small mining operations, the potential for discovering significant historic sites is remote.

The aboriginal people who occupied the Kenai Peninsula were Eskimos and Indians. Of the Eskimos, the Chugachimiut (now Chugach) lived in and adjacent to Prince William Sound. The Unixkugmiut Eskimo people resided on the south coast of the Kenai Peninsula. The Unixkugmiut, who inhabited this area for at least 500 years before the European discovery of Alaska, are now extinct.

The last reported native settlement on the south coast of the Kenai Peninsula at Aialik Bay was probably abandoned about 1880. It appears that the inhabitants migrated to Alexandrovski, originally a Russian port established in 1785, which was later called Odinochka. It is now the village of English Bay. The only Eskimo settlements on the Kenai Peninsula are Port Graham, English Bay, and Seldovia. The park is within the region that has been used traditionally by the Chugach people. Although native village sites have been reported within the park boundary, very little is currently known about their precise locations and characteristics.

Pursuant to section 14(h)(1) of ANCSA, 30 sites within the park have been selected by Chugach Natives, Inc. which may have cultural significance. These sites were selected on the basis of Eskimo and Russian associations. None of these sites has yet been evaluated to determine the presence of cultural resources.

Captain Vitus Bering explored part of the coast of Alaska in 1741 and was perhaps the first nonnative to see the Kenai Peninsula. Captain James Cook of the British Admiralty is credited with the European discovery of Cook Inlet and Turnagain Arm in 1778. There is no known evidence that these early explorers visited the land area included within the park.

Cook's report on Alaska included a description of furbearing animals and stimulated interest in the fur trade. The Russian American Company harvested the furs of sea mammals along the coast of the Kenai Peninsula and operated from posts along the shoreline of the Cook Inlet and Prince William Sound.

An early recorded American reference to Resurrection Bay is found in an expedition report of Lt. W. R. Abercrombie, who explored Prince William Sound in 1898. No cultural resources from these explorations are known to exist in the area.

Construction of a railroad was started by a private company in Seward in 1904, with the intention of reaching interior Alaska. After financial difficulties, the line was purchased by the U.S. government in 1915 and was completed to Fairbanks in 1923. This railroad exists today and is about 3 miles (4.8 km) east of the park.

Gold was discovered in Nuka Bay in 1918, although prospecting began in 1909. By 1924 more than six properties were being developed, and a mill was being constructed at the Alaska Hills mine. Peak activity was reached in the early 1930s, when at least four mines, each with its own mill, were producing gold. Toward the end of the 1930s, activity waned, and by 1940 only two properties--the Nukalaska and Sonny Fox mines--were operating. These were closed in 1942 during World War II, when the federal government banned the mining of nonstrategic minerals. Mining did not immediately resume after World War II. A U.S. Geological Survey report published in 1970 estimated the total value of gold produced in the Nuka Bay area between 1920 and 1940 to be $166,000. At current prices this value would be substantially higher. These mining efforts played a minor role in the development of the state and its mining industry. The abandoned mine facility at Shelter Cove is an excellent representative of the type of mining operation which occurred in the Nuka Bay area. Recent increases in the price of gold have drawn some renewed interest in the gold deposits of Nuka Bay.

A parkwide map depicting significant cultural resources is not included as part of this plan. Although some preliminary investigation of cultural resources has been undertaken, the comprehensive and detailed data which characterizes a map of historical, archeological, or paleontological resources does not currently exist.

SOCIOECONOMIC CHARACTERISTICS

Population

The towns in the vicinity of the park are Seward, Seldovia, and Homer; also near the park are the native villages of Port Graham and English Bay. A number of other communities are found on the Kenai Peninsula, including Cooper Landing, Moose Pass, Soldotna, Kenai, and Ninilchik.

Seward, the primary information and staging area for visitors to the park, lies at the head of Resurrection Bay, approximately 3 miles east of the park boundary. This town has excellent port facilities and a harbor that remains ice-free the year around. Seward has a population of 1,839 people, with additional people in outlying areas. Prior to the 1964 earthquake, which destroyed a great portion of the town's port facility, Seward served as the primary port for southcentral and interior Alaska. Today, much of the port facilities have been restored, and the town is becoming revitalized.

Homer, which is on the west side of the Kenai Peninsula and on the northern shore of Kachemak Bay, has a predominantly non-native population of 2,900 people. Both Homer and Seward experience seasonal fluctuations in population, which coincide with increased fishing, tourism, and other activities during the summer months.

Seldovia, south of Homer across Kachemak Bay, is a predominantly native community with a population of 733 people. The native villages of Port Graham and English Bay are on the southwestern tip of the Kenai Peninsula. Port Graham has a population of 162 and English Bay 125.

Economy

The economy of the Kenai Peninsula is a significant component of the economic base of the southcentral region of Alaska. The primary sources of employment on the Kenai Peninsula are commercial fishing and fish processing, tourism, government, transportation, timber, and retail sales.

Commercial fishing and fish processing are primary sources of employment in Seward, Homer, and Seldovia, and other coastal towns on the Kenai Peninsula. Fish processing is the largest manufacturing industry in the area. A substantial seasonal population is drawn to Seward and to other coastal communities during the peak sport and commercial fishing period. The outer district of the Cook Inlet commercial fisheries management area, which includes waters along the fjords portion of the park, is rich in red, chum, king, silver, and pink salmon, as well as herring, halibut, scallops, shrimp, and crab. On the southern and eastern coasts of the Kenai Peninsula, commercial fishermen netted $4 million worth of salmon in 1981 and $800,000 worth of salmon (1,395,800 lbs) in 1982 and $385,000 worth of salmon (1,210,730 lbs) in 1983. In the same areas, fishermen harvested $555,000 worth of shellfish in 1981 and $893,000 in 1982.

The timber industry has in the past been the second largest business in the Seward area; however, current market conditions have reduced the importance of the timber business. Harvest potential exists in Prince William Sound and in various parts of the Kenai Peninsula. A sawmill and chipmill at Seward, owned by the Kenai Lumber Company, has a maximum capacity of 60 million board feet per year.

Transportation is a significant and steady source of wage employment in the gulf communities, particularly at Seward, which remains an active port for incoming supplies and for the export of natural resources. Although most freight to Alaska moves through Anchorage, Seward has the potential for being a major port for both incoming and outgoing cargo. During construction of the Trans Alaska Pipeline, Seward was a major port for incoming construction equipment and materials, and it may become a primary port for exportation of Alaskan natural resources. Alaska Barge and Salvage, Foss Tug and Barge, ARCO, Sitmar, Standard Oil, Pacific Western Bargeline, and U.S. Army vessels use Seward as a port of call. The offices of the Alaska Marine Highway System in Seward are in a historic building that was formerly an Alaska Railroad depot. The home port of the MV Tustumena is at Seward.

Tourism is a major component of the economy of Seward and Homer. Nearly all the tourist business occurs from May to September when visitors from other parts of Alaska, the Lower 48, and other countries come to the Kenai Peninsula to take advantage of the many recreational opportunities. Saltwater fishing is the focus of most tourism in Seward and Homer. Charter boats are available for hire in these communities. The Silver Salmon Derby, held in early to mid August, is the height of the summer's tourism business in Seward. Other tourist activities include sightseeing, sport hunting, camping, and hiking. Japanese, Korean, Taiwanese, and Polish fishing crews use Seward as a port for recreation.

Besides generating revenue for charter boat operators, tourism is economically important to air service companies, hotels, restaurants, guides, and retail outlets. The national park is becoming an economic asset to communities on the Kenai Peninsula, especially Seward, as the park becomes better known and as access and services are provided to the Exit Glacier area and other parts of the park.

Government agencies that provide employment in Seward are the Alaska Department of Justice, Alaska Department of Transportation and Public Facilities, Alaska Department of Fish and Game, Alaska Department of Labor, the U.S. Coast Guard, the U.S. Postal Service, the Forest Service, and the National Park Service. A number of community residents work for the Alaska Vocational Technical Center, the city of Seward, and the elementary and high schools.

The production of oil and natural gas has been an important industry on the Kenai Peninsula since the late 1950s, following a significant oil discovery in 1957. Further drilling and production and the development of refineries and other processing plants followed the discovery. The oil and gas industry continues to play a significant role in the economy of the Kenai Peninsula.

Mining on the Kenai Peninsula also contributes to the economy. There are eight mining claims in the park (three claim groups); very little production has occurred during recent years on these claims. Two of the mining claim groups are currently active in the park and are unpatented lode claims in various degrees of operation to extract gold. While future work may involve development of new veins on these claims, mining activity now entails the reworking of old tailings. The Surprise Bay group consists of one claim, the Beauty Bay group consists of two claims, and the Surprise Bay lode claim group consists of five claims.

Most subsistence activities in the region occur in the vicinity of the native villages of English Bay and Port Graham. These activities include the hunting of marine and terrestrial mammals and birds, fishing, and gathering of plant materials and shellfish. Present subsistence hunting extends from these villages as far east as Port Dick. No subsistence hunting or fishing currently occurs in the vicinity of Kenai Fjords National Park. Subsistence activities within the boundaries of the park is prohibited.

Recreation and Visitor Use

The Kenai Peninsula attracts large numbers of visitors from Anchorage and other parts of Alaska, from the Lower 48, and from other countries. The peninsula's varied and spectacular terrain and its abundant fish and wildlife resources provide a wide range of outdoor recreational opportunities. Excellent sport fishing and hunting, skiing and snowmobiling, hiking, camping, boating, and sightseeing are offered on the Kenai Peninsula. Sport fishing for salmon is clearly the most popular activity. Most recreational activities on the peninsula occur during the summer and fall.

The fjord portion of the park receives relatively low amounts of recreational use, even during the months of June, July, and August, although visitation has increased substantially since the park's establishment in 1980. It is estimated that an average of four private recreational boats were in the fjords (from Aialik Bay to Nuka Bay) each day of the summer in 1983. If an average of four people on each boat is assumed, then about 1,440 visits were made to this section of the fjords in 1983 on private recreational boats. Additionally, the stretch of waters along the shoreline of the park from Bear Glacier to Cape Aialik is used by numerous boating parties for salmon fishing and bottom fishing. If these boats are counted, another 4,000 visits can be added; however, most of these people were likely more interested in sport fishing than in the park. Approximately 200 visits can be added for people who flew into the fjord portion in 1983. Few recreational boaters get to Nuka Bay in the southern end of the park, due to its distance from Seward and Homer and the open ocean that must be crossed. It is estimated that 160 people went ashore in the fjord portion in 1982, and 387 went ashore in 1983.

A total of 732 people visited the park on charter boats and flightseeing trips in 1982, and 1,289 people visited the park using these means in 1983. Additionally, it is estimated by the Alaska Department of Fish and Game that commercial fishing operations in the waters adjacent to the park account for approximately 7,000 visitor days per year.

The passengers on private boats and charter boats, which pass the headlands of the Aialik Peninsula and enter Aialik Bay, are generally interested in a variety of resources and recreational opportunities. Fishing for salmon and bottomfish, crabs, and shrimp are principal activities for many people. Viewing of wildlife, islands, mountains, and tidewater glaciers is of great interest to most boaters in the fjords, and these uses are becoming increasingly popular. Tidewater glaciers and hundreds of harbor seals resting on ice floes in front of these glaciers are prime attractions. The rugged peninsulas also are of scenic interest. The Chiswell Islands, in the Alaska Maritime National Wildlife Refuge, are very popular for viewing the large populations of marine mammals and seabirds.

Charter and private airplanes fly into the fjords. In recent years an air taxi service in Seward has flown people into Aialik Bay and has provided a cabin and kayak. This taxi service and others have also provided transportation for people with their own equipment. A few people come to fish in the short, freshwater streams when salmon are running and in several lakes. A few people camp along the coastline of the park. Some visitors tour the park by kayak, after being dropped off by aircraft or larger boats, or by kayaking directly from Seward. A guide has conducted kayaking and backpacking trips for clients into the fjords.

Charter boat service to the fjords has increased in recent years. Scheduled tours of the fjords began in the summer of 1982, when about five tours of the Chiswell Islands and Aialik Bay were conducted. In 1983 a day-long tour was scheduled for one day of each weekend during the summer months. The popularity of these tours occasionally required the operation of two boats on the weekend and the scheduling of a mid-week tour. The charter company that operated the tours in 1982 and 1983 plans to use a larger boat (65 fleet) in 1984. This company intends to offer four, day-long tours each week to the Chiswell Islands and Aialik Bay and three overnight excursions to Nuka Bay during the summer.

Boats in Seward can also be chartered for individual trips into the park area. Some trips are specifically for sightseeing or for fishing, while others combine these activities. Specific bird and marine mammal watching trips also occur each year. Most charter trips are for a single day, but some are for one or more nights.

Recreational use of the Harding Icefield is also growing, although total annual recreational visits are still few. In recent years mountaineering parties have crossed or have attempted to cross the icefield. Groups attempting to cross the icefield in the spring have often encountered storms that have forced them to shorten their intended route or to abandon the trip.

Charter plane companies offer trips over the Harding Icefield. Between 100 and 200 of these flights have occurred each summer for the past couple of years. Most flights originate in Seward but some start in Homer and other communities. It is anticipated that these flights will increase in popularity, as the opportunities and resources of the park become more widely known. There is interest in providing regular trips

to the icefield for day and overnight trips during the summer. Once people are on the icefield, they can ski, snowshoe, or just walk on its snowy surface. Nunataks can be climbed to achieve sweeping views. The icefield is generally flat and appears to be free of crevasses except at the top of glaciers.

In the early 1970s a tourism business was attempted on the Harding Icefield. The business, which included a small shelter and commercial snowmachine rental on the icefield, lasted one summer and was not profitable because of high overhead and lower visitor volume than anticipated.

The Exit Glacier area, on the northern end of the park and about 10 miles from Seward, was visited by 5,170 people in the summer of 1982 and 6,287 people in the summer of 1983. The glacier is the primary attraction of the area. The temporary footbridge that was installed over Resurrection River by the Kenai Peninsula Borough allowed a great increase in recreational use of the Exit Glacier area. Visitors currently walk from the footbridge to the glacier, a distance of about 2 miles (3 kilometers). Winter activities, such as snowmachine use, dog mushing, and cross-country skiing, are increasing in the area.

A development concept plan (DCP) was completed for the Exit Glacier area in 1982. The plan calls for the construction of a permanent vehicle bridge, road improvements, a trail system, a ranger station and small residence, and other visitor facilities. Some of these development projects have been completed, and the others should be completed by the middle 1980s. With the full implementation of the plan, Exit Glacier will be the most visited area of the park and could attain regional and state significance in recreation and tourism.

The combined visitor center and headquarters for the park, located across from the Seward small boat harbor, attracted 5,500 people during the first summer of operation in 1982 and was visited by 12,294 people in 1983.

LAND STATUS

Kenai Fjords National Park contains federal lands, state lands, lands selected by native corporations, and a few small parcels of other private lands (see Land Status map). The boundary of the park, as designated by Congress in ANILCA (1980), included other than federal lands, but the National Park Service has management authority only on the federal lands within the park boundary.

Approximately 530,000 acres (214,650 hectares) of federal land are in the park. The entire Harding Icefield and northern end of the park and most of the higher areas of the peninsulas in the fjords are in federal ownership; the Aialik Peninsula is mostly in federal ownership.

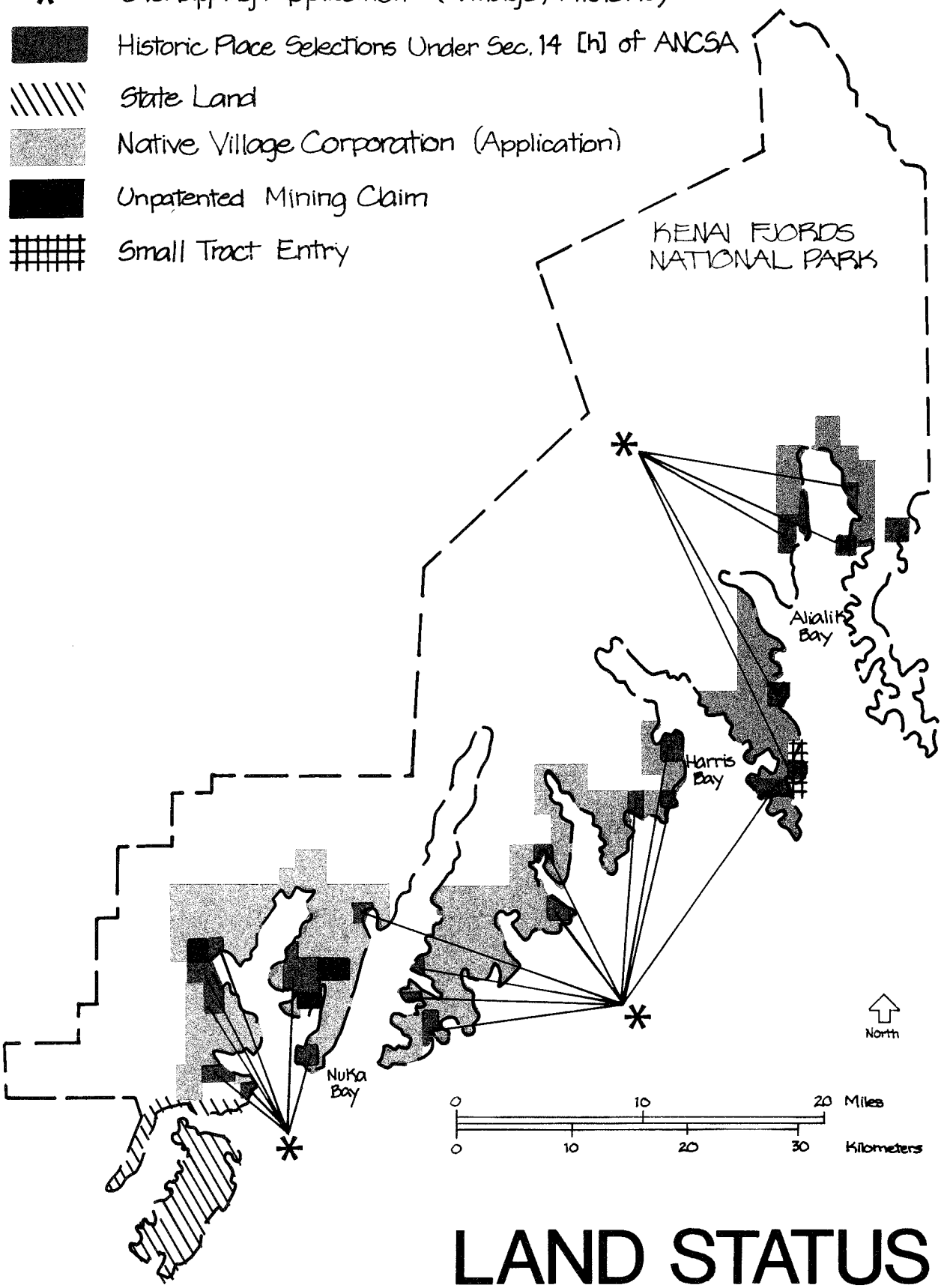
The boundary of the park is at the line of mean high tide along the shore. The state of Alaska owns and manages the tidelands and the submerged lands to 3 miles (5 kilometers) out from the shore.

Approximately 119,900 acres (48,560 hectares) within the park boundary are selected by the native village corporations of Port Graham and English Bay, pursuant to the Alaska Native Claims Settlement Act (ANCSA) of 1971. These two villages are on the southwestern tip of the Kenai Peninsula, about 40 miles (60 kilometers) from the park. Selections were authorized at this distance from the villages because there were not enough lands near the villages to complete their acreage entitlements, as specified in ANCSA. Selections in the park are currently in excess of remaining entitlements for the two villages; even though about 119,900 acres (48,560 hectares) are selected, there will be only about 77,450 more acres (31,367 hectares) conveyed to these villages to complete their entitlements. The villages' remaining entitlements are expected to come from selected lands within the boundary of the park. For lands that are conveyed to native villages, the villages will receive title to the surface estate, whereas the native regional corporation (Chugach Natives, Inc.) will receive title to the corresponding subsurface estate.

Native selected lands are currently in federal ownership and are managed by the National Park Service. Lands conveyed to the village corporations in the future will become private lands and will not be managed by the National Park Service, although they will be within the external boundaries of the park. Lands currently under selection that are not conveyed will remain federal lands and will be managed as park lands.

Lands selected by Port Graham and English Bay generally lie along the coastline of the park, from Nuka Bay in the south to Aialik Bay in the north. Nearly the entire shoreline and most of the peninsulas are selected. Most of the usable lands for camping, hiking, and sport fishing, as well as for recreational cabins or management facilities, are selected. The heads of the East Arm of Nuka Bay, Northwestern Lagoon, and Holgate Arm and most of the Aialik Peninsula are the only shorelines entirely free of selections.

In addition to native village corporation selections within the park boundary, there are also lands selected by the Chugach Natives, Inc., under sec. 14(h)(1) of ANCSA. This section of ANCSA provides for the



LAND STATUS

Kenai Fjords National Park

United States Department of the Interior / National Park Service

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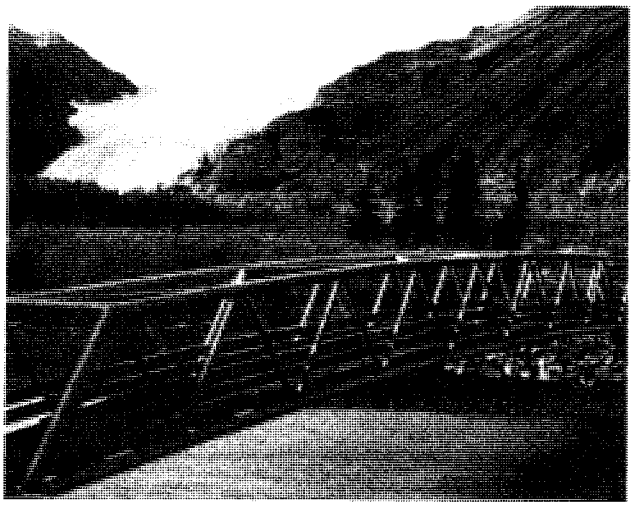
selection and conveyance of lands to native regional corporations that contain existing cemetery sites and historical places. There are 30 historical place selections in the park that total 3,450 acres (1,397 hectares). Most of the relatively flat lands along the shoreline have been selected under section 14(h)(1); some of these selections overlap village corporation selection areas. In cases where village selections and 14(h)(1) selections overlap, preference in conveyance will go to the village corporation. These selections have yet to be field investigated and adjudicated.

State lands were included within the boundary of the national park. Nuka Island and lands on the mainland to the north and west of Nuka Island that are inside the park are patented or tentatively approved for patent to the state of Alaska. The National Park Service has no management authority over these lands. Congress has encouraged the state of Alaska and the National Park Service to conduct joint studies and to enter into cooperative agreements regarding Nuka Island and adjacent lands.

There is one 5-acre (2 hectares) patented tract in the park near the head of Aialik Bay. There is also a native allotment application for 120 acres (49 hectares) on the western side of Aialik Bay and three unpatented mining claim groups in Nuka Bay, totalling eight lode claims.

THE PLAN



The management of Kenai Fjords National Park will be guided by this general management plan. The resources of the park will remain essentially unaltered and in their naturally occurring conditions, although some development will be provided to facilitate public use and enjoyment of the park and to allow effective management by the National Park Service.

RESOURCES MANAGEMENT

Natural Resources Management

Natural systems in Kenai Fjords National Park have remained relatively undisturbed by human activities. Rugged terrain, turbulent weather, and scarcity of exploitable resources have resulted in sparse and dispersed visitation and minimal commercial developments; therefore, the ecological integrity of the area has been maintained.

Because natural systems within the park are considered to be largely undisturbed, no active forms of restoring these systems are required or foreseen at this time. The current emphasis in resources management is on the study of these natural systems. All attempts will be made to realize specific resources management goals and objectives through nonconsumptive and nonmanipulative actions in the park.

In accordance with National Park Service policy and legislation specific to the park, management will strive to maintain the natural abundance, diversity, behavior, and ecological integrity of native animal populations in the park. Pursuant to ANILCA (PL 96-487), both sport and subsistence hunting are prohibited in the park. The Alaska Department of Fish and Game (ADF&G), under the constitution, laws, and regulations of the state of Alaska, is responsible for the management, protection, maintenance, enhancement, rehabilitation, and extension of the fish and wildlife resources of the state, in a manner compatible with ANILCA and NPS policy. A cooperative relationship will continue between the National Park Service and ADF&G to maintain fish and wildlife resources. A memorandum of understanding has been formulated and signed between the National Park Service and the ADF&G regarding management responsibilities for fish and game in national parks in Alaska. The National Park Service has developed a resources management program that is in substantial agreement with most ADF&G goals and research proposals. The primary focus of this program is on the collection of baseline data on natural resources and the monitoring of trends and future impacts.

The National Park Service will coordinate with ADF&G and the U.S. Fish and Wildlife Service (USFWS) in the scoping, collection, and dissemination of fish and wildlife research data. The USFWS has expressed a specific interest in participating in population, distribution, impact assessment, and monitoring studies, particularly for marine birds and mammals that use habitats within the national park and the nearby Alaska Maritime National Wildlife Refuge. The Park Service will work with ADF&G and USFWS to ensure access of officials to park lands for purposes of conducting research and managing wildlife where these activities are consistent with Park Service policies and regulations.

The protection and perpetuation of wildlife populations within the fjords, coastal waters, and offshore islands near Kenai Fjords National Park is of great interest and concern to the National Park Service. In addition to census counts of major raptor, mammal, and other species as described below, the park staff will also cooperate with the USFWS and the ADF&G to identify visitor recreation and other activities which could produce

negative impacts on wildlife. The park's interpretive program will be tailored to educate visitors about the negative impacts and consequences of specific boater or visitor behavior in the fjords.

A "Natural Resources Management Plan" for the park was completed and approved in September of 1982. This plan describes in detail the scope of scientific research and resources management methods that will be employed so that a better understanding of park resources will be achieved and utilized in future resource-related decisionmaking. The highlights of the resources management plan that relate to natural resources follow.

Because water in a variety of forms (icefield, lakes, streams, fjords) is a primary resource, it is important that park management initiate studies to assess climatological, hydrological, groundwater, and other water-related factors that affect resources in the park. Research has been initiated to determine the hydrological characteristics of the Exit Glacier area. This area has been influenced by the retreat of the glacier, and portions of the area are subject to changes that result from the meandering of stream channels. A comprehensive hydrological study of the Exit Glacier area from the glacier to the Resurrection River will investigate the long-term hydrological conditions of the area with emphasis on floodplain parameters, the migration of river and stream channels, and the potential for reactivation of inactive drainage channels. Recommendations will serve to help managers avoid or minimize the potential for hydrological impacts on development within the area and will provide information regarding development of safe drinking water sources and appropriate sewage disposal methods and locations. Future water-related studies will assess climatological factors, wetlands, floodplains, and water quality of other areas in the park. The hydrologic study at Exit Glacier is a park research priority, because it has implications for existing and proposed development in the area.

The dynamics of the vast Harding Icefield and its outflowing glaciers will be researched for purposes of visitor interpretation and safety. Very little research has been conducted to date on the Harding Icefield and its glaciers; however, some recorded information in the form of photographs and maps dates from the early 1900s to the present. The park staff will establish, in consultation with a glaciologist, a system for monitoring the dynamics of the Exit and Northwestern glaciers on a regular basis. Recordings by observation and photography will be used in interpretive materials to enhance visitor understanding and appreciation of this area.

A study will be performed by glaciologists on portions of the Harding Icefield and selected glaciers. The study will include an analysis of historical data on glaciers; measurements of snow, firn, and ice balance gradients; and determinations of glacial runoff. Information will increase visitor safety on the icefield and will form a basis for constructing a history of the area's icefield and its outflowing glaciers.

Advancing stages of plant succession occur downstream from the terminus of Exit Glacier, indicating that it is undergoing a period of recession that began at least 150 years ago. A proposed vegetation survey will be conducted in the Exit Glacier area to analyze types and distribution of

vegetation. A systematic program of mapping and photographing will document the extent and type of vegetative cover. Systematic data collection thereafter will document changes in patterns of vegetation. Data will be used in visitor programs and will enable park personnel to more effectively evaluate current and future impacts on vegetation and wildlife habitat.

Proposed wildlife research includes a mountain goat census on a three-year cycle, an in-depth study of the mountain goat population in the Exit Glacier area, and a survey of seabirds, raptors, and marine mammals on a five-year cycle.

The parkwide mountain goat study will obtain data concerning the patterns of movements and herd locations, ratios between sexes and between adults and kids, ranges, and herd health. Survey data will be compared with data collected in 1980 and 1981. During the 1981 census conducted by the Park Service, 534 goats were observed within the park boundaries. This data revealed a substantial increase from ADF&G's 1980 census information. Proposed future surveys will give a clearer picture of the dynamics of this prime wildlife resource within the park.

Specific attention will be given to mountain goats occupying the Exit Glacier area and the area along the park's northern boundary. Information from the survey should assist in the protection of mountain goats and in the preparation of interpretive material.

A seabird, raptor, and marine mammal survey will be conducted every five years along the entire park coastline. The first survey is proposed for 1985. Results will be compared to a 1976 National Park Service/U.S. Fish and Wildlife Service survey. This study has park research priority because it provides information useful in monitoring impacts on park wildlife.

Baseline information about the spawning, distribution, species composition, and abundance of native fish species in the park will be collected. Analysis of existing data and periodic counts will enable comparison of fish characteristics in park waters with nearby modified habitats. The impacts of increasing sport and commercial fishing may be assessed from study data. Pursuant to NPS policy and in keeping with the memorandum of understanding between the Park Service and ADF&G, the Park Service will not employ methods that artificially manipulate natural fish and wildlife habitats or populations.

Fire management is a minor component of the park's resources management program. The extensive glaciers, fjords, streams, and icefield and the high annual precipitation serve as natural inhibitors to extensive fires. The low incidence of lightning and human-induced fires warrant only minimal expenditures for fire suppression contingencies and equipment.

The National Park Service recognizes the potential for fuel and oil spills within the park and along the coastline. Increasing boat and aircraft traffic in the fjord portion of the park raises the chances of a spill occurring. The sensitive nature of the resources in the fjords and the difficulty of containing spills on the water make oil and fuel spills of special concern. Spills in other areas of the park could also cause significant harm. To minimize damage to the resources in and around the national park, the Park Service will work with other federal and state agencies in preparing for response in the event of a spill.

Mining on the unpatented mining claims in the Nuka Bay area of the park will be subject to standard Park Service regulations governing mining operations (36 CFR 9A and 13-15). These regulations require the submittal of a plan of operations by claimants before commencement of mining activities. Plans of operation are reviewed by appropriate federal and state agencis to ensure that mining operations are in compliance with federal and state regulations, and that adverse effects on resources and other uses are minimized.

Cultural Resources Management

Because most of the park has been covered with ice and snow until recent historic times, with more than 90 percent still unvegetated, the potential for finding significant prehistoric or historic sites is extremely remote for most areas of the park. Surveys to inventory the park's prehistoric archeological sites will be concentrated in the approximately 36,000 acres that have archeological potential. This acreage occurs in a strip along the coastline of the park and along the Resurrection River. Project-specific reconnaissance surveys will be performed as a part of the planning for any authorized undertaking that would require surface disturbance in any area of the park. Any archeological sites already identified or that may be discovered in the future will be treated as if they are eligible for inclusion on the National Register of Historic Places until they can be evaluated by appropriate professionals. Those archeological properties meeting National Register criteria will be nominated to the National Register and afforded the protection to which they are entitled, in accordance with NPS-28 and other NPS "Management Policies" pertaining to the care and treatment of archeological properties.

Chugach Natives, Inc., pursuant to sec. 14(h)(1) of ANCSA, has made 30 selections within the park. Section 14(h)(1) provides for the selection and conveyance of lands that contain existing cemetery sites and places that are of historic and cultural significance to native regional corporations. These selections will be field investigated and adjudicated. The Park Service will provide Chugach Natives, Inc., with technical assistance and professional advice in maintaining and preserving cultural properties conveyed under this section upon request. Prior to conveyance, the National Park Service will protect and manage all 14(h)(1) sites as if they were eligible for inclusion on the National Register. Those sites not conveyed from the park will also be treated as if they were eligible for inclusion on the National Register, until they can be properly evaluated and nominated to the register or are determined to lack significance pursuant to 14(h)(1), as may be appropriate.

With respect to historic and cultural properties that may exist on lands selected within the park by native village corporations, the Park Service will attempt to establish cooperative agreements with the landowners to ensure protection for such properties.

The ongoing identification of areas of sacred and traditional importance to the Chugach people and other local native Americans will be continued by professional archeologists and anthropologists. This will be accomplished, in part, through interviews with older native Americans representing groups with traditional ties to the park's lands. As new information is obtained, it will be added to the confidential inventory of these sites. Measures will be taken to ensure that mutually acceptable methods of protection and preservation are adopted, in conformance with NPS "Management Policies" and legislation. The National Park Service will encourage active participation of local native American groups in developing methods of interpreting and protecting native American culture.

A historic resource study will be conducted. Oral and written information will be collected from early residents of the area. Cabin sites scattered throughout the park and all other above-ground structures will be located, and their archeological, historical, architectural, and cultural values will be professionally evaluated. From this inventory, a List of Classified Structures (LCS) will be prepared. Potential LCS structures will be evaluated for adaptive and interpretive uses. This study will, among other things, establish the relative significance of gold mining in the park to determine if any of the remains of this recent historic occurrence possess significant integrity and historic importance to warrant inclusion on the National Register. Those properties found to meet National Register criteria and under NPS jurisdiction and control will be nominated to the National Register and added to the List of Classified Structures, as may be appropriate. These properties will be provided the protection and interpretation afforded to such properties. Wherever possible, the Park Service will encourage the owners of those historic properties within the park, which are not under NPS jurisdiction or control, to nominate them to the National Register and will provide technical assistance and advice in the proper care and treatment of such properties.

A scope of collections statement will be prepared to guide the park staff in the acquisition and management of museum objects. All park collections, including records, library and archival materials, and museum collections, will be managed in accordance with this statement and relevant NPS guidelines and policies.

A cultural sites inventory and a cultural resources base map will be prepared, based on the above research, and will be regularly updated. The assembled cultural resources information and data will be used in interpretive materials and programs for the enjoyment and education of visitors. Where such information is used for interpretive purposes, its use will be preceded by consultation with any affected native American group.

VISITOR USE AND DEVELOPMENT

As Kenai Fjords National Park becomes better known, increasing numbers of people will come to enjoy this magnificent park. The National Park Service's intent is to make the park available for people but to leave the area generally undeveloped and its resources free of man-made influences. The only developments in the park will be a few dispersed and unobtrusive structures. These visitor developments will make the park accessible to a greater number and wider spectrum of people and will increase the safety and comfort of visitors.

The development and operation of the facilities presented below will require consideration of site-specific resource values, aesthetics, public health and safety, and other factors. As necessary, consultations will be performed with federal, state, and local government agencies that have jurisdiction and experience in the above factors that may be affected by park developments. Facilities will be constructed and operated in accordance with all applicable laws and regulations.

Parkwide Access

Access to and within the park will depend on traditional means, including boats, aircraft, snowmachines, and various forms of nonmotorized access. The only road that will be constructed will be in the Exit Glacier area. The National Park Service does not intend to provide federally funded transportation services in the park. Instead, the Park Service will coordinate with public and private transportation services to provide access to the park and to maximize opportunities for viewing and using the park.

The state ferry system operates a ferry between Seward and Kodiak, which follows the coastline of the park. The present ferry can only let off and take on passengers at substantial docks, such as those at Seward and Kodiak. No such dock exists in the park and none is proposed. A new ferry may be constructed to replace the present ferry. Consideration is being given to placing a "stern ramp" on the new ferry, so that small craft and passengers can be let on and off the ferry in calm waters without requirement of a dock. Such capability would make it possible for people to visit the southern area of the park at less cost than can be obtained through chartered craft. The National Park Service will attempt to coordinate with the state ferry system to maximize opportunities for viewing the park from the ferry and to provide access to the Nuka Bay area of the park.

Parkwide Trails

The only recreational trails in the park are in the Exit Glacier area. The development concept plan for the Exit Glacier area calls for a trail to be constructed alongside Exit Glacier to the Harding Icefield, a loop trail near the glacier, and a trail along the stream that emerges from Exit Glacier. The Forest Service is constructing a trail along the northern boundary of the park, on Forest Service lands just across the

Resurrection River. This trail will serve visitors to Chugach National Forest and visitors to the north end of the park.

Steep topography and dense vegetation in the fjord portion of the park generally make it much easier to travel by boat than on foot. Most visitors use boats to tour the fjords, including those who use aircraft to get to the park.

Trails are not necessary at this time, nor are they practical in most locations within the park. If recreational use at some locations increases significantly and resource damage occurs as a result of trampling, it will become desirable to design and construct designated trails in the fjords, or to limit or alter use of the area.

A trail into the Nuka Bay area of the fjords could be constructed following completion of the Bradley Lake hydroelectric project, which is being developed just outside the western boundary of the park. If sufficient interest is expressed, a trail could be constructed from Bradley Lake over Nuka Pass, and down into Beauty Bay.

Expedition parties currently rely on maps and compasses to navigate across the Harding Icefield. Trails or marked routes are not appropriate because on clear days a marked route is unnecessary, and during white-out conditions a marked trail would be of little or no value. Formidable snows on the Harding Icefield would also make such a trail difficult to maintain.

Parkwide Interpretation and Information

Interpretation is the key to increasing visitor awareness, enjoyment, and understanding of the resources of the park. An interpretive prospectus will be prepared to define the park's interpretive themes and propose necessary interpretive media development.

Interpretive themes will focus on the primary resources of the park--the vast icefield and its outflowing glaciers, the fjords, the rich biotic resources, and possibly the prehistory and history of the area. Natural forces that will be interpreted are the effect of glaciers in shaping the landscape, the dynamics of the icefield over time, the response of biological communities to the retreat of glaciers, and others.

Information and interpretation will primarily be provided at a visitor center in Seward and at Exit Glacier. The Seward visitor center will offer information on the entire park. Personnel, publications, and maps will be available to help visitors understand and enjoy the park resources. Other media programs (exhibits and audiovisual) will also be used to provide information about the park. Preliminary contact between the park staff and other agencies responsible for visitor services and the management of lands outlying Seward has indicated a need for multiagency information and exhibits. The Park Service will work with these agencies to establish multiagency information/interpretation exhibits at an appropriate location in Seward. General informational services for the park will continue to be available at the interagency visitor center in Anchorage.

Information and interpretation for the fjord portion of the park will primarily be limited to NPS pamphlets and other publications because of the dispersed nature of visitor use, limited park personnel, and the intent to have visitors discover the fjords on their own. At some time in the future, visitor brochures or an exhibit could be made available on the state ferry that passes the fjords.

The interpretive program for the fjords will seek to educate boaters and other visitors about activities that may be disruptive to wildlife. Excessive noises by visitors, close approaches to wildlife rookeries or colonies during critical periods, and other activities of potential impact will thus be minimized.

Interpretation and information about the Harding Icefield will primarily be provided at the visitor center in Seward and at Exit Glacier. If visitation to the Harding Icefield increases significantly in the future, a park interpreter may be stationed at the icefield during peak use periods. This interpreter may be either near the top of the Exit Glacier trailhead or at an aircraft landing site. Primary topics for interpretation of the Harding Icefield will include the formation of the icefield through interaction of climate and topography and the history of glaciations in southcentral Alaska.

The Exit Glacier area will have interpretive facilities and services that are described in the completed development concept plan. Seasonal personnel will be assigned to operate the ranger station and to conduct interpretive walks, hikes, and campfire programs. The ranger station will contain information and simple exhibits. Trail markers and interpretive signs will be provided at key locations in the area. Visitors will have the opportunity to learn about movement of the glacier, creation of moraines, succession of vegetation, and the native wildlife populations in the area.

Interpretive signs will generally not be placed in the park; however, there will be interpretive signs in the Exit Glacier area. There may be interpretive signs in other areas of the park where signs are determined to be the most effective method for conveying useful information. Interpretation will rely heavily on published guides, and there will be only limited contact with NPS personnel, except at the Exit Glacier area.

Interpretive programs may be given in cooperation with the University of Alaska's Institute of Marine Science, which has a large auditorium in Seward. School programs will continue to teach local students about the park's resources.

Fjords

Visitor use is expected to increase in the fjord portion of the park, as more people learn of the abundant marine wildlife, the powerful glacial landscapes, and the rugged, forested peninsulas. The federal lands in the fjords will remain in their natural condition. Several minor developments will be accomplished in the fjords to facilitate visitor use and safety.

Access. Access to the fjord portion of the park will continue to be on private and commercial boats and airplanes; no federally funded transportation will be provided.

Boating Aids. The National Park Service will work to have mooring buoys placed along the coastline of the park. Because the waters and submerged lands where mooring buoys would be placed are beyond the park boundary, it is recognized that the cooperation and concurrence of other federal and state agencies are required to conduct this project.

Mooring buoys will facilitate recreational boating in the fjords. Although many sheltered bays and coves are along the coastline, obtaining a secure anchorage can be very difficult because of the extremely steep and rocky bottom conditions in most locations. Mooring buoys will be located where temporary anchoring is difficult or impossible, primarily along the mid-sections and ends of the major peninsulas in the fjords. Mooring buoys will not be placed in areas where temporary anchorages can be secured easily.

The mooring buoys are intended to serve recreational users. Although the buoys will be available for use by any boat, e.g., recreational or commerical fishing, they will be located so as to primarily serve recreational boaters. Proper siting in this regard should minimize conflicting use of the buoys. Buoys will also be located to avoid interference with navigation, commercial fishing, land uses, and park resources.

Three public use mooring buoys will be placed along the Aialik and Harris peninsulas in the northern, more accessible portion of the fjords. If recreational boating increases in the southern portion of the fjords and if additional buoys prove necessary, two mooring buoys will be installed in the Nuka Bay area.

Northwestern Lagoon is perhaps the most scenic area in the park. Rapid glacial retreat has occurred in this bay in the 20th century, yet glaciers still dominate the head of the bay. A large glacial moraine stretches across the entrance to Northwestern Lagoon; boulders lie at the surface and just below the surface. Without sonar it is impossible to know the precise location of these boulders. Although some boaters enter Northwestern Lagoon, many are not willing to take the risk. While some preliminary bathymetric surveys have been conducted, these waters have not been officially charted to date. The National Park Service will request that the National Oceanic and Atmospheric Administration chart Northwestern Lagoon and its entrance.

If charting Northwestern Lagoon and its entrance is not satisfactory to make for safe entry to this area, the National Park Service will request that a navigational buoy (or buoys) be installed at the lagoon's entrance.

Cabins. Public use cabins will be constructed in the fjords portion of the park. Two public use cabins will be provided in Aialik Bay, and two cabins may be constructed in Nuka Bay when visitation increases. The generally wet conditions and rough terrain in the fjords make simple overnight facilities desirable. The cabins will provide safe, comfortable

accommodations for overnight visitors. These cabins will be basic rustic structures, with bunks for up to six people. Woodburning stoves will not be provided in the cabins because gathering wood in the vicinity of the cabins would lead to unacceptable impacts. Cabins will be sited and designed to blend in with the surrounding landscape to the maximum possible extent. Pit toilets or other feasible methods of disposal of human wastes will be provided near the cabins. A reservation and fee system will be instituted.

The National Park Service will seek to have these public use cabins located on private lands in the fjords, and to the extent practical and desirable, will locate public use cabins on native land (ANILCA, section 1306(a)(2)). Specific provisions for construction, maintenance, and administration of cabins will have to be developed with private landowners. If it is not possible to build public use cabins on private lands, the cabins will be constructed by the National Park Service on federal lands in the park.

Campgrounds. No campgrounds are proposed to be constructed in the fjords portion of the park. Campgrounds will only be constructed if they are required to minimize resource impacts or unsanitary conditions resulting from public use. For example, a campground might be constructed if a popular camping area is becoming scarred by multiple fire rings and trampling of vegetation or if the area is subjected to contamination of surface waters by indiscriminate disposal of human wastes. Any campground in the fjords will be primitive in nature, providing only those facilities necessary for containment of resource damage and for maintenance of public health and safety.

Icefield

The vast Harding Icefield has attracted small numbers of mountaineering parties, day hikers, fly-in day visitors, and sightseers in small aircraft. Harsh weather conditions often make access to and use of the icefield very difficult, if not impossible. The establishing legislation for Kenai Fjords National Park (ANILCA, section 201(5)) authorizes the secretary of the interior to develop access to the Harding Icefield and to allow for use of mechanized equipment on the icefield for recreation.

Access. The Harding Icefield is currently reached by aircraft or by walking. A trail is being constructed to the icefield next to Exit Glacier, on the northern end of the park. When the trail is completed, the round trip to the icefield from the toe of Exit Glacier will be approximately 6 miles (10 kilometers) along the moderately difficult trail--a day hike for people in generally good health.

Tram access to the icefield was addressed in the Environmental Assessment/ Draft Development Concept Plan for the Exit Glacier area. A tram system is not considered to be feasible during the life of this General Mangement Plan because of high costs and current lack of sufficient demand for the system. Additionally, public comment on the Development Concept Plan and on the Draft General Management Plan was generally negative regarding this level of development. Before a tram

system can be considered further, visitor need, economic feasibility, and acceptable levels of environmental impact will have to be demonstrated.

Private and commercial aircraft can continue to land on the icefield. Commercial aircraft operations are required to secure a business license or concession permit. The entire icefield is open to aircraft landings and will remain open unless formal closure procedures lead to the closure of specific areas to aircraft landings (see discussion on closures under "Land Use and Management" section).

The number of commercial operations on the icefield is not expected to increase substantially during the life of this plan. If unexpected numbers of commercial operators apply for permits or licenses, the National Park Service will retain the right to limit the number of commercial operations on the icefield so that the environmental quality and high quality visitor experience will be maintained.

Each commercial operation will be authorized to construct a small temporary emergency shelter on the icefield at their primary landing site. Visitors will be flown to the icefield for the day or for part of a day. Planes may often leave visitors on the icefield and then return for them later in the day. Given the real possibility of cloudy weather conditions prohibiting the return of aircraft to pick up visitors on the icefield, structures may need to be available on the icefield where visitors can wait out storms. Visitors could be stranded on the icefield for several days, so shelters will need to be equipped with survival gear and food. Shelters will be constructed and maintained by the commercial operations under the provisions of a business license or concession permit.

Mechanical Equipment. One commercial operator will be authorized to operate surface mechanized equipment on the Harding Icefield. Permissible equipment will be limited to multipassenger snow vehicles for reasons of public safety. Individually operated rental snow vehicles would pose too great a possibility of visitors becoming lost or stranded on the vast icefield. Multipassenger snow vehicles will be operated by an employee of the company authorized to use this type of equipment on the Harding Icefield. These snow vehicles could be used for tours of the icefield and point-to-point transportation of visitors. Multipassenger snow vehicles will be operated in locations and in ways to minimize conflict with other uses on the icefield. These vehicles will be operated under the terms of a concession permit.

Visitor Station. If visitation increases substantially to the Harding Icefield, particularly in the form of day use drop-offs and pick-ups by aircraft, visitor use may outgrow the emergency shelter concept discussed above. Additionally, an increased level of visitor comfort may become desirable.

If visitation grows in volume and type beyond that which can be adequately handled by the emergency shelter concept, a study will be undertaken to determine the physical and economic feasibility of constructing a permanent visitor station on the Harding Icefield. The study will investigate the physical and economic operating season of a permanent visitor station, the possible methods of sewage and waste

disposal, public safety considerations, and other topics as necessary to determine the feasibility of constructing a permanent visitor station.

If a visitor station is constructed on the Harding Icefield, it will be designed for day use only, except for emergency overnight use in the event that visitors are stranded on the icefield. It should have outdoor viewing areas, an enclosed interior space for visitor use, and must be designed to withstand the severe environmental conditions on the icefield. The building should be at least 5 miles (8 kilometers) from the top of Exit Glacier, so that hikers on the trail to the icefield would not be disturbed by aircraft traffic and the sight of this permanent structure. This structure could be built and operated either by a private concessioner or by the National Park Service. A development concept plan would be prepared to determine the location, size, and design elements of this visitor station. The plan would also address facilities and methods for waste and litter disposal and other operational aspects of such a structure. One or more companies would be authorized to fly passengers to and from this destination.

If a permanent visitor station is constructed on the Harding Icefield, all temporary emergency shelters will be removed and no others will be authorized.

Exit Glacier

House and Senate committee reports that accompanied ANILCA (see appendix C) directed the National Park Service to complete a development concept plan for the Exit Glacier area. This plan was completed in 1982. It is felt that the completed development concept plan for the Exit Glacier area adequately addresses the requirements of this area for the life of the general management plan (10-15 years). A pictoral overview of the development contained in the completed development concept plan is shown on the following page.

Campground. The development concept plan states that a campground be built in the Exit Glacier area if sufficient demand is demonstrated and if no suitable campgrounds are otherwise available. Studies have indicated that no campgrounds exist or are planned in the region which would satisfy camping requirements at Exit Glacier. A walk-in campground will be constructed in the Exit Glacier area in the mid-1980s. Following installation of the vehicular bridge and other elements of the development concept plan, the need for a vehicular campground in the Exit Glacier area will be evaluated.

Public Use Cabin. A covered eating and cooking structure will be provided at the walk-in campground at Exit Glacier. This structure will be designed so that it can be enclosed for overnight use in the winter. This cabin will be available through a reservation-and-fee system. Exit Glacier is becoming an increasingly popular cross-country skiing and snowmachine destination, and the cabin will serve these winter visitors.

Seward

Seward is the site of the park's visitor center and administrative headquarters. It is the nearest community to all the primary park resources: the fjords, the icefield, and Exit Glacier. Commercial services and access routes originate in Seward for people wishing to reach the park; therefore, the main park visitor center and administrative headquarters will remain in this community.

The visitor center and headquarters is located across from the Seward small boat harbor, an ideal location for this marine-oriented park. It is also convenient to visitors entering Seward, because it is next to the road leading into town.

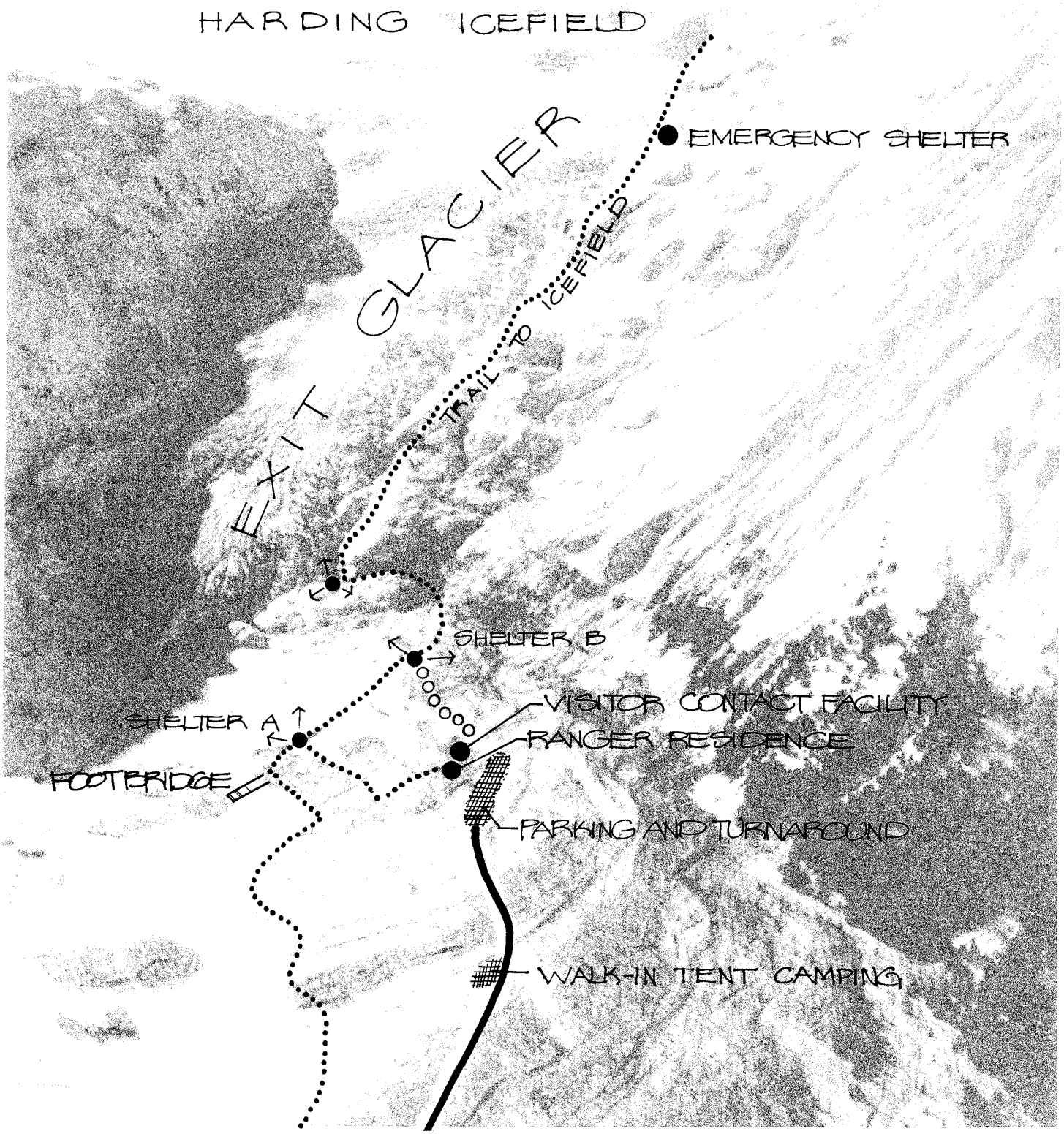
The visitor center and headquarters is housed in a leased A-frame building. Although this building is about the right size for current visitation and park operations, there is no room for expansion. Additionally the building was designed for summer use only and is not insulated for year-round use. The building is therefore not energy-efficient, and sewer and water pipes have frozen in recent years.

There is also a problem with having the building's workshop area immediately adjacent to the visitor contact area. Noise and dust penetrate this visitor use area where slide shows, talks, and other informational services are provided.

The National Park Service will seek to have a new park visitor center and headquarters building constructed in the vicinity of the small boat harbor. This facility could either be funded by the National Park Service on purchased or leased lands, or it could be funded by a private party and leased to the National Park Service under a long-term lease. This building would be designed to fulfill the park's requirements for visitor services and interpretation, administrative offices, and equipment storage and shop space. Space would continue to be provided for other agencies to have small exhibits and brochures.

If a new facility cannot be provided under the terms discussed above, the National Park Service will attempt to secure a long-term lease of the present building, which will be winterized and renovated to adequately handle visitor and administrative requirements.

The National Park Service will participate in the construction and maintenance of a multiagency, outdoor information display in the Seward area. This display will present information about the resources and recreational opportunities in the region surrounding Seward.



ROAD
HIKING TRAIL
HANDICAPPED TRAIL
VIEWPOINT

APPROVED DEVELOPMENT CONCEPT PLAN

EXIT GLACIER AREA

KENAI FJORDS NATIONAL PARK/ALASKA
UNITED STATES DEPARTMENT OF THE INTERIOR/
NATIONAL PARK SERVICE
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DSC/Feb 89

LAND USE AND MANAGEMENT

Management Zoning

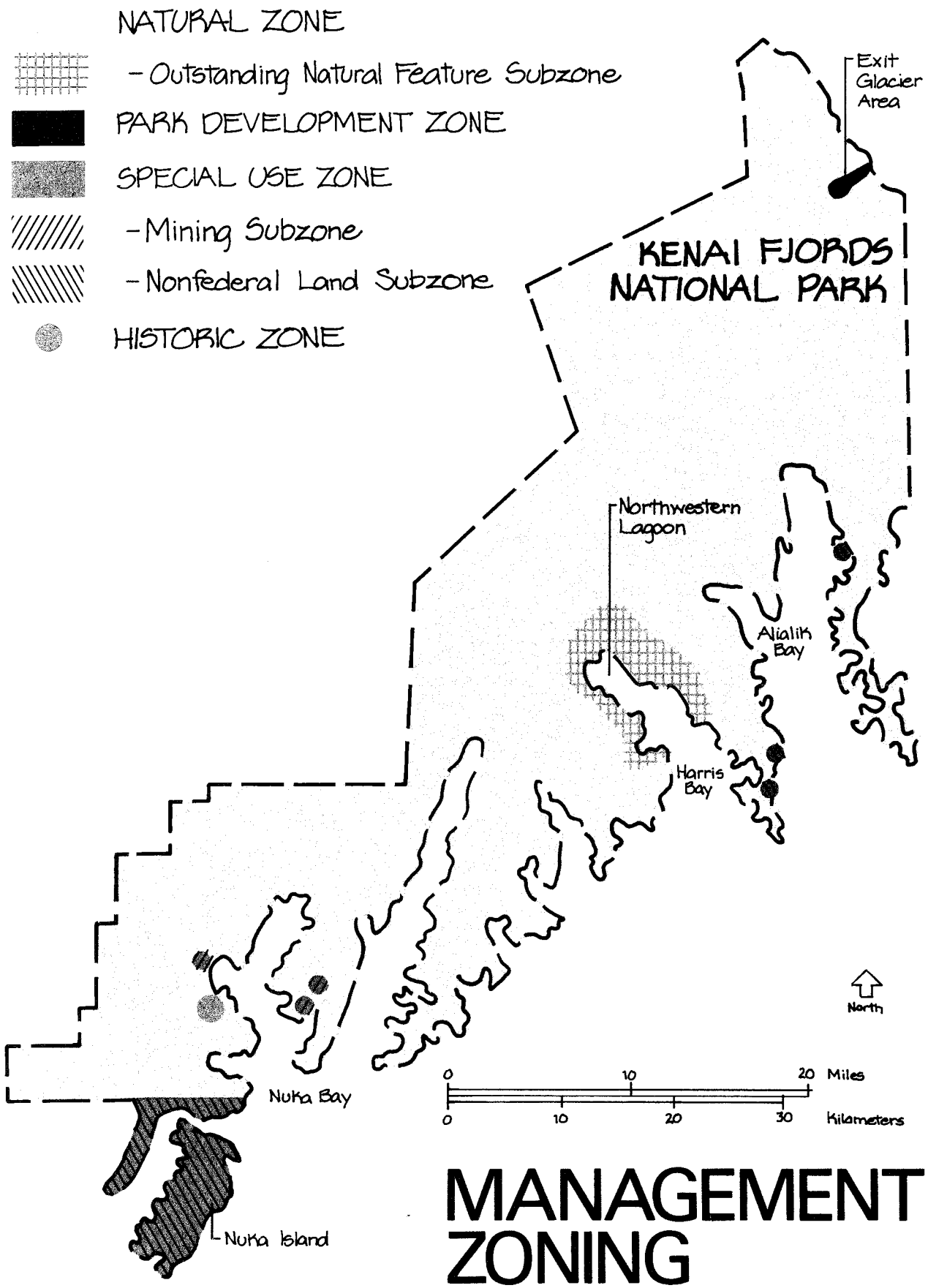
Lands within the national park system are zoned to identify and separate different types of uses that occur within the park. An established set of zones and subzones is provided in the "Management Policies" for the National Park Service. The four major types of zones are the natural zone, historic zone, development zone, and special use zone. Lands assigned to each zone have certain allowable uses in terms of types and levels of facilities, development, and activities. For example, the types of man-made structures permissible on lands within the natural zone are much more restricted than those permitted in the development zone. Management zoning thus provides a framework by which park lands will be managed. A zoning designation provided in the General Management Plan will remain valid until revised or superseded. The Management Zoning map presents the zones for the park.

Most of the park is designated as a natural zone, with emphasis on conservation of natural resources and processes and the accommodation of uses that do not adversely affect these resources and processes. Facilities in the natural zone are dispersed and have little effect on scenic qualities and natural processes. Examples of developments permissible in a natural zone include trails, trailside information displays, and primitive shelters.

The Northwestern Lagoon area is designated as an outstanding natural feature subzone (within the natural zone), with emphasis on public appreciation and protection of geological and ecological features of outstanding value. No developments will be allowed in the Northwestern Lagoon area.

Historic zones within park units are designated for the preservation, protection, and interpretation of cultural resources. A historic zone has been established around abandoned mining properties in the Shelter Cove area of Nuka Bay.

Portions of the Exit Glacier area containing recreational and administrative developments will be in a park development zone. The provision and maintenance of park development to serve the needs of park visitors and management will be emphasized. Small development zones will be designated in the fjord portion of the park when cabins are constructed there in the future. If an icefield station is constructed on the Harding Icefield (see "Visitor Use and Development--Icefield" section), a development zone will be designated that encompasses the station. The specific locations and configurations of these future development zones will be determined only after completion of site-specific resource inventory and development planning. Future management zoning maps will be revised to reflect new development zones. The boundaries of these zones will be limited to the actual facilities and the immediate surrounding area required for facility use and maintenance.



MANAGEMENT ZONING

Kenai Fjords National Park

United States Department of the Interior / National Park Service
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Special use zones are designated for lands within the boundaries of the park where uses are carried out by other government agencies or private interests and where National Park Service control over such uses is either lacking or secondary to that of another party. A mining subzone under the special use zone is designated on lands used for mining and related support activities and roads. Special use zones are designated around the three mining claim groups in the Nuka Bay area of the park.

Nuka Island and other nearby state lands on the southern end of the park are designated as a nonfederal land subzone (under the special use zone). All privately owned lands within the park are also within the nonfederal land subzone. All lands within the boundary conveyed to native corporations will be designated in the nonfederal land subzone. Future zoning maps will reflect this change in ownership.

Private Lands

A land protection plan is currently being developed for Kenai Fjords National Park which will provide a thorough treatment of private and state lands within the park boundary. General guidance regarding private lands is presented in the following paragraphs and will serve as a foundation for treatment of nonfederal lands in the land protection plan. This plan is scheduled for public review in the latter part of 1984.

Approximately 119,900 acres (48,560 hectares) of land are selected by native village corporations within the park boundary. Of this amount, approximately 77,450 acres (31,367 hectares) are expected to be conveyed in the mid-1980s and will thus become private lands. Discussions and correspondence between the National Park Service and native village and regional corporations have indicated that cooperative agreements and eventual acquisition of these lands by the Park Service may be mutually beneficial to both parties.

The Cook Inlet Aquacultural Association has identified the Delight and Desire drainages for potential fishing enhancement projects and the Delight drainage for a potential salmon hatchery. These fishing enhancement projects are prohibited by law within a unit of the national park system. However, these drainages are selected by the Port Graham native village corporation, and may be conveyed to this corporation to complete its land entitlement. If these drainages do become private lands, fishery enhancement projects may be conducted within the Delight and Desire drainages at the discretion of the landowners and appropriate permitting agencies.

In addition to native selected land, there is currently one 5-acre (2 hectare) tract and one 120-acre (49 hectare) native allotment (in two tracts) in Aialik Bay; these are the only private lands in the park other than native corporation selections. These two private tracts are currently undeveloped (there is one small structure on each tract). Land use on these tracts is currently compatible with management of park lands in the area.

In the short term, the National Park Service will seek to secure cooperative agreements with all private landowners within the park boundary to protect resources and scenic qualities and to maintain public access to lands along the coastline of the park.

As a long-term goal, the National Park Service will seek to acquire private lands within the park as opportunities arise. Lands that possess significant park quality resources and/or that offer high recreational values will receive priority for acquisition. A priority listing of lands for acquisition will be developed and presented in the land protection plan. Acquisition will be accomplished through exchange whenever possible. Native corporation lands will only be acquired with the consent of the landowner (section 1302 (b) of ANILCA). Other private lands will also be acquired on a willing seller/buyer basis whenever possible.

State Lands

When Congress established Kenai Fjords National Park, Nuka Island and some nearby coastal lands on the mainland were placed within the park boundary, even though these lands were in state ownership. These lands are managed by the Alaska Department of Natural Resources; the Park Service has no management authority over these lands. Nuka Island and other nearby state lands possess important resource values that are related to resources on federal lands within the park and within the Alaska Maritime National Wildlife Refuge. Additionally, Congress considered Nuka Island to be a good site for recreational and administrative developments to serve the southern end of the national park and Kachemak Bay State Wilderness Park. The House and Senate committee reports (Congressional Record:Senate (S11129) and House (H10536)) that accompanied ANILCA encouraged the state of Alaska and the National Park Service to enter into cooperative agreements regarding management and use of Nuka Island and nearby lands.

Nuka Island possesses outstanding natural resource values. The eastern shore of the 9-mile-long island is characterized by areas of steep cliffs and small valleys. The cliffs are inhabited seasonally by nesting seabirds. The western shore of the island is indented by bays, the mouths of which are protected by numerous islets that create calm waters within. Bald eagles nest in the trees along the western shoreline, and marine mammals appear to be abundant. Sea lions, harbor seals, sea and river otters, porpoises, and whales are frequently seen in these quiet waters. Recreational opportunities in the Nuka Island area include boating, wildlife viewing, fishing, and some hiking. The protected bays on the western side of the island provide ideal natural anchorages. The generally steep and wet nature of the island limits camping possibilities and development potential and makes boat-oriented use paramount.

A field investigation of Nuka Island was conducted by the National Park Service and state representatives from the Alaska Division of Parks and the Alaska Division of Land and Water Management. Options for the protection and compatible use of Nuka Island and other nearby state lands have been considered by the Park Service. It was determined that these goals could be accomplished through cooperative agreements between the

state and the Park Service; by the addition of Nuka Island and other nearby state lands to Kachemak Bay State Wilderness Park; or by acquisition of Nuka Island and nearby state lands by the federal government to be managed by the National Park Service. The National Park Service recognizes the outstanding natural resource values, cultural resource values, and recreational opportunities of Nuka Island and other nearby state lands, and is willing to cooperate with the state of Alaska in planning and management to provide for the protection and recreational use of Nuka Island and nearby lands. The National Park Service is interested in entering into a cooperative agreement with the state of Alaska to achieve these objectives.

Tidelands and Submerged Marine Lands

Tidelands and submerged marine lands in the fjords are in state ownership. Although these lands are not under park jurisdiction, they are important to the resources and to visitor use of Kenai Fjords National Park. Incompatible uses of the tidelands and submerged marine lands could have detrimental effects on the park and on the visitor experience. Incompatible uses could include commercial clam dredging on tidelands, ocean floor mining, oil and gas development, and hunting.

The National Park Service will work cooperatively with the state regarding tidelands and submerged lands. Possible actions include the joint preparation of a tidelands and submerged lands management plan (similar to the plan prepared in Tongass National Forest in southeast Alaska). Such a plan could provide guidelines to ensure compatibility of future uses of tidelands and submerged marine lands with the national park and visitor activities along the coast. Other possibilities include state classification of tidelands and possibly submerged lands in a "public recreation" category or inclusion of these lands in the Alaska marine park system.

Designation of tidelands and submerged lands within the fjords to the Marine Sanctuary Program would provide a continued, long-term emphasis on natural resources protection on these lands. The Marine Sanctuary Program is administered by the National Oceanic and Atmospheric Administration under the authority of the Marine Protection, Research, and Sanctuaries Act of 1972 (16 USC 1431-34). This act authorizes the secretary of commerce to designate ocean areas having distinctive conservation, recreational, ecological, or aesthetic values as marine sanctuaries, after consultation with the appropriate federal agencies and concurrence of the affected state, if state lands and waters are involved. Designation of lands within the fjords to the Marine Sanctuary Program would require identification of activities within the fjords which may be subject to regulation. Regulations are tailored to the specific needs of the individual marine sanctuary and are mutually agreed upon by affected federal and state agencies.

The Marine Sanctuary Program will not be accepting nominations for the designation of marine sanctuaries in Alaska for several years. When nominations are being accepted, the National Park Service will support the nomination of the tidelands and submerged marine lands adjacent to the Kenai Fjords National Park coastline to the marine sanctuary system.

Wilderness Suitability

Section 1317 of ANILCA requires that agencies managing conservation units created by ANILCA review all federal lands in the units that are not in wilderness status for suitability of preserving these lands as wilderness. Lands are to be evaluated according to the criteria of the Wilderness Act of 1964.

Most of the federal lands in the park are suitable for designation as wilderness (see Wilderness Suitability map). These lands meet the criteria for designation found in the Wilderness Act and the National Park Service "Management Policies." Federal lands in the park that are not suitable for wilderness designation are developed lands in the Exit Glacier area and lands associated with mining in the Nuka Bay area.

Lands selected by native corporations within the park boundary are federal lands and will remain so until conveyance to the respective corporations. These lands are now technically suitable for wilderness designation because they are undeveloped, possess appropriate natural values, and are federally owned; however, they cannot be recommended for designation because of legitimate claims on them by the native corporations. Private lands are not eligible for designation as wilderness.

The historic mine complex at Shelter Cove is considered to be suitable for wilderness designation. The access road to the complex is extremely overgrown, and the effects of past mining activities are not readily visible.

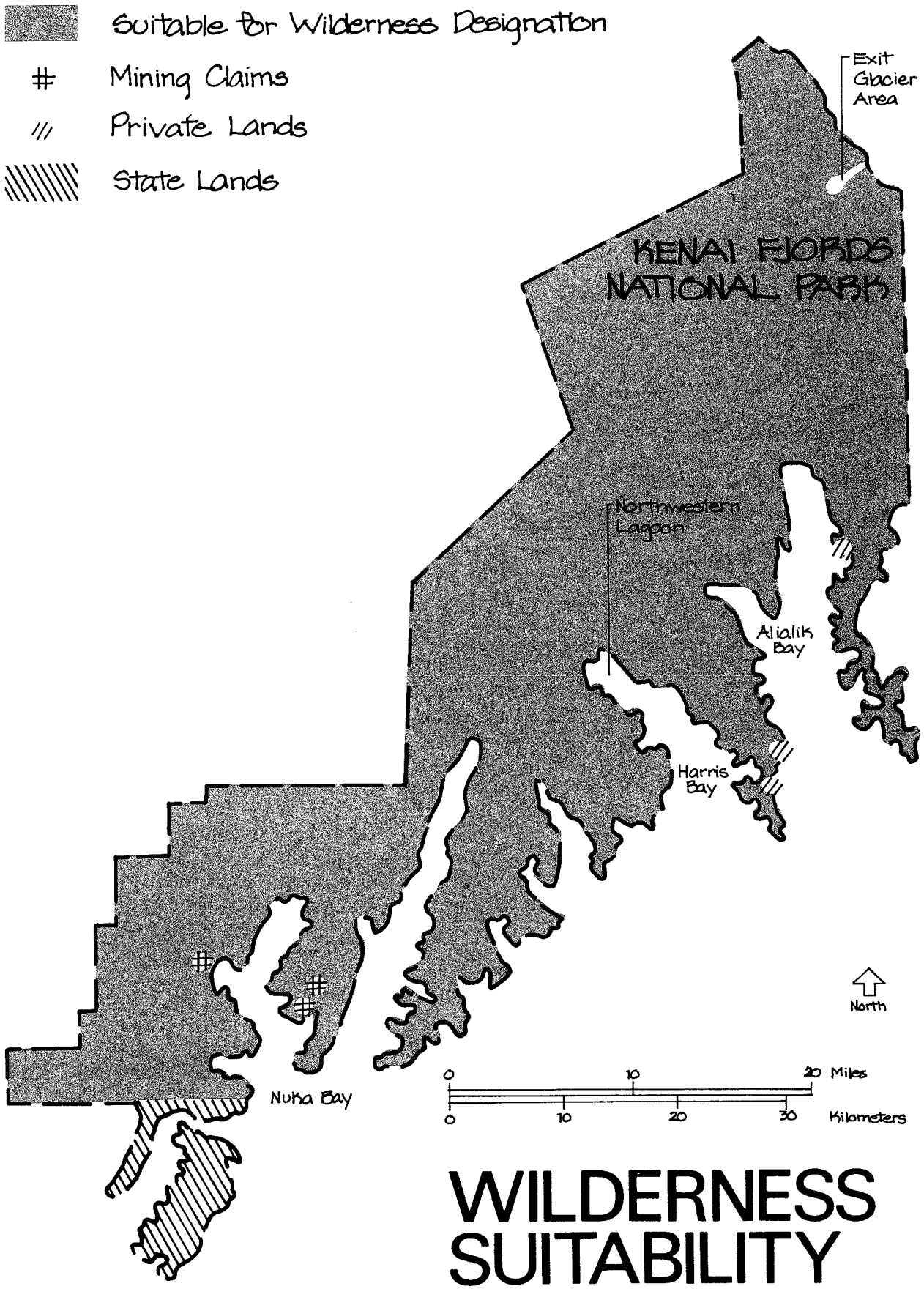
The area immediately surrounding structures on the icefield and fjords will be deleted from wilderness suitability in future mapping. The area on the icefield to be regularly used by surface motorized equipment may be deleted from wilderness suitability in future mapping.

No recommendations for wilderness designation of federal lands within the park are being made at this time; only the technical suitability of lands for designation is being considered. Wilderness recommendations are required by section 1317 to be submitted to Congress by the president by December 2, 1987.

Carrying Capacity

The National Park Service "Planning Process Guideline" (NPS-2) requires that the carrying capacity of the park be addressed in the general management plan. The NPS "Management Policies" require that the Service "carefully plan and regulate the use of the parks so that park resources are perpetuated and maintained unimpaired for the enjoyment of future generations." The policies go on to state that "the Service will, whenever necessary, regulate the amount and kind, and time and place, of visitor use in the parks. Such limitation will be fully explained to those affected and will be based upon adequate study and research."

The establishment of carrying capacity limits can be a useful tool for park managers in meeting these policy requirements. Essentially, the carrying



WILDERNESS SUITABILITY

Kenai Fjords National Park

United States Department of the Interior / National Park Service

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capacity is the ability of natural and cultural resources of the park to withstand recreational use without incurring unacceptable change or deterioration. Experience with this concept by the Park Service has shown that for any given system or area, no intrinsic threshold exists beyond which deterioration is inherently unacceptable. Indeed, any area can receive additional use if greater environmental impacts or changes in the visitor experience are considered acceptable. Thus, establishing capacity limits becomes a thoughtful blending of management objectives, visitor perceptions, and knowledge concerning resource impacts.

The park, excepting the Exit Glacier area, is expected to receive only light to moderate visitation during the life of this plan, and the potential for degradation of the resources or visitor experience appears to be insignificant. However, monitoring of resources and research will be performed. If visitation levels appear to be compromising the quality of the visitor experience or the resources of the park, a carrying capacity study will be conducted at that time, and limitations on use or activities could be instituted.

For example, park managers in the future may decide that expanding visitation at high-use points along the shoreline is causing impacts that are inconsistent with the management objective of allowing natural processes to determine the shapes and substances of the environment. Heavy localized use could result in trampling of vegetation and the emergence of a network of trails, increased human/wildlife interactions, or unacceptable impacts on the visitor experience. Based on management objectives and scientific research and monitoring, a study would be designed to identify a specific limit to human use within areas of the park. Such a study could examine visitor satisfaction levels relative to visitor densities, changes in the behavior of wildlife populations, and amounts of localized vegetation loss. The result could be a numerical limitation on visitors in specific areas to preserve a high-quality visitor experience and to maintain the essential naturalness of the area.

Information gathered through research as proposed in the park's resource management plan will be an important component in any future carrying capacity analysis that seeks to identify unacceptable impacts and that sets use limits.

Closures

The entire park is open to fixed-wing aircraft landings, camping, carrying firearms, snowmachine use, and other uses, as described in the Code of Federal Regulations (36 CFR, part 13). The superintendent has the authority to prohibit or restrict these uses in accordance with the provisions of the closure procedures. No restrictions or closures are thought to be necessary at this time. If, in the future, it is determined that restrictions or closures are required for resource protection, maintenance of public health and safety, or other management considerations necessary to ensure that the park is being managed in a manner compatible with the purposes for which the park was established, closure procedures will be initiated. Permanent closures must be published in the Federal Register, have a minimum public comment period

of 60 days, and be accompanied by public hearings. Examples of possible closures could include prohibition of camping in an active day use area or the closure to motorized equipment of areas with sensitive resources or high levels of public use.

Boundary Adjustments

The external boundaries of the park were examined during the preparation of this General Management Plan. It was determined that no boundary adjustments are required at this time. When the land status within and around the park is more firmly resolved in future years, boundary adjustments may be identified which benefit the park and/or other parties. Boundary adjustments might be pursued at that time.

The Alaska Department of Fish and Game recommended a boundary adjustment in the southern portion of the park, to exclude lands from the park in the vicinity of Beauty Bay. Most of the lands in the recommended exclusion are currently under selection by native village corporations. The status of these lands is therefore unresolved at this time, and the lands may be removed from National Park Service jurisdiction by the conveyance into private ownership.

Cooperative Agreements

The management and operation of many aspects of Kenai Fjords National Park depend on cooperation with other agencies. Cooperative agreements have been developed and implemented for certain aspects of park management; other cooperative agreements will be developed in the future.

A memorandum of understanding has been signed regarding the Exit Glacier area. Parties to this agreement are the National Park Service, the Forest Service, the Alaska Department of Transportation and Public Facilities, the Kenai Peninsula Borough, and the city of Seward. Each party to this cooperative agreement assumed certain responsibilities for the provision of access or visitor facilities in the Exit Glacier area.

There is a statewide master memorandum of understanding between the National Park Service and ADF&G. ADF&G, under the constitution, laws, and regulations of the state of Alaska, is responsible for management of the fish and wildlife resources of the state in a manner compatible with ANILCA and NPS policy. The National Park Service is responsible for the management of NPS lands in Alaska, the conservation of healthy populations of fish and wildlife within national preserves, and the perpetuation of natural and healthy populations within national parks and monuments. The Park Service also agreed to consult with ADF&G before entering into any cooperative land management agreement.

A cooperative agreement exists between the National Park Service and the Rescue Coordination Center (Alaska Air Command) regarding high altitude search and rescue.

The National Park Service has secured a cooperative agreement with the Alaska State Troopers (Alaska Department of Public Safety) for search and rescue.

An interagency agreement exists between the National Park Service and the Bureau of Land Management (Alaska Fire Service) for suppression and presuppression of fires within national park units in Alaska.

The National Park Service intends to work with the Forest Service and the U.S. Fish and Wildlife Service in establishing a fire management plan and a cooperative agreement for lands on the Kenai Peninsula.

In accordance with House and Senate Committee reports (H10536 and S11129), the National Park Service and U.S. Fish and Wildlife Service will cooperate in developing and implementing a plan for protection and use of the Alaska Maritime National Wildlife Refuge. The purpose of the plan will be to perpetuate a high quality visitor experience and to protect marine mammals, seabirds, and other resources on the islands off the coastline of the park.

Public Law 94-458, section 6 states: "The Secretary shall diligently pursue the consummation of arrangements with each State, Commonwealth, territory, or possession within which a unit of the National Park System is located to the end that insofar as practicable the United States shall exercise concurrent legislative jurisdiction within units of the National Park System." Pursuant to this legislation, the Park Service will seek concurrent legislative jurisdiction with the state of Alaska regarding Kenai Fjords National Park and other national park units in Alaska.

ADMINISTRATION

Management Districts

Parks are usually divided into management districts for the purpose of creating more manageable units and for assigning personnel and equipment. Section 1301(b) of ANILCA requires that consideration be given to designation of administrative units within the park areas. However, it would be impractical to create management districts for Kenai Fjords National Park at this time, given present levels of visitation and staff. The park staff consists of only a few permanent and seasonal employees. Park employees, particularly the permanent employees, have responsibilities in all areas of the park and therefore may change work sites daily.

If visitation increases substantially in the future, it might become desirable to create two management districts. The fjord portion of the park might be designated as one district and the Harding Icefield and Exit Glacier areas as the other district. The developing pattern of visitation and management of the park will determine the need for management districts and their configurations.

Administrative Facilities

Facilities for management of the park will be constructed in Seward, in the fjords, and in the Exit Glacier area.

The park visitor center/headquarters will be in Seward. (This dual function building was discussed previously in the "Visitor Use and Development" section.) The building will be the year-round administrative headquarters for the park and will contain office space, a shop, and storage and will serve as the park's main visitor center.

The Exit Glacier area has a ranger station/visitor center and a seasonal residence for rangers. An emergency shelter and emergency equipment cache will be constructed near the top of the trail leading from the base of Exit Glacier to the Harding Icefield. These structures were elements of the completed development concept plan for the Exit Glacier area.

Two ranger stations will be constructed in the fjord portion of the park. The first to be constructed will be in Aialik Bay. As visitation to the southern area of the park grows, a second ranger station will be constructed in Nuka Bay. These structures will provide seasonal housing, a small office space, and equipment storage. A mooring buoy will be in the vicinity of these ranger stations if necessary. These structures will be designed to blend into the surrounding terrain to the maximum extent feasible. They will be located either on federal lands, or on private lands with provisions for a long-term lease.

Staffing

The park staff will remain small for the life of this plan. However, the current permanent staff (superintendent, chief ranger, administrative

technician, and part-time park technician) will be augmented as visitation to the park grows, as proposed improvements are constructed in the Exit Glacier area, and as this plan is implemented. A resources management specialist, an interpretive specialist, and a less-than-full-time facility manager may be added to the staff. The seasonal staff may be expanded beyond the five employees currently required to operate the park during the summer.

Local Hire

A program for local hire has been established pursuant to section 1308 of ANILCA. As provided in this section, individuals who have special knowledge or expertise concerning the natural or cultural resources and their management will be considered for selection for any position within a conservation system unit. Kenai Fjords National Park has utilized this program for hiring individuals to fill staff positions and expects to continue employing this program in the future.

COMPLIANCE

This plan is in compliance with the Clean Air Act as amended by the act of 1977 (PL 95-95; 42 USC 7401 et seq.) and the Clean Water Act (PL 95-217; 33 USC 1251). The increments of air and water pollution that would be generated as a result of constructing minor administrative and visitor use facilities would be insignificant, localized, and temporary, and therefore would not require measurement for compliance with these acts. Facilities at Exit Glacier, or those developed within the fjords, will be in compliance with EO 11988, "Floodplain Management," EO 11990, "Protection of Wetlands," and the Safe Drinking Water Act as amended (PL 95-190; 42 USC 300 f-j).

A consistency determination has been prepared pursuant to the Alaska Coastal Management Act of 1977, as amended, and the plan is responsive to the standards developed in the Alaska Coastal Management Program (ACMP) of May 1979. A consistency determination was reviewed by the state of Alaska during July 1983, and notification that the plan is consistent with the program's goals was received from the Office of the Governor in a letter dated August 2, 1983. Compliance with the ACMP and section 307 of the federal Coastal Zone Management Act (PL 82-583) amended, is thus assumed.

Projected visitor use levels and forms of human activity within the fjords are not expected to significantly impact ecological systems, the marine environment, or human health. Proposed actions comply with the Marine Protection Research and Sanctuaries Act of 1972 (16 USC 1451 et seq.). Proposals would not impact estuarine resources or marine mammal populations and are in compliance with the protection and conservation tenets as provided in the Estuary Protection Act (16 USC 1221) and the Marine Mammal Protection Act (16 USC 1361 et seq.).

There are no known federally listed threatened or endangered species of plants or animals in the park. Thus, a biological assessment and formal

consultation with the U.S. Fish and Wildlife Service are not required. The plan complies with the Endangered Species Act amendments of 1978 (PL 95-632, 16 USC 1531).

Completion of the proposed surveys of cultural resources, nomination of properties possessing the appropriate characteristics to the National Register of Historic Places, and managing the historic and cultural resources of the park in accordance with NPS-28 will achieve compliance with the National Historic Preservation Act of 1966, as amended, and other historic preservation authorities.

In accordance with the September 1981 revision to the 1979 programmatic memorandum of agreement between the National Park Service, the Advisory Council on Historic Preservation, and the National Council of State Historic Preservation Officers, the National Park Service has requested participation of the Advisory Council and the Alaska state historic preservation officer during preparation of this plan. Preliminary meetings were held in Anchorage in July 1981, between the Park Service, the Alaska state historic preservation officer, and the Advisory Council, to discuss coordination and consultation procedures for all Alaska general management plans. Subsequently, the Alaska Regional Office has transmitted copies of the Kenai Fjords "Task Directive" and all other public information documents to the Alaska state historic preservation officer and the Advisory Council. Regional office personnel have met with the Alaska state historic preservation officer on several occasions to discuss this plan, and the Advisory Council has attended planning meetings in Denver and Anchorage.

A thorough effort has been made to identify all native corporations and local native American groups and individuals who would be interested in participating in this planning effort and who have traditional ties with the park. In conformance with section 1301(d)(3) of ANILCA, officials of native corporations that will be significantly affected by implementation of the plan have been provided opportunities to participate in the development, preparation, and revision of the General Management Plan.

Additional compliance and interagency consultation actions have been undertaken to date. A notice of NPS intent to prepare a general management plan appeared in the Federal Register on June 11, 1982. In addition, pursuant to requirements for public participation in ANILCA and NPS "Management Policies," several public involvement activities have occurred to date. A letter to interested individuals and organizations on the park's mailing list was sent out during May of 1982. This newsletter informed these groups of the initiation of the GMP effort and solicited comments.

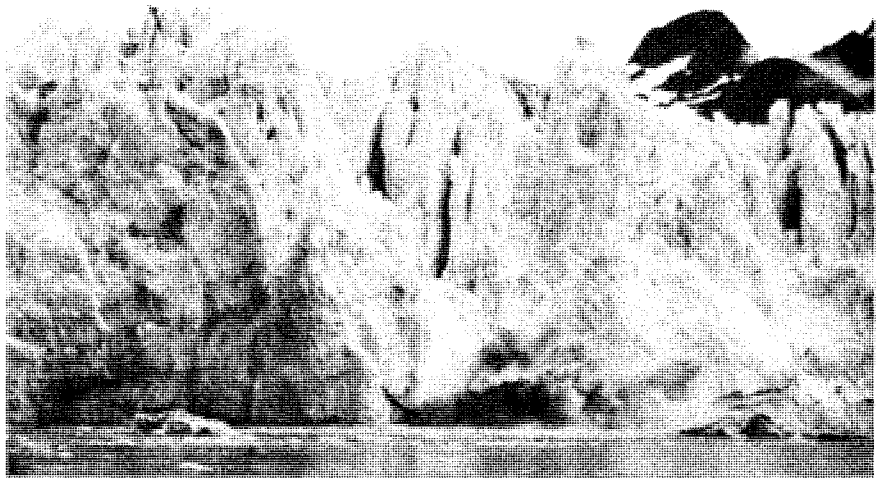
Scoping meetings for the general management plan were held with all interested state agencies in May 1982. In attendance at these meetings were the Alaska Department of Fish and Game, the Alaska Department of Environmental Conservation, the Alaska Department of Minerals and Energy Management, the Alaska Department of Transportation and Public Facilities, the Alaska Division of Geological and Geophysical Surveys, the Alaska Power Authority, and the Alaska Division of Parks. A second meeting with interested state agencies was held in August 1983.

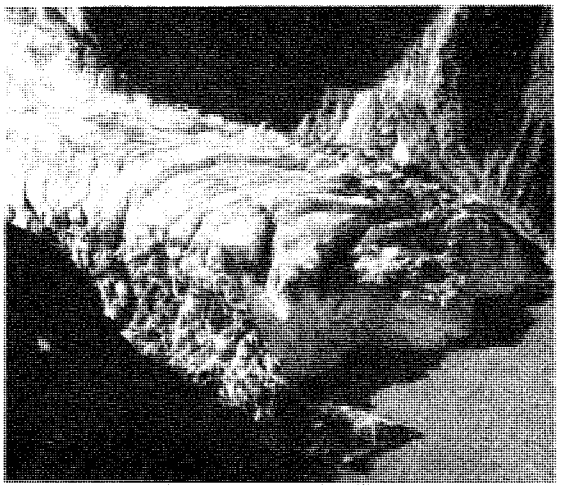
In October 1982, a GMP questionnaire was sent to the interested public and government agencies. This questionnaire requested input regarding access, visitor facilities, and other primary topics relating to the park.

Public meetings were held in Seward and Anchorage following publication of the draft GMP/EA. A 60-day public comment period concluded in mid August.

It was determined that the actions proposed in this plan will not result in major environmental effects, and that the preparation of an environmental impact statement is not required. A finding of no significant impact (FONSI) has been prepared by the National Park Service and is included in appendix G.

Future construction of visitor use and administrative facilities as described in this plan will be in compliance with applicable state and federal laws and regulations regarding air quality, water quality, and other environmental parameters. Required permits from the Alaska Department of Environmental Conservation and other state and federal agencies will be secured before commencement of construction activities.





APPENDIXES

APPENDIX A: MANAGEMENT OBJECTIVES

The following management objectives appeared in the January 1983 "Statement for Management". These objectives will be subject to periodic revision.

Natural Resources

Manage natural resources in accordance with an approved resources management plan for the purpose of perpetuating ecological systems and for the education and enjoyment of this and future generations.

Allow natural processes, including natural fire and floods, to determine the shapes and substances of the environment.

Elicit the cooperation of knowledgeable individuals, groups, institutions, and agencies in collecting the most current and complete information and data about the natural resources, including climate, weather, glaciers and glacier activity; and the effects of motorized equipment and vehicles on the natural resources.

Work cooperatively and interdependently with the Alaska Department of Fish and Game, Alaska Division of Parks, and the U.S. Fish and Wildlife Service to monitor populations of fish and wildlife and their habitat for the purpose of protecting and preserving resources.

Devise the best possible means of management and operations to protect important vegetation, fish and wildlife, and their habitats.

Maintain high environmental standards for the protection and preservation of natural resources in mining areas.

Encourage visitors to understand the park's natural resources and the need to maintain the interrelationships and balances among them.

Monitor the significant resource problems (threats) within and adjacent to the park boundary so as to prevent, as much as possible, adverse impacts on resources.

Cultural Resources

In accordance with an approved resources management plan, establish programs for the collection of information and data about the cultural resources and for the management and preservation of these resources.

Prepare a Scope of Collections Statement to guide the park staff in acquisition of museum objects.

Locate and identify all known historic and prehistoric sites and structures for their protection and possible designation in the National Register of Historic Places and the Alaska Heritage Re-Sources Survey.

Assemble cultural resources information and data to be used in interpretive materials and programs for the enjoyment and education of visitors.

Collect oral and written information from actual participants in the initial settlement of the area so as to preserve important historical information.

Elicit cooperation from and provide assistance to private owners of historical sites, structures, and objects so that these historic resources may be protected and preserved.

Administration

Administer Kenai Fjords National Park as a natural area of the National Park Service with due administrative concerns for the historical and cultural resources.

Complete a general management plan, involving public participation in the development of the plan.

Provide adequate staff for the protection and perpetuation of park resources, for services to and safety of visitors, for conducting natural and cultural resources inventories and preparing resources management plans, for conducting wilderness studies, for providing basic interpretive materials and programs and preparing an interpretive plan, and for furnishing adequate administrative support services.

Establish administrative headquarters and ranger sites for administration, for visitor contact points and interpretive services, for basing patrol operations, for cooperative search and rescue missions, and for cooperative resource management activities.

Determine management units or zones for the purpose of streamlining management responsibilities regarding visitor services and resource uses.

Employ innovative management approaches in developing and executing staffing plans that recognize the knowledge and skills of local persons and the effects of severe environmental conditions upon worker productivity.

Plan and manage the park according to ANILCA and other applicable laws, regulations, executive orders, and policies.

Visitor Use and Interpretation

Provide visitors with services, materials and programs to enhance their knowledge of park resources and their opportunities for enjoyable and educational visits.

Encourage and provide information and technical assistance to local businesses providing visitor services so that businesses and visitors will be mutually benefited and to aid the public to understand management policies for the park.

In accordance with the provisions of ANILCA and other federal law, ensure visitors adequate and feasible access to park resources.

Study and inventory recreational resources and develop a plan so as to accommodate such visitors as mountain climbers, cross-country skiers, snowmobilers, campers, sport fishermen, dog mushers, backpackers, photographers, and expeditioners; and minimize conflicts among these various users.

Prepare and keep current visitor information brochures describing outstanding resources, access, accommodations and visitor services, and opportunities for visitor activities.

Prepare an interpretive plan for the park.

Provide visitors with interpretive programs about the Harding Icefield, protruding glaciers, and fjords so that they might gain an understanding of natural forces in the area.

Compile data on past and current icefield expeditions, and prepare a trail guide and exhibits to be available for visitors.

Provide visitors with information concerning other federal and state areas surrounding Kenai Fjords National Park. Make space available to these agencies for small displays or exhibits.

Visitor Protection and Safety

Establish procedures and programs for visitor protection and safety.

Have well-trained, well-equipped field personnel to operate effectively in emergencies in both matters of search and rescue and law enforcement.

Provide visitors with such safety measures as voluntary registration, reports on weather and other conditions, information about visitor contact points and possible shelters, and emergency message systems.

Through cooperative agreements with the Alaska State Troopers, the Air Force Rescue Coordination Center, and the Coast Guard, and through the judicious uses of volunteer groups, devise means and prepare plans for the most efficient and effective procedures for providing visitor protection and safety.

Inform the public of the inherent dangers faced in severe and everchanging sea and weather environments and in glacier-related activities so as to reduce the potential for injuries.

Development of Facilities

Undertake development or construction projects that are architecturally harmonious with the natural and cultural setting and use the most suitable materials and equipment to conserve energy and resources and to protect the environment.

In conjuction with construction and development personnel in the Alaska Regional Office and with the Denver Service Center, determine the needs for construction and development to be addressed in a general management plan.

Obtain a permanent park headquarters and visitor center in Seward to be owned or leased on a long-term basis.

Observe and collect data on visitor uses and determine the need for and feasibility of cataloging and/or developing trails, primitive camp sites, primitive shelters, refueling sites, safe harbors, and access points.

Study the needs for obtaining adequate facilities for maintenance, storage, docking and refueling, communications, and transportation.

Encourage private enterprise to provide services both inside and outside the park and, to the fullest extent possible, accommodations and bases of operations outside the park.

Cooperative Planning

Develop a cooperative management program with public and private interests for managing the natural and cultural resources and for providing visitor services and resource uses.

For the purpose of community and regional planning, establish working agreements with private interests, local governments, and state and federal agencies. These could include the provision of interagency (state and federal) visitor information services in the Seward Visitor Center.

Concessions

Issue concession permits, contracts, or commercial licenses to provide the best possible, necessary, and appropriate visitor facilities and services.

Identify appropriate levels and types of commercial services and issue concessions contracts, permits, and commercial licenses as appropriate to those best able to meet the needs of visitors and protect resources.

APPENDIX B: ANILCA: PUBLIC LAW 96-487, Sec. 101,. a,b,d

Section 101.(a) In order to preserve for the benefit, use, education, and inspiration of present and future generations certain lands and waters in the State of Alaska that contain nationally significant natural, scenic, historic, archeological, geological, scientific, wilderness, cultural, recreational, and wildlife values, the units described in the following titles are hereby established.

(b) It is the intent of Congress in this Act to preserve unrivaled scenic and geological values associated with natural landscapes; to provide for the maintenance of sound populations of, and habitat for, wildlife species of inestimable value to the citizens of Alaska and the Nation, including those species dependent on vast relatively undeveloped areas; to preserve in their natural state extensive unaltered arctic tundra, boreal forest, and coastal rainforest ecosystems; to protect the resources related to subsistence needs; to protect and preserve historic and archeological sites, rivers, and lands, and to preserve wilderness resource values and related recreational opportunities including but not limited to hiking, canoeing, fishing, and sport hunting, within large arctic and subarctic wildlands and on freeflowing rivers; and to maintain opportunities for scientific research and undisturbed ecosystems.

(d) This Act provides sufficient protection for the national interest in the scenic, natural, cultural and environmental values on the public lands in Alaska, and at the same time provides adequate opportunity for satisfaction of the economic and social needs of the State of Alaska and its people; accordingly, the designation and disposition of the public lands in Alaska pursuant to this Act are found to represent a proper balance between the reservation of national conservation system units and those public lands necessary and appropriate for more intensive use and disposition, and thus Congress believes that the need for future legislation designating new conservation system units, new national conservation areas, or new national recreation areas, has been obviated thereby.

APPENDIX C: CONGRESSIONAL COMMITTEE REPORTS

Congressional Record - House H 10535, November 12, 1980,

"Kenai Fjords National Park is established to insure the preservation, interpretation, and study of a spectacularly beautiful interrelated icefield and fjord/rainforest system and its associated population of seabirds and marine mammals. The park is located immediately south of Seward, Alaska, which is only a 2 1/2-hour drive from Anchorage, the largest city in Alaska and a tourist focal point.

One of the four major icecaps in the United States today, the Harding Icefield is a reservoir of ice for glaciers that continue to carve deep glacial valleys through the Kenai Mountains. Three major glaciers and several minor ones flow from the icefield into the present fjords, where these tidewater glaciers frequently calve huge blocks of ice into the sea. On adjacent headlands, a moss-covered spruce rainforest clings tenaciously to steep rocky slopes amidst the cool, moist climate which created and sustains the icefield above. At this interface of land and water, where the Kenai Mountains are drowning in the sea, marine mammals and seabirds abound. Stellar sea lion and harbor seal haul out of ledges and ice flows respectively and warm in the sun of midsummer days: killer whale, porpoise, and sea otter swim just offshore. Puffins, gulls, and other seabirds inhabit rocks and cliffs by the tens of thousands, while eagles nest in trees overlooking the edible riches of the tidal fringe. The abundant life of the intertidal zone supports many of the larger animals mentioned above. Shoreward from the park's eight major bays, black bear, wolverine, river otter, and mountain goat are found. The scenic quality of the fjords is outstanding and its potential for marine-oriented recreation, such as sight seeing, sport fishing, and boating is excellent.

The Kenai Fjords National Park consists of 567,000 acres of public lands above the mean high tide. The official boundary map indicates an offshore boundary. The intent of this line is to include Nuka Island and its assorted rocks and spires, but not any offshore waters or submerged lands within the area.

The Kenai Fjords National Park will be managed as a natural area of the National Park System. Small clusters of offshore islands (the tops of largely submerged mountains extending out from the fjords), will be managed by the Fish and Wildlife Service. The Fish and Wildlife Service and the National Park Service are expected to cooperate so that visitors may enjoy the beauty and wildlife of the islands so long as the bird populations are protected.

Nuka Island and its associated rocks and spires, which are state owned, are within the park. It offers a location that may be jointly used by both the state and the National Park Service in a cooperative manner for the management of Kachemak Bay State Park and the Kenai Fjords National Park. The Park Service should explore the possibilties of developing cooperative management and

visitor facilities with the state here, or in another more appropriate locale. Cooperative agreements concerning the state and National Park here are encouraged.

The Kenai Fjords are a biological island, physically isolated from the remainder of the Kenai Peninsula by the Harding Icefield, the Kenai Mountains, and the ocean. Thus, the Kenai Fjords National Park represents a small distinct ecosystem of extreme beauty, best managed by the Park Service.

The Alaska Maritime Refuge includes most of the nesting colonies and marine hauling grounds of the region, including Chiswell Islands, with some bird and mammal concentrations inside the park. The Park Service and the Fish and Wildlife Service should cooperate in these two units in developing and implementing a plan which provides for protection of wildlife values, as well as allowing recreation in the fjords and around the islands.

Language was included which authorized the National Park Service to construct facilities to provide access by visitors up to the Harding Icefield. In recent years, a road up the Resurrection Valley to the vicinity of Exit Glacier has been constructed by the local people. The National Park Service, in its recommendation for the area, indicated that this location was ideal for the construction of a visitor center, picnic area, and campgrounds in the vicinity of the Exit Glacier. The Park Service should explore this further and initiate a development concept plan for the Resurrection Valley-Seward vicinity as soon as possible. As the park and the valley are road accessible today, the Kenai Fjords should be considered for development of visitor facilities as early as possible, upon the completion of all necessary planning and appropriate environmental statements. In order to facilitate early completion of a visitor complex in this area, specific authorization for facilities and motorized use of the icefield are included in the bill. All developments must, however, be consistent with the preservation of the park's resources and should not include massive facilities.

The senate recommended a national park of approximately 567,000 acres of Federal lands in Kenai Fjords. This is the same recommendation as included in the House-passed bill with essentially the same boundaries. Subsistence uses, sport hunting, and trapping are not allowed in the park, while sport fishing is allowed."

Congressional Record - Senate S11125, August 18, 1980

"Kenai Fjords National Park is established to insure the preservation, interpretation, and study of a spectacularly beautiful interrelated icefield and fjord/rainforest system and its associated population of seabirds and marine mammals. The park is located immediately south of Seward, Alaska, which is only a 2 1/2 hour drive from Anchorage, the largest city in Alaska and a tourist focal point.

One of the four major icecaps in the United States today, the Harding Icefield is a reservoir of ice for glaciers that continue to carve deep glacial valleys through the Kenai Mountains. Three major glaciers and several minor ones flow from the icefield into the present fjords, where these tidewater glaciers frequently calve huge blocks of ice into the sea. On adjacent headlands, a moss-covered spruce rainforest clings tenaciously to steep rocky slopes amidst the cool, moist climate which created and sustains the icefield above. At this interface of land and water, where the Kenai Mountains are drowning in the sea, marine mammals and seabirds abound. Stellar sea lion and harbor seal haul out of ledges and ice flows respectively and warm in the sun of midsummer days; killer whale, porpoise, and sea otter swim just offshore. Puffins, gulls and other seabirds inhabit rocks and cliffs by the tens of thousands, while eagles nest in trees overlooking the edible riches of the tidal fringe. The abundant life of the intertidal zone supports many of the larger animals mentioned above. Shoreward from the park's eight major bays, black bear, wolverine, river otter, and mountain goats are found. The scenic quality of the fjords is outstanding and its potential for marine-oriented recreation such as sightseeing, sport fishing and boating is excellent.

The Kenai Fjords National Park consists of 567,000 acres of public lands, above the means high tide. The official boundary map indicates an offshore boundary. The intent of this line is to include Nuka and Ragged Islands but not any offshore waters or submerged lands within the area, unless future agreements with the State or situations allow for this. Native and State lands are also included within the area, which will automatically be added should they be acquired in the future.

The Kenai Fjords National Park will be managed as a natural area of the National Park System. Small clusters of offshore islands (the tops of largely submerged mountains extending out from the fjords) will be managed by the Fish and Wildlife Service.

The substitute includes all of the Chiswell Islands in the coastal refuge, as they are all closely related to one another. In the Pye Islands, Outer Island and other unnamed islands and rocks are in the refuge, leaving Ragged Island in the park. Ragged Island is related to the mainland portion of the park and contains lower wildlife populations than the remainder of the island groups.

Nuka Island, which is State owned, is within the park. It offers a location that may be jointly used by both the State and the National Park Service in a cooperative manner for the management of Kachemak Bay State park and the Kenai Fjords National Park. The Park Service should explore the possibilities of developing cooperative management and visitor facilities with the State here, or in another more appropriate locale. Cooperative agreements concerning the State and National Park here are encouraged.

The Kenai Fjords are a biological island, physically isolated from the remainder of the Kenai Peninsula by the Harding Icefield, the Kenai

Mountains, and the ocean. Thus, the Kenai Fjords National Park represents a small distinct ecosystem, best managed by the Park Service.

The coastal refuge does include most of the nesting colonies and marine hauling grounds of the region, with some bird and mammal concentrations inside the park. The Park Service and the Fish and Wildlife Service should cooperate in these two units in developing and implementing a plan which provides for the protection of wildlife values, as well as allowing recreation in the fjords and around the islands.

Language was included which authorized the National Park Service to construct facilities to provide access by visitors up to the Harding Icefield. In recent years, a road up the Resurrection Valley to the vicinity of Exit Glacier has been constructed. The National Park Service, in its recommendation for the area, indicated that this location was ideal for the construction of a visitor center, campgrounds, and some means, such as a tramway, up the Kenai Mountains, in the vicinity of the Exit Glacier, to provide visitors access to the icefield. The Park Service should explore this further and initiate a development concept plan for the Resurrection Valley-Seward vicinity as soon as possible. As the park and the valley are road accessible today, the Kenai Fjords should be considered for development of visitor facilities as early as possible, upon the completion of all necessary planning and appropriate environmental statements. In order to facilitate early completion of a visitor complex in this area, specific authorization for facilities and motorized use of the icefield was included in the substitute.

The Committee recommended a National Park of approximately 567,000 acres of Federal lands in Kenai Fjords. In the substitute, the Kenai Fjords National Park is the same as recommended by the Committee. The intent of the Committee concerning the management and use of the park is retained in the Substitute. Subsistence uses, sport hunting, and trapping are not allowed in the Park, while sport fishing is allowed."

APPENDIX D: PLANNING REQUIREMENTS AND PROCESS

ANILCA REQUIREMENTS

Section 1301 of the Alaska National Interest Lands Conservation Act (ANILCA: PL 96-487) requires the preparation of conservation and management plans for each unit of the national park system established or enlarged by ANILCA. These plans are to describe programs and methods for managing resources, proposed development for visitor services and facilities, proposed access and circulation routes and transportation facilities, programs and methods for protecting the culture of local residents, plans for acquiring land or modifying boundaries, methods for ensuring that uses of private lands are compatible with the purposes of the unit, and opportunities for mutually beneficial cooperation with other regional landowners.

NPS PLANNING DOCUMENTS

The National Park Service planning process for each park (preserve, monument, or other unit of the system) involves a number of stages, progressing from the formulation of broad objectives, through decisions about what general management direction should be followed to achieve the objectives, to formulation of detailed actions for implementing specific components of the general management plan.

The general management plan addresses topics of resource management, visitor use, park operations, and development in general terms. The goal of this plan is to establish a consensus among the National Park Service and interested agencies, groups, and individuals about the types and levels of visitor use, development, and resource protection that will occur. These decisions are based on the purpose of the park, its significant values, the activities occurring there now, and the resolution of any major issues surrounding possible land use conflicts within and adjacent to the park. The following kinds of detailed action plans are prepared concurrently with or after completion of the general management plan.

- Land protection plans present approaches to private or other non-NPS lands within the boundaries of NPS units, in order to attempt to have these lands managed in as compatible a manner as possible with the planned management objectives of the park unit.
- Resource management plans identify the actions that will be taken to preserve and protect natural and cultural resources. Where appropriate, one component of the environment (for example, fire management plan, river management plan, historic structure plan) may be further developed into an independent plan that becomes a part of the resource management plan.
- Development concept plans establish basic types and sizes of facilities for specific locations.
- Interpretive plans describe the themes and media that will be used to interpret the park's significant resources.
- Wilderness suitability reviews determine which lands are suitable for inclusion in the national wilderness preservation system.

Depending largely on the complexity of individual planning efforts, action plans may or may not be prepared simultaneously with the general management plan. If they are prepared after the general plan, the NPS public involvement and cooperative planning efforts are continued until all of the implementation plans are completed.

APPENDIX E: CONSISTENCY DETERMINATION FOR ALASKA COASTAL ZONE MANAGEMENT POLICIES

Section 307 (c) of the Coastal Zone Management Act of 1972, as amended (PL 92-583), states that "each federal agency conducting or supporting activities directly affecting the coastal zone shall conduct or support those activities in a manner which is, to the maximum extent practicable, consistent with approved state coastal management programs."

The Alaska Coastal Management Act of 1977, as amended, and the subsequent Alaska Coastal Management Program (ACMP) and Final Environmental Impact Statement of 1979 set forth policy guidelines and standards for consistency determination.

The ACMP identifies 12 primary categories that are to be evaluated for consistency of impacts. The basis of the following consistency determination was the Environmental Assessment that accompanied the Draft General Management Plan (GMP) for Kenai Fjords National Park (May 1983). The highlights of this assessment are organized in the format of the ACMP standards in the following consistency determination. This determination considers not only the elements of this Final General Management Plan, but also the elements of alternative proposals in the draft plan which relate to coastal waters. The matrix has not been modified because it represents the original determination that was sent to the state of Alaska for concurrence.

The categories in the ACMP which are applicable to this plan are as follows:

Coastal development	*
Geophysical hazard areas	*
Recreation	*
Energy facilities	
Transportation and utilities	*
Fish and seafood processing	
Timber harvest and processing	
Mining and mineral processing	
Subsistence	
Habitats	*
Air, land, and water quality	*
Historic, prehistoric, and archeological resources	*

*Applicable

The following matrix evaluates the consistency of the GMP alternatives with the requirements of each of the applicable categories identified.

ACMP Section	Policy (Condensed from standard)	Evaluation of Preferred and Other Alternatives	Consistency
Coastal Development 6 AAC 80.040	(a) In planning for and developing coastal areas, priority is given to: 1) Water-dependent uses and activities 2) Water-related uses and activities 3) Non-water-related or water-dependent uses or activities exists. (b) Placement of structures and discharge of dredged or fill material shall comply with CFR, Title 33, Parts 320-323 July 19, 1977.	Preferred Alternative Construction of public use and administrative cabins in Aialik Bay and Nuka Bay, placement of channel and mooring buoys would facilitate water-dependent and water-related visitor use activities. Other Alternatives: Construction of tent platforms, campgrounds, or a lodge in the fjords would facilitate water-dependent and water-related visitor use activities. No dredged or fill material will be used in any alternative. No structures will be built within, nor will any obstruct navagible waters. The placement of navigational aids or moorings will be done in cooperation with the state and/or NOAA and will comply with CFR 33, Section 322.4(a). Alternatives conform to all other requirements of CFR 33 Parts 320-323.	C C
Geophysical Hazard Areas 6 AAC 80.050	Known geophysical hazard areas and areas of high development potential in which there is substantial geophysical hazard will be identified.	The areas proposed for limited development are not within known geophysical hazard zones. The alternative which proposes a channel marker in Northwestern Lagoon would enhance boater safety upon crossing the terminal moraine and entering the lagoon.	C
6 AAC 80.060 Recreation	In designating areas for recreational use, priority is given to areas which: 1) Receive significant recreational use or are a major tourist destination. 2) Have potential for high quality recreational use because of physical, biological, or cultural features. 3) Achieve the high priority of increasing public access to coastal water.	The visitor use facilities, as well as the information/interpretive services in all the alternatives would effectively and significantly enhance public access to coastal waters in an area which holds potential for high quality recreation and substantial use due to presence of scenic and biological resources.	C
6 AAC 80.080 Transportation and Utilities	(a) Transportation and utility routes must be compatible with district programs. (b) Transportation and utility routes and facilities must be sited inland from beaches and shorelines unless the route or facility is water dependent or no inland alternative exists.	No transportation or utility routes are considered on beaches or shorelines. Access to and through the area will be based upon water and air transportation modes. All facilities described in the alternatives are water-dependent in that they support or enhance visitor access to, and use of the fjords.	C

ACMP Section	Policy (Condensed from standard)	Evaluation of Preferred and Other Alternatives	Consistency
6 AAC 80.130 Habitats	The habitats identified in this section must be managed so as to maintain or enhance the biological, physical, and chemical characteristics of the habitat which contribute to its capacity to support living resources.	In general, the management directions presented in the plan will serve to maintain the integrity and biological health of coastal habitats. Offshore areas are not within the boundaries of the park; fisheries within these areas will continue to be under ADF&G management which will continue to maintain their viability. The plan's alternatives pose no known potential impacts upon lagoons, wetlands, tideflats, rivers, streams, or lakes within the park. Existing natural circulation patterns, nutrients, vegetation, oxygen levels, and habitat characteristics will not be affected. The NPS will continue to consult with USFWS and the state, as required, to avoid or mitigate impacts of increased visitation upon wildlife and habitat on the islands and the mainland coast of the Kenai Fjords.	C
6 AAC 80.140 Air, Land, and Water Quality	Regulations and procedures of the Alaska Department of Environmental Conservation pertaining to the protection of air, land, and water quality are components of the ACMP.	All standards will be met by the plan's alternatives. Implementation of any significant visitor use or other facilities as provided in the plan, will also require compliance with applicable federal and state laws and regulations regarding air, land, and water quality. Construction will be preceded by environmental compliance procedures pursuant to the National Environmental Policy Act of 1969 and other applicable standards.	C
6 AAC 80.150 Historic, Prehistoric and Archeological Resources	Areas of the coast which are important to the study, understanding, or illustration of national, state, or local history or prehistory will be identified.	The cultural resources management component of this plan calls for the identification, and possible preservation and adaptive use of historic or prehistoric resources which are determined to be of local, state, or national significance.	C

DETERMINATION

The General Management Plan for Kenai Fjords National Park has been evaluated for consistency with the elements of the Alaska Coastal Management Program. It was determined by the National Park Service that this plan conforms with all the requirements of the Alaska Coastal Management Program. This determination was reviewed by the state of Alaska during July 1983, and notification that the plan is consistent with the program's goals was received from the Office of the Governor in a letter dated August 2, 1983.

APPENDIX F: PRELIMINARY COST ESTIMATES

These preliminary estimates of cost should be used only for purposes of comparing alternatives. They are based on conceptual proposals, and each project will require considerable refinement to develop specific design and other criteria and more precise estimates. Each project structure or facility was estimated separately, using the assumption that it would be bid and developed by a private contractor. In reality, a number of projects could be accomplished by park staff and some projects could lend themselves to "packaging" to produce a more viable and more economical project. While some projects could be constructed by the National Park Service, others may be constructed by private concerns.

The following estimates do not include the costs of exhibits, design, construction drawings/document, or construction supervision.

THE PLAN

	Class C Estimate
Public use cabins in the fjords (4)	92,000
Administrative cabins in the fjords	46,000
Storage shed (2)	6,000
Mooring buoys in the fjords (5)	25,000
Channel marker in Northwestern Lagoon	10,000
Visitor station on the Harding Icefield	200,000
Public use cabin at Exit Glacier Area	23,000
New visitor center/headquarters complex in Seward	1,350,000
Headquarters boat and vehicle garage	106,000
TOTAL	$1,858,000

APPENDIX G: FINDING OF NO SIGNIFICANT IMPACT

The National Park Service is proposing to implement the General Management Plan for Kenai Fjords National Park. This plan is intended to guide management of the park for a period of 10 to 15 years and covers all the major topics of park management, including resources management, visitor use, development, and land protection.

The Draft General Management Plan/Environmental Assessment was published and released to the public in May 1983. This document contained two sections that presented approaches to management of the park: the first section was entitled "Management Directions" and the other section was entitled "Alternatives". The first section contained approaches to management of natural and cultural resources, visitor use and development, and administration (management districts, staffing, zoning, state lands within the park boundary, cooperative agreements, and other topics of park administration). The topics addressed in this section did not lend themselves to formulation of reasonable alternatives, and therefore, no alternatives were presented for these topics. The second section presented up to four distinct approaches to addressing each of the following topics: overnight facilities, boating aids, access and visitor use facilities, native corporation lands, remote administrative facilities, and a visitor center and administrative facilities in Seward. A preferred alternative was indicated for each of these topics.

The Draft General Management Plan/Environmental Assessment was available for review and comment by the public and other federal and state agencies from late May until mid August. Public meetings were held in Seward and Anchorage, Alaska. Sixteen letters were received from individuals, private organizations, and federal and state agencies: a letter of consolidated comments from state agencies was also received. Most commentors expressed general agreement with the preferred management presented in the draft plan. Some commentors called for greater detail in discussions about several management topics. Others expressed the idea that the preferred visitor developments in the draft plan were excessive and would be contrary to legislative intent for the park. A recurring comment was that cooperative agreements with owners of major landholdings within the park may not be an effective long-term solution, and that acquisition of lands should be the preferred approach in the final plan.

Based on the information and ideas expressed during the review period and further analysis and consideration by the National Park Service, the final plan is different in several ways from the draft plan. Additional detail was provided for many topics, e.g., approaches to state lands, carrying capacity, regulations, research, and planning for and monitoring environmental impacts. In the draft plan, the preferred alternative was to seek cooperative agreements with landowners; in the final plan cooperative agreements would be sought for the short term, but in the long term NPS would seek acquisition of these private lands. This policy is in accord with the goals of the major landowners within the park.

The major elements of the General Management Plan are programs for the management of natural and cultural resources; management intentions for access and treatment of private and state lands within the park boundary; carrying capacity studies; staffing and other related topics; and development of visitor and administrative facilities. Developments contained in the plan are visitor and NPS cabins in the fjord portion of the park, a visitor station on the Harding Icefield (if demand is demonstrated and studies indicate feasibility), small-scale visitor and administrative facilities at Exit Glacier (previously approved in a separate DCP), and a new or rehabilitated visitor center and headquarters in the town of Seward.

Implementation of this General Management Plan will leave the resources of the park in their essentially unaltered and naturally occurring conditions, although some developments will be provided to facilitate public use and enjoyment of the park and to allow effective management of the park by the National Park Service. Developments proposed in this plan (excluding those previously approved in the DCP for Exit Glacier) will disturb approximately 4 acres of land within the park.

Based on public and agency comment on the Draft General Management Plan/Environmental Assessment, it is believed that there are no substantial controversies regarding this plan, and that the proposals in the final plan do not have the potential to cause significant adverse impacts on the quality of the human environment. Consequently, approval of the plan does not constitute a major federal action that will significantly affect the human environment, so an environmental impact statement will not be required on this plan.

Approved:

Regional Director, Alaska Region — Date: 21 April '84

APPENDIX H: ALASKA LAND USE COUNCIL ENDORSEMENT

ALASKA LAND USE COUNCIL

P.O. Box 120
Anchorage, Alaska 99510

(907) 272-3422

State Co-Chairman
Bill Sheffield
Governor

Federal Co-Chairman
Vernon R. Wiggins

March 28, 1984

Mr. Roger J. Contor
Regional Director
National Park Service
2525 Gambell St., Room 107
Anchorage, AK 99503-2892

Dear Mr. Contor:

At the March 21, 1984, meeting of the Alaska Land Use Council, the Council voted unanimously to endorse the General Management Plan for the Kenai Fjords National Park.

This endorsement is subject to additional comments which may be provided by the State of Alaska.

Sincerely,

Bill Sheffield, Governor
State Cochairman

Vernon R. Wiggins
Federal Cochairman

cc: Mr. Bill Horn, Deputy Under Secretary
Mr. Russ Dickenson, Director, NPS
Mr. Ric Davidge, Office of Asst. Secretary, FWP

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