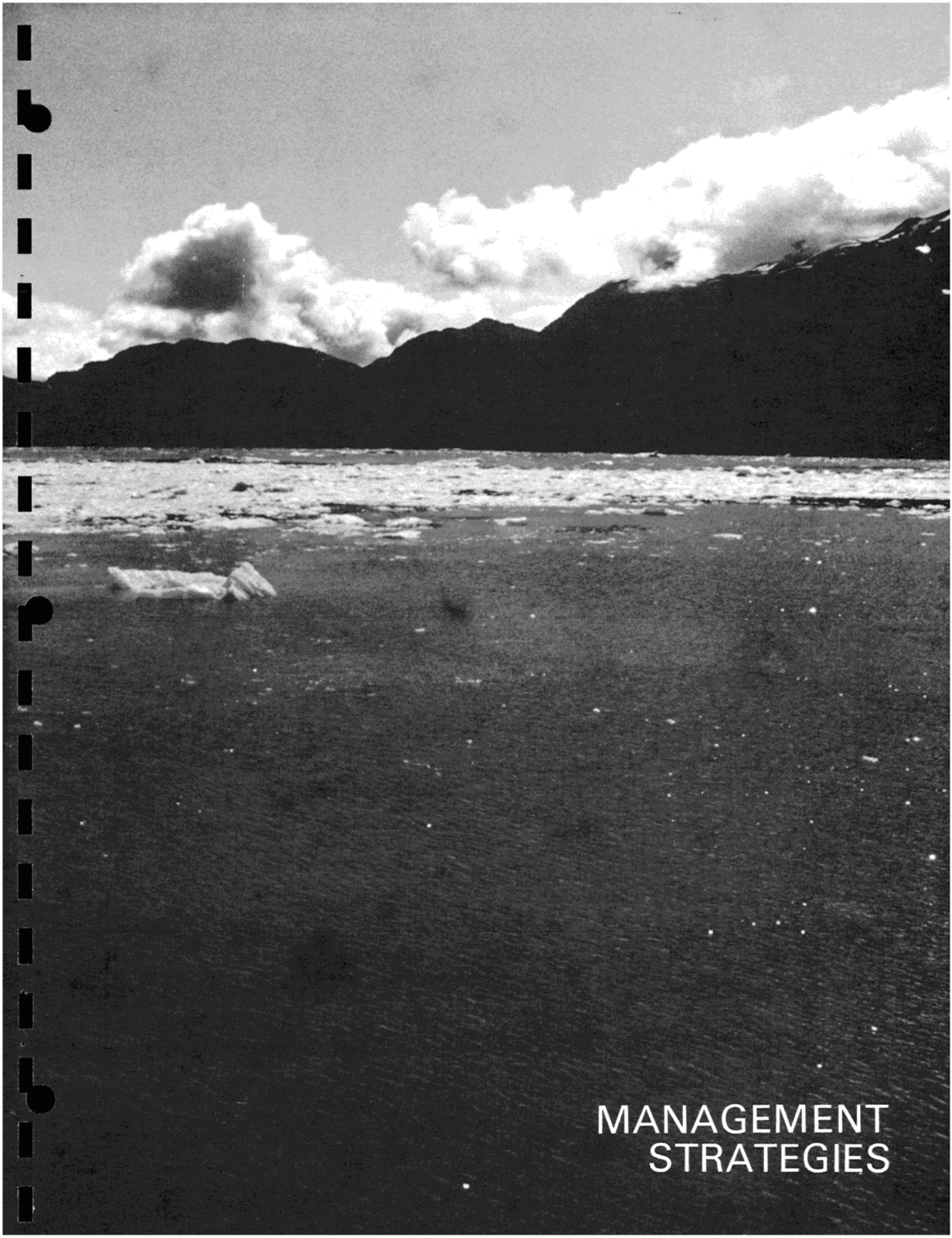

MANAGEMENT
STRATEGIES

NATURAL RESOURCES

The terrestrial resources of Glacier Bay are essentially unaltered by man, and therefore provide an excellent opportunity for research (see Significant Resources map). The area is of great scientific interest because of the records of catastrophic events that have been kept. Extensive ground measurements and photographs of glacier termini have documented this dynamic system, and related long-term studies of vegetation changes have greatly influenced plant succession theory. Continuous study for over 65 years has made Glacier Bay one of the most valuable plant succession study sites in the world. Maintaining this continuity of research is of international importance.

In recognition of the significance of natural resources, this plan reflects a sensitivity to the preservation of the natural scene through compatible and complementary design of facilities. Also cooperative resource planning and management with the state is the subject of a master memorandum of understanding, approved by the Alaska Department of Fish and Game and the National Park Service in October 1982 (see appendix D).

The "Department of the Interior Fish and Wildlife Policy: State and Federal Relationships" (43 CFR 24) further addresses intergovernmental cooperation in the preservation, use, and management of fish and wildlife resources. For the life of this General Management Plan, the Park Service will manage these resources in accordance with the provisions of the memorandum of understanding, departmental policy, and current law.

CARRYING CAPACITIES

The Park Service recognizes the importance of developing carrying capacities for visitor use throughout the national park system to avoid the degradation of natural and cultural resources or the quality of visitor experiences through overuse. The Park Service will work to determine those capacities for Glacier Bay National Park and Preserve and will discuss them in more detail in subsequent action plans.

Resource carrying capacities are usually based on the occurrence or disappearance of threshold phenomena (e.g., the disappearance of certain animal or plant species or rapid decreases in occurrence); they often require extensive onsite research efforts to determine. Sociological carrying capacities, often based on perceptions of crowding, are highly subjective and usually require extensive visitor surveys. Therefore, the development of carrying capacities for Glacier Bay National Park and Preserve will require several years for baseline data to be gathered. At the present time, only one resource carrying capacity (the summer population of humpback whales) and one sociological carrying capacity (a visitor perception of crowding in the upper bay) are being approached simultaneously, and regulations have been promulgated to prevent further impacts (see discussion of vessel use restrictions under "Use and Development").

WILDLIFE MANAGEMENT

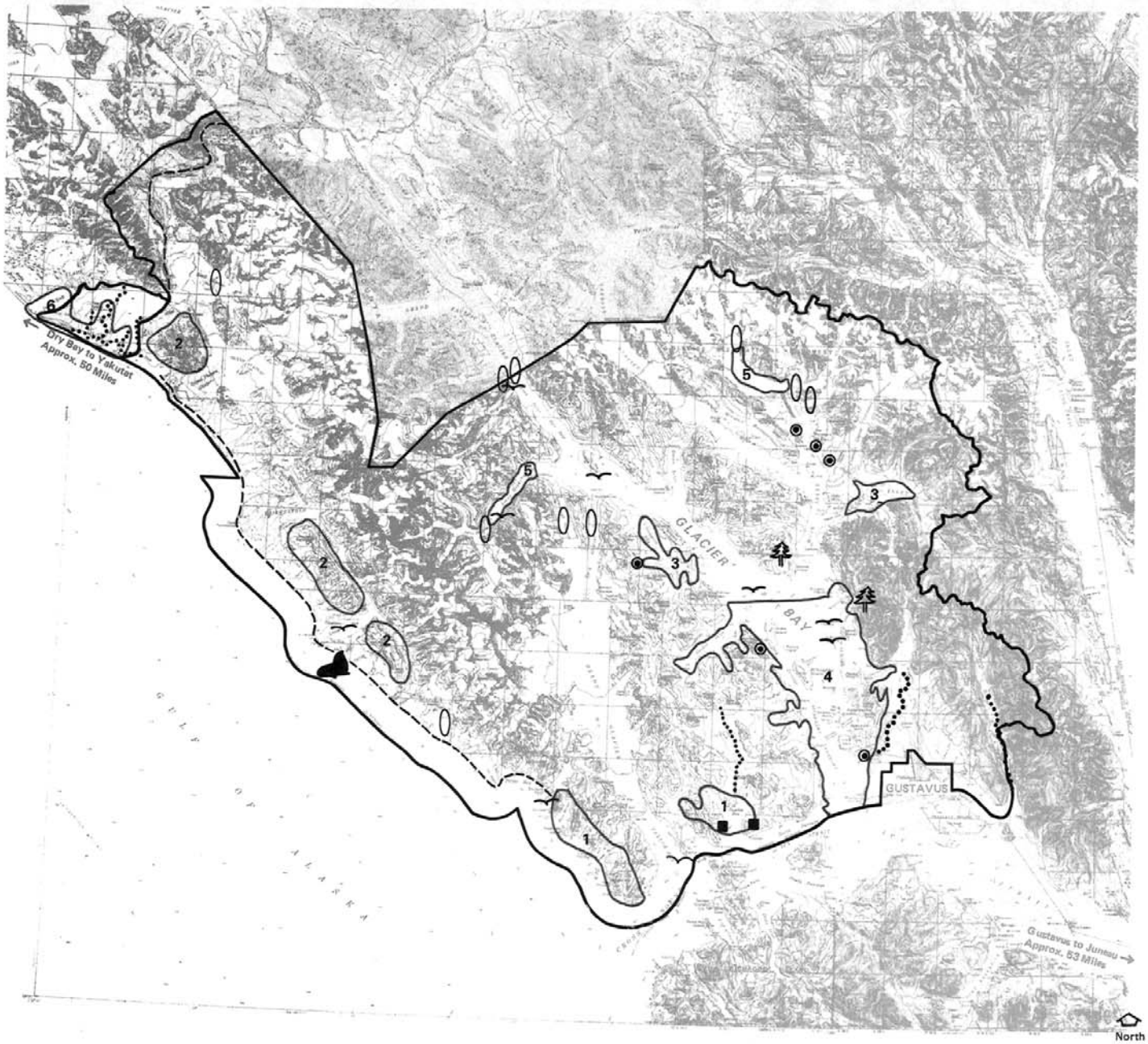
In cooperation with the National Park Service, the state of Alaska is responsible for establishing fishing, hunting, and trapping regulations in the park and preserve and for maintaining healthy fish and wildlife populations, according to state law. The state licenses both commercial and sport fishermen, along with sport hunters, and it sets seasons and bag limits. The Park Service will cooperate with the state wherever possible in setting seasons and limits that are compatible with park and preserve management and philosophy.

Subsistence harvest of fish, wildlife, and related resources on federal lands and waters in Alaska is now controlled by the Alaska Department of Fish and Game under provisions of ANILCA. Under ANILCA, the lands and waters within the national park area, including the 523,000-acre parcel added to the park in 1980, are closed to subsistence uses. Sport hunting, fishing, trapping, and subsistence uses are to be allowed on the 57,000-acre national preserve at Dry Bay and along the lower Alsek River. These uses are subject to state and federal laws. ANILCA requires that such harvest activities remain consistent with the maintenance of healthy populations of fish and wildlife.

ANILCA also requires the park and preserve to be administered by the secretary of the interior for a wide variety of purposes, including the protection of natural fish and wildlife populations and habitats. When the taking of fish and game conflicts with other established purposes of the park and preserve, the Park Service may promulgate regulations concerning consumptive uses and manipulation of resources that are more restrictive than the laws and regulations of the state (Kleppe v. New Mexico, 426 U.S. 529 [1976]). During congressional hearings before the passage of ANILCA, the following policy statement was made:

> It is contrary to the National Park Service concept to manipulate habitat or populations to achieve maximum utilization of natural resources. Rather, the National Park System concept requires implementation of management policies which strive to maintain the natural abundance, behavior, diversity, and ecological integrity of native animals as part of their ecosystem, and that concept should be maintained. . . .
>
> It is expected that the National Park Service will take appropriate steps when necessary to insure that consumptive uses of fish and wildlife populations within National Park Service units not be allowed to adversely disrupt the natural balance which has been maintained for thousands of years. Accordingly, the National Park Service will not engage in habitat mainpulation or control of other species for the purpose of maintaining subsistence uses within National Park System units. (Congressional Record, Aug. 18, 1980, p. S 11135-36.)

The state has provided the Park Service with resource management recommendations for Glacier Bay National Park and Preserve. These recommendations suggest management of game species for sustained-yield harvest. The Park Service cannot adopt such objectives for the park for



1 Rich Biological Estuarine and Rocky Coastline Ecosystems with Diverse Intertidal and Subtidal Marine Life

2 Possible Biological Refugium Unoccupied by Glacier Ice During Wisconsin Time

3 Waterfowl Molting Area (Canada Geese)

4 Area Frequented by Humpback Whales (note: NPS management jurisdiction includes significant marine habitats)

5 Harbor Seal Pupping Area

6 Major Migratory Bird Staging Area (swan wintering area)

Important Salmon Spawning Stream

Wildlife Migration Corridor (outer coast beaches represent a major bird flyway and an important travel route for bears, otters, wolves, and moose)

Active Tidewater Glacier (may be advancing or retreating)

Remnant Forest Above Neoglacial Ice Levels

Interstadial Stumps Uncovered by Retreating Ice

Sea Lion Haul-out Site

Colonial Seabird Nesting Site (other bird nesting areas, including peregrine falcon and bald eagle, scattered throughout coastal zone)

Classified Historic Structure

SIGNIFICANT RESOURCES

GLACIER BAY NATIONAL PARK AND PRESERVE
UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

0 5 10 Miles
0 5 10 15 Kilometers

132 | 20018D
DSC | FEB 84

reasons expressed above and because Glacier Bay National Park is closed to hunting. Such objectives may be adopted for the preserve if management actions do not conflict with the preserve's purpose (i.e., natural succession rather than manipulation of habitats).

The Park Service will continue to permit and cooperate with ADF&G research projects on fish and wildlife populations in Glacier Bay National Park and Preserve that are compatible with the park's management objectives. For example, the National Park Service and the Alaska Department of Fish and Game are cooperating in conducting moose and goat surveys in the Dry Bay area. The Park Service will keep the department informed of other fish and wildlife research to be conducted. The following surveys are examples of ongoing research in Glacier Bay National Park and Preserve that will be continued:

colonial bird-nesting sites
eagle nests
bear habitat
whale sightings
insect infestations

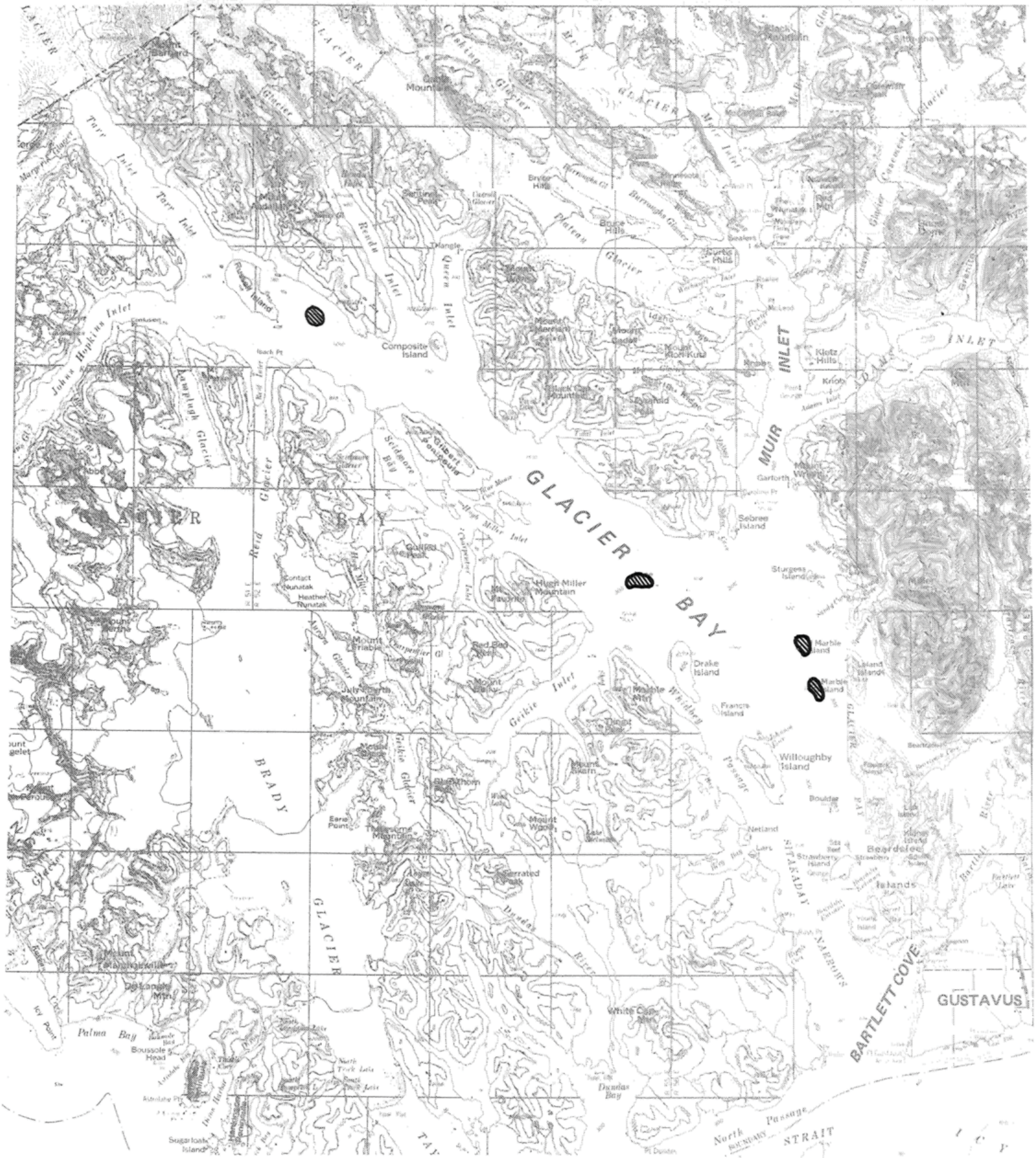
Significant habitat areas such as Adams Inlet, Hugh Miller Inlet, and Dry Bay will be monitored to determine wildlife population trends. Seasonal movements of mammals as well as the significance of the Alsek River as a migration corridor will be evaluated. The Marble Islands and several other small islets will continue to be closed during the bird-nesting season (see Island Closure map). The Park Service will seek permanent closures for these islands during the nesting season.

A specific concern is the potential for bear/human conflicts, particularly along shoreline areas frequented by both visitors and bears. To minimize potential conflicts, and to maintain an undisturbed bear population, existing populations will be evaluated in terms of numbers, general condition, ranges, and habitat use. Also relevant studies will be reviewed to determine habits and behavior of black and brown bears.

Information about food and garbage cleanup and storage will continue to be provided to visitors to prevent conflicts with black and brown bears. Problem bears (those that continually raid campgrounds and campsites, threaten visitors, and do not respond to "scare" techniques) will be treated in a manner consistent with the park's 1978 "Bear Management Plan." For example, there is an electric fence around the fish plant's solid waste facility at Dry Bay. The 1978 plan will be reviewed in cooperation with the Alaska Department of Fish and Game.

During the last few years, harbor porpoise census work has been done in the park. Also research on the population, distribution, and essential habitat for harbor seals will continue to be conducted. Studies have also examined interactions between seals and vessels, resulting in the development of guidelines for tour boat operations in the vicinity of seals.

The endangered humpback whale will be protected through the promulgation of vessel regulations, in cooperation with the National Marine Fisheries Service. (See the discussion of vessel use regulations under "Use and Development.")



Area closed to foot traffic or motorized vessels for resource management

ISLAND CLOSURES

GLACIER BAY NATIONAL PARK AND PRESERVE

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

0 — 10 Miles
0 — 10 Kilometers

North

132 | 20021
DSC | NOV 82

FISHERIES MANAGEMENT

Commercial Fisheries

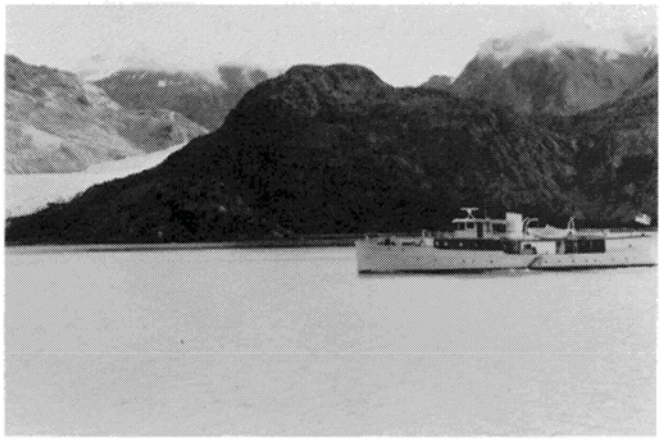
Commercial fishing has been an activity of considerable economic importance in park and preserve waters in recent years. Cross Sound, Icy Strait, the outer coast (Gulf of Alaska), and the Dry Bay vicinity have been the most important areas. Glacier Bay proper, the park's principal visitor use area and the focus of most park visitor activities, is also considered an important fishing area that is used by commercial fishermen when areas closer to home ports are not producing or when weather conditions are favorable. Traditional commercial fishing methods include trolling, long lining and pot fishing for crab, and seining (Excursion Inlet only) in park waters and setnet fishing in preserve waters (Dry Bay area). In addition, several permanent "fish camps" (cabins), many temporary ones, a fish-processing plant, and several airstrips have been developed in the Dry Bay area to support the fishing industry.

The Alaska Department of Fish and Game will continue to regulate commercial fishing in Glacier Bay National Park and Preserve, which is consistent with ANILCA and state law. Traditional commercial fishing practices will continue to be allowed throughout most park and preserve waters. However, no new (nontraditional) fishery will be allowed by the National Park Service. Halibut and salmon fishing and crabbing will not be prohibited by the Park Service. Commercial fishing will be prohibited in wilderness waters in accordance with ANILCA and the Wilderness Act.

The National Park Service, in cooperation with other federal and state agencies, will continue to identify areas where commercial fishing may conflict with other park user groups or may pose a threat of resource damage. For example, commercial fishing for species preyed upon by whales may reduce available food stock, thus detrimentally affecting the endangered humpback whales. The National Park Service, therefore, will continue to prohibit commercial fishing for these species.

Currently, the Alaska Department of Fish and Game reports commercial fish harvest statistics for Glacier Bay combined with those of a portion of Icy Strait and Cross Sound. The National Park Service will continue to work with the department to establish Glacier Bay as a separate statistical reporting unit or subunit for all species taken in the park. Catch data for Glacier Bay specifically will provide excellent reference for changes in fisheries and natural effects of the evolution of marine ecosystems as they continue to occur following the retreat of tidewater glaciers.

If such a realignment of statistical units is not feasible, the Park Service may establish a registration system for all commercial fishermen using Glacier Bay proper. This would allow data to be gathered for management information and analysis; a cooperative system with the Department of Fish and Game is preferable. The system would require only registration and catch reporting and would not be a limited permit system. The Park Service and Department of Fish and Game have already agreed to a memorandum of understanding for mutual review and analysis of regulations, harvest quotas, and other matters related to the



management of park and preserve ecosystems (see appendix D). Other cooperative efforts will be pursued with the National Marine Fisheries Service and the International Pacific Halibut Commission.

To achieve the intent of ANILCA and other NPS mandates, the National Park Service will manage resources and visitor use so as to maintain habitats and natural and healthy fish populations. The Park Service will not allow the introduction of nonnative species or hatchery fish, lake fertilization, or the erection of artificial fish passageways on NPS lands. NPS guidelines allow for the maintenance of established fish migration routes and spawning areas. Use of park salmon brood stocks for enhancement activities outside the park boundaries may be permitted on a case-by-case basis.

ANILCA and the Wilderness Act prohibit the commercial exploitation of natural resources in areas officially designated as wilderness by Congress. Therefore, following promulgation of regulations, the National Park Service will prohibit commercial fishing in all current wilderness waters, specifically including Rendu Inlet, Hugh Miller Inlet (also including Scidmore Bay, Charpentier Inlet, and Weird Bay), Adams Inlet, the Beardslee Islands, and the northwest arm of Dundas Bay. Except for the Beardslee Islands, these areas represent developing estuarine systems where limited commercial fisheries exist. They are inhabited by a variety of marine life and provide important breeding and brooding habitat for marine mammals and birds. Their scenic settings offer a primitive recreational opportunity for park visitors. Areas designated in the future as wilderness by Congress will also be removed from commercial fishing. Those areas removed from wilderness will be reopened to commercial fishing.

The National Park Service will conduct or encourage studies of biological features such as kelp bed dynamics, fish and shellfish communities, and animal behavior such as territoriality and migration. Surveys of salmon-rearing streams and intertidal habitat will continue.

Sport Fisheries

Sport fishing is highly important to the Alaskan way of life. This use in Glacier Bay has been fairly stable over the past five years, after a rapid increase for the previous 10 years because of the construction of the Glacier Bay Lodge and the growth in visitor use. Anglers include local residents and visitors who fish from private or charter fishing vessels that enter the bay under permit. Such fishing pressure occurs primarily in the lower bay, from the entrance northward through Sitakaday Narrows into the mid-bay area. The taking of salmon and shellfish, including crabs, for personal use is considered a "sport" use by the Park Service and is also a traditional use in Glacier Bay.

Sport fishing will continue to be allowed subject to ADF&G and NPS regulations. Sport harvest of any aquatic species threatened by excessive harvest pressure may be regulated in the future. However, the National Park Service will work closely with the Alaska Department of Fish and Game for the establishment of such regulations. Stream surveys

will be conducted by the Park Service or the Department of Fish and Game to ascertain their importance as spawning rivers. No fisheries enhancement will be provided within park and preserve boundaries.

VEGETATION MANAGEMENT

Subsistence collection of plants (stems, roots, leaves, and flowers) for food will be allowed in the preserve. Fruits and berries, as specified by the superintendent, may be picked in the national park and preserve for personal consumption.

Population trends of the spruce bark beetle will be closely monitored. Approximately 4,000 acres within the lower area of the bay contain significant amounts of dead and defoliated Sitka spruce. Standing diseased or dead trees within the developed area of Bartlett Cove will be closely evaluated and removed if they are considered hazardous to park resources, visitors, employees, or adjacent landowners. The removal of dead trees will substantially reduce the probability of wider infestation by the spruce bark beetle in the developed area.

In accordance with NPS policy and ANILCA, no timber harvest, commercial or otherwise, will be allowed on park lands. The Park Service will not use park timber for construction materials. Salvage of beach logs will not be allowed within the former Glacier Bay National Monument boundaries. However, if nonpark resources in the future cannot provide sufficient firewood for local use, the National Park Service will consider salvage of beach logs in designated areas.

The Glacier Bay region has no history of significant wildfire. Because of the high precipitation, moist ground conditions, and climate, natural and man-caused fires are infrequent and insignificant. Therefore, no detailed fire management plan is necessary. Fires in developed areas resulting from unusually dry conditions will be suppressed. Naturally caused fires in wilderness areas will not be suppressed unless they threaten adjacent lands and development.

Exotic plants may be eradicated in the Bartlett Cove developed area, although no formal program is necessary. Road rights-of-way in the preserve may be cleared periodically to maintain user safety.

CULTURAL RESOURCES

The majority of cultural resources in Glacier Bay National Park and Preserve are archeological. The few recent historic resources are in an advanced state of decay due to the wet climate. In addition, the legendary landscape of the native peoples is an intangible cultural resource.

Archeological remains, while often difficult to locate because of the extremes in terrain and dense vegetation, represent cultures in southeast Alaska throughout man's prehistory on the continent. Some of the archeological sites in Glacier Bay may prove to be extremely important in deciphering the early prehistory of the New World.

The few historic period resources that do remain are of some local and typological interest for interpretive purposes and for the study of reciprocal impacts between the dynamic environment and human users, but these remains are generally in poor condition or are inaccessible. Other historic themes are secondary and are well represented elsewhere in southeast Alaska.

Because most cultural resources are either in a generally poor condition, or are inaccessible, management emphasis will be on the dynamic natural setting of Glacier Bay rather than on its human artifacts. Therefore, no specific "historic zones" will be designated because such designation will not aid in the management of resources.

Management actions taken over the next 10 to 15 years will supplement the cultural resource data base as follows:

A comprehensive plan will be initiated to evaluate prehistoric resources of Glacier Bay. This will be accomplished by first identifying all significant archeological sites and then by conducting selective archeological investigations in typical, environmentally stable areas to help develop a more thorough overview of the prehistory. Significant archeological sites or districts will be nominated to the National Register of Historic Places.

In-park compilation of ethnohistorical and historical data will be continued for interpretive purposes, with concentration on observations of and reactions to Glacier Bay's natural phenomena. Tlingit history (ethnography and ethnology) will be incorporated into interpretive programs and displays.

Subsistence studies, evaluations, and recommendations will be completed in conjunction with fisheries investigations of the Dry Bay area and in cooperation with the Alaska Department of Fish and Game.

The park maintains a list of classified structures (LCS) that describes significant buildings within the park. The list will be updated as necessary to add or delete properties. Existing and potential LCS properties will be evaluated for adaptive use or

interpretive potential. Structures identified for "passive" protection or benign neglect will be photographed, recorded, marked as necessary, and allowed to deteriorate. Active preservation of historic remains within Glacier Bay National Park and Preserve is not in the best public interest because of the expense involved and the limited significance of the resources, their deteriorated condition, and their inaccessibility.

Continuing cultural resource surveys and clearances/mitigations will be conducted to avert resource damage by park development projects (special surveys may be necessary for mining program clearances).

If through future conveyances private inholdings are acquired, they will be surveyed for historical, architectural, archeological, and contemporary native American resources before decisions or actions are taken that may affect them.

Development proposals that relate to cultural resources will reflect a sensitivity to the preservation of the historical/cultural scene through compatible and complementary design. All developments with potential for ground disturbance will be preceded by archeological clearances. Before proposals with potential for impacts on traditional sites are approved, local native Americans will be consulted. Projects will be designed to avoid or to have minimal adverse effects on cultural resources.

ARCHEOLOGICAL SITES

The protection of archeological sites and districts will be based on historic preservation laws, NPS policies and standards, and professionally accepted techniques.

Sites will be recorded, selected sites will be monitored to determine continuing natural and human impacts, selected sites will be tested to evaluate them and plan further preservation actions, and data will be recovered at sites that could be affected by development or use. All data recovery, such as controlled surface collection and excavation, will be done according to current NPS policies and professional standards. Data recovery will also be designed to obtain the most information with the least destruction of archeological resources.

Inholdings or other areas that may be transferred that are not specifically covered by current archeological inventories will be surveyed. This information will be used to plan protection or preservation actions, if needed. Although current inventory surveys have increased the knowledge of Glacier Bay archeological resources, considerably more work remains to be done. Archeological resources near campsite locations and trails will need to be evaluated for the possible monitoring and mitigation of human or natural indirect impacts.

Surface collection will be undertaken to professionally record and preserve artifacts that may be subject to adverse impacts because of vandalism or proposed development actions. This surface collection will be conducted only by a professional archeologist, who will determine whether this activity meets existing professional and NPS standards.

HISTORIC STRUCTURES

Historic structures and sites, such as native villages, historic cabins, or trails, will not be reconstructed. Interpretation for visitors will be provided through other techniques.

Certain stuctures on the park's list of classified structures (the Dundas Bay cannery, ramp, and boiler, and the Harbeson cabin and woodshed) will not be preserved because of relatively low historical significance, advanced deterioration, and excessive costs. These structures will be recorded and allowed to deteriorate naturally, with their sites eventually reverting to a natural condition. Some removal of hazardous elements may be necessary for safety and to avoid an attractive nuisance. Park users will be alerted to the potential hazards associated with these structures, which are chiefly in the backcountry and have value as "discovery" sites. All work will conform with management policies and compliance requirements.

The Muir cabin site at Muir Point will be permanently marked and recorded. The site will be commemorated through interpretive means.

The archeological deposits at historic sites will be clearly identified. Any actions affecting them will be designed for minimal adverse effect and will be preceded by professionally adequate data recovery.

CONTEMPORARY NATIVE AMERICAN CONCERNS

To keep communication open and to provide for an exhange of concerns, the Park Service will maintain a dialogue with the Tlingit people. The ongoing identification of areas of sacred and traditional importance to local native Americans will be continued by professional archeologists and anthropologists. As new information is obtained, it wll be added to the confidential inventory of these sites. Measures will also be taken to ensure that mutually acceptable methods of protection and preservation are adopted, in conformance with NPS management policies and legislation.

Input and active participation in methods to interpret native American culture will be encouraged.

If local native Americans wish to sell crafts, the Park Service will encourage concessioners to develop outlets for their work.

COLLECTIONS

Park collections, consisting of records, a library and archives, and museums, will be managed in accordance with the park's "Scope of Collections Statement" and relevant NPS guidelines and policies.

LAND PROTECTION

WILDERNESS SUITABILITY REVIEW

ANILCA designated 2,770,000 acres of Glacier Bay National Park as wilderness, under conditions of the 1964 Wilderness Act. This accounts for almost all of the land area within the park. The Bartlett Cove developed area, Blue Mouse Cove, Cenotaph Island, and an area on the south shore of Alsek Lake are the major exceptions. Five marine areas are also designated as wilderness--Rendu Inlet, Hugh Miller Inlet (including Scidmore Bay, Charpentier Inlet, and Weird Bay), Adams Inlet, the northwest arm of Dundas Bay, and the area within the Beardslee Islands. Section 1110 of ANILCA allows "the use of snowmachines, . . . motorboats, airplanes, and nonmotorized surface transportation" on public lands designated as wilderness. These uses are subject to reasonable regulation "to protect natural and other values."

The following proposals represent the results of a wilderness suitability review conducted during the general management planning process, as required by ANILCA. The proposals are based on alternatives discussed in the Draft General Management Plan/Environmental Assessment, but they have been modified to reflect suggestions from the public, organizations, and governmental agencies. Because these changes were not discussed in their current format in the draft plan, subsequent documents in compliance with the National Environmental Policy Act (NEPA) will be developed by the Park Service for public/agency review before the final recommendations are submitted to Congress. These changes, which are shown on the Land Status and Wilderness Recommendations map (back pocket), include the following:

Alsek Lake--Alsek Lake should be redesignated as park wilderness, representing a wilderness addition of approximately 8,400 acres. No changes in current use restrictions are recommended except that no motorized vessels should be allowed on the Alsek River above Gateway Knob.

Deception Hills--This area should be redesignated as preserve wilderness rather than park wilderness. No change in designated wilderness acreage would be necessary (see discussion of park/preserve boundary change below).

Beardslee Islands--The entire marine area surrounding this island group should be redesignated as park nonwilderness. This would result in the deletion of approximately 18,400 acres of designated wilderness waters, and it would allow for the continuation of traditional commercial fishing in the Beardslees without affecting current use.

Muir Inlet and Wachusett Inlet--These two inlets should be redesignated as park wilderness, representing a wilderness addition of approximately 30,900 acres. This action would consolidate the majority of park wilderness waters in one area. A limited number of motor vessels would continue to be allowed in Muir Inlet, but Wachusett and Adams inlets would be closed to motorized use to

preserve the scenic setting and to provide a primitive recreational opportunity for park visitors. Motor vessels might be phased out over a period of years. The wilderness designation would protect marine environments from motorized vessel use and provide for ecological research relating to the reestablishment of salmon-rearing streams. Impacts on traditional commercial fishing would be minimal.

Hugh Miller Inlet--This 1,660-acre marine area should be deleted from wilderness designation to allow for traditional commercial fishing at the mouth of the inlet, which would not affect the wilderness character of interior waters. Scidmore Bay, Charpentier Inlet, and Weird Bay would remain in wilderness status.

Dundas Bay--The entire bay should be redesignated as park nonwilderness, resulting in approximately 6,300 acres being deleted from marine wilderness. This would allow for the continuation of traditional conmmercial fishing access without visitor impacts because little or no visitor use is now made of the bay.

PARK/PRESERVE BOUNDARY CHANGES

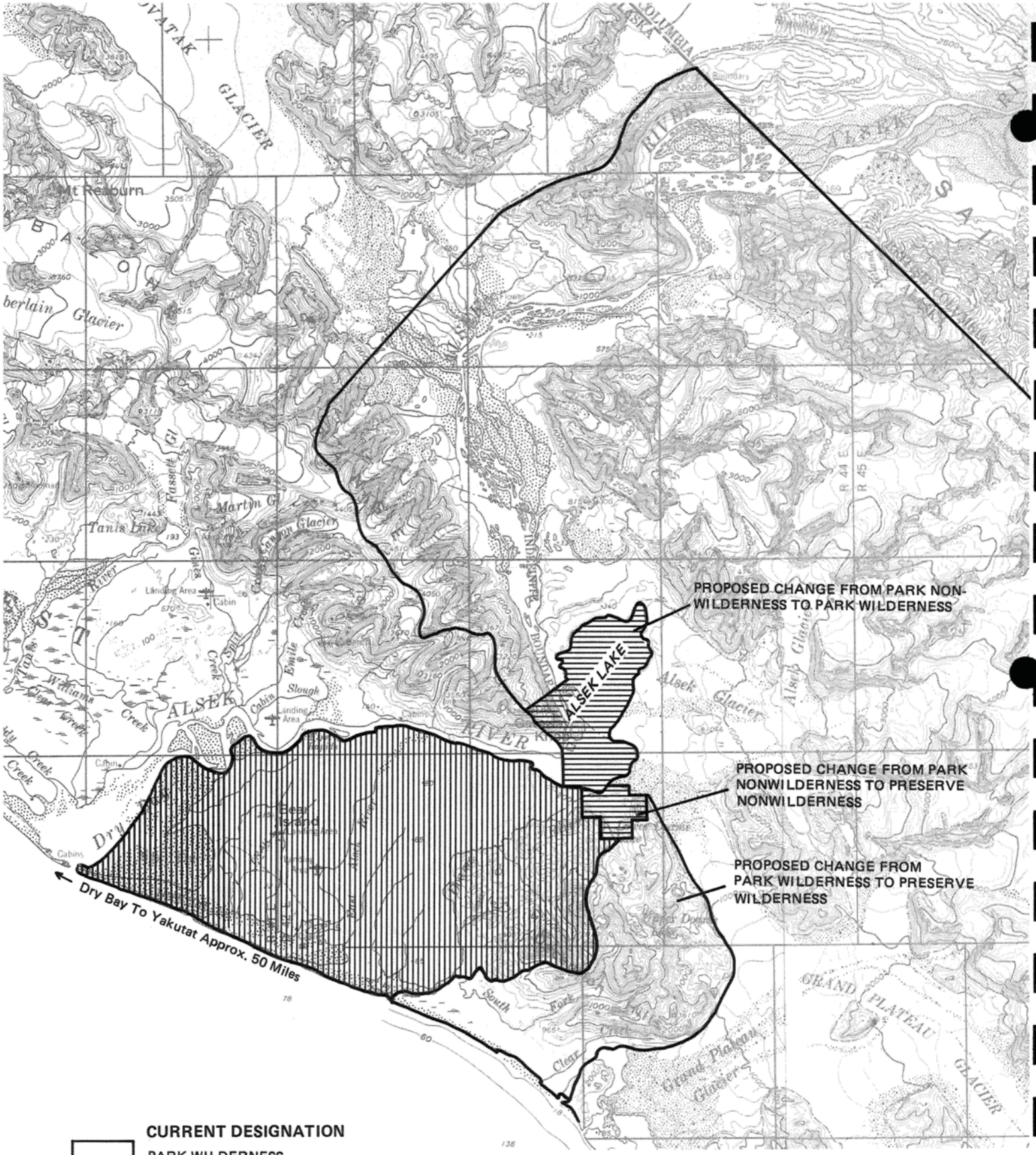
In the Dry Bay area, the eastern boundary between the preserve and the park, as established by ANILCA, divides an area used by bears and moose, both of which are traditionally taken by sport hunters in the area. This boundary is extremely difficult to locate in the field. In the past, motorized surface vehicles have been used for access by hunters with commercial guides. This type of use is not permitted in park wilderness areas, according to section 1110 of ANILCA. Therefore, the Park Service proposes that the park boundary be moved southeastward to follow the easily discernible western extreme of the Grand Plateau Glacier. This action would add about 24,000 acres to the preserve. Wilderness designation for the new preserve area should be retained. Under the provisions of ANILCA, preserve wilderness may be managed for motorized access and hunting (see Proposed Park/Preserve Boundary Changes map).

The National Park Service is considering, as a separate issue, a 14,000-acre land exchange with the state of Alaska for state-owned lands within Wrangell-St. Elias National Park and Preserve. As a part of this transfer, approximately 6,000 acres of park lands in the Gustavus area would be transferred to the state. These lands consist of upland areas adjacent to existing developed lands and 1,900 acres of submerged lands. This parcel also includes an area that has been identified as a potential site for a hydroelectric generating facility for Gustavus and Bartlett Cove (see discussion under "Non-NPS Projects"). This proposal could result in the deletion of 6,000 acres of designated wilderness.

MANAGEMENT ZONING

Park Zones

Five categories will be used to zone Glacier Bay National Park: nonwilderness waters, wilderness lands, wilderness waters, development,



Proposed PARK/PRESERVE BOUNDARY CHANGES

GLACIER BAY NATIONAL PARK AND PRESERVE

UNITED STATES DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

ON MICROFILM

132	20020C
DSC	FEB 84

and special use. Any zone may be subdivided to meet management needs or to further delineate future resource areas. The locations of the zones at the time of the release of this plan are shown on the Management Zoning map. Congressional action will be necessary for some of the wilderness revisions, boundary modifications, and land transfers recommended in this plan.

Nonwilderness Waters Zone--This zone will include most of the marine waters of Glacier Bay National Park and Preserve. Restrictions on vessel use will be promulgated as a result of past and ongoing whale research.

Wilderness Lands Zone--Most of the land area in the park will be included in this zone. It will be managed in accordance with the Wilderness Act, ANILCA, and NPS wilderness management policies.

Wilderness Waters Zone--This zone will include the areas of Muir, Wachusett, and Adams inlets and the Hugh Miller Inlet complex. Special management considerations for wilderness waters are discussed under "Fisheries Management."

Development Zone--Lands in this zone will be managed for park development and intensive public use that substantially alters the natural environment. Parking lots, public roads, buildings, and park utilities will be included in this zone.

Special Use Zone--This zone will include lands and waters to be used by other agencies or interests for purposes not permitted in the other zones. These include two valid mining claim groups (zones for mining operations may be adjusted to site needs described in NPS-approved plans of operations). The Sitka Southeast Telephone Company has a special use permit for servicing and maintaining the telephone system between Bartlett Cove and Gustavus. The U.S. Coast Guard has a special use permit authorizing maintenance of existing navigational aids. Special use permits are also provided for the Dry Bay fish camps and processing plant.

Preserve Zones

Glacier Bay National Preserve will be zoned into the following three categories, in addition to the nonwilderness waters zone described above:

Special Use Zone--This zone will be the designated area for temporary fish camps during commercial seasons. Also sites for support activities for commercial fishing will be authorized in this area.

Wilderness Zone--Lands in the Deception Hills area now designated as park wilderness will be redesignated as preserve wilderness.

Natural Zone--All the remaining lands in the preserve will be included in this zone.

MINING CLAIMS

The 1976 Mining in the Parks Act (16 USC 1901) repealed former mineral entry provisions within Glacier Bay and several other national park system areas. The act instructed the National Park Service to survey mining claims within these areas to determine their validity. At that time there were 212 recorded claims. The survey has been completed, and the report to Congress notes only two valid claim groups (NPS 1979b). One group lying beneath the Brady Icefield and known as the Nunatak lode claim group has 20 patented claims (400 acres) for nickel and copper. The other claim is the unpatented LeRoy No. 1, a small gold claim near Ptarmigan Creek in Glacier Bay's west arm.

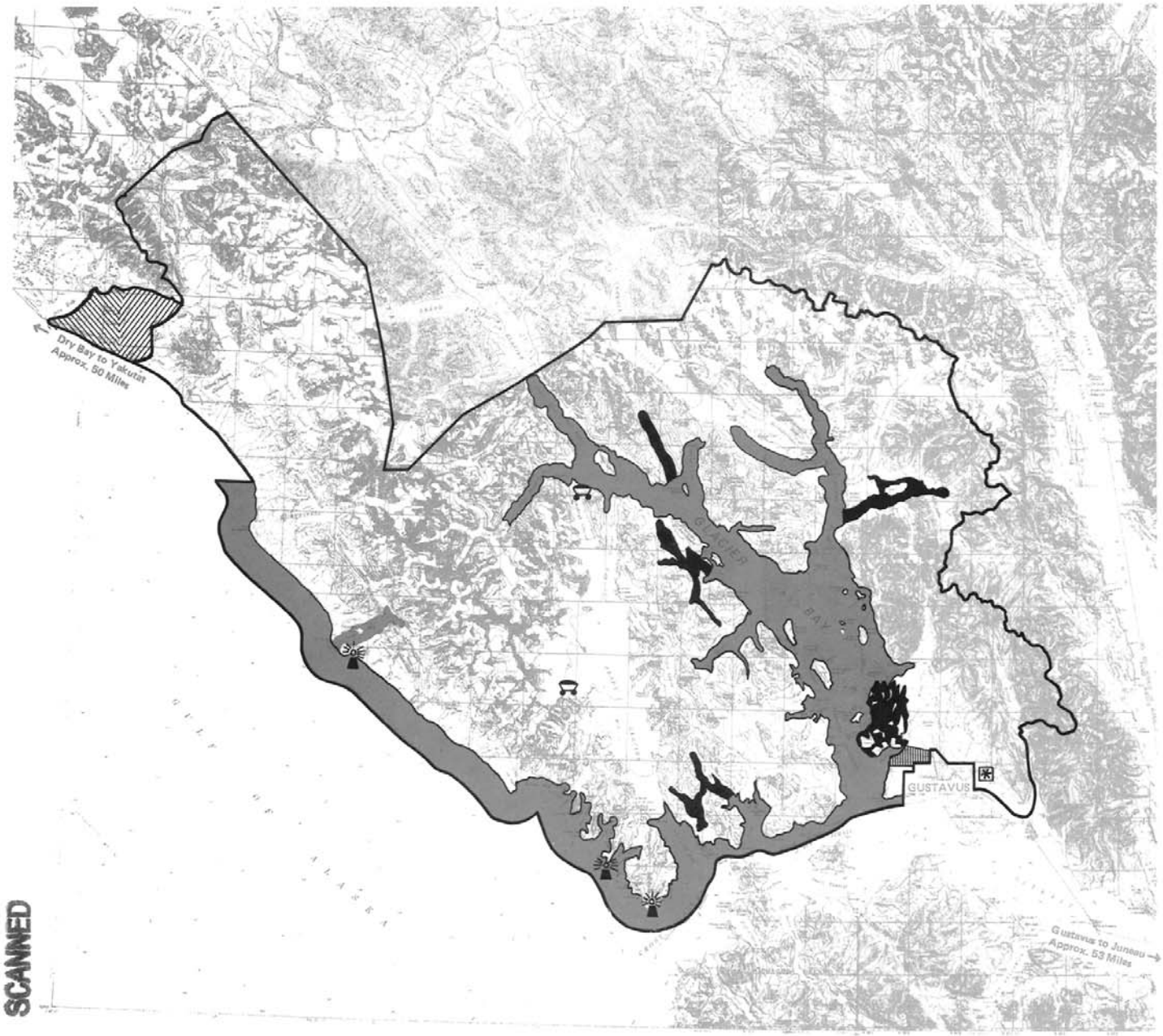
Several other mineral claim groups declared invalid as a result of the survey are in various stages of adjudication. One of the largest claim groups involves 134 placer locations north and south of Lituya Bay.

All valid claims fall under comprehensive regulations affecting mining activities, as specified in 36 CFR 9a. New access provisions resulting from the provisions of ANILCA are in 36 CFR 13.15. Currently, the LeRoy No. 1 claim is being operated under an NPS-approved plan of operations on a season-by-season basis. Such plans must be approved prior to the operation or sampling of any other valid claim. The Park Service will investigate land exchanges as a method of acquiring extraction rights from holders of valid claims.

PRIVATE LANDS AND OTHER PROPERTIES

Two private tracts of land encompass approximately 198 acres on the shoreline near Gustavus. The land has been logged in the past, is unimproved, and is used on a limited basis. No acquisition of these properties by the National Park Service is deemed necessary at this time.

The Bureau of Land Management has recently decided to review the files on 21 Alaska native allotment claims (2,926 acres), and a private tract of 147 acres near Point Gustavus was recently awarded as a native allotment. This review, which may take several years, has been brought about by a new determination of the regulations concerning use and occupancy. The claims are for 80- to 160-acre sites and are located in Excursion Inlet, Dundas Bay, and Glacier Bay proper (see Land Status and Wilderness Recommendations map). Following the review, the National Park Service will analyze potential impacts on park resources of any allotments conveyed to claimants. Before December 1985 a land protection plan will be prepared to ensure satisfactory protection of conveyed or adjacent lands. Such a plan will address all nonfederal lands within park boundaries. It will describe management intent for the protection of park resources, and it will evaluate all feasible land management strategies, such as scenic easements, land bank agreements, cooperative agreements, and fee acquisition. The plan will emphasize alternatives to fee acquisition where practicable, in accordance with Department of the Interior land protection policy.



PRESERVE ZONES

- SPECIAL USE
- NATURAL

PARK ZONES

- NONWILDERNESS WATER
- WILDERNESS LAND
- WILDERNESS WATER
- DEVELOPMENT
- SPECIAL USE
- PRIVATE (INHOLDINGS)

Note: Recommended changes for wilderness designations are shown on the Land Status and Wilderness Recommendations map. If such changes are effected by Congress, management zoning will be changed.

MANAGEMENT ZONING

GLACIER BAY NATIONAL PARK AND PRESERVE
UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

North

0 5 10 Miles
0 5 10 15 Kilometers

132	20017C
DSC	FEB 84

The locations of private lands and native allotments are shown on the Land Status and Wilderness Recommendations map (in the back pocket).

NON-NPS PROJECTS WITH POTENTIAL EFFECTS ON THE PARK

Establishment of ferry service to Gustavus, by way of the Alaska marine highway system, has been considered by the state. If such service was provided, the number of vehicles and visitors would increase at Bartlett Cove. This increase would tax the capacity of the existing and planned roads and facilities well beyond design limits. Therefore, the development of vehicle ferry service to Gustavus should not precede the development of adequate lodging, fueling, and other services by private interests. If ferry service was provided to Gustavus, a park-and-ride operation from that area to Bartlett Cove could be established. However, additional analysis would be necessary to determine whether adverse impacts might result from such a service. That analysis should be conducted cooperatively by the Park Service, the Alaska Department of Transportation, and the community of Gustavus.

The state of Alaska has held hearings on a proposal to construct a highway east of the park that would run along the west side of Lynn Canal and connect with a proposed shuttle ferry system operating from Juneau to Haines. It is unclear how such a road would affect resource management or visitor use. Because the terrain between the proposed road and the park is steep and rugged, it seems backcountry visitors would be predisposed to gain access from the east instead of the west. If the highway was built, the Park Service would analyze potential impacts of the project and modify this General Management Plan accordingly, if necessary.

Within the last few years the state has sold lots in the Gustavus area, and the year-round population of 80 to 100 (summer population approximately 250 to 300) is expected to grow, with some impacts on park areas and facilities near the boundary.

A proposal has been made to develop a small hydroelectric plant at Fall Creek, just inside the park boundary near Gustavus (see Management Zoning map). The U.S. Army Corps of Engineers has initiated a feasibility study for this project. The study was scheduled for completion in May 1983; however, a final report has not been received. If the project is feasible and desirable to Gustavus residents, Congress may approve such use of the water. A hydroelectric power plant could affect the population growth rate of Gustavus, and it could affect park operations. Potential effects on the park would be separately evaluated before any final decision. The site of the power plant is included in the NPS Gustavus land package being considered for exchange with the state of Alaska for state-owned lands within the boundary of Wrangell-St. Elias National Park and Preserve.

USE AND DEVELOPMENT

INTERPRETIVE PROGRAMS

Major interpretive objectives and themes are contained in the park's 1976 "Interpretive Prospectus." The primary goal is to foster in visitors an understanding of the dynamic relationship of glaciation and biological succession. Secondary themes include the interpretation of individual plant and animal species and human history. However, the interpretive program will also help achieve management objectives by providing for visitor safety and resource protection. Overall, interpretive efforts will continue in the direction and intensity of existing programs, as described below.

A unique aspect of the Glacier Bay interpretive program is the provision of personalized interpretation to 80 percent of the park visitors at the site of the park's major resources. This is accomplished by NPS interpreters on board both commercial cruise ships and tour vessels. Such interpretation is a living and traveling experience, with minimal impacts on the resources. The cooperative program with the cruise ship companies allows seasonal interpreters to board ships for a full day of interpretive programs (10-13 hours). Interpreters use the public address system, meet informally with passengers on deck to answer questions, and present movies and slide programs. Modular displays that can be carried on board and used to give a better overview of Glacier Bay's dynamic processes are being prepared by the Harpers Ferry Center. New publications concerning the park and a film on glacial processes are also being prepared.

Interpretive programs offered on concessioner vessels are much the same as those offered on cruise ships. Glacier Bay Lodge, Inc., operates the Thunder Bay, a daily tour boat, and the Glacier Bay Explorer, an overnight vessel. Interpreters will be aboard the overnight vessel operated by Glacier Bay Yacht Tours in 1985.

These in-depth interpretive services will be continued. As before, cruise ship and tour boat operators will be encouraged to make donations to defer NPS expenses, including salary and transportation costs to and from the cruise ships or tour boats.

Interpretive activities in the Bartlett Cove area will continue to center around the lodge and campground, as described below under "Bartlett Cove Development Concept." Existing services include exhibits within the lodge, guided and unguided nature trails and walks, and auditorium programs. There are two signed and maintained trails in the Bartlett Cove area (see Visitor Access map). The forest trail begins in the lodge area, connects to the campground, and returns along the shoreline. Daily guided walks are provided along this trail. The Bartlett River trail passes through the rain forest and then follows the river for 1½ miles. These trails will continue to be maintained and upgraded as required.

Information about how to minimize impacts of use will continue to be distributed to backcountry users. A video program to be shown at the Bartlett Cove visitor contact station is being developed for this purpose.

Curatorial space will be provided in the present maintenance shop once it has been remodeled as an administrative building. Collected and stored items will include both natural and cultural specimens and artifacts, as described in the park's approved "Scope of Collections Statement."

Interpretive programs outside the park, such as school presentations in local communities, will include informal discussions with residents of Elfin Cove, Hoonah, Pelican, Yakutat, Juneau, and other communities. Canadian cooperation will be sought for interpreting natural features along the Alsek River.

The Glacier Bay Agency of the Alaska Natural History Association has sales outlets at Glacier Bay Lodge, on cruise ships, and at the Bartlett Cove information station. Annual sales in 1983 were approximately $53,000. The association staff consists of a year-round business manager and a seasonal employee.

The association aids the National Park Service in its interpretive and visitor services and other operations by developing and printing interpretive sales materials on Glacier Bay and other NPS areas. It also prints an annual interpretive newspaper, brochures listing visitor activities, and other free information; the association donates publications for visitor information on the concession-operated tour boats. Another service is the sponsoring of an annual photo contest to get slides for NPS use. Funding is provided for a "minimum impact" program given to campers, for purchasing library, museum, and interpretive materials, for supplemental interpretive staff at the lodge and on cruise ships, for film processing for interpretive use, and for other purposes. The association requires work space for one employee plus about 250 square feet of stock storage on site.

A joint U.S. Forest Service/National Park Service visitor information station is currently operated in the Centennial Building in Juneau. This contact function will be continued. As required by ANILCA (sec. 1305), the Forest Service, Park Service, and state are conducting a study to determine the best location for an interagency visitor center in southeast Alaska.

COMMERCIAL VISITOR SERVICES

Section 1307 of ANILCA states that persons who on or before January 1, 1979, were adequately providing visitor services may continue to do so under certain terms and conditions, as long as the services are consistent with the reasons for which the area was established.

A 10-year concession contract with Glacier Bay Lodge, Inc., ending in January 1986, provides for overnight accommodations, meals, beverage service, charter fishing service, and scheduled bay tours by two tour boats. The National Park Service owns the lodge, cabins, and all internal facilities and equipment, and the concessioner owns the quarters used by its employees. This contract must be renewed or renegotiated before 1986.

Aerial sightseeing tours are provided from Bartlett Cove and Gustavus by Glacier Bay Airways and from Yakutat by Gulf Air Taxi under concession permits (see Visitor Access map). The permit for Glacier Bay Airways authorizes booking services in the lodge and onsite advertisement. Use of Glacier Bay Airways by the National Park Service for search and rescue, patrolling, and resource management needs is facilitated because of the desk location in the lodge, making communications faster.

Kayaking and backpacking trips are offered by Alaska Discovery, Inc., under a concession permit (see Visitor Access map). Trips vary from three to 10 days. These services will be continued.

Guided sport fishing and hunting trips are available in the preserve.

At present, six U.S. companies operate commercial river trips on the Alsek River under concession permits. Because much of the river is within Canada, an interim river management plan for the Alsek River allows for 16 U.S. and 16 Canadian commercial trips each year. Cooperation will also be maintained with the Alaska Department of Fish and Game, which manages commercial fishing on the river at Dry Bay.

BACKCOUNTRY USE

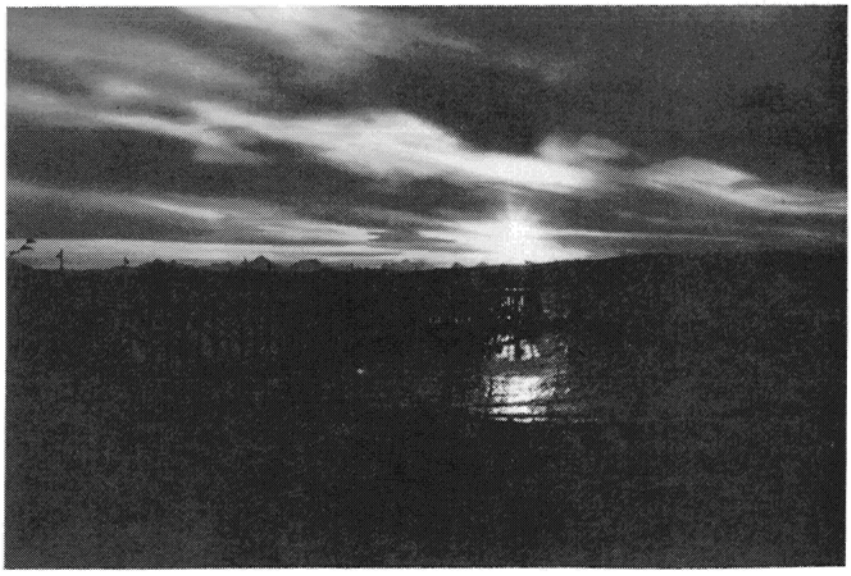
Access to the backcountry is primarily by charter airplane, charter boat, kayak, and concession-operated tour boats (see Visitor Access map). Kayaks are becoming more popular as a means of travel in the park and can be rented locally with or without guide service from Alaska Discovery, Inc., an NPS concessioner. During 1981 there was a significant increase in kayakers, to slightly more than 50 percent of all backcountry users. Kayakers tend to spend a week or more in the backcountry; other campers normally stay one or two nights.

The number of recreation backcountry user nights has increased from 1,927 in 1976 to 3,581 in 1983. Most camping takes place within ¼ mile of shore. Travel on land is normally limited to stretches of beach because dense alder thickets or rough mountainous terrain makes interior hiking difficult.

The heaviest use month is July, when up to 32 people have been observed camping at Reid Glacier at the same time. Riggs Glacier has received similar levels of use. The park's distance from large population centers, wet and foggy weather, and high travel costs limit rapid increases in backcountry use.

Backcountry management approaches will preserve desired ecological conditions while limiting constraints on backcountry users. The Park Service will encourage visitors to voluntarily disperse so as to minimize impacts of existing uses without requiring an allocation permit system or the designation of campsites.

Management practices necessary to ensure opportunities for primitive recreation appropriate to an Alaska wilderness park are identified below. A draft backcountry management plan is being prepared concurrently with



this management plan. The final backcountry plan will discuss in more detail the following NPS management procedures:

campsite and trail monitoring to provide baseline data for measuring resource changes, specifically degradation

a voluntary backcountry user registration system to gather visitor use information

an education program dealing with minimum-impact camping practices

the prohibition of motorized use in portions of the wilderness area

the prohibition of shelter and trail development in designated wilderness areas

limitation of group size to a maximum of 12

a backcountry visitor drop-off boat service to provide flexible and varied access into the backcountry

backcountry use by individual visitors (commercially guided trips would be needed for only about 20 percent of total use), with the use of commercial guides being encouraged for less accessible areas

prohibition of helicopter and fixed-wing aircraft drops for mountaineering trips

A seasonal backcountry ranger station has been established in Muir Inlet to provide needed visitor services and to monitor backcountry use. This primitive floating ranger station is located upon rafts in Goose Cove during the summer. Use of these facilities will continue as long as Muir Inlet is not designated as wilderness. An additional ranger station may be required as backcountry use increases in the west arm to facilitate patrols and visitor contact. A modest live-in vessel may be acquired for this purpose.

A backcountry drop-off boat service will be instituted to make the entire bay, especially the west arm, more accessible to backcountry users. Currently, kayakers and backpackers are transported on the concession vessel Thunder Bay to and from a few selected areas in Muir Inlet, such as at Riggs Glacier, for a fee equivalent to a round-trip ticket plus a $16 charge. The concessioner used the Glacier Seal in 1984 to drop campers off at Reid Inlet. A similar service will be provided in the West Arm in 1985. Some backcountry users with folding boats are transported up bay by aircraft operators at greater cost. A new camper drop-off service vessel will be used primarily for this function, but it may also provide additional services. This vessel will be operated by an NPS concessioner.

Drop-off points will be limited to beach locations least susceptible to man-caused damage. Some of the best locations are those that experience natural scouring by icebergs or periodic flooding by streams. In these areas man's trampling is insignificant compared to the recurring natural activity. Drop-off sites will be assigned to tour boats for backcountry

camping and short day excursions. The objective will be to disperse use to areas most resistant to human use.

ALSEK RIVER USE

Under ANILCA (sec. 202 (1)), the National Park Service is authorized to protect a segment of the Alsek River and to ensure a quality wilderness experience. The legislative reports for ANILCA further state that the National Park Service must take steps to ensure that overuse of the river does not occur and that a quality wilderness experience is protected. An Alsek River interim management plan has been implemented and calls for data gathering to define the ecological and social carrying capacities of the various ecosystems and to develop a statistical profile of river users. Carrying capacities and regulations necessary to provide a quality wilderness experience will be determined and contained in the final river management plan. The Park Service is conducting a sociological study of river users in the Tatshenshini/Alsek rivers corridor to obtain information necessary to develop a final river management plan.

The interim management plan for the river has established a concession permit system for the Tatshenshini/Alsek rivers to provide NPS control of commercial river trips. Studies to develop a long-range plan that will establish levels of use consistent with providing a quality wilderness experience, as directed by the legislative history of ANILCA, are continuing. To minimize conflicts between boaters, floaters, and fishermen, no motorized vessels will be permitted above Gateway Knob. When the final river management plan is completed, more specific recommendations may be made.

Planning for and management of the Tatshenshini/Alsek corridor will continue to be conducted in close cooperation with Canadian agencies because all river trips originate from British Columbia and the Yukon Territory of Canada. About 70 percent of the entire trip is within Canada.

The Submerged Lands Act of 1953 and the Alaska Statehood Act of 1958 provide for state ownership of the beds of navigable waters to the "ordinary high water mark." Determination of what waters are navigable is an ongoing process in Alaska at both the administrative and judicial levels. If the Alsek River is determined navigable, the National Park Service will work cooperatively with the state to perpetuate the natural ecosystems and to provide for public use.

USE OF GLACIER BAY NATIONAL PRESERVE

Before the passage of ANILCA, the preserve area was managed by the U.S. Forest Service as part of Tongass National Forest. During that time a fish-processing plant, several roads and airstrips, 40-50 temporary fish campsites, and about 20 "permitted" fish camps (cabins and outbuildings) were established in the area. Since this area was transferred to NPS management, four more cabins and expansions to two existing ones have been authorized by the Park Service.

ANILCA provides for the continued exercise of valid commercial fishing rights and privileges, including the use of public lands for cabins, motorized vehicles, and aircraft landings on existing airstrips in the preserve. It also specifies that the disposition and use of cabins be compatible with the purpose for which the preserve was established ("to protect a segment of the Alsek River, fish and wildlife habitats and migration routes"). The act emphasizes the need to protect area resources by preventing land use levels from expanding significantly beyond 1979 levels and by not allowing new uses.

During the 1981 public workshops for this plan, a 25 percent increase in the use of public lands was discussed as a figure to define ANILCA's "significant" level of increase. No objection to this figure was voiced. The National Park Service has subsequently determined that a 25 percent increase will be used initially as the measure of significant expansion at Dry Bay.

No additional roads or airstrips will be authorized because the present level of development is satisfactory for access to fish campsites and the fish-processing plant. These access points are also adequate for recreational and subsistence purposes in the preserve, including hunting, fishing, and trapping.

Commercial fishermen will continue to be required to camp within a designated special use zone. Temporary camps within this zone will not require an NPS permit. The Park Service will coordinate with the Alaska Department of Fish and Game in determining this zone so as to mitigate environmental impacts.

The Park Service will coordinate with the Alaska Department of Environmental Conservation to ensure that effluent and solid wastes generated by the existing fish-processing plant are disposed of according to state guidelines.

Primitive camping facilities and pit toilets for river floaters in the preserve at the pullout location near the Dry Bay fish-processing plant provide minimum conveniences for visitors waiting out inclement weather for plane pickups (typically one or two days). A change in the side channel may require the pullout point to be relocated in the future.

The East Alsek River cabin, which was previously used as a Forest Service recreation cabin, will continue to be available for traditional public use. An NPS cabin will be constructed near the main Dry Bay airstrip to provide dependable and safe housing for the Dry Bay ranger.

Two commercial operators who provide meals, lodging, and access to fishing areas have operated in the preserve for several years and are being recognized as concessioners under section 1307 of ANILCA. Two licensed commercial hunting guides traditionally operate in the preserve in districts designated by the state of Alaska. One currently holds an NPS commercial license; the other will be granted a similar license. The Park Service will investigate the appropriateness of having fishing and hunting guides operate as NPS concessioners. There is no evident demand for major commercial services in the preserve; therefore, to maintain the pristine atmosphere, no major developments are proposed.

There is some evidence of glacial surges causing blockage of the Alsek River and subsequent flooding downstream in recent history (150 years ago). The Park Service will investigate this phenomenon to determine if it is recurrent and whether or not it would pose a hazard to people and structures in the Dry Bay area.

SUBSISTENCE USE

Subsistence harvest of fish, wildlife, and related resources on federal lands and waters in Alaska is controlled by provisions of ANILCA. The subsistence provision provides two guiding precepts for overall management. First, all federal lands in Alaska must be managed so as to minimize possible adverse impacts on local rural residents who engage in subsistence activities. Second, and central to ANILCA's subsistence provision, subsistence activities are not to be fostered or promoted, rather the Park Service is to provide and protect the opportunities for local rural residents. The state has indicated a willingness, through the Boards of Fisheries and Game, to provide a definition of "local residents" and to regulate subsistence uses within the preserve.

Closure to hunting and subsistence harvest of fish, wildlife, and plant resources is a longstanding management policy within national parks and monuments in the United States. Specific language in ANILCA (sec. 816) adheres to this policy for resource protection. However, the statute also makes special exceptions for seven parks and monuments in Alaska by allowing the continuance of established subsistence uses by rural residents. It is important to note that lands and waters within Glacier Bay National Park are not included in this special subsistence exemption, and therefore remain closed to such uses (Congressional Record, Aug. 18, 1980, p. S 11133; Nov. 12, 1980, p. H 10539).

ANILCA also expanded the existing unit at Glacier Bay by the establishment of a 57,000-acre preserve at Dry Bay and along the Alsek River. The designation as preserve, rather than park, is crucial because it allows for continued sport and subsistence hunting, fishing, and trapping, in accordance with state and federal laws. The Park Service will recommend to Congress that the preserve boundary be modified to be aligned with natural features so subsistence users can more easily distinguish when they are within the preserve (see "Park/Preserve Boundary Changes" section). This action would add approximately 24,000 acres of designated wilderness to the preserve.

Subsistence use of resources within the preserve is accorded the preferential protection applicable to all federal lands open to harvest under ANILCA. Subsistence uses, for example, shall be given preference over other consumptive uses when it is necessary to limit harvest to ensure the conservation of fish and wildlife populations. The law also requires that such harvest activities remain consistent with the maintenance of healthy populations of fish and wildlife. Continuing studies will gather subsistence use data necessary for making resource allocation decisions if they become necessary.

VESSEL USE

Six concession permits have been issued to companies operating cruise ships entering the bay each summer. These companies currently are Westours, Paquet Cruises, World Explorer, Sitmar Cruises, Royal Lines, and P & O Cruises. Glacier Bay Lodge, Inc., operates two tour boats and three fishing boats in the bay. A smaller overnight vessel operated by Glacier Bay Yacht Tours, Inc., originates in Juneau and is operated on a regular schedule. Fourteen sightseeing and fishing charter boat operations based outside the park are also under concession permit. In addition private vessels visit the bay. Overall vessel use increased during the 1970s, with large cruise ships reaching a peak of 139 in 1977 and small craft entries nearly doubling. However, the number of vessels in the bay at one time has been restricted because of potential effects on humpback whales (see "Endangered Species" section above).

When considering an action that could affect an endangered species, federal agencies are required under section 7 of the Endangered Species Act of 1973 to seek formal consultation with the National Marine Fisheries Service (NMFS) or the U.S. Fish and Wildlife Service. In 1979 the National Marine Fisheries Service issued a biological opinion, stating "that if the amount of vessel traffic in Glacier Bay was allowed to increase without limit or if the existing restrictions on the operation of vessels within the Bay were removed, the associated disturbance would be likely to jeopardize the continued existence of the southeast Alaska humpback whale stock." It also indicated that the National Park Service should seek additional research to better understand this complex situation, should limit boat traffic to 1976 levels, and should control activities of boats that could affect whales.

The National Park Service subsequently issued regulations to control vessel use and traffic in Glacier Bay as an appropriate and prudent management tool to protect humpback whales. Vessel use limits allow the entrance of 89 cruise ships (a maximum of two per day) into the bay between June 1 and August 31; no more than 339 private vessels can enter the bay during the same period (a maximum of 21 per day); and the number of commercial tour boats is limited to 1976 levels. Except for commercial fishing or charter vessels actively fishing, no motorized vessel may intentionally be positioned within 1/4 mile of a whale, and no vessel may pursue or attempt to pursue a whale. Within whale waters all vessels larger than 16 feet, except those actively engaged in fishing, must operate on a mid-channel course and at 10 knots or less.

The National Marine Fisheries Service also contracted and administered for the National Park Service (under a reimbursable agreement) three research projects in Glacier Bay and adjacent waters in 1981 and 1982. These projects accomplished the following:

Accoustical research measured underwater sound propagation and ambient noise characteristics.

Humpback whale prey research measured zooplankton and fish distribution and abundance in and around whale-feeding sites.

Whale behavior research investigated behavior responses of humpback whales to vessels.

In 1983 the National Park Service funded further whale prey research by the National Marine Fisheries Service. The Park Service also continued whale population and distribution studies. Cumulative research findings have provided detailed information about changes in whale behavior associated with nearby vessel activity. Based on available information, both agencies have concluded that unrestricted vessel use of Glacier Bay may affect the endangered humpback whale.

Because of the additional information from these efforts, the National Park Service reinitiated section 7 consultation for the endangered humpback whale. The resulting 1983 biological opinion issued by the National Marine Fisheries Service concluded:

> Although the amount of vessel traffic that would be likely to displace the whales from Glacier Bay is unknown, NMFS believes that some increase in vessel traffic can occur in Glacier Bay without jeopardizing the southeast Alaska humpback whale stock. This belief is based upon NPS' ability to control both the amount and operation of vessel traffic in the Bay and to monitor the effects of any increase. . . .
>
> We believe that no additional vessel traffic should be allowed unless the number of individual whales that enter Glacier Bay remains equal to or is greater than the 1982 level. If under these conditions, the NPS proposes to increase total vessel use from the present level, NMFS believes that an initial increase of no more than 20 percent for the large ship and small vessel categories would be prudent.

Humpback whale use in Glacier Bay during 1983 was significantly lower than in 1982. Therefore the 1984 total vessel use limits and vessel operational restrictions were kept essentially the same as 1983 (no more than two vessels per day and a maximum of 89 cruise ship entries between June 1 and August 31). Future vessel use limits and whale water designations will be provided for annually under 36 CFR 13.30. This will allow for more efficient management of vessel use in light of forthcoming scientific information and evolving management concerns. Cruise ship entries will be limited to no more than two per day throughout the year. The superintendent, however, will have the authority to reschedule entries if necessary due to unforeseen problems affecting cruise ship schedules. Tour boats will be limited to three per day.

Many of Glacier Bay's hundreds of miles of waterways and outer coast provide access to forested coves, rocky beaches, and glaciated inlets. Most of these will remain open to motorized vessel passage to offer visitors a unique opportunity to see these resources without adversely affecting them. In several areas, however, proposed regulations will allow only nonmotorized vessel access. This will satisfy a need for wilderness waters, and it will help protect marine and terrestrial species sensitive to the larger motorized vessels.

Although current vessel use limitations are based on only one factor (use of Glacier Bay by the endangered humpback whale), other factors will be considered in the future if the limits are revised. Continued biological research studies will help identify levels of vessel use that may affect other biota or processes. Limitations on vessel use should also take into account the physical limits of the environment, such as anchorage space or potential air quality degradation, and adverse sociological impacts on visitors. The park resource management plan will determine what studies are needed to provide further information about other biota or processes, and carrying capacity studies will establish physical and sociological thresholds. Together, all this information will provide managers with a sound basis to establish a reasonable vessel carrying capacity.

AIRCRAFT USE

Several charter operations have attempted to stimulate interest in scenic flights over Glacier Bay, and the number of flights has grown; but current economic conditions and insurance requirements for air taxi permits may affect the availability of services. Most flights are made at low elevations (1,500-4,000 feet) and originate from Juneau, Haines, Gustavus, or other local areas. At the present time Glacier Bay Airways has a concession permit to operate booking services for aerial sightseeing tours out of the lodge at Bartlett Cove; this single operation is satisfactory for services originating and terminating within the park. Gulf Air Taxi, Inc., operating from Yakutat, holds a concession permit to provide similar services in the park and preserve.

A commercial use license will be required for future landings in the park by all commercial aircraft operating from bases outside the park. This requirement conforms to concession policy and law. Commercial and private aircraft will be allowed to land in Bartlett Cove, but only the concessioner will be allowed to originate trips there. Only concession permittees will be allowed to originate trips within the park or preserve. No special facilities or services will be provided for aircraft by the Park Service.

Regulations limiting aircraft landings have been proposed through the public meeting regulation process. The two regulations proposed in 36 CFR 13.65(a) are as follows:

> All beaches within Glacier Bay and all beaches from Cape Fairweather south to the mouth of DeLangle Mountain Creek are closed to aircraft landings and snowmachines, except that airplanes may land on the beach for 2 miles immediately to the northwest of La Perouse Glacier.
>
> The water and shorelines of Vivid, Bartlett, and Adams Island lakes are closed to aircraft landings.

Excessive aircraft noise can interfere with the use and enjoyment of parks and can adversely affect wildlife. The Park Service will work with air taxi operators and local aircraft organizations to reduce this problem.

BARTLETT COVE DEVELOPMENT CONCEPT

The lodge and walk-in campground at Bartlett Cove make up the only developed area within Glacier Bay National Park and Preserve that provides land-based overnight accommodations (see the Bartlett Cove Existing Development map). Access to Bartlett Cove is either by watercraft, floatplane, or vehicle over a 10-mile gravel roadway from the unincorporated community of Gustavus (see Visitor Access map). Gustavus is served by scheduled commercial airline flights during the summer. Visitor seasons generally run from Memorial Day to Labor Day.

Existing park facilities are grouped along the southwestern shore of the inner cove. Facilities in Gustavus include three NPS-employee residences, which are on land leased from the state of Alaska. Some facilities are also maintained in Juneau. Existing park facilities are described in table 2.

The total development package described in this plan will approach the sociological carrying capacity for Bartlett Cove visitation and the physical carrying capacity of the existing utility infrastructure. Therefore, after the proposed development has been completed, all future visitor facilities should be provided by private enterprise outside the park boundaries. In addition, any new development will be contingent upon its compatability with a carrying capacity study.

Visitor Use

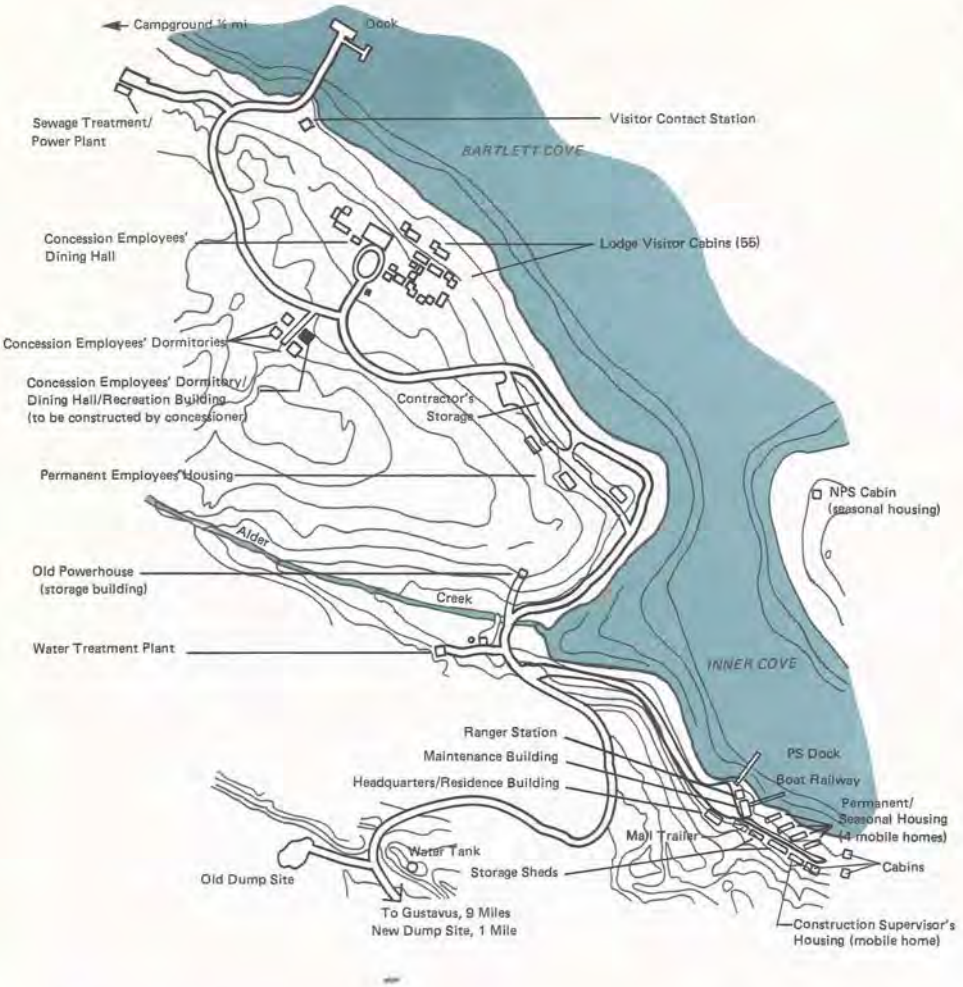
Bartlett Cove will continue to be the focus for overnight visitor accommodations in Glacier Bay National Park and Preserve. Access will continue to be primarily by water and by air through Gustavus.

Visitor contact will continue to be focused at the dockside station and the interpretive facilities on the second floor of the lodge.

The Bartlett Cove campground accommodates individuals and families as well as groups. Capacity is reached only two or three times each season. The campground may be expanded when necessary to meet future needs. Any expansion will be undertaken incrementally (up to a maximum of 30 additional sites) and to the west, away from the lodge.

The forest trail and Bartlett River trail will continue to be maintained and upgraded as required. A new trailhead for the river trail will be established near the new administrative offices.

Equestrian use will not be permitted except within the Gustavus/Bartlett Cove road corridor. Horses are not now used for access to the park nor is such use traditional and widespread in southeast Alaska. Detrimental impacts associated with regular horseback use include soil compaction, denudation, trail erosion, excrement deposition, and the introduction of exotic plants as a result of seeds eaten by horses. Because the park was established to preserve an important research area for plant ecology, it is inappropriate to subject the area to impacts.



EXISTING FACILITY
PROPOSED FACILITY

BARTLETT COVE
EXISTING DEVELOPMENT

GLACIER BAY NATIONAL PARK AND PRESERVE
UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

0 400 800 Feet
0 245 Meters

North

132	20024D
DSC	AUG 84

Table 2: Existing NPS and Concession Facilities

Facilities	Existing Space sq ft	sq m
Bartlett Cove		
NPS administrative/maintenance facilities		
Administrative offices	1,100	102.2
Maintenance garage/shop with marine railway	2,250	209.0
Ranger station	200	18.6
Post office trailer	500	46.5
NPS seasonal staff housing		
4 trailers	840 ea.	78.1 ea.
1 cabin ("gray cabin")	950	88.3
2 A-frames	320 ea.	29.7 ea.
1 island cabin	400	37.2
1 trailer ("toad hall")	500	46.5
NPS permanent staff housing		
1 duplex with laundry above administrative offices	750	69.7
2 single-family detached units	1,600 ea.	148.6 ea.
1 duplex, 2 two-bedroom units	1,000 ea.	92.9 ea.
Other facilities		
1 house trailer (DSC project supervisor)	500	46.5
Water treatment plant with 100,000-gallon steel reservoir	1,750	162.6
Old power plant (storage)	500	46.5
New power plant/sewage treatment plant	2,625	243.9
Bartlett Cove dock, tank farm, and pumphouse		
Concession facilities (NPS owned)		
Main lodge	6,825	634.1
55 cabin units	400 ea.	37.2 ea.
Employee dining room	300	27.9
Concession facilities (concessioner owned)		
3 two-story buildings for housing approximately 70 employees	1,225 ea. floor	113.8 ea. floor
Juneau		
1 single-family unit	1,600	148.6
1 warehouse	650	60.4
Office space (Federal Building)	800	74.4
Visitor information station (Centennial Building)*	375	34.8
Dock		
Gustavus		
3 single-family units	1,000 ea.	92.9 ea.

*Space shared under cooperative agreement with U.S. Forest Service.

Docking and Fuel Facilities

The main dock at Bartlett Cove was originally constructed in 1957. It provides fuel oil and gasoline sales to private and commercial boat owners, Gustavus residents, and commercial fishermen; it also provides mooring space for concessioner and NPS boats. The fueling facilities are now used to near capacity, occasionally resulting in shortages and rationing. At the present time, fuel lines, electric lines, ropes, and ladders are being replaced; vapor return lines and fuel tanks are being upgraded to meet current safety codes; and safer mooring sites for NPS and concession vessels are being developed.

Existing launching facilities for vessels are inadequate, and there is no safe, efficient barge unloading system. The existing marine railway to the boat shop in the inner cove is rarely usable (only during extreme high tides) because it, like other structures in the cove, has risen several feet since construction because of "isostatic rebound." At the current rate of rise, the railway will become totally unusable within the next 10 years. Launching vessels from trailers or with a front-end loader necessitates the use of existing beaches at high tide, oftentimes completely submerging wheels, hubs, and axles in saltwater and mud, resulting in excessive maintenance problems. Access into the inner cove itself is currently restricted to high-tide periods. As the submerged land rises, making the inner cove shallower, these access periods are becoming shorter. The existing launching ramp near the main dock will be improved to eliminate the need for using the marine railway. A dock on the inner cove is used for NPS boats.

An expansion and improvement project for the main dock and inner cove dock is scheduled for spring 1984. Improvements to the main dock include the following:

addition of floating docks and finger, fuel, and seaplane floats to accommodate NPS, concessioner, and visitor vessels

construction of a floating fish-cleaning station for visitor use

installation of a new hoist, storage shed, and site improvements such as handrails

extension of electrical power, water, and metered fuel lines to the new floats

Improvements to the inner cove dock include adding 56 feet of floating pier, two finger floats, and electrical extensions.

These actions will improve boating safety and access, accommodate increasing usage, improve pedestrian safety on the docks, and reduce the danger of fuel spills. An environmental assessment for the dock improvements was released for public and agency review in June 1983. A finding of no significant impact was signed by the NPS Alaska regional director on July 22, 1983.

A state ferry vehicle access dock will not be provided at Bartlett Cove because necessary parking and vehicle service facilities are not compatible with the park.

The Park Service's primary goal with regard to facilities is to serve park visitors; consequently, barges loaded with goods bound for Gustavus will not be provided unloading space at the NPS dock from May 15 through September 30. The Park Service will continue to provide emergency facilities. Also, the following interim priorities will be used to determine fuel allocations during periods of unusually low supplies or delivery delays:

NPS patrol and supply vessels, vehicles, and for emergency needs
park concession vessels
park visitor vessels
miscellaneous park permittee charter vessels
commercial fishing boats and private vehicles

A private firm began selling fuel in Gustavus in fall 1983.

If Gustavus and its needs grow, the Park Service will encourage the community to provide its own public docking facilities. Harbor facilities are available for local boaters at Hoonah, Elfin Cove, Pelican, and Juneau. Constructing a regional marina at Bartlett Cove would greatly increase vessel traffic in the lower bay and would conflict with NPS vessel management objectives discussed previously.

NPS Operations Facilities

New facilities will be provided, as shown on the Development Concept map, to adequately accommodate current and expanded administrative operations, maintenance, and housing. To minimize impacts on the Bartlett Cove rain forest and the visitor experience, a new service (maintenance) area will be constructed approximately 1,500 feet south of the existing administrative offices, just west of the road to Gustavus and on the old NPS waste disposal site. This site has been previously disturbed and is large enough to accommodate NPS and lodge concessioner needs. The development will be screened from the roadway by the existing moraine and vegetation, thus minimizing visitor awareness of the facility.

Implementation will occur in three phases:

Phase I--Maintenance functions will be relocated to the newly constructed facilities. The new boat ramp will be constructed to replace the function served by the marine railway. The existing maintenance shop will be converted to administrative offices and storage. Seasonal housing and three permanent employee units will be constructed near the old powerhouse site and existing permanent residence sites respectively. Utility capacities will be upgraded as necessary. Existing seasonal housing in the inner cove area will be removed, and the area will be restored to natural conditions. The Bartlett River trail will be rerouted to a new trailhead near the new administrative offices.

Phase II--Resource and sociological carrying capacity studies will be conducted for the Bartlett Cove area. Visitor use trends will be assessed as well as the load capacity of the existing infrastructure to determine the need for an expansion of visitor facilities. Private development trends in Gustavus will also be evaluated to see if future facilities could be located there. If warranted at Bartlett Cove, a maximum of 15 cabins (30 beds) may be constructed along with a hostel (also 30 beds).

Phase III--If housing needs cannot be met privately in Gustavus, additional NPS permanent housing will be constructed after existing structures have served their useful life.

Table 3 contains space requirements for the new maintenance area, and table 4 shows NPS residential facility requirements. Appendix C contains cost estimates for development.

The existing or new power-generating equipment will be relocated from the present sewage treatment plant to the new maintenance facility. The feasibility of a heat exchange system to convert waste heat to additional electricity in summer (cogeneration) and to heat the maintenance facility during winter will be evaluated in an engineering study undertaken subsequent to this management plan. The optimum size and operating scenario for the generators will also be determined, including the load potential for the visitor facilities described above. Space made available in the sewage treatment plant by the removal of electrical generators and control equipment may be used for improvements to the sewage treatment system. A flow equalization tank is needed at the present time.

The residential trailers for the NPS construction project supervisor and construction employees will be relocated to the new maintenance area or to an administrative site in Gustavus. Utility connections for the trailers will be designed with the new facilities.

The existing Gustavus-Bartlett Cove road is inadequate, as evidenced by frequent chuckholes and a washboard surface. These conditions have resulted in several accidents and numerous near-accidents in recent years. This road will be improved from the Bartlett Cove developed area to the park boundary. Improvements will include a new gravel base and surface as well as adequate drainage structures. This project is to be undertaken in cooperation with the Federal Highway Administration and was scheduled to begin in FY 1984. The Alaska Department of Transportation has been and will continue to be consulted about this project.

The old maintenance shop will be converted to offices. Once new residential facilities are completed, the second floor of the existing headquarters building will also be converted to offices. The two buildings will house the following administrative spaces, which will be designed at a later date:

superintendent's office
chief of operation's office
chief of interpretation's office
chief of maintenance's office (including drafting table and filing space)
concession specialist's office
resource manager's office
library/conference room
administrative officer's office
secretary's office (including related storage space)
interpretive materials storage
interpreters' work space
post office
miscellaneous storage and utilities
curatorial space
research laboratory space
district ranger's office
rangers' work space

Solid wastes and sewage sludge will continue to be disposed of at the existing NPS solid waste facility ("new dump") 1.3 miles east of the Bartlett Cove developed area. The Park Service will determine if a solid waste compactor would significantly extend the life of the facility and, if so, what type of unit and power requirements would be necessary. The Park Service supports the concept of a cooperative solid waste facility that would also serve the needs of Gustavus area residents.

Concession Facilities

Approval for additional facilities will be based on an analysis of several factors, including carrying capacities (both resource and sociological capacities for Bartlett Cove and Glacier Bay), visitor use trends, private development trends in Gustavus, and infrastructure/utility capacities.

If authorized, the following projects to increase visitor service facilities in the Bartlett Cove area may be undertaken following the construction of NPS facilities previously described:

construction of a maximum of 15 visitor cabins

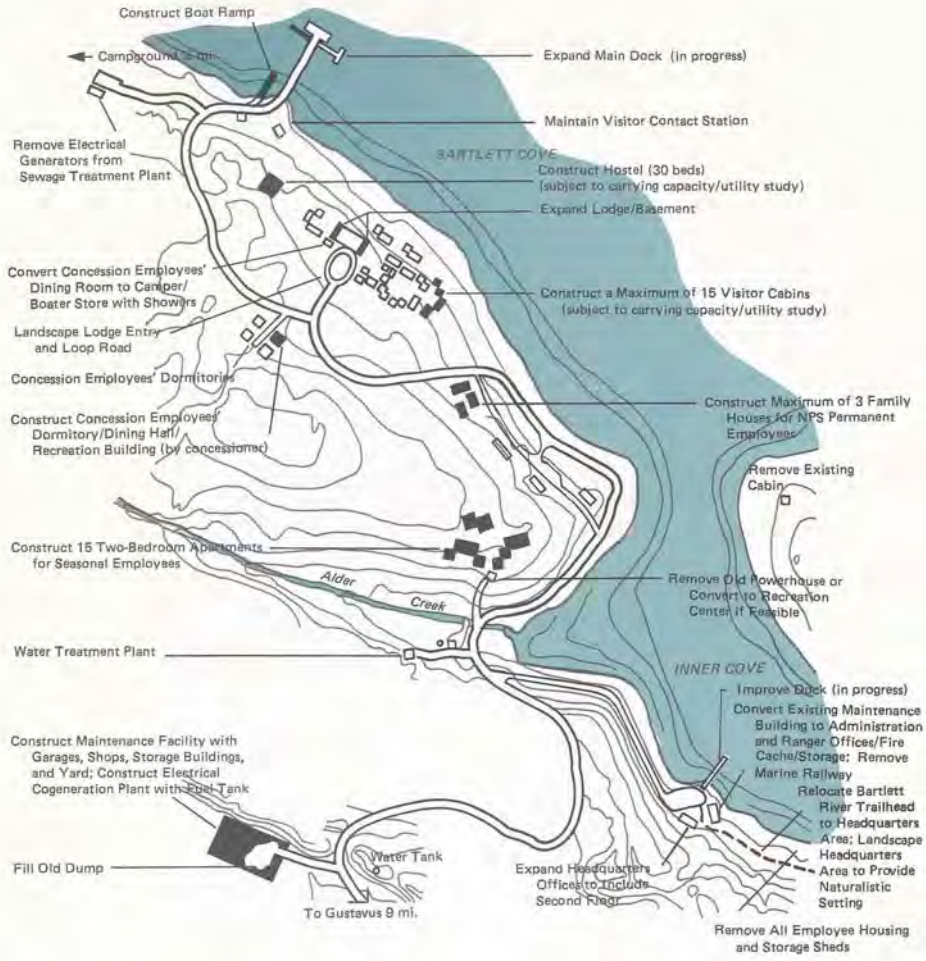
construction of a 30-bed hostel

addition to lodge building for expansion of the kitchen, dining room, lounge, and audiovisual room, and for basement storage

conversion of the existing concession employees' dining room to a small camper/boater store

provision of a combination bathhouse/laundry

The small camper/boater store and a combination bathhouse/laundry may be provided at the lodge; these could be supported by fees and operated by the concessioner. The lodge entrance will be redesigned and landscaped. Utility needs for future development will be considered when Bartlett Cove utility capacities are upgraded during phase I.



BARTLETT COVE DEVELOPMENT CONCEPT

GLACIER BAY NATIONAL PARK AND PRESERVE
UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

132 | 20023E
DSC | AUG 84

Table 3: Space Requirements for Maintenance

Function	Space Required sq ft	sq m
Boat equipment repair shop (including 2 bays with lifts)	1,200	111.5
Paint shop (including miscellaneous storage)	2,000	185.8
Mechanic's shop (vehicle maintenance, welding booth, 2 bays with lifts)	1,600	148.6
Tool storage room	100	9.3
Carpentry/wood shop	1,000	92.9
Plumbing/electrical shop	250	23.2
Bay for ambulance-type vehicle and other rescue equipment	250	23.2
Generator and control rooms	1,000	92.9
Miscellaneous indoor storage (exclusive of overhead storage space in areas of building with high ceilings)	1,000	92.9
Miscellaneous utilities (heating, machinery, restrooms with toilets, shower, wash basin, and lockers)	250	23.2
Fire cache and truck storage (may not be located at maintenance area)	750	69.7
Construction staging area	12,000	1,114.8
Construction supervisor's office and residential trailer locations	2,000	185.8
Construction employees' trailer locations (6)	6,000	557.4
Covered storage	1,500	139.4
Outdoor storage	12,000	1,114.8
Concessioner maintenance facilities	8,000	743.2

50 900

Table 4: New NPS Residential Facilities

Facility	Space Required sq ft	sq m
Permanent staff and dependents' housing 3 three-bedroom units*	1,600 ea.	148.6 ea.
Seasonal housing 15 two-bedroom apartments	800 ea.	74.3 ea.
Bunkhouse with kitchen and bath facilities for 10 people (backcountry rangers, researchers, visiting personnel, etc.)	1,000	92.9
Recreation building	2,000	185.8

*The seven existing units will not be replaced until the end of their useful life.

All new visitor facilities will be designed for access by handicapped visitors. All proposed expansions or improvements to existing visitor facilities will include upgraded access for the handicapped wherever feasible.

A new concession employees' dormitory, with a kitchen and dining/recreation hall, will be built by the concessioner adjacent to existing dormitories. This facility has already been approved by the National Park Service. It is recommended that the concessioner provide adequate landscaping to screen these facilities from the adjacent road and the lodge visitor use area.

Space will be provided for the development of concessioner maintenance facilities at the new maintenance area.

NPS OPERATIONS AND STAFFING

An administrative office for Glacier Bay National Park and Preserve was previously maintained in Juneau and an operational office at Bartlett Cove, with the superintendent and administrative officer occupying the Juneau office during the winter and the Bartlett Cove office during the summer. Since fall 1983 these functions are based year-round at Bartlett Cove. Other permanent and seasonal staff will continue to be stationed at Bartlett Cove, Yakutat, and Juneau. A district ranger living in Yakutat also works for Wrangell-St. Elias National Park and Preserve. The visitor information service provided at the Centennial Building in Juneau will be continued. A procurement clerk will continue to be based at the Juneau office.

An NPS residence, warehouse, and dock located at Indian Point, 14½ miles west of downtown Juneau, will still be operated by the Park Service. The house was used as the superintendent's winter residence; the warehouse provides storage for supplies and equipment awaiting shipment to the park; and the dock provides a Juneau home berth for the NPS vessel, the Nunatak. The dock location saves time and fuel that would otherwise be spent if the Nunatak had to load in the downtown port area. As a courtesy, the National Park Service has also allowed ADF&G vessels to moor at the NPS dock. The dock will be maintained, and the Juneau residence will be the quarters for the vessel captain.

The Nunatak, a 65-foot vessel capable of sleeping 10, provides regular supply service to the park. In addition to food, it carries virtually all the material supply items for park operations, such as lumber, paint, and engine parts. Trips are normally twice a month. The Nunatak is also used for patrols and research support, and it ferries supplies to the backcountry ranger stations at Lituya Bay and Goose Cove. An administrative review of the Nunatak operations was conducted by the Park Service in 1982. All activities are considered essential to park operations and are cost-effective.

To carry out the program described in this plan, some staffing increases will be necessary. Table 5 lists existing and future staffing levels for Glacier Bay National Park and Preserve.

During the 1983 visitor season, a total of 52 permanent and seasonal staff members were employed at Glacier Bay National Park and Preserve. Of those, approximately 10 own property in the local area. Additionally 10 were employed through the NPS local hire program. The Park Service will continue to seek the expertise of local residents as staffing funds are available.

Table 5: NPS Staffing Requirements

	Existing/Proposed	
Position	Permanent	Seasonal
Superintendent	1/1	
Secretary	0/1	
Information/receptionist	0/1	
Concession Specialist	1/1	
Resource Management Specialist	1/1	
Marine biologist	0/1	
Biologist's aid		1/3
Administrative Officer	1/1	
Procurement clerk	1/1	
Clerk/typist	1/2	1/2
Boat Captain	1/1	
Deckhand	1/1	
Chief of Operations	1/1	
District ranger--Bartlett Cove	1/1	
Subdistrict rangers--resource management, visitor protection, law enforcement		6/10
District ranger--Yakutat	0/1	
Subdistrict rangers		1/2
Chief of Maintenance	1/1	
Maintenance workers and operators	3/5	
Laborers		3/4
Chief of Interpretation	1/1	
Supervisory interpretive ranger	0/1	1/0
Interpretive rangers*		16/20*
Park aids		2/3
Totals	15/23	31/44
Grand Total	46/67	

*Includes one interpretive ranger stationed at the Juneau Centennial Building visitor contact station and one at the cooperative visitor center proposed by ANILCA in southeast Alaska.