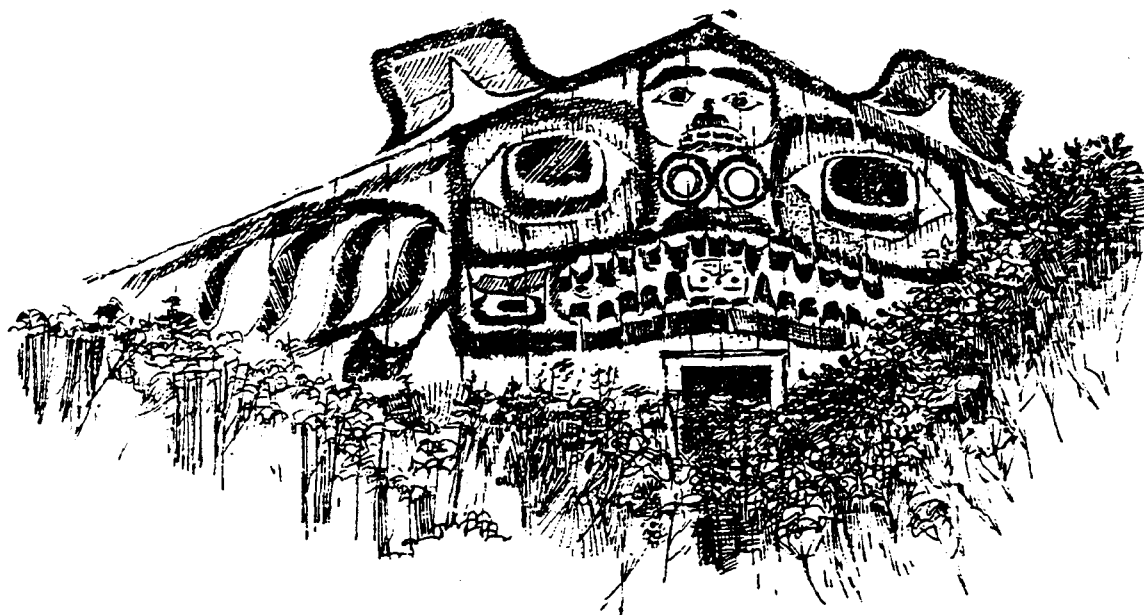


FINAL

DRAFT

**COMPREHENSIVE DESIGN PLAN
ENVIRONMENTAL ASSESSMENT**

September 1997



BARTLETT COVE

GLACIER BAY

NATIONAL PARK AND PRESERVE • ALASKA



UNITED STATES DEPARTMENT OF THE INTERIOR • NATIONAL PARK SERVICE

**FINDING OF NO SIGNIFICANT IMPACT
COMPREHENSIVE DESIGN PLAN
BARTLETT COVE
GLACIER BAY NATIONAL PARK**

INTRODUCTION

The National Park Service (NPS) has prepared a plan for the future of the Bartlett Cove developed area of Glacier Bay National Park. Details of the plan were included in the Comprehensive Design Plan/Environmental Assessment (CDP/EA) published in September 1997.

The 1984 General Management Plan for Glacier Bay National Park designated Bartlett Cove as the only developed area within the park. Since that time visitation has increased and visitation patterns have changed, management responsibilities and associated information needs have increased, and utilities have aged. The CDP/EA was undertaken to examine these new conditions and outline a preferred course of action for the future.

PROPOSAL

The preferred alternative in the CDP/EA called for upgrading existing utility systems, and constructing a new maintenance facility, visitor access center, research center, tribal house, and additional lodging. The alternative also recommended removing some developments from sensitive areas, accommodating the increased needs of administration by adapting existing facilities, and moderately expanding Glacier Bay Lodge visitor facilities.

ALTERNATIVES CONSIDERED

In addition to the proposal, a no action alternative and an alternative that implemented the actions outlined by the 1984 General Management Plan were considered. Alternative A (no action) outlined the status quo; no facilities beyond those existing would be constructed and all existing facilities would remain as is. Alternative B would implement those actions described in the 1984 General Management Plan. This alternative included the construction of a new maintenance facility at the old landfill site, upgraded utilities, additional accommodations (up to 15 visitor rooms and a 30-bed hostel), expansion of the lodge to accommodate increased visitor use, construction of 6 additional seasonal beds and 1 additional single family house, and construction of a recreational facility for park staff.

PUBLIC INVOLVEMENT

Initial scoping meetings were held in Bartlett Cove in fall 1996 to identify potential issues and needs. These meetings were attended by park staff, planning staff from the NPS Denver Service Center, and representatives from Glacier Bay Lodge, Inc., the

community of Gustavus, and the Hoonah Indian Association. Information gathered at these meetings was used to develop three alternatives for consideration.

The CDP/EA was released for public review on October 1997. The public review period closed on December 31, 1997. Public workshops were held in Gustavus and Hoonah on December 15 and 16, 1997 respectively. A total of 42 people attended both meetings. The NPS received a total of 51 written comments during the comment period. Public comment focused on the need to approach additional development at Bartlett Cove cautiously and only after integrating development plans with backcountry access plans (i.e., vessel management and backcountry permitting). Many commentators noted that Bartlett Cove is an integral part of many visitor's experience in Glacier Bay National Park and expressed interest in preserving opportunities for Bartlett Cove visitors to experience quiet and a sense of solitude. Many were also concerned that construction of additional facilities – in particular those not directly related to visitor access – would detract from the natural setting surrounding Bartlett Cove and could potentially impact sensitive habitats.

FINAL ALTERNATIVE DESCRIPTION

The NPS decision regarding future development addresses public concern regarding the need to verify the carrying capacity for Bartlett Cove and coordinate all public access strategies. Numerous actions proposed in the preferred alternative have been revised to better address resource and public concerns. The final alternative incorporates public concerns by limiting future development at Bartlett Cove to that deemed essential to carrying out NPS mandates. In addition, site reviews will be conducted prior to all construction to ensure that both cultural and natural resource concerns are addressed. In general, construction activities will be planned to minimize ground disturbance and vegetation, wildlife and visitor impacts.

Specific actions described in the CDP/EA, public comment regarding those actions and the NPS decision for each component are addressed below. All proposed construction is subject to funding availability in future years.

Park Headquarters: Public comment regarding park headquarters was largely in favor of the preferred alternative's action which calls for maintaining headquarters at the existing location and converting the maintenance building into additional office space. Conversion of the maintenance facility to office space will proceed following construction of a new maintenance facility. All existing cabins and maintenance/storage sheds will be removed from the headquarters area.

Research Facility: The preferred alternative included the placement of modular units at the lagoon area near the existing park headquarters to support research functions. Many commentators expressed concern about the construction of a research facility at this location. Comments focused on concerns about additional construction in a sensitive resource area and potential duplication of facilities (construction of an interagency

marine research facility in Juneau is currently being considered). Several commentors recommended that the research facility should be smaller than proposed.

Protection of park resources depends on a solid understanding of physical, biological and sociological factors. Comprehensive inventories, long-term monitoring, and research programs are important to sound management of Glacier Bay National Park. Glacier Bay National Park's enabling legislation notes its importance to the scientific community as a unique laboratory where studies related to successional processes should occur.

A research field station located in Bartlett Cove will allow scientific information to be effectively collected and readily shared with park managers. In response to concerns about additional large-scale development, NPS will combine several research and administrative facility components (i.e., conference room, multipurpose room, GIS station, library, and storage space) to minimize the footprint of the research station. A small research facility will provide work areas and some common space and storage for sensitive gear for up to 10 researchers, including other federal, state, and university personnel, will be constructed near the administrative headquarters. This facility will effect less than ½ acre.

Maintenance Facility: Most public comment supported the preferred alternative that relocated all maintenance facilities to the site of the old park landfill. Facility relocation will increase operational efficiency, improve employee safety, and enhance the shoreline scenic quality and the visitor's experience in Bartlett Cove. The facility will house plumbing, electrical and carpentry shops; vehicle and boat maintenance, boat storage, a wash station, a paint shop, storage bays, a warehouse, and service space. A separate building will house flammable and hazardous materials. The construction footprint of this facility will be less than 6 acres.

Fire Cache: NPS received minimal public comment regarding the relocation of the fire cache to an area near the existing seasonal housing. Some commentors suggested that the facility be located near the old landfill site or closer to permanent housing.

Effective emergency response requires that emergency equipment be located near park housing in Bartlett Cove. To minimize habitat disturbance the fire cache will be constructed on the site of the existing electrician's shop (northeast of seasonal housing).

Utility Upgrades: Commentors consistently noted that the top priority at Bartlett Cove should be renovation of the sewage treatment plant; water collection, treatment, storage and distribution; and fuel storage facilities. The utility upgrades are the highest priority and will be completed prior to construction of additional facilities.

Visitor Accommodations: The preferred alternative included construction of up to 30 units (60 pillows) to the existing lodging. The alternative also recommended conversion of the concession employee dormitory to a 50-room budget accommodation (100 pillows). Numerous commentors expressed concern regarding the construction of

additional lodging in Bartlett Cove; most suggested that these facilities would be more appropriately provided in Gustavus.

The NPS is mandated to protect park resource and provide for visitor enjoyment of parklands and waters. Ensuring that visitor's have adequate accommodation in or near park units allows the public the opportunity to experience public lands. The NPS will continue to gather information from members of the community, Glacier Bay Lodge management and others to (1) further refine the social and biological carrying capacity of Bartlett Cove, and (2) determine whether the community of Gustavus could provide any additional visitor lodging needed. If the NPS determines that such lodging can appropriately be accommodated in Bartlett Cove and it cannot be provided in the community, the NPS will authorize 15 additional units (up to 30 pillows) at Glacier Bay Lodge for overnight visitor use. Construction of up to 15 units would require approximately ½ acre.

The NPS is interested in ensuring that budget accommodations are available to park visitors. Should budget accommodations be deemed appropriate, necessary, and not available in Gustavus, they will be provided for within the parameters described above.

Lodge Expansion: Several commentors indicated that the proposal to expand visitor facilities at the Glacier Bay Lodge was unnecessary. The NPS does not agree; current facilities do not adequately accommodate existing visitation needs. NPS will authorize moderate expansion of the dining and kitchen facilities and parking lot and renovation of laundry and shower facilities (primarily used by campers). The majority of expansion and renovation work will be within existing space, but additional parking will require about 0.3 acre.

Concession Employee Housing: The preferred alternative proposed moving Glacier Bay Lodge, Inc. concession employee housing offsite and converting this facility to a budget lodging facility and cafeteria. Numerous commentors, including the current concessioner, indicated that relocation of concession employee housing was not desirable. NPS agrees. Employee housing will not be relocated.

Park Housing: The preferred alternative proposed that 18 additional seasonal employee beds, a 10-bed bunkhouse, and 2 additional permanent employee houses be constructed in Bartlett Cove. Many commentors indicated that no additional housing for park employees should be constructed; other recommended that fewer units be constructed.

Housing opportunities for full-time year-round employees are generally available in the community of Gustavus. Opportunities for seasonal housing, however, are limited. Travel to and from Gustavus is difficult for seasonal employees whose work schedules vary and who do not, for the most part, have ready access to transportation. Housing for up to 18 additional seasonal employees and a 10-person bunkhouse to accommodate visiting researchers and other NPS employees will be constructed. Construction of seasonal units would affect about 1 acre. No additional housing will be constructed in Bartlett Cove for permanent employees.

Recreation Building: The preferred alternative includes a recreational facility to be constructed in Bartlett Cove for park employees. Several commentors suggested that this facility was not necessary. The health and well being of park staff is important for effective park operations. A multi-use facility, up to 2,000 square feet, will serve as a gathering area for off-duty employees as well as a facility to accommodate meetings and training sessions. The facility will affect about ½ acre of land.

Visitor Center: The preferred alternative includes the construction of a visitor center near the outer dock. Most commentors felt that some type of visitor facility was necessary and appropriate.

The existing visitor facilities are inadequate. Interpretive displays are limited to a small area on the second floor of the Lodge. Visitor information facilities (dispatch, backcountry information, kayak rental information, etc.) are dispersed, resulting in visitor confusion and lack of coordination between information specialists. To ensure that park visitors have the opportunity to learn about park resources and have the information necessary to safely enjoy parklands and waters, the NPS will construct a visitor center near the head of the outer dock. The facility will be constructed to minimize impacts to sensitive coastal resources. This facility and associated parking will occupy about 1 acre of largely previously disturbed land.

Hoonah Tribal House/Cultural Center: The preferred alternative recommended construction of a traditional Tlingit Tribal House on the shore of Bartlett Cove. While commentors expressed concern about additional construction along the sensitive shoreline, most recognized the importance of the Hoonah Tlingits' cultural connection to Glacier Bay.

The NPS agrees and further recognizes that Bartlett Cove, in particular, was the site of Tlingit settlement. The Tlingit story is important to the public's understanding and appreciation of Glacier Bay. A traditional longhouse east of the Lodge will be constructed for visitor use, interpretive programs, and special events held by the Hoonah Tlingit. The facility will occupy approximately 1 acre of land along the Bartlett Cove shoreline.

Road Realignment: The preferred alternative includes rerouting the Bartlett Cove road to minimize shoreline impacts and further separate park visitors from employee housing. In general, commentors were supportive of this proposed action. The NPS will realign the existing road, within the boundaries of the Bartlett Cove developed area, and convert the old roadbed into a coastal trail. Road reconstruction and/or upgrade outside of the Bartlett Cove area will be further analyzed in a separate environmental assessment.

Trails: The preferred alternative recommended that the existing coastal trail be extended to Cooper's Notch and linked to the park road to provide a loop trail. Some commentors indicated that additional trails should not be constructed in Bartlett Cove, while others



October 1997

Dear Interested Citizen:

We are pleased to send you the *Draft Comprehensive Design Plan / Environmental Assessment* for Bartlett Cove, Glacier Bay National Park and Preserve. This document presents a range of alternatives for managing development at Bartlett Cove. Three alternatives are examined, a "no-action" alternative, an alternative that would entail implementing the existing *General Management Plan*, and the proposed action, which is the alternative preferred by the National Park Service. The impacts that could occur if each alternative was implemented are described and analyzed.

In 1984 the *General Management Plan* for this park designated Bartlett Cove as the only development zone within the National Park and Preserve and generally outlined development actions for the area. Since that time, visitation to Glacier Bay and the Bartlett Cove area has doubled, and numerous pressing resource issues have expanded park management responsibilities. The park staff has increased concurrently, resulting in the need for additional housing, maintenance facilities, and park administrative and science offices. At the same time, the infrastructure of Bartlett Cove has aged, and many facilities are in poor repair, do not meet the existing demand, or are not in compliance with safety and environmental regulations.

This plan addresses our desire to improve and expand visitor opportunities and provide adequate park infrastructure and housing. It also includes actions to reincorporate a native presence in Bartlett Cove, an area of great importance to the Hoonah Tlingit.

We invite all interested individuals and groups to comment on the *Comprehensive Design Plan / Environmental Assessment*. The 45-day public comment period closes on November 28, 1997. Open houses, which will be held in Gustavus and Hoonah, will give interested people the opportunity to talk with the park staff and express opinions and concerns regarding the plan for Bartlett Cove. We also welcome written comments through the end of the comment period. Comments may be directed to: Superintendent, Glacier Bay National Park and Preserve, P.O. Box 140, Gustavus, Alaska 99826.

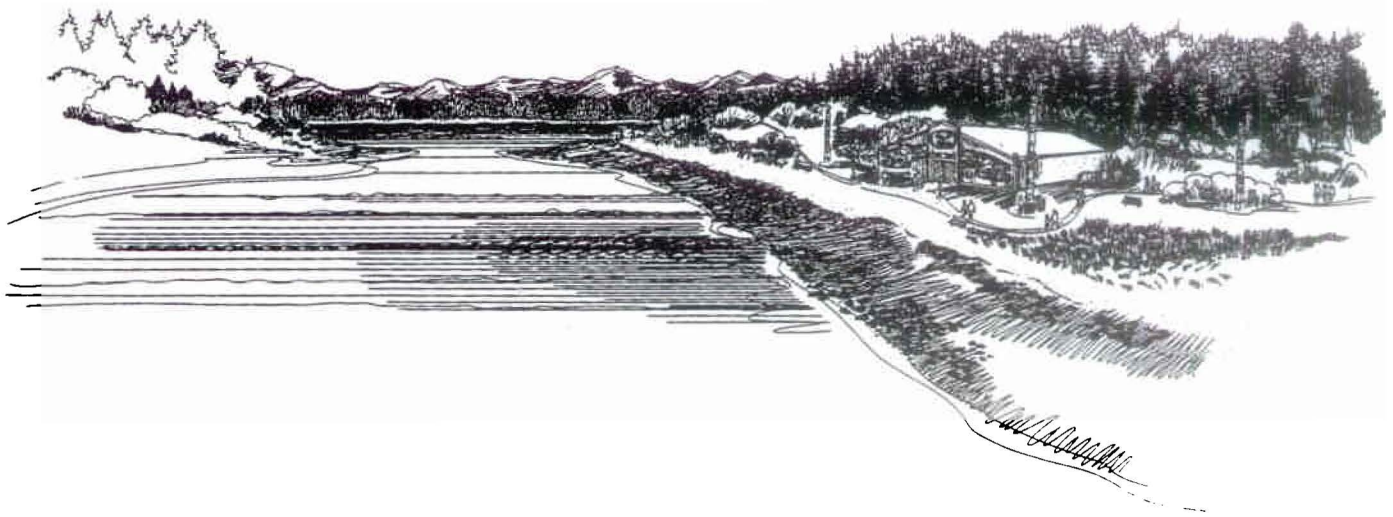
Thank you for participating in this planning process.

Sincerely,

J. M. Brady
Superintendent

**DRAFT
COMPREHENSIVE DESIGN PLAN
ENVIRONMENTAL ASSESSMENT**

September 1997



BARTLETT COVE

GLACIER BAY
NATIONAL PARK AND PRESERVE • ALASKA

United States Department of the Interior • National Park Service

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PURPOSE OF AND NEED FOR THE PLAN

INTRODUCTION

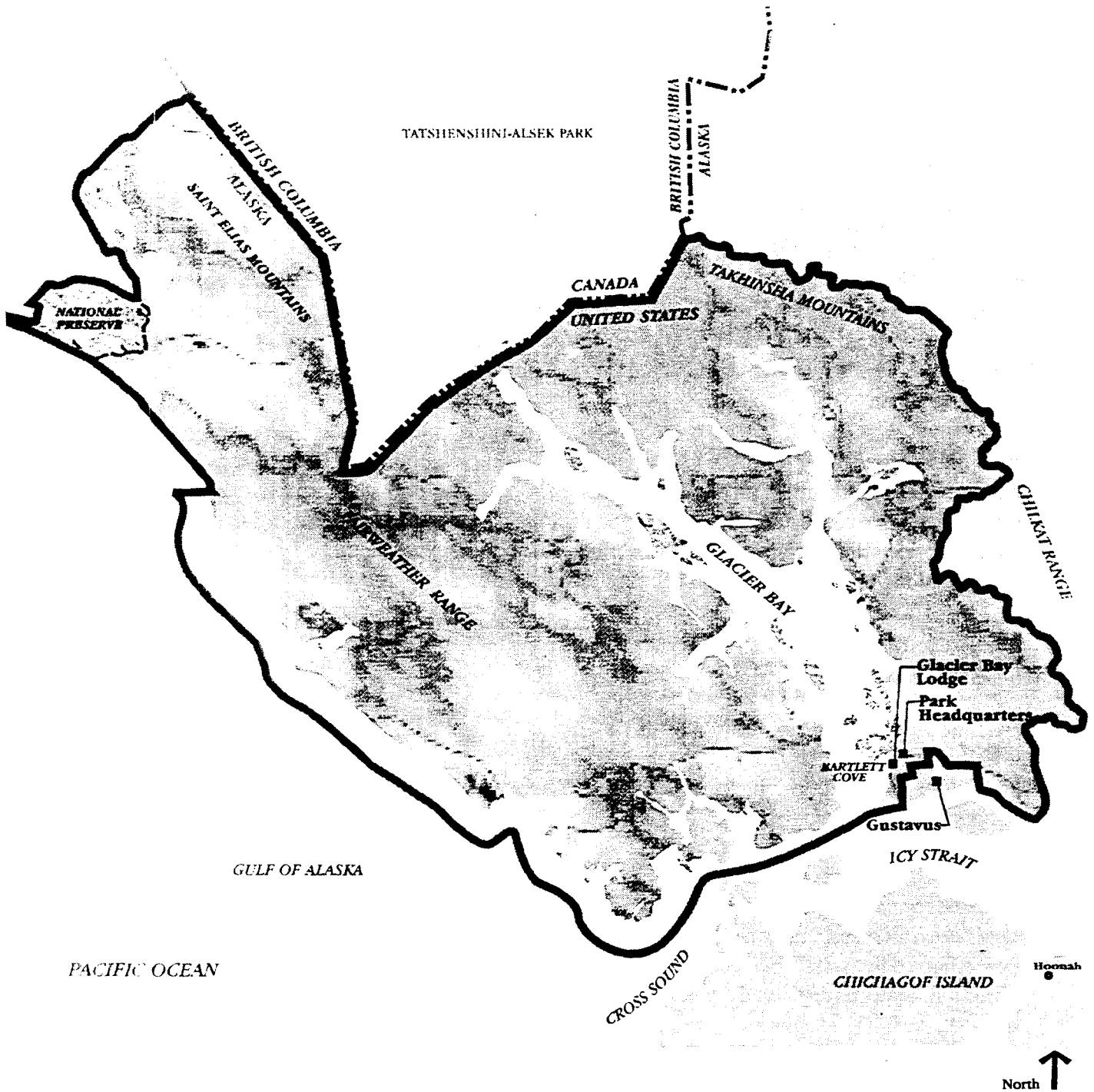
The National Park Service (NPS) is proposing to improve and expand visitor and administrative facilities at the Bartlett Cove development area of Glacier Bay National Park and Preserve (see Vicinity map). Bartlett Cove, gateway to the 3.3 million acre Park, is accessible by road from the community of Gustavus, 10 miles southeast, or by boat or floatplane at the Bartlett Cove dock. Bartlett Cove is the designated development area for the Park; it serves as a staging area for Park visitors and is the logistical and administrative base for Park operations and management.

This *Comprehensive Design Plan / Environmental Assessment* includes three alternatives, including a proposed action and a no-action alternative. The associated impacts of each alternative are described and analyzed in this document. This plan and environmental assessment has been prepared in accordance with the National Environmental Policy Act of 1969 (NEPA) and the regulations of the Council on Environmental Quality (40 CFR 1508.9).

Park Purpose and Significance

Glacier Bay was originally designated as a National Monument by presidential proclamation in 1925 to preserve tidewater glaciers and areas of glacial retreat, to offer visitors an opportunity to see the glaciers, and to provide unique opportunities to study successional processes (see appendix A for legislation). On December 2, 1980, Congress passed the Alaska National Interest Lands Conservation Act (ANILCA), which redesignated the unit as a Park, expanded boundaries, and created a national preserve in the Yakutat area. The Park purposes were broadened to include preservation of natural, scenic, historic, archeological, geological, scientific, wilderness, cultural, recreational and wildlife values. The preservation of unaltered ecosystems, sound wildlife populations and habitat, natural landscapes, wilderness recreational opportunities, and scientific research opportunities were also mandated by ANILCA.

In 1986 Glacier Bay National Park and Preserve was designated an international Biosphere Reserve by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) under the Man in the Biosphere program. In December 1992 UNESCO designated the Park a World Heritage Site, a natural site of outstanding universal value to all people. The Park also serves as the core area for the Glacier Bay Ecosystem Initiative, a national program designed to facilitate partnerships focused on ecosystem-level research.



VICINITY

**GLACIER BAY NATIONAL PARK
AND PRESERVE
BARTLETT COVE**

United States Department of the Interior • National Park Service
DSC • 132 • 20044 • MAY 97

Bartlett Cove Development

The National Park Service completed a *General Management Plan* (GMP) for the Park in 1984 (NPS 1984). The plan addressed overall Park management, natural and cultural resource management, visitor use and interpretation, research, administrative facilities, regional cooperation, and wilderness management. It also identified five management zones: nonwilderness waters, wilderness lands, wilderness waters, special use zones, and a development zone. At that time the Bartlett Cove area was considered to be the main gateway to the Park (except for those accessing the area by cruise ship) and was the only designated development zone within Park boundaries. Through this zoning concept, Glacier Bay National Park and Preserve accomplished what many large natural area Parks strive to achieve; the vast majority of the Park is zoned for wilderness uses with minimal development limited to that necessary for management and visitor services.

The *General Management Plan* describes the conditions expected in the Bartlett Cove developed zone as:

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.

The document further outlined a development concept for the Bartlett Cove area to meet Park visitation and NPS management needs while minimizing resource impacts. The plan allowed for facilities, housing, roads, trails, Parking lots, concessioner facilities, and Park utilities to be constructed within this zone. Bartlett Cove would continue to be the focus for overnight visitor accommodations in Glacier Bay National Park. Access would continue to be primarily by water and by air through Gustavus.

In designating Bartlett Cove a developed zone, the GMP directed that land in the area be managed for intensive public and administrative use and acknowledged that such actions would substantially alter the natural environment. The National Park Service recognizes that the visitor opportunities and experiences in a developed zone are significantly different from experiences provided by backcountry opportunities. Within the Bartlett Cove developed area, visitors will frequently experience the sights and sounds of facilities, other visitors, vehicles, floatplanes, etc. However, the GMP also emphasized that, to the extent possible, development in Bartlett Cove should “emphasize a high quality of design that harmonizes with the Park’s history and atmosphere” to minimize impacts on visitors and resources. Thus, the Bartlett Cove setting was envisioned to be natural, but not pristine.

PURPOSE AND NEED

Some elements of the GMP specific to the Bartlett Cove area have been implemented, including construction of Park housing and a partial dock expansion. This *Comprehensive Design*

Plan: Environmental Assessment reexamines the actions at Bartlett Cove that were endorsed by the 1984 GMP but have not been implemented. The GMP also allowed for additional facility development following an assessment of the area's carrying capacity (see Appendix B). Since that time, visitor use in Bartlett Cove has increased dramatically and the Park faces numerous new issues. These issues drive the need to reanalyze development at Bartlett Cove and form the basis for this *Comprehensive Design Plan / Environmental Assessment*. The issues outlined below, and the corresponding NPS objectives designed to resolve them, were developed through a series of scoping sessions conducted in May and July 1996 with the Park staff, the Park concessioner, the community of Gustavus, and the Hoonah Indian Association and the community of Hoonah (see "Consultation and Coordination").

Issue 1: Lack of adequate visitor facilities/Lack of a diversified visitor experience in Bartlett Cove

Visitation to Glacier Bay and the Bartlett Cove area has doubled over the last 10 years. Overnight stays at the Glacier Bay Lodge have increased by 81%; lodge capacity was reached in the early 1990s for the peak visitor season (mid-June to late August), and growth in visitation has subsequently filled the shoulder seasons (May and September). The National Park Service is concerned that lack of accommodations may preclude visitors from experiencing the Park. The potential to exclude some visitors or shorten their stay by lack of affordable budget accommodations is also a concern.

The current visitor center facilities on the second floor of the lodge are undersized; consequently, self-directed interpretive opportunities are limited to a small display on Glacier Bay's natural history. The theater accommodates a maximum of 60 visitors. Currently, backcountry orientations are provided in a smaller, separate building at the head of the dock which also serves as the vessel dispatch center. The National Park Service is concerned that backcountry visitors and vessel operators may not receive adequate information because this facility is often overcrowded and lacks the space needed to provide informational displays.

Currently there are three trails in the Bartlett Cove area: the Bartlett River, Bartlett Lake, and Forest Loop, totaling about 12 miles. All of these trails traverse temperate rain forest habitat with few opportunities to view coastal habitats.

The typical length of a visitor's stay in Bartlett Cove is short. Many visitors arrive by evening jet, spend an evening at the lodge, travel up bay on the concessioner day tour boat the next day and depart that evening. These visitors have little contact with the park landscape and do not experience the range of experiences, qualities, or values represented by a National Park.

Objective 1: Enhance the quality of the visitor experience at Bartlett Cove by providing a broader array of visitor activities and appropriate support facilities

To accommodate increased visitor use and to meet the demand for greater park access, this plan considers several alternatives and facilities to meet user demand. This plan also considers

several actions designed to broaden the range of options for visitors to Bartlett Cove and provide them with a more in-depth experience of the Park. The plan considers developing a larger visitor center to provide for natural and cultural interpretation of park resources, visitor orientation, and vessel and backcountry permitting. Additional lodging in the park is considered to make it possible and affordable for visitors to stay longer and explore the park in greater depth. Modest trail expansion would provide for a broader visitor experience and would enhance access to coastal areas. Construction of a traditional tribal house is considered, which would allow interpretation of the cultural component of the Glacier Bay landscape.

Issue 2: Inadequate Administrative Facilities

The park faces numerous new pressing resource issues, including vessel management, commercial fishing, and backcountry management. Consequently, administrative responsibilities have grown, resulting in a larger staff and a concurrent need for staff housing, maintenance facilities, and park administrative and science offices.

Park housing and office space is not sufficient to meet the current needs. Existing housing is not adequate for current permanent and seasonal staff levels. Transient housing for visiting researchers and NPS employees is typically unavailable. The lack of adequate housing makes personnel recruitment difficult.

Lack of park maintenance, administrative, and other operational work space hampers efficient park management. Office space is overcrowded; no work rooms or conference rooms are available.

The existing maintenance shop, approximately 4,000 square feet, is undersized for current operations and does not meet health or safety codes. Maintenance functions are conducted at separate locations throughout the Bartlett Cove area, making the overall maintenance operation inefficient and impacting visitor experience. The current shop is inadequate for the storage and maintenance of machinery, heavy equipment, and vehicles. Boat maintenance and marine operations are hampered by the lack of a boat storage and maintenance yard.

Moreover, the administrative infrastructure at Bartlett Cove has aged; many facilities are in need of upgrade and repair. Park utilities (wastewater, water, fuel storage, and electrical) do not meet current and projected demand and safety and environmental regulations. The demands on the systems continue to grow with more day use, overnight use, and staff increases. Repair has become costly and inefficient because of the system's age.

Objective 2: Provide adequate administrative office space, maintenance facilities, staff housing and utility systems to increase the efficiency of park operations

Efficient operation of a National Park with expanding responsibilities depends on adequate support structures. This plan recommends that appropriate work space and adequate housing be constructed to enhance park operations. Relocating and consolidating maintenance

operations would not only increase operational efficiency, but would improve visitor experience by removing these operations from visitor use areas. Upgrading and expanding utilities would meet the current and projected demand and comply with applicable laws.

Issue 3: Lack of cultural presence in Bartlett Cove

Glacier Bay is the traditional homeland of the Hoonah Tlingit people, and Bartlett Cove served as an important village site. While the Tlingit people have strong spiritual ties to Glacier Bay, their presence in the Park is largely limited to occasional special programs or projects. Tlingit children, whose ancestors lived in Glacier Bay, have little opportunity to experience their homeland or learn of their culture as it relates to “place.”

Importantly, the story of past human use of Glacier Bay and Bartlett Cove by the Tlingit is largely untold. Visitors have little opportunity to learn about the lifestyle of these coastal people who are an important part of the Glacier Bay landscape.

Objective 3: Recognize the traditional use of Bartlett Cove by Hoonah Tlingit and provide opportunities to maintain traditional heritage and, when appropriate, share it with the public

Both the NPS and Tlingit Natives are interested in reincorporating a Tlingit presence in the Bartlett Cove area. Thus, this plan recommends constructing a traditional tribal house to serve as a Native Alaskan cultural center. This center would serve as a focal point for native ceremonies and classes and could potentially be used as the basis for a summer spirit camp for Tlingit youth. The facility would be open to the public when not in use for ceremonies. The plan also discusses opportunities for public education on Hoonah Tlingit traditions, including cultural themes as interpreted by the Tlingit.

Issue 4: Developments in Bartlett Cove may impact the natural setting of Bartlett Cove

Development in the Bartlett Cove area may impact fragile ecosystems and alter wildlife distribution and vegetation patterns. As the gateway to Glacier Bay National Park, Bartlett Cove is, for many visitors, the first portion of the park they visit. For some visitors, it is the only experience they have of the park. Development at Bartlett Cove, administrative activities, and high visitor use levels may impact visitors experience by reducing the natural quality of the environment.

Objective 4: Minimize impacts on natural resources and, to the extent practicable, maintain a natural setting

In designating Bartlett Cove a developed zone, the GMP directed that land in the area be managed for intensive public and administrative use and acknowledged that such actions would substantially alter the natural environment. However, the GMP also provided that, to the extent possible, development in Bartlett Cove should “emphasize a high quality of design that

harmonizes with the park's history and atmosphere" to minimize impacts on visitors and resources. Thus, this plan considers consolidating administrative and maintenance facilities and housing and removing unnecessary facilities. The Visitor Access Center and additional park housing will be designed to fit into the surrounding landscape. The plan considers rerouting the road to reduce impacts to the shoreline and to separate visitor uses from administrative functions.

ISSUES CONSIDERED BUT NOT ADDRESSED

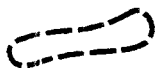
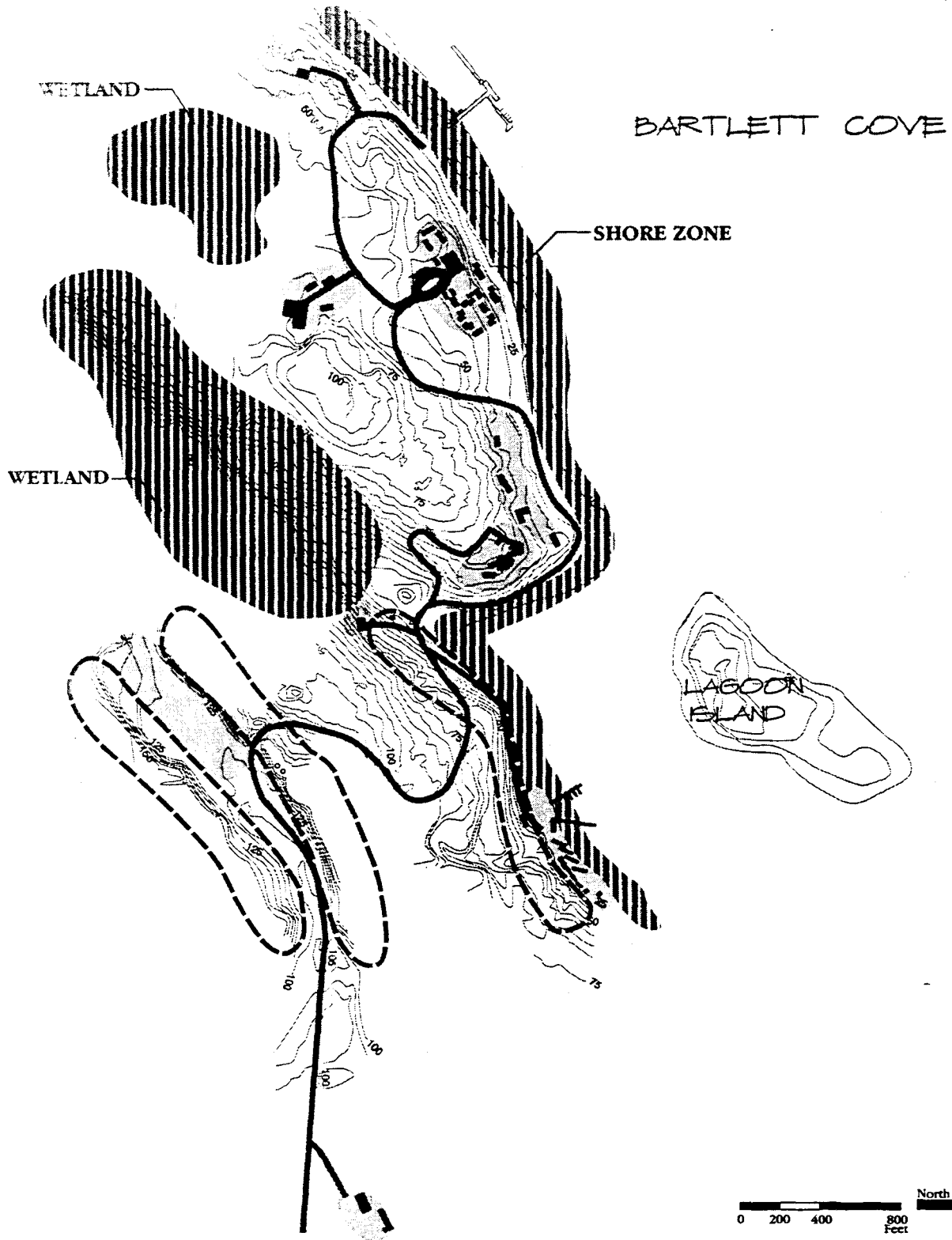
The issues and impact topics that follow will not be addressed further in this document. Reasons are provided for each issue/topic.

Rehabilitation and Expansion of Docks

Two docks provide boat mooring at Bartlett Cove; the main dock in the outer cove supports private, charter, and tour boats and the administrative dock in the inner cove supports NPS vessels. The main dock structure is 40 years old and needs stabilization and rehabilitation work to maintain it in a usable condition. The existing dock is also inadequate for the number and size of vessels using Bartlett Cove. Due to siltation and glacial rebound, the useful life of the inner dock may be limited to about 10 years. Although there is a need to expand the outer dock and mooring area to better meet existing and future demands, this planning is complex and would require a detailed study of design alternatives and mitigation. Design details would need to be developed to obtain necessary permits and to develop mitigating measures for the marine environment. This level of complexity and detail is beyond the scope of this *Comprehensive Design Plan*. Dock expansion will be evaluated in a future, separate planning and environmental compliance process.

High End Expansion of Lodging Facilities at Bartlett Cove

The carrying capacity evaluation shows that the resource capacity of Bartlett Cove is greater than that contemplated in this plan (see Suitability Analysis Map and Appendix B). In addition to the 30 new cabins proposed by this plan, 30 more cabins (total of 60 cabins) could be physically accommodated in the lodge area. The sociological carrying capacity evaluation, however, is inconclusive about the social limits of the Bartlett Cove area beyond the proposed expansion of 30 new cabins. This, along with environmental limits related to additional facility infrastructure (utilities) that would also be necessary, deserves further study and monitoring before further expansion is warranted. These questions make it impractical to pursue the alternative of high end expansion of lodging facilities at this time.



SEVERE SLOPE



SENSITIVE RESOURCES



DEVELOPED AREA

SUITABILITY ANALYSIS

GLACIER BAY NATIONAL PARK AND PRESERVE
BARTLETT COVE

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Park Road Upgrade

The road to Bartlett Cove from the park boundary passes through a lowland area and is subject to both spring and fall flooding. Road improvements in 1996 raised the road surface and ameliorated this problem to some extent but also resulted in a narrower road width. Further road improvements are necessary to address problems in crossing the lowland area, to expand the road width, and to rebuild and perhaps realign the road corridor in some areas. To fully evaluate needed road improvements, detailed design concepts and engineering studies will be needed, which are beyond the scope of this planning process. Park road upgrades will be comprehensively studied in a separate environmental planning and compliance effort.

Relocate Existing Park Administrative Facilities

Relocating the existing park administrative facilities from the inner cove site was considered but dismissed from full evaluation to minimize the impacts of additional new development. The existing administrative site is already disturbed, and it is unlikely that full restoration of the site would be feasible. Thus, constructing an additional facility elsewhere in Bartlett Cove would essentially double the impact of administrative facilities. A new administrative development would be costly due to the need for site preparation work including clearing and extending utilities. NPS funding for large construction projects is limited; it is unlikely that funding for this project would be received within the period covered by this document (10–15 years). Thus, it is most practical to adapt the existing facilities by remodeling buildings or using temporary modular construction as necessary.

Provide Park Housing and Administrative Facilities in Gustavus

Because the focus of many park operations and visitor-use services is in the Bartlett Cove area, it is more efficient to provide administrative support and some housing for key personnel in this area. Many park employees are associated with life, health, and safety functions and are on call 24 hours; these employees must be able to immediately respond to issues in Bartlett Cove and elsewhere in the Park. It is impractical to house seasonal employees outside the park as there is no public transportation system in Gustavus, and seasonal employees have widely variable work schedules. While park housing in Gustavus was not included as an option in this document, this does not preclude park staff from seeking housing in the community. In fact, approximately 50% of permanent park employees live in Gustavus.

Coastal Zone Management

The project area is not in a coastal floodplain. In 1984 the National Park Service determined that the *General Management Plan* was consistent with the Alaska Coastal Management Program (ACMP) and the Alaska Department of Governmental Coordination concurred with

the NPS determination. The National Park Service has determined that this plan is also consistent with the ACMP.

Wetlands, Floodplains, and Tsunamis

No proposed facilities would be located in a wetland. The project area is not in a floodplain or subject to storm surges that would affect development at Bartlett Cove. It is unlikely that a tsunami or a local wave generated by a landslide in the upper bay would occur and affect Bartlett Cove.

Subsistence

Section 810(a) of the Alaska National Interest Land Conservation Act requires that federal agencies evaluate their proposed land use and the effects on . . . subsistence uses and needs, the availability of other lands for the purposes sought to be achieved and other alternatives that would reduce or eliminate the use.” Federal agencies are also required to determine the potential for significant restriction of subsistence uses (see Appendix C). This topic was dismissed from further analysis because (1) Glacier Bay National Park is closed to subsistence uses and (2) the proposed action and alternatives would not affect regional subsistence resources or activities outside the park. Since there would be no effect, there would be no potential for significant subsistence restrictions.

MANAGEMENT ALTERNATIVES, INCLUDING THE PROPOSED ACTION

Three alternative strategies for the future of Bartlett Cove are presented for consideration. These alternatives represent a range of possibilities for the level of development and visitor activity at Bartlett Cove, the designated developed area of Glacier Bay National Park and Preserve. Alternative A, the no-action alternative, represents no change in the existing level of development at Bartlett Cove. Alternative B would involve implementing the Bartlett Cove development concept portrayed in the 1984 *General Management Plan*. Alternative C, the proposed action and NPS-preferred alternative, would involve diversifying visitor use, upgrading the maintenance and utility systems, and responding to additional management responsibilities. Table 1 at the end of this chapter provides a comparison of the alternatives. Table 2, at the beginning of the Environmental Consequences chapter, provides a summary and comparison of potential impacts for each alternative.

ACTIONS COMMON TO ALL ALTERNATIVES

Use Of Commercially Available Utility Systems

One long-term goal of the National Park Service is to use commercially available utility systems outside the park whenever economically and environmentally practicable. This option will be considered should utility systems in Gustavus become available.

Campground and Kayak Rental Services

The 35-site Bartlett Cove campground would not be modified in any alternative. Facilities for kayak rentals would remain adjacent to the campground in all alternatives.

Gustavus Housing

NPS housing in Gustavus would continue to serve park staff in all alternatives. The National Park Service would continue to explore options for expanding NPS housing options in the Gustavus community.

ALTERNATIVE A (NO ACTION)

General Concept

Alternative A would involve no change in the level of development at Bartlett Cove (see Alternative A map). The decisions of the *General Management Plan* that have not already

been implemented would not be acted upon. The existing infrastructure in the Bartlett Cove area would remain in its present configuration, and facility expansion and development of new facilities would not be considered. For a more detailed description of the existing infrastructure, see the “Affected Environment” chapter.

Actions

Park Headquarters: The park administrative facility would remain at its existing location and current configuration.

Maintenance Facility: Maintenance operations would continue to be based out of the existing facility across from the administrative building.

Utility Systems: The wastewater treatment plant, the water collection and distribution system, and the fuel storage facilities would remain at their current capacities and locations.

Visitor Accommodations and Lodge: Visitor lodging facilities (56 cabins and an 8-bed hostel) would remain unchanged. The existing lodge and visitor center would not be expanded.

Concession and Park Employee Housing: Concession employee housing would remain at the existing Bartlett Cove site. Additional permanent and seasonal housing for NPS employees would not be built (the ongoing trailer replacement program would continue — 12 seasonal beds, 1 single family unit).

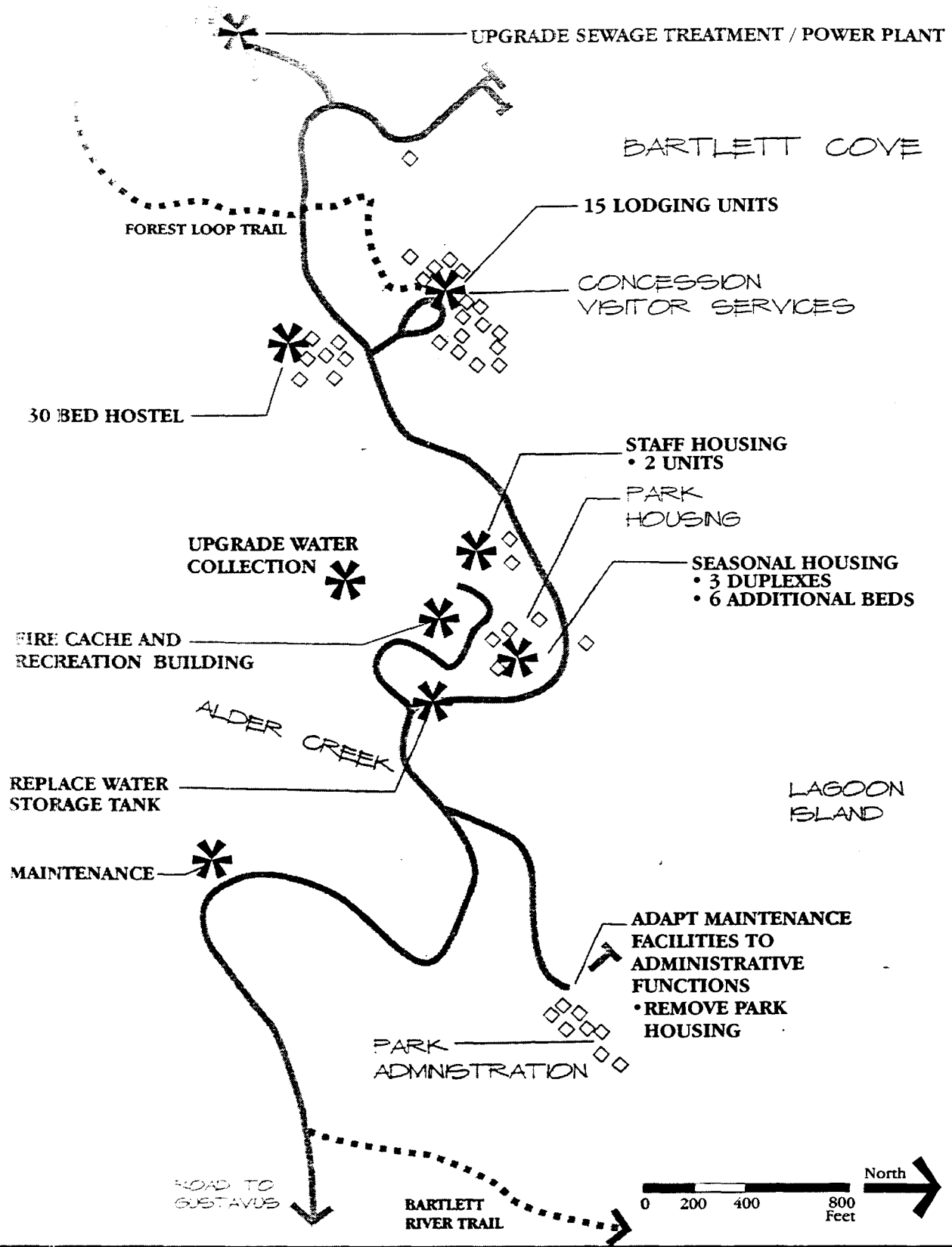
ALTERNATIVE B (IMPLEMENT EXISTING GENERAL MANAGEMENT PLAN)

General Concept

Under alternative B, the approved actions of the *General Management Plan* would be implemented as funds became available (see Alternative B map). The objective of the Bartlett Cove development concept identified in the GMP was to adequately accommodate current and expanded administrative operations, maintenance, and housing and increase visitor service facilities to respond to increased park visitation. The approved actions not yet implemented are discussed in the following paragraphs.

Actions

Park Headquarters: The park administrative facilities would remain at the existing location. Office facilities would be expanded through conversion of the existing maintenance facility into administrative and ranger offices.



- EXISTING TRAIL
- ◇◇◇◇◇ EXISTING PARK FACILITIES
- ~~~~~ EXISTING ROADS

ALTERNATIVE B

GLACIER BAY NATIONAL PARK AND PRESERVE BARTLETT COVE

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All existing cabins and maintenance/storage sheds would be removed from the headquarters area. To the extent practicable the area would be restored to natural conditions through the active application of restoration.

Maintenance Facility: The new maintenance facility would be built at the abandoned landfill site. The 14,560-square-foot facility would house plumbing, electrical and carpentry shops, vehicle and boat maintenance, boat storage, a wash station, a paint shop, storage bays, a warehouse, diving equipment and operations, and service space (office, lockers, kitchen, conference rooms, and restrooms). A separate 760-square-foot building would house flammable materials. The site would include 11,200 square feet of open storage for materials and equipment and employee parking. Six acres would be required for these facilities.

Utility Systems: Utilities identified in the *General Management Plan* that would be upgraded include the sewage treatment plant; the water collection, treatment, storage, and distribution system; and the fuel storage facilities.

Sewage Treatment Facilities: The NPS and concessioner sewage systems would be separated. In the long term an underground modular wastewater treatment plant with a capacity of 20,000 gallons per day would be constructed. The plant would include a laboratory and an equipment building. The building housing the NPS sewage treatment plant would be enlarged by 1,400 square feet to provide space for a laboratory, a shop, and a flow equalization tank. Wastewater treatment would require 700 square feet, and the generation of electricity would require an additional 700 square feet. Both wastewater systems would use the existing outfall into Bartlett Cove.

Water Collection and Distribution System: A total of 750 feet of surface pipe from the Alder Creek impoundment to the treatment plant would be replaced and insulated, and 800 feet of buried waterline from the treatment plant to the storage tanks would be replaced. The size of the impoundment would not change.

The older of the two storage tanks (100,000-gallon capacity) would be replaced by a 109,000-gallon tank at the same location. The tank foundation would be reconstructed. The overall storage capacity would be 218,000 gallons. Meters would be installed throughout the distribution system to monitor delivery and identify significant leaks. The distribution system would be extended by 1,400 feet to serve the maintenance facility and by 200 feet to serve the wastewater treatment plants. No clearing would be required because the site has been previously cleared to provide service access to the current facility.

Fuel Storage Facilities: The fuel storage and supply would be relocated to a site adjacent to the existing wastewater treatment plant. The facility would consist of six 25,000-gallon fuel storage tanks, a pump and equipment house, and piping for distribution.

The existing fuel storage facility would be removed after the development of a remediation plan to clean up fuel-contaminated soil. The National Park Service would prepare a spill pre-

ALTERNATIVE C (PROPOSED ACTION)

vention control and countermeasure plan (as required by 40 CFR Part 112) and a facility response plan (as required by the Oil Pollution Act of 1990) before constructing the new fuel storage facility. Site requirements would call for clearing and grading about 0.5 acre of land.

A total of 700 square feet of the sewage treatment plant / generator building expansion would be used for shop space and a fourth generator pad for future upgrades. Generator control panels would be upgraded to current standards. Electrical service would be extended underground along the roadway 2,000 feet to the maintenance facility and landfill.

Visitor Accommodations and Lodge: Visitor accommodations would be increased by up to 15 additional units (30 pillows) at the lodge and a 30-bed hostel. The existing lodge would also be expanded to accommodate increased use. About 2 acres of land would be required for these facilities, including vehicle parking.

Park Employee Housing: In addition to the ongoing trailer replacement program (which would construct 12 seasonal beds and 1 single family unit), one additional single family house and 6 additional seasonal beds in apartments would be constructed. About 1 acre of land would be required for these facilities, including vehicle parking.

Recreation Building: A 2,000-square-foot recreation building would be constructed for park staff adjacent to the seasonal housing. About 0.5 acre of land would be required.

Other Actions: Once suitable housing and administrative facilities became available, the cabin on Lagoon Island would be removed. The old powerhouse would be removed.

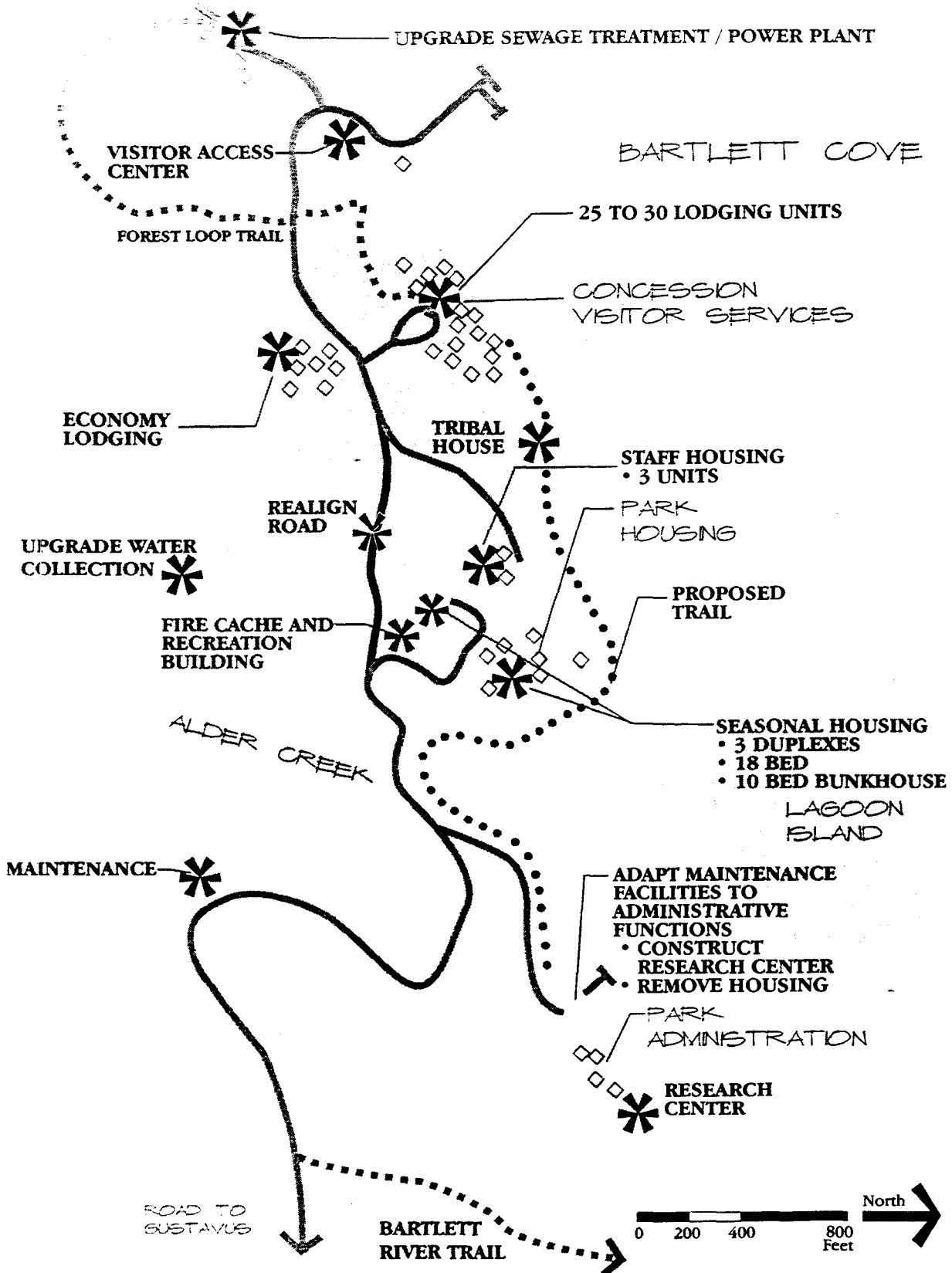
ALTERNATIVE C (PROPOSED ACTION)

General Concept

Alternative C would implement the provisions of the *General Management Plan* as well as additional actions. The objective of the proposed action would be to adequately accommodate current and expanded administrative operations; maintenance, utility, and housing needs and to diversify visitor experience by increasing visitor service facilities (see Alternative C map). The proposed action, the alternative preferred by the National Park Service, would include the following actions:

Actions

Park Headquarters: The park administrative facilities would remain at the existing location. The administrative facilities, including vehicle parking, would be designed to accommodate the growing staff of Glacier Bay National Park and Preserve. Office facilities would be increased by expanding the existing office and converting the existing maintenance facility into



- EXISTING TRAIL
- ◇◇◇◇◇ EXISTING PARK FACILITIES
- EXISTING ROADS
- NEW ROAD ALIGNMENT
- PROPOSED TRAIL

**PREFERRED ALTERNATIVE
ALTERNATIVE C**

**GLACIER BAY NATIONAL PARK AND PRESERVE
BARTLETT COVE**

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administrative and ranger offices. The administrative facility would include work stations or office space for up to 50 employees, a conference room, a lobby area, a computer equipment outbuilding, an interpreter's workroom, a collections room, a library, a storage area, a kitchen, trash / recycle center, and a restroom/shower facility.

All existing cabins and maintenance/storage sheds would be removed from the headquarters area. To the extent practicable the area would be restored to natural conditions through the active application of restoration techniques.

Research Center: A research center (shared between the National Park Service and the U.S. Geological Survey, Biological Resource Division (BRD)) would be constructed to formalize and facilitate the science and research program of Glacier Bay National Park and Preserve. The research center would include work stations for up to 19 employees and visiting researchers, a multipurpose room, a conference room, a laboratory, GIS stations, a research library, and field preparation and storage space. The facility would also include a kitchen and a bathroom. The research center (about 0.5 acre in size) would be constructed using modular buildings at the existing headquarters site.

Maintenance Facility: The new maintenance facility would be built at the abandoned landfill site. The maintenance facility is described under "Alternative B."

Fire Cache: A fire cache would be constructed near the seasonal housing complex.

Utility Systems: Utility systems (sewage treatment plant; water collection, treatment, storage, and distribution system; and fuel storage facilities) would be upgraded. Utility system upgrades are described under "Alternative B. The potential also exists to drill groundwater wells to augment or replace the existing water collection system. Wells could be located adjacent to the existing seasonal employee housing.

Visitor Accommodations and Lodge: The concessioner would add up to 30 units (60 pillows) to the existing lodge. The existing concession employee dormitory would be converted to a 50-room budget accommodation (100 pillows). The employee cafeteria would be converted to a public cafeteria. The lodge building would be redesigned and expanded to accommodate increased visitation. The visitor accommodations and lodge expansion, including parking, would require about 3.25 acres of land.

Concession Employee Housing: Most concession employee housing would be relocated outside of Bartlett Cove.

Park Employee Housing: Housing to accommodate 18 seasonal employees (18 beds) and 2 permanent employees (family units) would be constructed adjacent to the existing housing complex. These would be in addition to those constructed through the ongoing trailer replacement program (12 seasonal beds and 1 single family unit). A 10-person bunkhouse with kitchen and bath facilities would also be constructed to support visiting researchers and visiting

NPS employees. Construction of employee housing and vehicle parking would require about 1.5 acres of land.

Recreation building: A 2,000-square-foot recreation building would be constructed for park staff adjacent to the seasonal housing complex. About 0.5 acre of land would be required.

Visitor Access Center: A visitor access center adjacent to the outer dock would provide interpretive and informational services for visitors on the natural and cultural resource values of Glacier Bay. This facility (about 8,000 sq. ft.) would include a lobby, a visitor information area, exhibit space, a multi-purpose room, an aquarium, interpretive offices, a dispatch and boat/backcountry orientation area, a backcountry trip staging area, storage, an Alaska Natural History Association book sales area, kayak rental, a camper store, and restrooms. The visitor activity center and vehicle parking would occupy about 1 acre of land. The existing backcountry visitor center would be removed, restoring approximately .5 acres of land.

Hoonah Tribal House: A traditional tribal house would be built near the lodge and would be available for visitor use, interpretive programs, and special events held by the Hoonah Tlingit. Cultural resource interpretation would be integrated into the visitor experience through programs offered by the National Park Service in cooperation with the Hoonah Tlingit. Those programs would be directed at cultural conservation. The tribal house and small service entrance would occupy about 1 acre of land.

A temporary Hoonah spirit camp would be permitted in conjunction with the tribal house. The camp would be aimed at reviving latent skills and transferring cultural traditions to succeeding generations. The spirit camp would be a temporary summer camp without permanent facilities

Bartlett Cove Road Realignment: The road in the Bartlett Cove area would be rerouted to the east of the park housing area. About 800 linear feet of new road would be constructed. The old roadbed (about 1,200 linear feet) would be converted into a trail.

Trails: A coastal trail developed generally along the alignment of the old road would be designed to function as an interpretive trail. The coastal trail would extend to Cooper's Notch and loop back to the park road. The trail would link the lodge and the Bartlett Cove outer dock area with the administrative area and Bartlett River trail access.

Other Actions: All nonessential facilities and structures would be removed from the administrative area. Once suitable housing and administrative facilities became available, the cabin on Lagoon Island would be removed. The old powerhouse would be removed.

Project Implementation

The first priority for Bartlett Cove development would be the sewage treatment plant, which is currently overloaded, and the fuel storage facility, which is not in compliance with state and federal regulations. The second priority would be upgrading the Bartlett Cove water system and the construction of a new maintenance facility. The timeframe for facility construction would depend on available funding and regulatory compliance. In all likelihood, the construction of planned facilities would occur over a number of years as funding became available. Cost estimates for the proposed action are provided in Appendix D.

In addition to funding constraints, the timetable for some actions would depend on the sequential phasing of facility relocations and the demolition/reconstruction activity. For example, new lodging units are dependent on the utility system upgrade, and the economy lodging is dependent on relocating concessioner housing to Gustavus. Extending the trail depends on the realigning the road section.

MITIGATING MEASURES COMMON TO ALL ACTION ALTERNATIVES

This section describes measures that would be used to minimize the adverse effects of facility construction. All construction would be restricted to the minimum area required. During construction a project supervisor and a resource specialist would review the work to ensure that work methods would minimize impacts on the environment and to ensure that mitigating measures were followed.

Protection of Natural Resources

Specific site plans would be developed for all facility developments. All site-specific plans would be designed to minimize impacts on natural resources.

Protection of Marbled Murrelets

Tree removal and landscape clearing activities in mature and old-growth spruce and hemlock in the Bartlett Cove area would be performed outside the marbled murrelet nesting and fledging period (April–August).

Protection of Cultural Resources

Prior to construction, archeological surveys and ethnographic interviews would be conducted on all development sites to determine the presence, extent, and significance of any previously unknown cultural resources. If cultural resources should be encountered during earthwork or

construction, such activities would cease, and a qualified NPS archeologist would be notified for onsite inspection.

Potentially adverse effects on cultural resources, if avoidance was not feasible, would be mitigated by actions developed by the National Park Service in consultation with the Alaska State Historic Preservation Officer and the Advisory Council on Historic Preservation, as stipulated in 36 CFR 800, and when appropriate with the Hoonah Indian Association.

COMPARISON OF ALTERNATIVES

The actions of the different alternatives are compared in table 1, on the following page.

TABLE 1: BARTLETT COVE ALTERNATIVES

Development Concept	Alternative A: No Action	Alternative B: Implement Existing General Management Plan	Alternative C: Proposed Action
Park Headquarters	The park administrative facility would remain at existing location.	Headquarter offices would remain at their existing location and be expanded by converting the existing maintenance building to administrative and ranger offices and a fire cache. All existing cabins and storage sheds would be removed from the inner cove area.	Same as alternative B.
Research Center	No research center would be constructed.	Same as alternative A.	A research center would be constructed using modular buildings at the existing, inner cove administrative site.
Maintenance Facility/Area	Maintenance facility would remain at existing administrative site across from office building; limited maintenance yard at new landfill.	A new maintenance facility would be built at the abandoned landfill; facility would provide shops, vehicle and boat maintenance areas, storage and office areas. There would be a vehicle parking area and open storage for materials and equipment.	Same as alternative B.
Fire Cache	No change in existing facility.	Same as alternative A.	A fire cache would be constructed near the seasonal housing complex.
Utilities	No change in existing utility systems.	Upgrade wastewater treatment plant; upgrade water collection, treatment, storage, and distribution system; relocate and increase capacity of fuel storage facilities.	Same as alternative B. The potential also exists to drill groundwater wells to augment or replace the existing water collection system.
Visitor Accommodations	No additional visitor accommodations would be constructed.	Up to 15 visitor rooms (30 pillows) would be added to the lodge. A 30-bed hostel would be constructed near the lodge. Parking would be provided.	A total of 25-30 additional visitor rooms (50-60 pillows) would be added to the lodge. Existing concession employee dormitory would be converted to a 50-room (100 pillow) budget accommodation. The employee cafeteria would be converted to a public cafeteria. The lodge building would be redesigned and expanded. Parking would be provided.
Lodge	Existing lodge would not be expanded.	The lodge would be expanded to accommodate increased visitor use.	Same as alternative B.
Concession Employee Housing	Concession employee housing would remain at the existing Bartlett Cove site.	Same as alternative A.	Concession employee housing would be relocated outside the park.

Development Concept	Alternative A: No Action	Alternative B: Implement Existing General Management Plan	Alternative C: Proposed Action
Park Employee Housing	No change to existing seasonal and permanent housing accommodations.	Implement GMP-authorized housing	Expand housing to accommodate existing staff.
Seasonal Housing (number of beds)	Existing housing consists of: I. 12 beds in 3 duplexes (replaces 5 trailers; to be constructed) II. 22 beds in apartments III. 4 beds in cabins/A-frames	Housing would consist of: VI. 12 beds in 3 duplexes (replaces 5 trailers; to be constructed) VII. 22 beds in apartments VIII. 6 beds to be constructed	Housing would consist of: XI. 12 beds in 3 duplexes (replaces 5 trailers; to be constructed) XII. 22 beds in apartments XIII. 18 beds to be constructed XIV. 10-bed bunkhouse
Permanent Housing (number of units)	IV. 4 units in single family houses (3 existing; 1 to be constructed) V. 1 duplex (2 units)	IX. 5 units in single family houses (3 existing; 2 to be constructed) X. 1 duplex (2 units)	XV. 6 units in single family houses (3 existing; 3 to be constructed) XVI. 1 duplex (2 units)
Recreation Building	A recreation building would not be constructed.	A 2,000 square foot recreation building would be constructed for park staff adjacent to the seasonal housing.	Same as alternative B.
Visitor Access Center	A visitor access center would not be constructed.	Same as alternative A.	A visitor access center to provide visitor information and interpretive services would be located adjacent to the outer dock. Parking would be provided.
Tribal House	No tribal house would be constructed.	Same as alternative A.	A tribal house would be developed north of the lodge near a beach.
Bartlett Cove Road Realignment	No change to existing road.	Same as alternative A.	The road would be rerouted to the east of the park housing, and the old roadbed would be rehabilitated and converted to a trail.
Trails	No new trails would be constructed.	Same as alternative A.	The coastal trail would extend to Cooper's Notch and loop back to the park road.
Campground	No change to existing park campground.	Same as alternative A.	Same as alternative A.

Development Concept	Alternative A: No Action	Alternative B: Implement Existing General Management Plan	Alternative C: Proposed Action
Other Actions	None.	Once suitable housing and administrative facilities became available, cabin on Lagoon Island would be removed. The old powerhouse would be removed. Kayak rentals would continue to be adjacent to the campground.	Same as alternative B, plus all nonessential facilities/ structures encroaching on the coastline at Bartlett Cove would be removed.

AFFECTED ENVIRONMENT

NATURAL RESOURCES

Vegetation and Wildlife

Bartlett Cove is situated on a remnant of a terminal moraine created by an advancing tide-water glacier. As the glacier receded, plant communities evolved over a period of at least 170 years into an even-aged high-density, spruce-dominated forest, with mosses, devil's club (*Oplopanax horridum*), and blueberries (*Vaccinium* spp.) as the primary understory vegetation. Much of the Bartlett Cove area is situated in this moist forest community. It is theorized that the rapid growth of the even-aged high-density forest has depleted the soil of nutrients in recent years. In turn, this nutrient depletion may be responsible for reduced tree growth rates, increased competition, and physiological stress of many trees. A consequence of this rapid growth and subsequent depletion of nutrients can be increasing susceptibility to insects and disease (E. Holsten, USDA Forest Service, pers. comm., June 1996).

Forests in the Bartlett Cove area show evidence of increased mortality from naturally occurring forest pathogens (spruce beetle, *Dendroctonus rufipennis* and others). There are at least 12,000 acres of spruce/hemlock forest in lower Glacier Bay and the Bartlett River watershed. One potential future scenario predicted by forest ecologists is a die-off of spruce leading to a fundamental change in forest structure (L. Sharmen, NPS, pers. comm., December 1996). An increase in western hemlock (*Tsuga heterophylla*) as a component of the forest is also possible.

Many of the existing developments lie along the shoreline of Bartlett Cove, and much public use is focused in this area. Shoreline habitats — beachfront, intertidal and subtidal — are typically rich and fragile communities and serve as important wildlife travel corridors. Although the Bartlett Cove shoreline continues to support unique plant and animal life, human use, as well as developments along the shore (campground, boat ramp, public dock, lodge, hiking trail, and administrative facilities), have likely altered wildlife travel patterns.

Many types of wildlife are found in the Bartlett Cove area. Common species are black bear (*Ursus americanus*), mink (*Mustela vison*), river otter (*Lutra canadensis*), flying squirrel (*Glaucomys sabrinus*), porcupine (*Erethizon dorsatum*), red squirrel (*Tamiasciurus hudsonicus*), voles (*Microtus* spp. and *Clethrionomys rutilus*), moose (*Alces alces*), and shrews (*Sorex* spp). A total of 57 species of birds have been identified in the Bartlett Cove area.

A limited biological inventory of the major plant communities and wildlife species of Bartlett Cove and Gustavus area provided the basis for identification of sensitive habitats to avoid in development concepts (Streveler, Paige, and Bosworth 1995).

Threatened, Endangered, or Sensitive Species

The American peregrine falcon (*Falco peregrinus anatum*) is the only federally listed endangered species for which suitable habitat exists in the Bartlett Cove project area. Habitat for no other threatened or endangered plant or terrestrial animal species exists in the area. Habitat for two other species of concern does exist in the area; the marbled murrelet (*Brachyramphus marmoratus*) and the Glacier Bay water shrew (*Sorex alaskanus*).

American peregrine falcon (*Falco peregrinus anatum*): This species is listed as an endangered species under the Endangered Species Act and is also a species of special concern for the state of Alaska. These birds nest throughout the forested interior of Alaska, mainly on cliffs along rivers and lakes, and feed primarily on other birds. This species may occur in the Bartlett Cove area as a transient during seasonal migrations (USFWS 1996). No critical habitat has been designated in the Bartlett Cove area for this species.

Marbled murrelet (*Brachyramphus marmoratus*): The marbled murrelet, which is found in the waters of Bartlett Cove year-round, is listed as threatened in Oregon, Washington, and California. It is also listed as a species of concern in Canada. Icy Strait and Glacier Bay are important feeding waters for this species. Between 2,000 and 7,000 marbled murrelets feed in park waters and approximately 20,000 and 30,000 murrelets have been observed in Icy Strait.

Marbled murrelets may fly significant distances inland, usually up rivers, to reach suitable habitat for nesting. They nest in large trees in old-growth forests or in trees with other suitable structural components such as large branches or heavy moss growth that will provide a suitable nesting platform. They prefer low-elevation forests. The extent of suitable habitat in lower Glacier Bay could be as much as 12,800 acres. Recent surveys indicate that marbled murrelets may be nesting in the Bartlett Cove area (Rice 1996).

Glacier Bay water shrew (*Sorex alaskanus*): The Glacier Bay water shrew is closely related to the water shrew (*S. palustris navigator*). Two Glacier Bay water shrew males were collected on 12 June 1899 near Point Gustavus and subsequently described as a new subspecies *S. navigator alaskanus* by Merriam (1900). Merriam based his classification on the larger sagittal and lambdoidal crests and lighter pelage than that of the water shrew (Jackson 1928). The subspecies was elevated to full species status by Jackson (1926, 1928). Jackson stated that although *S. alaskanus* very closely resembles *S. p. navigator* in external appearance, it differs from it and all other forms of the genus *Sorex* in its highly ridged skull. This elevation to full species status by Jackson has been questioned by Hall (1981) and Junge and Hoffmann (1981) and other taxonomists. They believe the Glacier Bay water shrew should not be considered a separate species. Since that time only one other specimen of the Glacier Bay water shrew has been collected. This shrew was found on the road to Bartlett Cove (MacDonald and Cook 1993).

Little is known about the natural history of the Glacier Bay water shrew. However, water shrews (*Sorex palustris navigator*) are usually found in temperate areas. They have been recorded as far north as the head of Lynn Canal in Southeastern Alaska (NPS, Home 1973). They are highly aquatic and usually tied to communities associated with water (Banfield 1974). Water shrews tend to inhabit streambanks, lakeshores, and marshes in the coniferous forests from sea level to 2,190 meters. They are particularly attracted toward the mossy banks, rocks, and logs found along swift-flowing streams in climax coniferous forests (Banfield 1974).

Coastal Zone Resources

Glacier Bay National Park and Preserve contains one of the world's largest protected marine areas. Within its more than 5,000 square miles, the park contains approximately 940 square miles of marine waters and more than 1,000 miles of shoreline. Coastal resources include diverse intertidal communities and associated beaches, seabird nesting colonies, seal and sea lion haul-outs, and near-shore marine waters providing critical habitat for marine mammals.

Wetlands, Floodplains, and Tsunamis

The 1995 biological inventory performed identified wetlands in Bartlett Cove, including forest ponds (palustrine) on the crest of the moraine, stream (riparian), and estuarine subtidal and intertidal (U.S. Fish and Wildlife Service *National Wetland Inventory* categories). The forest ponds were formed by settling of the moraine or ice blocks embedded in the till. Depressions left after the glacial ice melted became vegetated. The subsequent decomposition of plant material mixed with soluble iron to form soil, which sealed the bottom of the depression (D. Engstrom, St. Croix Watershed Research Station, Science Museum of Minnesota, pers. comm., July and December 1996). A site-specific map of palustrine wetlands in Bartlett Cove is presented in Appendix E.

The project area is not in a floodplain or subject to storm surges that would affect development at Bartlett Cove.

There are no records of tsunamis at Bartlett Cove in a National Oceanic and Atmospheric Administration publication, *A Historical Summary of Earthquake Epicenters in and Near Alaska* (NOAA 1976). According to the National Oceanic and Atmospheric Administration's Alaska Tsunami Warning Center, there is little likelihood of a tsunami generated by an earthquake in the Gulf of Alaska or the Aleutian Trench affecting Bartlett Cove. There is a remote possibility that Bartlett Cove could be affected by a local wave from a landslide into Glacier Bay similar to slides that have occurred at Lituya Bay. Such a surge would be less than 1 foot (G. Carte, Alaska Tsunami Warning Center, NOAA, pers. comm., June 1996).

VISUAL QUALITY

As the Park's developed area, Bartlett Cove is managed for intensive administrative and public use, which substantially alters the natural environment. The developed area located on the eastern shore of Bartlett Cove is situated in spruce-dominated forest. While facilities are appropriately located and screened by vegetation and terrain and have been planned to minimize impacts to visual resources; parking lots, public roads, buildings, park utilities and vehicle traffic are a common sight in this area.

Park visitors may experience the Bartlett Cove viewshed from two vantage points — from the developed road corridor or from the water. Views of Bartlett Cove from the water are primarily of an undisturbed shoreline with the exception of the dock and limited views of the steeply sloping lodge roof. Visitors viewing Bartlett Cove from along the developed road corridor (including the lodge and various trails in the area) are likely to see various facilities, including the lodge, lodge cabins, park and concessioner staff housing, and various maintenance out-buildings. These visitors will also experience road traffic, including administrative traffic.

The primary view from the development area to the northwest, overlooking Bartlett Cove toward the Fairweather Range, is relatively pristine, although the outer dock and associated vessel activities are evident.

CULTURAL RESOURCES

The Hoonah Tlingit have revered oral traditions about a settlement in Bartlett Cove that was overrun by the last glacial advance (Dauenhauer and Dauenhauer 1987). They call the settlement L'aw shaa shakee aan — “town on top of the glacial sand dunes” — although its actual location is unknown (Thornton 1995). However, physical evidence of prehistoric use of the Bartlett Cove area before the last glacial advance is not likely to be found because glaciers have repeatedly scoured the ground.

During the historic period, the Hoonah Tlingit occupied a permanent village on the south shore of Lester Island in Bartlett Cove, where they also had a cemetery (Ackerman 1964). In addition, they established seasonal camps, gardens, and smokehouses for smoking salmon. The Tlingit harvested ribbon seaweed, crabs, gumboots, seal, groundhogs, and porcupine as well as timber for canoes in Bartlett Cove (Goldschmidt and Haas 1946).

Bartlett River at one time was a significant stream producing sockeye salmon. Such a river was “. . . the most valuable property of the Tlingit . . . [and] was a family [lineage] possession, handed down through generations” (Emmons 1991). Goldschmidt and Haas list Bartlett Cove as being within the traditional territory of the Chookenaiddi clan, but all Tlingit clans had connections to the area.

The National Park Service purchased two former Native allotments in the Bartlett Cove area. One allottee, Albert Jackson, described his and others' use of the area in 1945:

Bartlett Cove was an important place for the native people. I have a dwelling and two smokehouses there; also a garden with rhubarb, strawberries, raspberries, cranberries and soapberries. I had two trap lines around the lake above Bartlett Cove . . . since I have become too old my sons used these trap lines until it [Glacier Bay] was made a reserve. I have fish lines and traps in my house. We used to get sock-eyes and cohoes in the cove and land otter in that area. I also have a trapping cabin on the lake. (Goldschmidt and Haas 1946).

Charles Judson was the other Native allottee who sold his property to the National Park Service. These men, their families, and clan members and others who had permission to use the resources also harvested the inner bark of trees for food, shelter, and crafts (Lewis and Mobley 1994). As a result, numerous culturally modified trees are evident in Bartlett Cove.

Because of the rich salmon resources in Glacier Bay, a cannery and later a saltery were established near the Hoonah village in Bartlett Cove. The Bartlett Bay Packing Company, operating under ever-changing names, operated from 1888 to 1894. A saltery was subsequently established at the site from 1898 to 1901. At one point 40–50 Hoonah Tlingit worked at the saltery (NPS, Kurtz n.d.). A trading post operated by Dick Willoughby was also located in the Bartlett Cove vicinity and may have preceded the saltery and cannery. Evidence of the cannery, the saltery, and the trading post include pilings, boiler parts, and building remains. Several house platforms identify the probable location of the village (Ackerman 1964).

Clearly there was much cultural activity at Bartlett Cove, although there is little surface evidence of that activity today. Several traditional cultural properties, a type of national register nomination, will likely result from an ongoing ethnographic overview, which will recognize Tlingit residence, use, and the cultural importance of Bartlett Cove and Glacier Bay in general (NPS 1990a).

SOCIAL ENVIRONMENT AND VISITOR EXPERIENCE

Bartlett Cove Administrative Facilities

Bartlett Cove is the designated developed area for Glacier Bay National Park and Preserve. As such, it serves as a staging area for visitors entering the park and as a logistical and administrative base for park and concession management. Support facilities include the NPS administrative and maintenance facilities, a ranger station, a backcountry office, and a boat dock. Housing is provided for some seasonal and permanent employees. Utilities comprise water and wastewater treatment, fuel storage, and a power plant.

The wastewater treatment and collection system at Bartlett Cove services park operations, housing, and concessioners' operations. Combined flows approach 30,000 gallons per day,

but because of the limited capacity of the existing plant, only 10,000 gallons per day is receiving secondary treatment. The remaining effluent is serviced by two septic systems and then released through two marine outfalls.

The water collection and distribution system consists of an impoundment on Alder Creek, a treatment plant, and two storage tanks. A total of 750 feet of surface pipe connect the impoundment with the treatment plant, and 800 feet of pipe connect the treatment plant with the storage tanks. Water storage facilities consist of a 100,000-gallon tank and a 109,000-gallon tank. The current storage capacity is 175,000 gallons, although the combined tank size is 209,000 gallons. Design problems make it impossible to fill the 109,000-gallon tank completely.

The fuel storage facility handles, stores, and distributes petroleum products in the form of gasoline and diesel oil. Commercial barges transfer fuel to the facility about every 3 weeks during the summer and once every other month during the winter. The fuel is stored in single-wall, underground steel storage tanks. The facility has a total capacity of 18,000 gallons of gasoline and 70,500 gallons of diesel fuel (NPS 1990b). An estimated 10,000 gallons of petroleum product has leaked from the underground storage tanks into the soils surrounding the facility.

Four trailers in the inner lagoon area that serve as seasonal housing will be replaced upon completion of the new seasonal housing facilities (scheduled for completion in fiscal year 1998). This project is part of a nationwide NPS program to upgrade park housing.

Concession facilities consist of a central lodge with a restaurant and a gift shop, 56 units of overnight lodging, and an employee housing complex. The National Park Service operates a modest visitor center and auditorium on the second floor of the lodge, and the Alaska Natural History Association sells publications in the lodge. A campground with 35 sites is available for visitors to Bartlett Cove. The public dock at Bartlett Cove serves tour boats, private boats, and float planes. A kayak rental service is also available.

Local Community

The unincorporated town of Gustavus is the entryway to Glacier Bay. On the north shore of Icy Strait, Gustavus has a year-round population of approximately 350. The population expands considerably in summer when seasonal businesses reopen and summer or weekend residents return. Originally settled by agricultural homesteaders, Gustavus now supports a diverse population of school employees, fishermen, NPS employees, and numerous residents involved in the tourist industry. In recent years the area has burgeoned as a tourist destination; popular visitor activities include sport fishing and whale watching in Icy Strait and visiting Glacier Bay National Park. At least 20 inns/lodges/bed and breakfasts and approximately 25 charter vessel companies serve the growing tourist population. The community is expanding rapidly,

with numerous new seasonal and year-round houses being built. Gustavus offers a state-owned airport with jet capability (in summer months) and can also be accessed via numerous air taxi services and a once-a-day ferry from Juneau in summer months. Float plane access is available in nearby Bartlett Cove.

Visitor Opportunity/Experience

Visitation to Bartlett Cove and Glacier Bay has increased steadily over the last 10 years. Since 1984, visitation to Glacier Bay and the Bartlett Cove area has doubled, and overnight stays at the lodge have increased by approximately 80%. By the early 1990s, the lodge reached full capacity; overnight stays have stabilized at approximately 15,500 since that time.

Increases in visitor day use are likely because of increased lodging opportunities in Gustavus and the recent increases in vessel quotas provided for by the *Vessel Management Plan* (NPS 1995). In addition, backcountry use has increased by 60% in the last 10 years; most of these visitors pass through Bartlett Cove before and after their backcountry trip.

The most typical length of stay for park visitors is quite short. Many visitors arrive on an evening jet, spend the evening at the lodge, travel up bay on the concession-operated day tour boat the next day, and then leave by jet that evening. Few other visitors spend additional time exploring the Bartlett Cove area.

Visitor opportunities in the Bartlett Cove area focus around the lodge and visitor center. The most typical Park experience includes a day-long tour boat cruise Up Bay. Fewer numbers of visitors sportfish on lodge-operated charter boats or kayak in Bartlett Cove.

Interpretive opportunities include visiting the limited displays on the upper floor of the lodge, attending evening slide show programs offered by Park staff, or participating in naturalist-led hikes. Many visitors hike the trail systems or follow the shoreline on their own.

The majority of visitor use occurs from June through August. However, visitation is growing in the shoulder seasons of April–May and September.

ENVIRONMENTAL CONSEQUENCES

The environmental consequences of the different alternatives are compared in table 2. Following the table, the impacts are discussed in detail in this chapter.

TABLE 2: COMPARISON OF IMPACTS OF ALTERNATIVES

Impact Topic	Alternative A: No Action	Alternative B: Implement Existing General Management Plan	Alternative C: Proposed Action
Vegetation	Vegetation in the Bartlett Cove area would not be further affected.	The development of facilities identified in the GMP would result in the loss of about 7 acres of spruce/hemlock forest. Facility removal in the administrative area and on Lagoon Island would result in the revegetation of about 1 acre of the park's land.	The development of facilities would result in the loss of about 10 acres of spruce/hemlock forest. About 1 acre of alder would be lost. Facility removal in the administrative area and on Lagoon Island would result in the revegetation of about 1 acre of the park's land.
Wildlife	Wildlife in the Bartlett Cove area would not be further affected.	About 7 acres of wildlife habitat would be lost through facility construction.	About 11 acres of wildlife habitat would be lost through facility construction.
Threatened, Endangered, and Sensitive Species	The endangered American peregrine falcon, marbled murrelet, and Glacier Bay water shrew would not be adversely affected as a result of the no-action alternative.	The endangered American peregrine falcon and Glacier Bay water shrew would not be affected. Land clearing activities would reduce potential nesting habitat for marbled murrelet. The potential for direct loss of adults and fledglings would be minimal.	Same as alternative B.
Water Quality	The potential for water quality degradation from outdated utility systems would continue. The wastewater treatment facilities would continue to be out of compliance with water quality regulations. Inadequately treated sewage could enter the bay. Potential exists for fuel that has leaked from the underground storage tanks into the soils to migrate into Bartlett Cove waters.	The upgrade of wastewater treatment plant and relocation of fuel storage facilities would improve water quality. Upgrading wastewater treatment facilities would eliminate the potential for discharge of improperly treated sewage into the bay. Fuel storage facility removal and cleanup of fuel-contaminated soils would eliminate the possibility of fuel migrating into Bartlett Cove waters.	Same as alternative B.

Impact Topic	Alternative A: No Action	Alternative B: Implement Existing General Management Plan	Alternative C: Proposed Action
Visual Resources	The visual quality of the Bartlett Cove area would not change.	<p>Facility development would not impair the visual quality of Bartlett Cove. Facilities would be located away from destinations and routes traveled by park visitors and would be screened from public view.</p> <p>New visitor accommodations and lodge expansion would be visible to park visitors but would not impair visual quality of this developed area.</p>	<p>The development of a new maintenance facility, park employee housing, recreation building, research center, and utility upgrade would not impair the visual quality of the Bartlett Cove area.</p> <p>New visitor accommodations, lodge expansion, visitor access center, and tribal house would be visible to park visitors but would not impair visual quality of the area.</p> <p>Removal of unnecessary shoreline facilities would enhance Bartlett Cove's scenic quality. Road realignment and trail development along old roadbed would enhance scenic qualities of the shoreline.</p>
Cultural Resources	Cultural resources in the Bartlett Cove area would not be affected.	Construction of facilities proposed in the GMP would not adversely affect any known cultural resources.	Construction of facilities proposed in the GMP would not adversely affect any known cultural resources. Proposed action would offer an opportunity for a symbolic return of the Hoonah Tlingit to Bartlett Cove.
Visitor Opportunity and Experience	Visitor use patterns and experiences in the Bartlett Cove area would not change. Increases in visitation to the Bartlett Cove area might lead to increased crowding of visitor facilities and activities. This could limit visitor opportunities and cause a decrease in visitor satisfaction.	Expansion of visitor accommodations would increase the number of people that could stay at Bartlett Cove. The hostel would offer a range of economic choices for park visitors. Lodge expansion would accommodate additional visitor use.	Park visitors would be offered additional recreational and interpretive opportunities in the Bartlett Cove area. Expansion of visitor accommodations would increase overnight accommodations at Bartlett Cove. The hostel and economy lodging would offer a broad range of economic choices for park visitors. Lodge expansion would accommodate additional visitor use.
Local Community	The local community would be largely unaffected by the no-action alternative. Expansion of tourist industry in Gustavus would continue, with businesses catering to park visitors. Lodging in the Gustavus community has increased in recent years and can be expected to increase in the future.	Expansion of lodge visitor accommodations would increase competition with the local visitor lodging industry. Expected tourism increases should be able to fill expanded lodging facilities in the park and in Gustavus. A 30-bed hostel would not offer any competition to local establishments since budget lodgings are not offered in Gustavus.	Effects on the local community from expansion of lodge visitor accommodations and development of budget accommodations would be essentially the same as in alternative B. Relocating concession employees to Gustavus and an expanded job market might provide some economy opportunities for local residents.

Impact Topic	Alternative A: No Action	Alternative B: Implement Existing General Management Plan	Alternative C: Proposed Action
Park Management	Utility systems would remain out of compliance with safety and environmental regulations.	Park operations would be enhanced by upgrading utilities to meet demand and comply with safety or environmental regulations.	Park operations would be enhanced by upgrading utilities to meet demand and comply with safety or environmental regulations. Management would be improved through a combined headquarters and research station.
	Park housing and office space would continue to be insufficient to meet current and future needs.	Additional employee housing would improve visitor use and administrative functions at Bartlett Cove. The Bartlett Cove road segment would continue to be a safety hazard. Summer traffic would continue to cause dust.	Additional employee housing would improve visitor use and administrative functions at Bartlett Cove. Road realignment would minimize pedestrian and vehicle conflicts. Summer traffic would continue to cause dust.

IMPACTS OF ALTERNATIVE A (NO ACTION)

Natural Resources

Vegetation and Wildlife. Vegetation and wildlife habitat in the Bartlett Cove area would not be affected since no development would occur under the no-action alternative.

Threatened, Endangered, or Sensitive Species. The endangered American peregrine falcon, the marbled murrelet, and the Glacier Bay water shrew would not be adversely affected as a result of the no-action alternative.

Water Quality. The no-action alternative would not result in any additional effects on surface water or groundwater resources in the Bartlett Cove area. However, the potential for water quality degradation from outdated utility systems would continue.

The wastewater treatment facilities would continue to be out of compliance with state water quality regulations. Inadequately treated sewage would continue to enter Bartlett Cove through existing outfalls.

It is also possible that some petroleum product that leaked from the underground storage tanks into the soils surrounding the fuel storage facility would migrate into Bartlett Cove waters. Although some remediation could occur, complete remediation would not be possible without removing the fuel storage facility.

Visual Quality

The visual quality of the Bartlett Cove area would not change.

Cultural Resources

There would be no impacts on archeological resources in the Bartlett Cove area since ground-breaking activities would not occur under this alternative. However, important ethnographic resources and traditional cultural knowledge associated with Bartlett Cove would be lost over time because this alternative provides little means for enhancing Hoonah involvement in the area.

Socioeconomic Environment and Visitor Experience

Visitor Opportunity and Experience. There would be little change in visitor opportunities or experiences at Bartlett Cove in the short term. In the long term, crowding of visitor

facilities may occur as visitation to the Bartlett Cove area increases. Increased visitation also may limit visitor opportunities resulting in decreased visitor satisfaction.

The Bartlett Cove road segment would continue to be a safety hazard. Summer traffic would continue to cause dust along the shoreline area where visitors walk.

Local Community. The local community would be largely unaffected by the no-action alternative in the short term. In the long term, increasing visitor use would increase pressure on Gustavus for visitor facilities and recreational/educational opportunities. Expansion of the tourist industry in Gustavus would continue with businesses catering to park visitors.

Park Management

The existing utility systems of Bartlett Cove (wastewater, water, fuel storage, and electricity) would continue to be inadequate and would not meet safety or environmental codes and regulations. The demands on the systems would continue to grow with more day use, overnight use, and increases in staff. Repair would become increasingly costly and inefficient because of the age of the system.

The existing maintenance shop would continue to be undersized for current operations and would not meet health or safety codes. Maintenance functions would continue to be conducted at separate locations throughout the Bartlett Cove area.

Park housing and office space would continue to be insufficient to meet the needs. Because the lack of adequate housing would make personnel recruitment difficult, park management efficiency would be reduced. Lack of appropriate office and work space would continue to hamper park operations, potentially resulting in long-term impacts to park resources. The lack of an adequate facility to house park researchers would reduce the availability of important scientific information necessary to protecting park resources.

IMPACTS OF ALTERNATIVE B (IMPLEMENT EXISTING GENERAL MANAGEMENT PLAN)

Natural Resources

Vegetation and Wildlife. The development of a maintenance facility (3 acres), visitor accommodations (2 acres), park employee housing (1 acre), a recreation building (2 acres), and utilities upgrade (2 acres) identified in the *General Management Plan* would result in the loss of about 10 acres of spruce/hemlock forest habitat at Bartlett Cove.

The removal and restoration of lands in the administrative area (cabins and storage) and on Lagoon Island (cabin) would result in the restoration of about 1 acre of park land.

The improvement of fuel storage and sewage treatment facilities would eliminate contamination risks to the marine environment.

Threatened, Endangered, and Sensitive Species. Because the endangered American peregrine falcon occurs in the Bartlett Cove area only as a transient during seasonal migrations, it would not be affected by the level of development proposed by this alternative. No critical habitat would be affected.

The removal of about 7 acres of mature and old-growth spruce and hemlock in the Bartlett Cove area would reduce potential marbled murrelet nesting habitat. The amount of spruce/hemlock habitat lost would be considerably less than 1% of the total available in lower Glacier Bay and the Bartlett River watershed. The potential for direct loss of adults and fledglings would be negligible because land clearing activities would be performed outside the nesting and fledging period (April–August).

No activities would involve wetlands or streams; consequently, habitat for the Glacier Bay water shrew would not be affected.

Water Quality. Upgrading the wastewater treatment plant and relocating fuel storage facilities would improve water quality in the Bartlett Cove area.

Upgrading the Bartlett Cove wastewater treatment facilities would bring this facility into compliance with state regulations and eliminate the potential for discharge of improperly treated sewage into the bay.

The removal and relocation of the existing fuel storage facility adjacent to outer dock would eliminate a potential source of petroleum pollution on the shore of Bartlett Cove. The cleanup of fuel contaminated soils at this site would eliminate the possibility of fuel migrating into Bartlett Cove waters.

Visual Quality

The development of a new maintenance facility, park employee housing, a recreation building, and utility upgrade would slightly impair the visual quality of the Bartlett Cove area for visitors viewing the area from the developed corridor. However, these facilities would be located away from visitor destinations and routes normally traveled by park visitors and would be screened from public view by vegetation.

The new visitor accommodations and lodge expansion would be visible to park visitors. These facilities would be blended into the natural setting to minimize impacts to the visual quality of the area.

Cultural Resources

The development of a new maintenance facility, visitor accommodations, park employee housing, a recreation building, lodge expansion, and utility upgrade would not have an adverse effect on any known cultural resources.

It is unlikely that any intact cultural sites would be found in the area of the proposed maintenance facility because the facility site is an abandoned landfill situated in generally steep and uneven topography well away from the waterfront.

The location proposed for the sewage plant and fuel farm upgrade is an old beach environment that would have been suitable for human occupation during post-glacial times. Although numerous shovel probes did not detect buried cultural materials, the potential clearly exists.

Important ethnographic resources and traditional cultural knowledge associated with Bartlett Cove would be lost over time as this alternative provides little means for enhancing Hoonah Tlingit involvement in the area.

Socioeconomic Environment and Visitor Experience

Visitor Opportunity and Experience. The expansion of visitor accommodations by up to 15 lodge units and a 30-bed hostel would increase the number of people that could stay at Bartlett Cove. Hostel accommodations would be less expensive than existing lodging, thus offering a range of economic choices for park visitors. Lodge expansion would accommodate additional visitor use.

Existing recreational/educational opportunities for enjoying the Bartlett Cove area would remain largely unchanged. Over time, crowding of existing facilities would be likely to occur, potentially resulting in decreased visitor satisfaction.

Upgrading the utility systems would ensure a healthier environment for visitors.

Local Community. The expansion of visitor accommodations at the lodge (by up to 15 rooms) would slightly increase competition with the visitor lodging industry in Gustavus. The development of a 30-bed hostel would compete with some local establishments in Gustavus.

Park Management

Park operations would be enhanced by the upgrading of park utilities (wastewater, water, fuel storage, and electrical) to meet demand and comply with safety or environmental codes and regulations.

The construction of a new maintenance facility would consolidate these operations, increasing maintenance efficiency. Additional administrative office space would be partially accommodated in the old maintenance facility, increasing the effectiveness of management and thus ensuring the long-term protection of park resources. The lack of adequate office space for park researchers would continue to hamper the collection and analysis of important scientific information.

Additional permanent and seasonal employee housing would improve visitor services and administrative functions at Bartlett Cove in the short term. However, this housing would not be adequate to meet the long-term demands of park management issues. Recruitment of park personnel would become difficult over time, hampering effective management of park resources.

The Bartlett Cove road segment would continue to be a safety hazard. Summer traffic would continue to cause dust in the shoreline area where visitors walk.

IMPACTS OF ALTERNATIVE C (PROPOSED ACTION)

Natural Resources

Vegetation and Wildlife. The development of additional lodging (about 3.25 acres), a maintenance facility (about 3 acres), a visitor access center (about 0.5 acre), park employee housing (about 1 acre), a recreation building (about 0.5 acre), road realignment (about 1 acre), and utilities upgrade (about 0.5 acre) would result in the loss of about 10 acres of spruce/hemlock forest at Bartlett Cove. The traditional tribal house would affect about 1 acre of alder/willow shoreline habitat.

Converting the old road to a hiking trail would reduce the disturbance of shoreline habitat somewhat.

The removal and restoration of lands in the administrative area (cabins and storage) and on Lagoon Island (cabin) would result in restoration of about 1 acre of park land.

The improvement of fuel storage and sewage treatment facilities would eliminate contamination risks to the marine environment.

Threatened, Endangered, and Sensitive Species. Because the endangered American peregrine falcon occurs in the Bartlett Cove area only as a transient during seasonal migrations it would not be affected by the level of development proposed by this alternative. No critical habitat would be affected.

The removal of about 10 acres of mature and old-growth spruce and hemlock in the Bartlett Cove area would reduce potential marbled murrelet nesting habitat. The amount of spruce/hemlock habitat lost would be considerably less than 1% of the total available in lower Gla-

Glacier Bay and the Bartlett River watershed. The potential for direct loss of adults and fledglings would be slight since land clearing activities would be performed outside the nesting and fledging period (April–August).

None of the proposed activities would involve wetlands or streams; Glacier Bay water shrew habitat would not be affected by this alternative.

Water Quality. The effects on water quality would be the same as those described for alternative B.

Visual Quality

The development of a new maintenance facility, park employee housing, a recreation building, and utility upgrade would slightly impair the visual quality of the Bartlett Cove area. However, these facilities would be located away from visitor destinations and routes normally traveled by park visitors and would be screened from public view by vegetation.

The new visitor accommodations and lodge expansion, visitor access center, and tribal house would be visible to park visitors. These facilities would be blended into the natural setting to the extent possible to minimize impacts on the visual quality of the area.

The removal of unnecessary facilities from the inner lagoon would slightly enhance the visual quality of the area. The road realignment and trail development along the old roadbed would remove vehicular traffic and road dust from the view of the shoreline and add a scenic trail for visitors to enjoy.

Cultural Resources

The impacts on archeological resources from the development projects mentioned above would be similar to those described for alternative B. The proposed action would not have an adverse effect on any known cultural resources.

The proposed action would offer an opportunity for a symbolic return of the Hoonah Tlingit to Glacier Bay, and to Bartlett Cove in particular, where ancestral villages were located.

Important ethnographic resources and cultural traditions would be protected. The tribal house would allow the continuation and transmission of cultural practices, including food gathering and preparation, arts and crafts demonstrations, medicinal and subsistence techniques, and the performance of expressive culture in the form of storytelling, song, and dance. The spirit camp would encourage cultural transmission to the young, preserving these resources over time.

Socioeconomic Environment and Visitor Experience

Visitor Opportunity and Experience. The proposed action would offer park visitors more recreational and interpretive opportunities in the Bartlett Cove area and foster a well-rounded, holistic experience of a unique landscape. Visitor experiences would be diversified by the addition of a visitor access center, a Hoonah tribal house, lodge expansion, and a shoreline trail. These opportunities would most likely increase the length of the typical visitor's stay, allowing each visitor a more in-depth understanding of park resources and management issues.

The addition of up to 30 lodging units would increase the overnight capacity at Bartlett Cove. The 50 budget accommodations would accommodate visitors with diverse economic backgrounds.

Local Community. The expansion of visitor accommodations at the lodge (up to 30 rooms) would increase competition with the visitor lodging industry in Gustavus, as would the conversion of the employee dormitory to a 50-room budget accommodation.

Relocating park concession employees closer to Gustavus might provide some economic opportunities for local residents. Economic opportunities would be limited, since it is assumed that dormitory-style housing and meals for employees would be provided by the concessioner.

Local residents would realize a growth in job opportunities with the proposed expansion in concessioner and NPS facilities.

Park Management

Park operations would be enhanced by the upgrading of park utilities (wastewater, water, fuel storage, and electricity) to meet demand and comply with safety or environmental regulations. The management of Glacier Bay National Park would be improved through the construction of a combined headquarters and research station. Increased office space and a research facility would allow for the collection and analysis of important scientific information and would enhance the translation of that information into management decisions designed to protect park resources.

Additional permanent and seasonal employee housing would improve visitor services and administrative functions at Bartlett Cove. Adequate housing would be provided in both the short term and the long term.

The realigned part of the road would minimize conflicts between pedestrians and vehicles, resulting in improved safety. Relocating concession employees would slightly increase traffic on the park entrance road. Summer traffic would continue to cause dust; however, road realignment would remove dust from the shoreline area.

CUMULATIVE IMPACTS

Cumulative impacts are defined as the incremental impacts on the environment resulting from adding the proposed action to other past, present, and reasonably foreseeable future actions. Cumulative impacts may result from singularly minor but collectively significant actions taking place over a period of time. Actions occurring in the area that could affect Bartlett Cove developed area include upgrading the entrance road, renovating and expanding the outer dock, and expanding lodging in Gustavus.

Entrance Road Upgrade

The road to Bartlett Cove from the park boundary, which passes through a lowland area, is subject to flooding, which makes it nearly impassable in the spring. Road improvements in 1996 raised the road surface and ameliorated this problem to some extent but resulted in a narrower road width. Further road improvements would be necessary to address problems in crossing the lowland area, to expand the road width, and to rebuild and perhaps realign the road corridor in some areas.

Upgrading of the park entrance road would be confined to the corridor identified in the *General Management Plan*. Road widening and borrow pits could require up to 10 acres. The entrance road upgrade will be evaluated in a future, separate planning and environmental compliance process.

Outer Dock Renovation and Expansion

The main dock structure is 40 years old and needs stabilization and rehabilitation work to maintain it in a usable condition. The existing dock is also inadequate for the number and size of vessels using Bartlett Cove. Due to siltation and glacial rebound, the useful life of the inner dock may be limited to about 10 years.

The expansion of the outer dock would be designed to provide access by tour boats, charter boats, private vessels, and NPS vessels within limits established by the *Vessel Management Plan* (NPS 1995). Dock expansion will be evaluated in a future, separate planning and environmental compliance process.

Lodging Expansion in Gustavus

Lodging in the Gustavus community has increased in recent years and can be expected to increase in the future. An average of one bed-and-breakfast facility opens each year, and one lodge accommodating up to 40 guests has opened every third year since 1990.

Cumulative Impacts on Natural Resources

Entrance road improvements would result in the loss of additional vegetation, wildlife habitat, and wetlands adjacent to the Bartlett Cove developed area if the road was widened. Potentially up to about 8 acres of wetland and forested land could be affected. No threatened or endangered species would be adversely affected.

While the proposed action represents a level of disturbance that would be greater than other activities in the Bartlett Cove area, the total area disturbed would remain small. No major cumulative impacts on natural resources would be anticipated from adding the proposed action to other potential actions because of the relatively small amount of land affected.

Cumulative Impacts on Cultural Resources

Outer dock renovation and expansion, entrance road upgrade, and increased park visitation would have little effect on cultural resources in the Bartlett Cove developed area. Outer dock renovation and expansion would not affect land-based cultural resources, since operations would occur primarily in Bartlett Cove waters. Road improvement activities would occur primarily in the existing road alignment; therefore, the potential for the disturbance of cultural resources would be limited. However, new construction might disturb previously unknown resources.

Because of mitigating measures, no substantial cumulative impacts on cultural resources would be expected from adding the proposed action to other anticipated actions that might affect the Bartlett Cove developed area. However, the proposed action would have significant positive effects on ethnographic resources and cultural traditions by reestablishing the Hoonah Tlingits' cultural connection to the park.

Cumulative Impacts on Socioeconomic Environment and Visitor Experience

Under the proposed action, operational efficiency would be increased because of new, adequate facilities and more effective location of management and support functions. The impact of the proposed action would provide both expanded and more efficient operations and management. The cumulative impacts of the proposed action would be substantial and positive when compared to the anticipated impacts from other reasonably foreseeable actions.

Lodging expansion in Gustavus and entrance road improvement would potentially increase visitor use of Bartlett Cove and the various services provided by the National Park Service and the park concessioner. Because the proposed action includes numerous new recreational/educational opportunities, the anticipated modest growth in visitor use accounted for by lodging expansion in Gustavus (estimated at one lodge per year) could be accommodated. If increases in visitor access to Gustavus exceeded that anticipated (that is, more than one ad-

ditional lodge per year and/or a larger than typical lodging facility), this growth could not be accommodated at Bartlett Cove, and the visitor experience might be adversely affected.

Increased park visitation and vehicle traffic would not result in congestion or safety hazards along the entrance road, considering planned upgrades for the road. No cumulative impacts on visitor use and visitor opportunities would be anticipated since the proposed action would include expanding visitor services and opportunities to meet an ever-increasing demand for park visitation.

CONSULTATION AND COORDINATION

CONSULTATION

The comprehensive design plan for Bartlett Cove was initiated in May 1996, when a design workshop was conducted at the park. The National Park Service extended to interested parties an opportunity to attend the workshop and help define the desired outcomes and develop the alternatives for the future of Bartlett Cove. Included were residents of Gustavus, the Hoonah Indian Association, Glacier Bay Lodge (the concessioner), the U.S. Army Corps of Engineers, the National Biological Survey (now the Biological Resources Division of the U.S. Geological Survey), and the park staff. Workshop results were compiled and sent to all participants.

The consultation process was continued in July 1996, when the design team presented conceptual alternatives to interested parties at open houses held at Hoonah, Gustavus, and park headquarters.

Native American consultations have been conducted as required under section 106 of the National Historic Preservation Act and other laws and policies. Representatives of the Hoonah Tlingit participated directly in scoping meetings in the park for this project in May 1996. Members of the park staff and the planning team have made several visits to seek Hoonah input on cultural and other aspects of this plan. A Hoonah representative participated in a tour of southeastern Alaska to see reconstructed tribal houses in Wrangell, Ketchikan, Saxman, and Metlakatla. The spirit and substance of the September 30, 1995, memorandum of understanding between the Hoonah Indian Association and Glacier Bay National Park and Preserve is being carried out not only through this planning effort, but also through other park activities with the Hoonah people (Associated Press 1995).

Other relevant input will be sought later from the Central Council of the Tlingit and Haida, the Alaska Native Brotherhood and Sisterhood, Huna Totem, Inc., and Goldbelt, Inc. As part of the public comment period, input will also be sought input from Sealaska Corporation.

The National Park Service consulted the U.S. Fish and Wildlife Service and the Alaska Department of Fish and Game regarding threatened or endangered species (see appendix F). The National Marine Fisheries Service was consulted on the *Vessel Management Plan* (NPS 1995), and that information has been incorporated into this project.

This *Comprehensive Design Plan / Environmental Assessment* will be sent to interested parties for review and comment, including those listed below.

Federal Agencies

U.S. Army Corps of Engineers, Juneau
U.S. Department of the Interior
 U.S. Fish and Wildlife Service, Southeast Alaska Ecological Services, Juneau
 U.S. Geological Survey, Biological Resources Division
U.S. Department of Commerce
 National Oceanic and Atmospheric Administration
 National Marine Fisheries Service

State Agencies

Alaska Department of Fish and Game, Division of Wildlife Conservation, Juneau
Alaska Department of Government Coordination.
Alaska State Historic Preservation Officer

Others

Hoonah Indian Association
University of Alaska Museum
Personal Communications
 John Piatt, National Biological Survey (now U.S. Geological Survey, Biological Resources
 Division), Anchorage, AK (about marbled murrelet)
 George Carte, Alaska Tsunami Warning Center

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APPENDIX A: LEGISLATION

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

A PROCLAMATION

[No. 1733—Feb. 26, 1925—43 Stat. 1988]

WHEREAS, There are around Glacier Bay on the southeast coast of Alaska a number of tidewater glaciers of the first rank in a magnificent setting of lofty peaks, and more accessible to ordinary travel than other similar regions of Alaska,

AND, WHEREAS, the region is said by the Ecological Society of America to contain a great variety of forest covering consisting of mature areas, bodies of youthful trees which have become established since the retreat of the ice which should be preserved in absolutely natural condition, and great stretches now bare that will become forested in the course of the next century,

AND WHEREAS, this area presents a unique opportunity for the scientific study of glacial behavior and of resulting movements and development of flora and fauna and of certain valuable relics of ancient interglacial forests,

AND WHEREAS, the area is also of historic interest having been visited by explorers and scientists since the early voyages of Vancouver in 1794, who have left valuable records of such visits and explorations,

NOW, THEREFORE, I, Calvin Coolidge, President of the United States of America, by virtue of the power and authority in me vested by section two of the act of Congress entitled: "An Act for the preservation of American Antiquities", approved June 8, 1906 (34 Stat., 225), do proclaim that there is hereby reserved from all forms of appropriation under the public land laws, subject to all prior valid claims, and set apart as the Glacier Bay National Monument, the tract of land lying within the following described boundaries, to wit:

Beginning at the most southerly point of North Marble Island in approximate latitude $58^{\circ}40'$ north and approximate longitude $136^{\circ}4'$ west as shown on Coast and Geodetic Survey chart No. 8306; Thence southeasterly to the most westerly point of the largest island at the entrance of Bear Track Cove in approximate latitude $58^{\circ}34'$ north and approximate longitude $135^{\circ}56'$ west; thence following the mean high water of the southerly shore to the most easterly point of said island; thence east on a parallel of latitude to the crest of the divide between the waters of Bear Track Cove and Bartlett Cove; thence northeasterly along this divide to the summit of the divide between the waters of Excursion Inlet and Glacier Bay; thence northerly along this divide to the crest of the divide between the waters of Glacier Bay and Lynn Canal; thence northerly and westerly along this divide to the International Boundary line between Alaska and British Columbia; thence southwesterly along the International Boundary line to the summit of Mt. Fairweather; thence southeasterly to the summit of Mt. Lituya; thence easterly and southerly along the divide between the waters of the Pacific Ocean and the waters of Glacier Bay and Icy Strait to the summit of Mt. La Perouse; thence easterly across Brady Glacier to the summit of the mountain marked 4480 on Coast and Geodetic Survey chart No. 8306 in approximate latitude $58^{\circ}33'$ north and approximate longitude $136^{\circ}38'$ west; thence northeasterly to the summit of the mountain marked 4030 on said chart in approximate latitude $58^{\circ}34'$ north and approximate longitude $136^{\circ}33'$ west; thence northeasterly to the most southerly point on the north shore of Geikie Inlet; thence northeasterly following the mean high water of this shore to the most easterly point of land at the entrance of Geikie Inlet, thence southeasterly to the place of beginning, containing approximately 1,820 square miles.

Warning is hereby given to all unauthorized persons not to appropriate or injure any natural feature of this monument or to occupy, exploit, settle or locate upon any of the lands reserved by this proclamation.

And I do also proclaim that my order No. 3983 of April 1, 1924, withdrawing the public lands within the hereinafter described limits pending determination of the area therein which should be set apart for national monument purposes, is hereby revoked:

Beginning at the western extremity of Cape Fairweather on the west coast of Alaska, thence in a northeasterly direction to the summit of Mt. Fairweather on the international boundary between Canada and the United States, thence following such boundary easterly, northeasterly and easterly to Monument No. 157 of the survey of such boundary by the International Boundary Commission approved June 9, 1923; thence east following the latitude of said monument to an intersection with the right bank of Chilkat Inlet; thence southerly along the right banks of said inlet and Lynn Canal to Icy Strait; thence westerly along the north shores of Icy Strait and Cross Sound to the Pacific Ocean; thence in a general northwesterly direction along the shore of the Pacific Ocean to Cape Fairweather, the place of beginning containing approximately 2,560,000 acres.

And I do further proclaim and make known that pursuant to Public Resolution No. 29 of February 14, 1920 (41 Stat., 434), as amended by Resolutions Nos. 36 and 79, approved January 21 and December 28, 1922, respectively (42 Stat., 358, 1067), it is hereby ordered that the public lands in that portion of the area last above described not included in said Glacier Bay National Monument by this proclamation, subject to valid rights and the provisions of existing withdrawals, shall be opened only to entry under the applicable homestead laws by qualified ex-service men of the war with Germany, under the terms and conditions of said resolutions and the regulations issued thereunder, for a period of ninety-one days beginning with the sixty-third day from and after the date hereof, and thereafter to appropriation under any public land law applicable thereto. Subsequent to the date hereof and prior to the date of restoration to general disposition as provided herein, no rights may be acquired to the lands so restored by settlement in advance of entry, or otherwise except strictly in accordance herewith.

The Director of the National Park Service, under the direction of the Secretary of the Interior shall have the supervision, management, and control of the Glacier Bay National Monument, as provided in the act of Congress entitled "An Act to establish a National Park Service, and for other purposes", approved August 25, 1916 (39 Stat., 535), as amended June 2, 1920 (41 Stat., 732).

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the United States to be affixed.

DONE at the City of Washington this 26th day of February in the year of our Lord one thousand nine hundred and twenty-five, and [SEAL] of the Independence of the United States of America the one hundred and forty-ninth.

CALVIN COOLIDGE.

By the President:
CHARLES E. HUGHES,
Secretary of State.

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

A PROCLAMATION

[No. 2330—Apr. 18, 1939—53 Stat. 2534]

WHEREAS it appears that certain public lands, part of which are within the Tongass National Forest, adjacent to the Glacier Bay National Monument, in Alaska, have situated thereon glaciers and geologic features of scientific interest; and

WHEREAS a portion of the aforesaid public lands contiguous to the said monument are necessary for the proper care, management, and protection of the objects of scientific interest situated on the lands included within the said monument; and

WHEREAS it appears that it would be in the public interest to reserve all of the aforesaid public lands as a part of the said monument:

NOW, THEREFORE, I, Franklin D. Roosevelt, President of the United States of America, under and by virtue of the authority vested in me by the act of June 4, 1897, 30 Stat. 11, 34, 36 (U. S. C., title 16, sec. 473), and the act of June 8, 1906, c. 3060, 34 Stat. 225 (U. S. C., title 16, sec. 431), do proclaim that all of the following-described lands which lie within the Tongass National Forest, in Alaska, are excluded therefrom, and that, subject to valid existing rights, all the following-described lands in Alaska are hereby added to and made a part of the said Glacier Bay National Monument:

Beginning at the summit of Mount Fairweather, on the International Boundary line between Alaska and British Columbia; thence southeasterly along present southern boundary of Glacier Bay National Monument to the point of the divide between the waters of Glacier Bay and Lynn Canal where said divide is forked by the headwaters of Excursion Inlet; thence easterly and southeasterly along the divide between the waters of Excursion Inlet and Lynn Canal to a point in approximate latitude $58^{\circ}27'$ N., longitude $135^{\circ}18'$ W., where said divide meets a subsidiary divide between streams flowing into Excursion Inlet; thence westerly and northwesterly along said subsidiary divide to the east shore of Excursion Inlet; thence due west to the center of the principal channel of Excursion Inlet; thence southerly along the center of the principal channel of Excursion Inlet to its junction with the Icy Passage; thence westerly and southwesterly along the center of Icy Passage, North Passage, North Indian Pass, and Cross Sound to the Pacific Ocean; thence northwesterly following the general contour of the coast at a distance of 3 nautical miles therefrom to a point due west of the mouth of Seaotter Creek; thence due east to the north bank of Seaotter Creek and easterly along the north bank of Seaotter Creek to its headwaters; thence in a straight line to the summit of Mount Fairweather, the place of beginning. Containing approximately 904,960 acres.

Warning is hereby expressly given to all unauthorized persons not to appropriate, injure, destroy, or remove any feature of this monument and not to locate or settle upon any of the lands thereof.

The Director of the National Park Service, under the direction of the Secretary of the Interior, shall have the supervision, management, and control of the monument as provided in the act of Congress entitled "An Act to establish a National Park Service, and for other purposes," approved August 25, 1916, 39 Stat. 535 (U. S. C., title 16, secs. 1 and 2), and acts supplementary thereto or amendatory thereof.

IN WITNESS WHEREOF I have hereunto set my hand and caused the seal of the United States to be affixed.

DONE at the City of Washington this 18th day of April in the year of our Lord nineteen hundred and thirty-nine, and of the Independence of the United States of America the one hundred and sixty-third.

FRANKLIN D. ROOSEVELT.

By the President:
CORDELL HULL,
Secretary of State.

Public Law 96-487
96th Congress

An Act

To provide for the designation and conservation of certain public lands in the State of Alaska, including the designation of units of the National Park, National Wildlife Refuge, National Forest, National Wild and Scenic Rivers, and National Wilderness Preservation Systems, and for other purposes.

Dec. 2, 1980
[H.R. 39]

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. This Act may be cited as the "Alaska National Interest Lands Conservation Act".

Alaska National
Interest Lands
Conservation
Act.
16 USC 3101

* * * * *

ADDITIONS TO EXISTING AREAS

SEC. 202. The following units of the National Park System are hereby expanded:

16 USC 410hh-1.

(1) Glacier Bay National Monument, by the addition of an area containing approximately five hundred and twenty-three thousand acres of Federal land. Approximately fifty-seven thousand acres of additional public land is hereby established as Glacier Bay National Preserve, both as generally depicted on map numbered GLBA-90,004, and dated October 1978; furthermore, the monument is hereby redesignated as "Glacier Bay National Park". The monument addition and preserve shall be managed for the following purposes, among others: To protect a segment of the Asek River, fish and wildlife habitats and migration routes, and a portion of the Fairweather Range including the northwest slope of Mount Fairweather. Lands, waters, and interests therein within the boundary of the park and preserve which were within the boundary of any national forest are hereby excluded from such national forest and the boundary of such national forest is hereby revised accordingly.

Glacier Bay
National
Monument.

* * * * *

GENERAL ADMINISTRATION

SEC. 203. Subject to valid existing rights, the Secretary shall administer the lands, waters, and interests therein added to existing areas or established by the foregoing sections of this title as new areas of the National Park System, pursuant to the provisions of the Act of August 25, 1916 (39 Stat. 535), as amended and supplemented (16 U.S.C. 1 et seq.), and, as appropriate, under section 1313 and the other applicable provisions of this Act: *Provided, however,* That hunting shall be permitted in areas designated as national preserves under the provisions of this Act. Subsistence uses by local residents shall be allowed in national preserves and, where specifically permitted by this Act, in national monuments and parks. Lands, waters, and interests therein withdrawn or reserved for the former Katmai and Glacier Bay National Monuments are hereby incorporated within and made a part of Katmai National Park or Glacier Bay National Park, as appropriate. Any funds available for the purposes of such monuments are hereby made available for the purposes of Katmai National Park and Preserve or Glacier Bay National Park and Preserve, as appropriate. Notwithstanding any other provision of law, no fees shall be charged for entrance or admission to any unit of the National Park System located in Alaska.

16 USC 410hh-2.

Post, p. 2483.

* * * * *

COMMERCIAL FISHING

SEC. 205. With respect to the Cape Krusenstern National Monument, the Malaspina Glacier Forelands area of Wrangell-Saint Elias National Preserve and the Dry Bay area of Glacier Bay National Preserve, the Secretary may take no action to restrict unreasonably the exercise of valid commercial fishing rights or privileges obtained pursuant to existing law, including the use of public lands for campsites, cabins, motorized vehicles, and aircraft landings on existing airstrips, directly incident to the exercise of such rights or privileges, except that this prohibition shall not apply to activities which the Secretary, after conducting a public hearing in the affected locality, finds constitute a significant expansion of the use of park lands beyond the level of such use during 1979. 16 USC 410hh-4.

WITHDRAWAL FROM MINING

SEC. 206. Subject to valid existing rights, and except as explicitly provided otherwise in this Act, the Federal lands within units of the National Park System established or expanded by or pursuant to this Act are hereby withdrawn from all forms of appropriation or disposal under the public land laws, including location, entry, and patent under the United States mining laws, disposition under the mineral leasing laws, and from future selections by the State of Alaska and Native Corporations. 16 USC 410hh-5.

* * * * *

DESIGNATION OF WILDERNESS WITHIN NATIONAL PARK SYSTEM

SEC. 701. In accordance with subsection 3(c) of the Wilderness Act (78 Stat. 892), the public lands within the boundaries depicted as "Proposed Wilderness" on the maps referred to in sections 201 and 202 of this Act are hereby designated as wilderness, with the nomenclature and approximate acreage as indicated below: 16 USC 1132.

- (1) Denali Wilderness of approximately one million nine hundred thousand acres; 16 USC 1132 note.
- (2) Gates of the Arctic Wilderness of approximately seven million and fifty-two thousand acres; 16 USC 1132 note.
- (3) Glacier Bay Wilderness of approximately two million seven hundred and seventy thousand acres; 16 USC 1132 note.
- (4) Katmai Wilderness of approximately three million four hundred and seventy-three thousand acres; 16 USC 1132 note.
- (5) Kobuk Valley Wilderness of approximately one hundred and ninety thousand acres; 16 USC 1132 note.
- (6) Lake Clark Wilderness of approximately two million four hundred and seventy thousand acres; 16 USC 1132 note.
- (7) Noatak Wilderness of approximately five million eight hundred thousand acres; and 16 USC 1132 note.
- (8) Wrangell-Saint Elias Wilderness of approximately eight million seven hundred thousand acres. 16 USC 1132 note.

APPENDIX B: CARRYING CAPACITY

To meet plan objectives, the National Park Service examined the physical, resource, and sociological carrying capacities of the Bartlett Cove area. The *General Management Plan* stated that the proposed development would approach both the sociological carrying capacity for visitation at Bartlett Cove and the physical carrying capacity of the existing infrastructure. It also directed that a study of these limiting factors be undertaken before any expansion of overnight use in Bartlett Cove. This appendix examines the physical capacity of the facility infrastructure and the sociological and resource capacities.

PHYSICAL CAPACITY (FACILITY INFRASTRUCTURE)

When the *Comprehensive Design Plan* was initiated, the utility systems at the park already required upgrading for a variety of reasons. These include changes in state requirements regarding sewage treatment and increased requirements for electrical power creating brownout at peak load periods. Although not all structures described in the *General Management Plan* have been constructed, the utility outputs have decreased due to age, and utility requirements have increased due to increased visitor day use, increased park staff, and the increased power requirements of modern technology supporting both research and management of the park. Therefore, the utility systems require upgrading whether or not any increase in lodging occurs.

RESOURCE CAPACITY

Several key resources were examined in determining the resource carrying capacity for this *Comprehensive Design Plan*. Landscape suitability was studied to identify and map areas of steep slopes, wetlands, shorelines, and other areas of resource sensitivity. Although the suitability analysis indicated that much of the land area in Bartlett Cove development area should be avoided, developable areas remain (see the Suitability Analysis map). Reasonable design criteria and aesthetic principles were applied to potential developments at Bartlett Cove. Considerations included setbacks from the road and shoreline, retaining vegetative screening and forest cover, and maintaining appropriate spatial densities. With the application of these factors to the identified sensitive resources, the increase in lodging and housing and other facilities proposed could be achieved without diminishing the character of the existing development or significantly affecting resource values. Although the resource capacity of Bartlett Cove is not without limits, mapped sensitive resource areas did not limit the scale of development being proposed for any alternative.

SOCIOLOGICAL CAPACITY

To determine the sociological carrying capacity of Bartlett Cove, NPS staff identified the number of visitors that could be comfortably accommodated without crowding and while maintaining a high quality visitor experience. First, all possible activities currently available to visitors were identified, as well as those proposed by alternatives in this plan (see tables showing existing and proposed visitor activity). Then staff estimated the number of people that could be comfortably accommodated at each activity at any given time. The park staff also estimated the approximate period of time each activity would require. The maximum total of visitor hours was calculated by multiplying these factors.

Under the proposed action, the maximum total visitor activity hours capacity would approximately double (from 1,297 to 3,232). By dividing these totals by the number of hours that a visitor might be expected to pursue these activities (about 14 hours per day), the existing social carrying capacity is estimated at about 100 visitors per day, and the proposed social carrying capacity is estimated at about 230. Social carrying capacity would increase under the proposed action due to the increased diversity in available activities (i.e., crowding at any one activity would be minimized by increasing the number of opportunities available).

It is important to note that carrying capacity numbers assume full use of all activity sites. Actual use is currently lower than carrying capacity, and future use is expected to remain below projected carrying capacity. For instance, while the carrying capacity of the existing visitor center in the lodge is 15 people for .5 hours each, visitor use is typically much lower. Actual use is expected to remain below theoretical maximum carrying capacity levels because of limited overnight accommodations in the park and Gustavus and because not all individuals will choose to participate in all activities. For any given day, it is likely that the majority of visitors will be occupied on boat tours, charters or kayaking in the bay. However, by diversifying activities available to visitors, a high quality visitor experience could be maintained and any perceptions of crowding avoided.

TABLE B-1: EXISTING VISITOR ACTIVITIES

Visitor Activity	Visitor Capacity	Hours per Activity	Times per Day	Total Visitor Hours
Visitor Center (lodge)	15	0.5	10	75
Evening Program	60	1.0	2	120
Bartlett River Trail	12	3.0	2	72
Forest walk	15	1.0	4	60
Beach walk	20	2.0	2	80
Viewing from dock	20	0.5	20	200
Lodge gift shop	10	0.5	20	100
Lodge lounge	20	1.0	10	200
Lodge dining	65	1.0	6	390
Total visitor activity hours				1,297

TABLE B-2: PROPOSED VISITOR ACTIVITIES

Visitor Activity	Visitor Capacity	Hours per Activity	Times per Day	Total Visitor Hours
Visitor Activity Center	100	2.0	4	800
Evening Program	120	1.0	2	240
Bartlett River Trail	12	3.0	2	72
Cultural Center	50	1.0	4	200
Coopers Notch Trail	10	4.0	2	80
Forest walk	15	1.0	4	60
Beach walk	20	2.0	2	80
Viewing from dock	20	0.5	20	200
Lodge gift shop	30	0.5	20	300
Refurbished lodge lounge	30	1.0	10	300
Refurbished lodge dining	75	1.0	6	450
Economy dining	100	0.75	6	450
Total visitor activity hours				3,232

APPENDIX C: ANILCA SECTION 810 — SUBSISTENCE EVALUATION

BACKGROUND

Subsistence uses, as defined by section 803 of the Alaska National Interest Land Conservation Act of 1980 (ANILCA) means “the customary and traditional uses by rural Alaska residents of wild, renewable resources for direct personal or family consumption as food, shelter, fuel, clothing, tools, or transportation; for the making and selling of handicraft articles out of non-edible byproducts of fish and wildlife resources taken for personal or family consumption; for barter, or sharing for personal or family consumption; and for customary trade.” Subsistence activities include hunting, fishing, trapping, and collecting berries, edible plants, and wood or other materials.

Section 203 of ANILCA authorizes subsistence uses by local residents within Glacier Bay National Preserve. However, subsistence uses were not authorized by section 202(1) of ANILCA in Glacier Bay National Park.

INTRODUCTION

This appendix was prepared to comply with Title VIII, section 810 of ANILCA. It summarizes the evaluations of potential restrictions to subsistence activities that could result from the alternative actions proposed in the *Comprehensive Design Plan / Environmental Assessment* for Bartlett Cove in Glacier Bay National Park. The purpose of the design effort is to better accommodate visitor use and protect natural and cultural resources specifically at Bartlett Cove.

EVALUATION PROCESS

Section 810(a) states:

In determining whether to . . . permit the use . . . of public lands . . . the head of a Federal agency having primary jurisdiction over such lands or his designee shall evaluate the effect of such use . . . on subsistence uses and needs, the availability of other lands for the purposes sought to be achieved, and other alternatives which would reduce or eliminate the use . . . of public lands needed for subsistence purposes. No such . . . permit or use . . . which would significantly restrict subsistence uses shall be effected until the head of such Federal agency —

(1) gives notice to the appropriate State agency and the appropriate local communities and regional councils established pursuant to Section 805;

(2) gives notice of, and holds, a hearing in the vicinity of the area involved; and

(3) determines that (A) such a significant restriction of subsistence uses is necessary, consistent with sound management principles for the utilization of public lands, (B) the proposed activity will involve the minimal amount of public lands necessary . . . and (C) reasonable steps will be taken to minimize adverse impacts upon subsistence uses and resources resulting from such actions.

ANILCA created new units and additions to existing units of the national park system in Alaska. Glacier Bay National Park and Preserve was expanded by ANILCA Section 202(1) for the purposes of

containing a segment of the Alsek River, fish and wildlife habitats and migration routes, and a portion of the Fairweather Range.

With the passage of ANILCA in 1980, the designation of Glacier Bay National Monument was changed to Glacier Bay National Park and Preserve. At that time approximately 523,000 acres were added to the park, and approximately 57,000 acres were set aside as the National Preserve. The taking of fish and wildlife for subsistence uses is allowed by ANILCA within Glacier Bay National Preserve, pursuant to Section 203; however, subsistence activities are not authorized within Glacier Bay National Park.

The potential for significant reduction of subsistence uses must be evaluated for the proposed action's effect upon "... subsistence uses and needs, the availability of other lands for the purposes sought to be achieved and other alternatives which would reduce or eliminate the use." (Section 810, ANILCA).

PROPOSED ACTION ON FEDERAL PUBLIC LANDS

The National Park Service is considering three alternatives for the future of the Bartlett Cove developed area of Glacier Bay National Park. A detailed discussion of the project and its alternatives is provided in the *Comprehensive Design Plan / Environmental Assessment* for the Bartlett Cove area. Briefly, the comprehensive design alternatives are as follows:

Alternative A: No Action — Bartlett Cove would remain essentially unchanged except for actions taken to correct health, safety, or environmental conditions recognized deficient.

Alternative B: Implement the General Management Plan — Those actions approved in the 1984 *General Management Plan* for Bartlett Cove would continue to be implemented as funds became available.

Alternative C: The Proposed Action — Visitor use be diversified, resource management would be expanded, and maintenance and utility systems would be upgraded.

AFFECTED ENVIRONMENT

A summary of the affected environment as it pertains to subsistence use is presented in this appendix. For a more comprehensive treatment, reference can be made to the "Affected Environment" chapter of this document.

Lands within Glacier Bay National Park, including Bartlett Cove, are closed to subsistence uses. However, ANILCA authorized subsistence uses in the preserve and on public lands adjacent to the park.

SUBSISTENCE USES AND NEEDS EVALUATION

To determine the potential impact on existing subsistence activities, three evaluation criteria were analyzed relative to existing subsistence resources that could be impacted.

The evaluation criteria are:

the potential to reduce important subsistence fish and wildlife populations by (a) reductions in the numbers; (b) redistribution of subsistence resources; or (c) habitat losses;

what effect the action might have on subsistence fisherman or hunter access;

the potential for the action to increase fisherman or hunter competition for subsistence resources.

THE POTENTIAL TO REDUCE POPULATIONS

Alternative A: No Action. Bartlett Cove would remain essentially unchanged with some modest corrections to the utility systems and fuel storage capabilities. No impact is recognized on fish and wildlife populations or habitat.

Alternative B: Implement the General Management Plan. The increase in lodging and park housing along with construction of the new maintenance facility may displace some wildlife in the vicinity. However, impacts would not be of a magnitude to significantly reduce fish or wildlife populations or habitat.

Alternative C: The Proposed Action. Disturbances caused by new construction and the removal of facilities might displace some wildlife in the vicinity. However, impacts would not be of a magnitude to significantly reduce fish and wildlife populations or habitat.

Restriction of Access

All rights of access for subsistence harvest on NPS lands, where otherwise allowed, are granted by section 811 of ANILCA. None of the alternatives under consideration would in any way adversely affect access to NPS lands and waters.

Increase in Competition

None of the alternatives under consideration would in any way produce any significant increase in competition for subsistence resources.

AVAILABILITY OF OTHER LANDS

The availability of other lands outside and within the park have been considered in the proposed actions. The proposed actions are consistent with NPS mandates. Because the proposed actions would occur on federal lands that are not available for subsistence use, the proposed actions would not affect the availability of federal land for subsistence use. No major impact on subsistence uses would be expected under the proposed actions.

ALTERNATIVES CONSIDERED

The evaluation has described and analyzed the alternatives of this *Comprehensive Design Plan / Environmental Assessment*, with emphasis on the proposed actions.

FINDINGS

This analysis concludes that the proposed actions would not result in significant restriction of subsistence uses.

APPENDIX D: COST ESTIMATES

COST ESTIMATES: PROPOSED ACTION

The following projects would be necessary to implement the Bartlett Cove *Comprehensive Design Plan*.

Through partnerships, (primarily National Park Service and Goldbelt, Inc.) these improvements would increase visitor access, expand and diversify visitor services, and correct major compliance, safety, and deteriorating infrastructure conditions. Over a four-year-plus period, necessary improvements amounting to more than \$35 million are projected, with potentially almost half that amount coming from the private sector and the rest from NPS appropriations and other federal sources such as the NPS authority to establish concession improvement accounts.

Fiscal Year 1998

1.	Upgrade Utility Systems, Phase I (Sewage Treatment and Fuel Farm)	\$ 2,687,000 ^a
2.	Prepare Construction Drawings for Dock Improvements	250,000
3.	Rehabilitate Outer Dock	3,900,000
4.	Preliminary Design — Reconstruct Park Road	FHWA-FLHP
Subtotal, FY 1998		\$ 6,837,000+

Fiscal Year 1999

5.	Upgrade Utility Systems-Phase II (Electricity, Water, WWTP)	\$3,113,000
6.	Prepare Construction Drawings — Utility Support Center	280,000
7.	Design Visitor Access Center	475,000
8.	Construct Utility Support Center	3,800,000
9.	Construct Dock Improvements	1,000,000
10.	Prepare Construction Drawings — Reconstruct Park Road	FHWA-FLHP
Subtotal, FY 1999		\$8,668,000+

Fiscal Year 2000

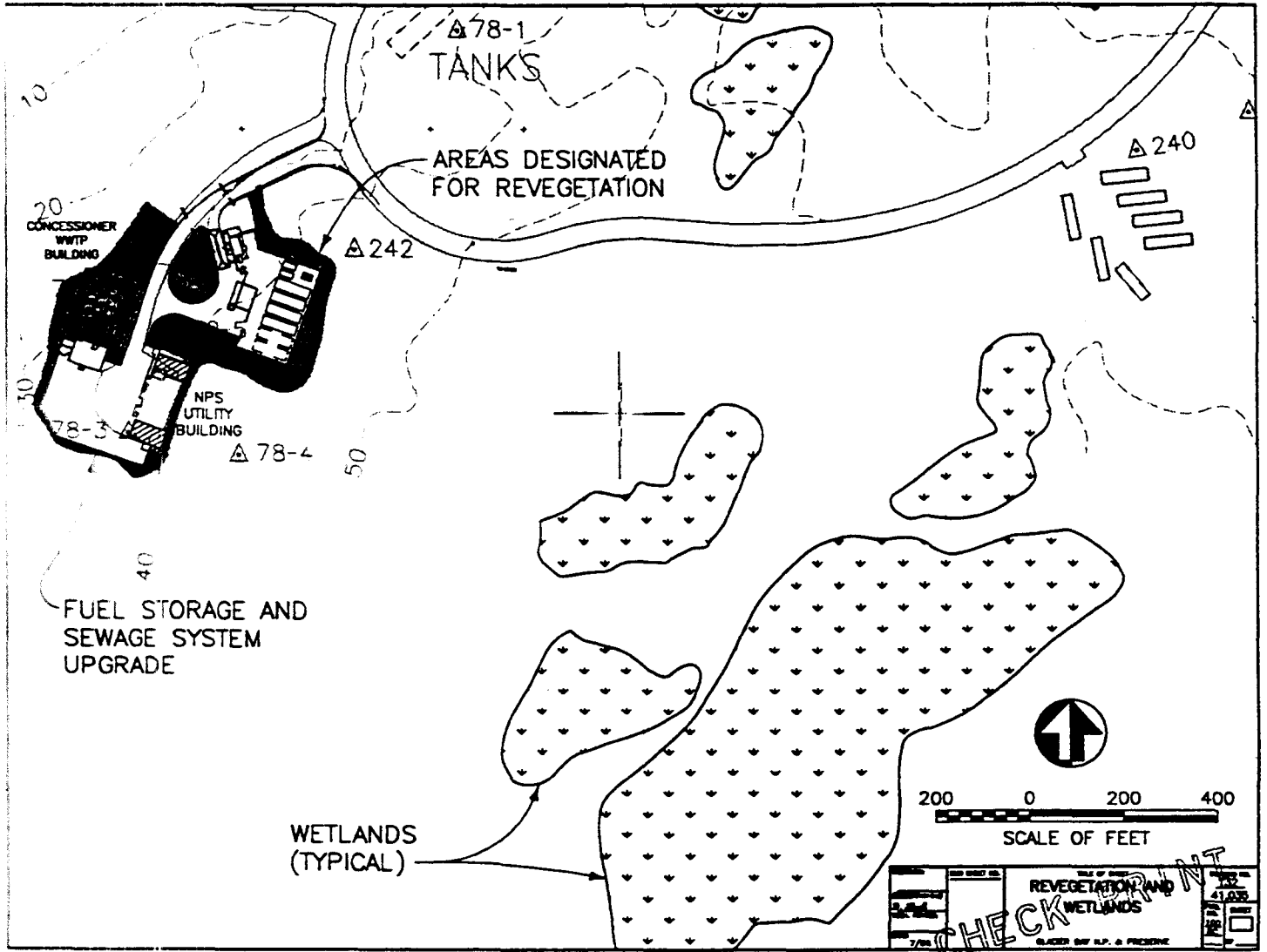
11.	Reconstruct Park Road (FHWA-FLHP)	\$4,700,000
12.	Construct Visitor Access Center	3,900,000
13. ^b	Move Concession Employee Lodging	2,000,000
14. ^b	Convert Dormitory to Economy Lodging	1,000,000
15. ^b	Remodel Lodge Dining Room and Meeting Areas	1,000,000
16. ^b	Add 30 Cabins/Rooms to Lodge	5,000,000
17. ^b	Design and Construct Native Cultural Center	2,000,000
Subtotal, FY 2000		\$19,600,000+
Total, estimated NPS, FHWA, Concession Improvement Account and Private Sector Investment		\$35,105,000+

^a Cost estimates for sewage treatment plant and fuel farm are \$731,000 and \$1,956,000 respectively; however, proposed (Senate) amendment to FY98 appropriations is for \$1,731,000 and identifies only sewage treatment plant.

^b Projects 13-17 are proposed private sector investments, and could begin earlier than FY 2000.

ALL COST FIGURES ARE TENTATIVE, BASED ON "CLASS C" OR BETTER ESTIMATES (8/67). Discussions and negotiations are continuing regarding concessioner investment in proposed improvements; depending on joint funding alternatives (and related appropriations language); overall costs of needed design and construction could be reduced by up to 25%.

APPENDIX E: PALUSTRINE WETLANDS IN BARTLETT COVE



APPENDIX F: CONSULTATION WITH U.S. FISH AND WILDLIFE SERVICE
AND ALASKA DEPARTMENT OF FISH AND GAME ON SPECIAL STATUS SPECIES



United States Department of the Interior

JUN 05 1996

FISH AND WILDLIFE SERVICE
Southeast Alaska Ecological Services
3000 Vintage Blvd., Suite 201
Juneau, Alaska 99801-7100

IN REPLY REFER TO:

David M. Lee
National Park Service
P.O. Box 25287
Denver, CO 80225-0287

Dear Mr. Lee

This responds to your May 22, 1996 letter requesting information about threatened or endangered species that may occur in the vicinity of the proposed maintenance and development projects (Packages 100BC and 100BD), at Bartlett Cove, Glacier Bay National Park and Preserve, Alaska. For the purposes of the Endangered Species Act (ESA) Section 7 consultation, we offer the following comments:

Based on available information, the following threatened or endangered species may occur in the project area.

<u>Common Name</u>	<u>Scientific Name</u>	<u>ESA Status</u>
American peregrine falcon	<u>Falco peregrinus anatum</u>	endangered

This peregrine falcon subspecies may occur in the project area as a transient, primarily during seasonal migration. No critical habitat has been designated for this species.

The Fish and Wildlife Service no longer maintains lists of species being considered for listing, such as those formerly designated Category 2 candidate or Species of Concern. Candidate species are now defined as those species for which the Service has on file sufficient information on biological vulnerability and threat(s) to support proposals as threatened or endangered. No species meeting the current, revised definition of Candidate occur in the vicinity of Bartlett Cove. The Service encourages agencies to identify and consider species whose status may be at risk when developing and implementing plans so that these species are not significantly adversely affected.

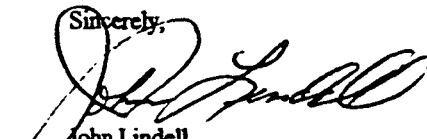
For information on threatened and endangered marine mammals, fish, and reptiles you should contact the National Marine Fisheries Service at the following address:

National Marine Fisheries Service
National Oceanic and Atmospheric Administration
Protected Resources Division
P.O. Box 21668
Juneau, AK 99802-1668

If you have any questions regarding this matter, please contact Ed Grossman or myself at the above address.

These comments are offered for endangered and threatened species for which the Service has responsibility under Section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1521 et seq.) and its amendments. The above comments are specific to the Endangered Species Act and do not reflect agency concerns regarding other organisms or habitats for which the Service has legislated responsibilities.

ROUTE-DENVER SERVICE CENTER	
1. DSC- <u>RP Lee</u>	_____
2. DSC- _____	_____
3. DSC- _____	_____
4. DSC- _____	_____
REMARKS: _____	
_____ May 29, 1996 _____	
ORIGINAL SENT TO PIFS	<input checked="" type="checkbox"/>
AFTER ROUTING, SEND	_____
ATTACHMENTS TO PIFS	_____

Sincerely,

John Lindell
Endangered Species Biologist

STATE OF ALASKA
SPECIES OF SPECIAL CONCERN

ALASKA DEPARTMENT OF FISH AND GAME

(effective March 1, 1994)

Received
June 14, 1996
No Cover Letter
from
Juneau office
ADFG
initiated WL
Postmarked June 5/96
From Phil Koel

Aleutian Canada goose^{1,2}
American peregrine falcon^{2,3}
Arctic peregrine falcon^{1,2}
Northern goshawk⁴
Spectacled eider¹
Steller's eider⁵
Olive-sided flycatcher⁶
Gray-cheeked thrush
Townsend's warbler
Blackpoll warbler
Steller sea lion¹
Harbor seal
Beluga whale⁷
Chinook salmon^{1,8}

Branta canadensis leucopareia
Falco peregrinus anatum
Falco peregrinus tundrius
Accipiter gentilis laingi
Somateria fischeri
Polysticta stelleri
Contopus borealis
Catharus minimus
Dendroica townsendi
Dendroica striata
Eumetopias jubatus
Phoca vitulina
Balaena mysticetus
Oncorhynchus tshawytscha

John Schoen 267-2280

- ¹ Federally listed as threatened
² Downlisted from Alaska Endangered Species List
³ Federally listed as endangered
⁴ Southeast Alaska population
⁵ Category 1 Candidate Species under ESA
⁶ Category 2 Candidate Species under ESA
⁷ Cook Inlet population
⁸ Fall stock from Snake River

Copy - our recommendation
no restrictions
considered for listing
Marked Murrelet

On May 25, 1993 the Commissioner of Fish and Game established an administrative list of Species of Special Concern to complement the Alaska Endangered Species List. A Species of Special Concern is any species or subspecies of fish or wildlife native to Alaska that has entered a long-term decline in abundance or is vulnerable to a significant decline due to low numbers, restricted distribution, dependence on limited habitat resources, or sensitivity to environmental disturbance.

5 AAC 93.020. ENDANGERED SPECIES. The following species are endangered in Alaska:

Eskimo curlew	<i>Numenius borealis</i>
Short-tailed albatross	<i>Diomedea albatrus</i>
Humpback whale	<i>Megaptera novaeangliae</i>
Right whale	<i>Eubalaena glacialis</i>
Blue whale	<i>Balaenoptera musculus</i>

(Eff. 11/11/93, Register 128)

Authority: AS 16.05.020
AS 16.20.190

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As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Glacier Bay National Park/Preserve
P.O. Box 140
Gustavus, AK 99826

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